



**UNIVERSITY**  
*of*  
**GLASGOW**

**An Examination of Factors Influencing the Formation  
of the Consideration Set and Consumer Purchase  
Intention in the Context of Non-deceptive  
Counterfeiting**

By

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## **Abstract**

The substantial growth of the appearance of counterfeits in the worldwide market has aroused significant levels of concern, interest and attention among practitioners, policy makers, and academic researchers. However, existing research on this phenomenon remains to date incomplete, with considerable confusion and fragmentation. Consumers' perceptions towards counterfeits as well as the effect of consumers' perceptions on consumer purchase behaviour remain unclear. On the other hand, the study of determinants of the consideration set has recently become attractive to researchers due to its importance in relation to the study of consumer choice processes. Nevertheless, previous research appears to be arbitrary and few researchers have examined the influence of consumer perceptions of branded products on the formation of the consideration set despite the fact that a number of academics have called for research in this area.

Recognising the deficiency in these two research areas, this thesis attempts an investigation of the determinants of the two crucial stages – consideration set and purchase intention of the consumer choice process in the context of non-deceptive counterfeiting. To achieve this aim, the present research adopted a combination of qualitative research (focus group) and quantitative research (individual interview survey) and provides a detailed examination of consumers' perceptions of both the counterfeit and original branded products studied, as well as their explanatory power on the selected consumer choice processes.

This research suggests that there are certain differences in the kinds of determinants of the same stage of the consumer choice process across different versions of a brand. There also exist some differences in the kinds and numbers of determinants of the consideration set and the purchase intention towards one brand. Nevertheless, the brand personality appears to be significant across all regression models. Generally, it plays the dominant role in the formation of the consideration set and consumer purchase intention. Consumers are more likely to evaluate more criteria in the process of consideration than at the purchase intention stage. This research contributes a more comprehensive understanding of determinants of the consumer choice processes in a more complex context than was previously available, enriches the branding theory, suggests a more sophisticated use of Aaker's (1997) brand personality scale, develops a new measurement scale for use in the study of multiple brands, recommends a more comprehensive data analysis process and proposes possible directions for further research.

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‘PhD has never been an easy journey. If it is easy, it is not a PhD.’ If anyone asks me who said this, I can provide a list of Doctors who made almost this identical statement while I was complaining about the struggles, loneliness, hopelessness and stress I encountered in the journey in pursuit of a PhD. Frankly speaking, as a person who is seeing the light at the end of the tunnel, I cannot agree more with this apparently very plain and simple, but actually very meaningful, claim. Put more bluntly, it might be the case that only people who have gone through the entire journey know what this simple sentence means. It is constant hard work. By hard work, I really mean that it is more than a full-time job which requires a person like me (not very bright anyway) to work more than six days a week the whole year round, with no holiday, no social life, no time for cooking, no...for three years. You will be put off by even thinking of it.

Doing a PhD is hard, for sure. In my case, believe it or not, I see it (the last three years) as the hardest time in my life. As such, without full support from people around me, I would not have been able to succeed. I have been too busy to acknowledge people’s support and assistance over the last three years. Now, coming to the final stage of the whole PhD process, I am really ready to express my sincere gratitude to these kindest of people.

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# **Chapter 1   Introduction**





## Chapter 1 Introduction

### 1.1 Introduction

The purpose of the present chapter is to provide an introduction and overview of the current study as a whole. In so doing, it will make clear both the imperative and rationale for the study, and introduce the means by which this research will be prosecuted.

To achieve this aim, the chapter has six main objectives: a full description of the identified research problems based on an intensive research literature review; an outline of the overall aims and objectives of the study; an outline of the research assumptions and research scope; a brief description of the main research methodology; a brief discussion of the significance of this research; and the overall structure of this thesis.

The organisation of this chapter closely follows the objectives of the chapter. The first two sections focus on reporting the core literature in the study of counterfeiting and consumer choice process related issues, with the identified research gaps being reported at the end of each section. Based on the identified research problems, the research aim, as well as research objectives, are then generalised and reported in a brief format. Following this, the key issues related to research methodology are reported. This part focuses on a discussion of the justification for the use of a combination of qualitative and quantitative research methods. Next the main theoretical and methodological contributions of the current research are presented. This section highlights the significance of the present study.

The last objective of this chapter is to be achieved by signalling the purpose and form of each of the following chapters in turn, and providing an indication of the chronology, content and structure of the study. Key issues covered by each chapter are discussed briefly with the aim of providing the reader with the key content of each individual chapter, as well as demonstrating the connections and logic of this organisation. In offering this brief overview, the present chapter is chiefly concerned with putting forward an introduction to the study and making some preliminary considerations. The chapter finishes with a brief summary.

## 1.2 Literature Review of Counterfeiting and Identification of the Research Gap

Counterfeiting has existed for a long time, yet it mushroomed only in the 1970s (Harvey and Ronkainen 1985). Counterfeiting is regarded as a civil offence, and is also considered as a criminal offence in some countries (Bush et al. 1989; Hopkins et al. 2003), for example, the U.S. and the U.K. As counterfeiting practice is illegal, explicit data on the volume of such trade is not available. However, it is estimated that the value of counterfeit goods in the world market grew by 1100% between 1984 and 1994 (Blatt 1993; Carty 1994), whilst the International Chamber of Commerce states that it accounts for 8 per cent of world trade (Freedman 1999). No product categories are left unscathed (Shultz II and Saporito 1996). It is clear that counterfeiting has become a significant economic phenomenon.

In general, counterfeiting is regarded as a serious economic, social, and political problem. It affects consumers' confidence in legitimate products, destroys brand equity and companies' reputations (Wilke and Zaichkowsky 1999), causes loss of revenues (Grossman and Shapiro 1988a, b; Bush et al. 1989), increases costs associated with trying to contain infringement, impacts on hundreds of thousand of jobs (Bamossy and Scammon 1985), and threatens consumer health and safety (Grossman and Shapiro 1988a; Chakraborty et al. 1996; Cordell et al. 1996; Tom et al. 1998). Counterfeiting has emerged as a major headache for global marketers (Blatt 1993; Sweeney et al. 1994).

In contrast to this general view, however, Givon et al. (1995) and Prasad and Mahajan (2003) suggest that the diffusion of the legitimate software can benefit from the 'shadow diffusion' of the counterfeit version. Furthermore, Grossman and Shapiro (1988a) argue that whilst on one hand counterfeits of status goods impose a negative impact on consumers' evaluation of genuine items, as counterfeits degrade the status associated with a given label, while on the other hand counterfeits allow consumers to unbundle the status and quality attributes of brand-name products, and alter the competition among oligopolistic trademark owners. Grossman and Shapiro (1988b) report that counterfeits may raise or lower national and global welfare, depending on the trading circumstances of the home country. They suggest that in the case of a fixed number of domestic firms, the existence of counterfeits would cause both national and global welfare to rise, since it is likely that brand-name producers would be forced to



raise their quality in an effort to battle counterfeiters. However, the existence of counterfeits will lower national and global welfare if the country allows free entry to domestic firms. These analyses once again highlight the complexity of counterfeiting and the caution people should have in view of the effects of counterfeits.

During the last couple of decades, counterfeiting has attracted more and more research interest from academics. A closer look reveals that most of the discussions have focused on the general situation of counterfeiting and legal issues related to counterfeits (e.g. Bikoff 1983; Harvey 1987; Roberts 1985; Bamossy and Scammon 1985; Globberman 1988; Chaudhry and Walsh 1996; Nill and Schultz II 1996; Wilke and Zaichkowsky 1999; Lai and Zaichkowsky 1999; Chow 2000; Stone 2001), and looked into strategies for curbing counterfeiting (e.g. Harvey 1987; Bush et al. 1989; Olsen and Granzin 1992; Shultz II and Saporito 1996; Delener 2000; Green and Smith 2002). Some studies examined impacts of counterfeit products (e.g. Givon et al. 1995; Prasad and Mahajan 2003; Grossman and Shapiro 1988a, b), whilst others investigated consumer-related issues (e.g. Bloch et al. 1993). It is appreciated that there is a need to examine counterfeiting from the consumers' perspective. A few academics (e.g. Bloch et al. 1993; Wee et al. 1995; Penz and Stöttinger 2003) called for further investigation of consumer behaviour and counterfeits.

Previous research into the study of consumer behaviour and counterfeiting has tried to search for answers to questions such as what consumers' views about counterfeits are (e.g. Bamossy and Scammon 1983; Nia and Zaichkowsky 2000), do consumers purchase counterfeits or not (e.g. Bloch et al. 1993; Tom et al. 1998; Wee et al. 1995; Phau et al. 2001), who buys counterfeits (e.g. Phau et al. 2001) and why consumers purchase counterfeits (e.g. Bloch et al. 1993; Wee et al. 1995; Albers-Miller 1999). In addition, most recently, cross-cultural study has begun to attract some attention from researchers (e.g. Bian and Veloutsou 2006; Gentry et al. 2006; Harvey and Walls 2003).

Despite all the aforementioned works, it appears that the study of counterfeits from brand level is almost untouched; consumers' perceptions of counterfeit branded products (CBP) as opposed to original branded products (BP) is unknown; and modelling consumer behaviour from a brand perspective in the context of non-deceptive counterfeiting is unexplored.

Counterfeiting has been defined in many ways by both researchers and practitioners. This research demonstrates that misuse and misunderstanding of this terminology appears to be common in previous research. Although, by definition, counterfeiting, imitation and piracy are distinct practices, some researchers tend not to differentiate these terms in their works. This author argues that not only are these three terminologies defined differently literally, but also that they possess distinguishable legal responsibility. Thus, it is necessary to have a clear boundary to the concept of counterfeiting before any investigation is carried out by researchers (Phau et al. 2001; Hoe et al. 2003). In this study, counterfeit products are considered to be “those bearing a trademark that is identical to, or indistinguishable from, a trademark registered to another party and infringes on the rights of the holder of the trademark” (Scrivener Regulation). This definition is consistent with the views of both practitioners and researchers, is widely adopted by previous researchers (e.g. Bamossy and Scammon 1985; Grossman and Shapiro 1988a, b; Kapferer 1995a; Chaudhry and Walsh 1996; Bian and Veloutsou 2004, 2006; Veloutsou and Bian 2005), and fits the studied branded products of this research well.

Consumers are not always deceived when they are involved in counterfeiting transactions. Accordingly, Grossman and Shapiro (1988a) classify the practice whereby consumers knowingly purchasing counterfeit products as non-deceptive, whilst unwitting purchases are classified as deceptive. This research believes that Grossman and Shapiro’s (1988a) classification of counterfeiting is not exhaustive. The scenario, where consumers are not quite sure whether what they purchase is counterfeit or a genuine branded product is not included in either non-deceptive counterfeiting or deceptive counterfeiting. The current research labels this scenario as ‘blur counterfeiting’. In this study, the focus is on non-deceptive counterfeiting, since only under these circumstances can consumers make conscious purchase decisions on counterfeits.

### 1.3 Literature Review of Consumer Choice Processes and Identification of the Research Gap

According to the dynamic choice process model (Shoker et al. 1991), consumer decision-making concerning brand choice is a two-step process. These two steps are the



formation of a consideration set and the final choice. Consumers tend to consider a subset of the alternatives from the awareness set during the formation of the consideration set (Wu and Rangaswamy 2003; Lawrence and Garber Jr. 1995), either by selected memory or stimulus cues or both (Bettman 1979; Lynch Jr. and Scrull 1982). The consideration set helps simplify purchasing decisions, and has significant implications for the marketing strategy and the allocation of marketing resources (Krieger et al. 2003).

Consumers typically evaluate brands that pass into their consideration sets because they expect that the products will perform well (Nedungadi 1990). Research has shown that consideration effects have an important influence on consumer choice (Roberts and Lattin 1991; Hauser and Wernerfelt 1990; Nedungadi 1990). Hauser and Wernerfelt (1990) argue that 70% of the variance accounted for in choice is explained by consideration. Since inclusion of a product in a consideration set is often a necessary precondition for choice (Howard and Sheth 1969), unless a product is included in the consideration set, it will not be chosen (Nedungadi 1990).

Aspects related to the formation of a consideration set have attracted attention; for example, how consumers narrow down the alternatives. Previous research findings suggest that in the context of a stimulus-based choice situation, advertising (Mitra 1995; Baker et al. 1986), pioneering products (Kardes et al. 1993; Shapiro et al. 1997), packaging (Garber Jr. 1995), brand familiarity (Baker et al. 1986), in-store display activities and features advertising (Mehta et al. 2003), goal-conflict and goal-ambiguity (Ratneshwar et al. 1996), strength of association between the brand and the choice category (Posavac et al. 2001), involvement and consumer sensitivity of type II error (Chakravarti and Janiszewski 2003), and incidental exposure to an advertisement (Shapiro et al. 1997), all influence the formation of the consideration set. Nedungadi (1990) focuses on memory-based choice situations and suggests that brand accessibility (ease of retrieval) and external cues (e.g. brand organization in memory and brand primes) are two potentially important factors in the formation of the consideration set. Desai and Hoyer (2000) also investigate memory-based choice situations and reveal that the familiarity of usage occasion and usage location both have an impact on consideration set stability, size and marginal variety.

As can be clearly seen, study in this area is still very much arbitrary and there is no obvious pattern in terms of research findings on perspectives from which the previous research was conducted. Roberts and Lattin (1997) call for research to study the nature of the relationship between product attributes and consideration. Interestingly, it appears that this area has been largely ignored to date. In particular, little attention has been devoted to an investigation of the effects of consumers' perceptions of product/brand related characteristics on the formation of a consideration set, leaving unanswered the question as to how difficult it might be for a brand/product to enter or remain in a consideration set (Desai and Hoyer 2000; Roberts and Lattin 1991). Furthermore, what the determinants of the formation of a consideration set and purchase intention in the context of non-deceptive counterfeiting are, is something that has not yet attracted the attention it deserves.

#### 1.4 The Research Aim and Objectives

Building on the identified research problems that limited research has been undertaken into consumers' perceptions of counterfeit products and their effects on consumer choice from the brand level (Bloch et al 1993; Wee et al. 1995; Penz and Stöttinger 2003) and how consumers narrow down alternatives to form a consideration set (Chiang et al. 1999; Robert and Lattin 1997) which thereafter leads to purchase behaviour, this study aims to achieve an in-depth understanding of consumers' perceptions towards non-deceptive CBP as opposed to BP, and its impact alongside other selected factors (product involvement, self-assessed product knowledge, and four demographic variables) on consumer choice processes in the context of non-deceptive counterfeiting.

In order to achieve the research aim, this study will be carried out with the follow objectives (in the context of non-deceptive counterfeiting).

- To explore the influences of variables related to consumer characteristics and self-assessed consumer product knowledge, product involvement of the studied product categories, and consumer perceptions of CBP on the likelihood of consideration of CBP.
- To explore the influences of variables related to consumer characteristics and self-assessed consumer product knowledge, product involvement of the studied product categories, and consumer perceptions of BP on the likelihood of consideration of BP.



- To explore the influences of variables related to consumer characteristics and self-assessed consumer product knowledge, product involvement of the studied product categories, and consumer perceptions of CBP purchase tendency of CBP.
- To explore the influences of variables related to consumer characteristics and self-assessed consumer product knowledge, product involvement of the studied product categories, and consumer perceptions of BP on purchase tendency of BP.

### 1.5 Assumptions of This Study and Research Scope

- This research assumes that consumers do form a consideration set in the process of decision making.
- This research only examines consumer behaviour in the context of non-deceptive counterfeiting, but is cognizant that there are other kinds of counterfeit practice (e.g., deceptive counterfeiting and blur counterfeiting).
- This research only investigates consumers' perceptions of luxury branded products but not generic products, even though, researchers claim that to some extent generic products can also be counterfeited.
- This research is conducted in the UK.
- This research only investigates the influence of consumers' perceptions of the studied CBP and BP on choice processes in general, but does not put them into a specific usage situation. However, the researcher is fully aware that the usage situation may have a great impact on consumer consideration and purchase intention.
- This research uses a stimulus based approach. Examples of the counterfeit branded products and pictures of the genuine branded counterparts are presented to participants.

### 1.6 Research Methodology

The present research uses both qualitative and quantitative research methods in order to enhance the robustness of the current research design and to improve the level of reliability of the research findings. More specifically, the qualitative research method (focus group discussion) is adopted in order to generate the most important and relevant items related to brand image and the language that consumers use to describe their perceptions of the investigated luxury brands. It serves construction of the research instrument. The interview survey is used to collect data for the principal study.

The research instrument used in this study is developed by the researcher. Apart from the brand image measure, the other measures are all adopted from previous research with necessary adaptation. The research instrument goes through three phases before it reaches the survey respondents. These phases are the qualitative study (five focus group discussions), the stage one piloting (testing of the research instrument using three experts) and the stage two piloting (testing of the research instrument on 40 typical respondents). All of these efforts assist in achieving an accurate and practical questionnaire.

Driven by the research objectives, an intensive literature review is conducted. A set of hypotheses developed based on previous literature. The research hypotheses are tested through examination of first-hand data collected by trained fieldworkers using an individual interview survey method in four randomly selected supermarkets in Glasgow. In total, 430 questionnaires were collected. Out of the 430 collected questionnaires, 321 are usable, giving a usable rate of 76.5 percent.

The collected data is analysed using SPSS and R statistical analysis software (R-Commander package only). The use of R-Commander is required due to the severely skewed distribution nature of the response variables related to certain brands or certain versions of a brand. Specifically, R-Commander is used to transform skewed data. Before beginning the testing of the hypotheses, reliability and validity of all utilised measures are carried out. Appropriate actions are taken to clean the raw data when it is necessary in order to secure an acceptable level of reliability. A series of tests on the basic regression assumptions are carried out before running the regressions. These tests include detection of multicollinearity, non-constant variance and break of normality. The main statistical techniques employed in this research are content analysis, descriptive statistics, frequency statistics, factor analysis, regression analysis, and Box-Cox and Box-Tidwell for data transformation.

### 1.7 Significance of This Research

This piece of research is designed to contribute to both theory and practice, as required for the degree of Doctor of Philosophy. Some of the contributions that are offered by this study are outlined briefly as follows.



### 1.7.1 Academic Contributions

It is argued that this research will contribute to both the literature of consumer choice process and the study of counterfeiting in several ways. Firstly, this research contributes to the consumer choice process literature and the literature in the study of counterfeiting phenomenon by establishing the determinants of the formation of a consideration set and purchase intention in the context of non-deceptive counterfeiting. Consumers do knowingly purchase counterfeits, as has frequently been reported, and consumer demand for counterfeits is regarded as one of the main reasons why counterfeiting is booming despite all the anti-counterfeiting efforts by the parties involved. Reasons as to why consumers knowingly purchase counterfeits remain unclear. There is limited work exploring this issue from an individual brand perspective. Meanwhile, the study on determinants of the formation of the consideration set is also scarce. The current research fills these two identified literature gaps

Secondly, this research provides empirical support to Plummer's (1985, 2000) brand image composition proposition. Brand image is regarded as a multi-dimensional construct. Plummer (1985, 2000) proposes that product attributes, perceived purchase benefit/consequence, and brand personality compose the brand image. This notion remained theoretical. No empirical support for this has been in existence until the present research. In addition, this research also suggests that Plummer's (1985, 2000) brand benefit notion might be too conservative as it only takes into account functional benefits. The research results reveal that in addition to the functional benefits, consumers also perceive image benefit (a combination of experiential benefits and symbolic benefits). These findings undoubtedly enrich the brand image theory.

Thirdly, this research challenges the traditional view which claims that attitude influences consumer decision making. This research argues that consumers' perceptions of branded products have a significant role to play in terms of influencing consumer decision making. This is supported by the research findings. This research indicates that any research into counterfeiting and consumers should never ignore brand effects on consumer behaviour.

Fourthly, this study investigates the universal applicability of Aaker's (1997) brand personality scale. The finding from the preliminary study reveals that the universal

applicability of the tested scale should be viewed with caution. The majority of the items included in Aaker's scale appear to be irrelevant to the studied brands. This finding is consistent across two versions of all four selected brands. Some items included in Aaker's (1997) scale appear to be difficult to understand for participants in Glasgow.

Fifthly, in terms of methodology, in order to shorten the research instrument, the researcher developed a new measure technique. The newly-developed scale combines the Liker Scale with the repertory-grid technique. This new technique retains all advantages of both. In addition, it helps to avoid the occurrence of respondents "haloing" their response toward brands that they like. The practicality and reliability of this new scale has been tested and supported by this research. By using the new scale, the length of the research instrument is reduced almost by half. This newly developed measure scale can be applied in study of multiple products or brands.

Sixthly, in terms of data analysis, this research goes beyond the conventional logistic regression and loglinear techniques commonly used by previous researchers when facing the broken normality problem. R-Commander's Box-Cox and Box-Tidwell data transformation functions are applied for the first time in analysing counterfeiting related data. In the same vein as Cordell et al. (1996), this research addresses the point that conventional OLS and logistic regression statistics should be used with caution, in particular when researchers are analysing behavioural data related to the study of counterfeits.

### 1.7.2 Implications

The research findings not only fill the identified gaps relating to both consumer choice process literature and that of counterfeiting literature, but also provide practitioners and policy-makers with a base from which they can begin to work out an effective way to curb counterfeits. The discussions regarding the managerial implications are based closely on the research findings. The main implications are generalised and presented using bullet points, as follows:

- Owners of original luxury brands should highlight the difference between the brand personality of the original branded products and the counterfeit versions.



- Owners of original luxury brands could emphasise the distinctive image benefits that the original branded luxury goods can bring to their consumers, while at the same time stressing the negative image benefits related to counterfeits.
- To emphasise the functional benefits of the original function-oriented luxury branded products will increase sales of these products, but not necessarily contribute to anti-counterfeiting. Efforts should not be made to highlight the functional benefits related to fashion-oriented luxury brand products.
- Owners of original luxury brands should take on the task of directing consumption by emphasising the importance of consuming genuine products and being genuine and stressing the benefits and good sense related to going for one which is really good, rather than for 10 crappy ones.
- Policy makers could help to curb counterfeits by educating the public about the environmental concerns related to massive amounts of disposable goods.
- The marketers of the original luxury brands could consider carrying out differentiated marketing to target several market segments. The market should be segmented according to usage situations rather than consumer demographic profile. This device might only be worth implementing if counterfeits are taking a noticeable percentage of market-share and if consumers with higher levels of product knowledge and involvement appear to purchase counterfeits.
- Marketers of original luxury brands should be fully aware of both the determinants of the consideration set and purchase intention, and ensure that their marketing strategies fit in well with these determinants and monitor the change of the determinants on a regular basis.

### 1.8 Structure of the study

This study is presented in nine chapters, as illustrated in Figure 1.1. After identifying the research problems, outlining the research aim and objectives, reporting the research assumptions and research scope, presenting the research methods utilised to achieve the research objectives, and justifying the significance of the study in the introductory chapter, this thesis will proceed with a review of the relevant literature in the study of counterfeit phenomena (Chapter 2) and consumer decision making processes (Chapter 3). This is to establish the significance of this study as well as to provide its theoretical foundation. Consequently, it justifies the theoretical contributions that this study can

provide to the literature gaps of consumer choice process and counterfeiting study, in particular in the context of non-deceptive counterfeiting.

Chapter 2 provides the research context for the present research, an intensive literature review on the study of counterfeiting, and detailed discussion about the identified research gap. This chapter is organised around four arguments. First, it is argued that counterfeiting, imitation and piracy are different literally and practically as well as bearing distinguishable legal responsibilities. Therefore, researchers should draw a clear boundary between them before they carry out any research in related areas. Second, this research challenges Grossman and Shapiro's (1988a) counterfeiting categorisation. It is suggested that the two categories (non-deceptive and deceptive counterfeiting) proposed by these authors are not exhaustive. Based on a live scenario which appears to be ignored by Grossman and Shapiro (1988a), this study proposes the third category of counterfeiting practice, namely 'blur counterfeiting'. Third, in line with previous works, the current study argues that consumer demand for counterfeiting is one of the main reasons for the spectacular spread of counterfeits. Fourth, it is claimed that little work has investigated counterfeiting from a brand perspective, consumers' perceptions of CBP and BP are unexplored, and there are few works which have modelled how consumers' brand perceptions influence consumer choice processes. The fourth argument is developed based on a thorough review of the literature in the study of consumers and counterfeits, and represents the identified research gap in the study of counterfeiting. It also implies the theoretical significance of the current research.

Chapter 3 provides the theoretical foundation of this research, an extensive review of the literature in the study of the consideration set concept, and the research problem in relation to the study of consumer choice process. This study first differentiates the consumer decision making process from the consumer choice process by arguing that each of the process possesses distinguishable subjects. It is claimed that consumers are the subjects of the consumer decision making process, whereas brands/products are the subjects of the consumer choice process. Research related to the first process examines the process undertaken by consumer before they come to an end choice. Research related to the consumer choice process investigates the process that brands/products go through before they are chosen by consumers. The distinction this research discovered



assists in being able to draw a clear literature review boundary and justifies the literature review focus of this chapter.

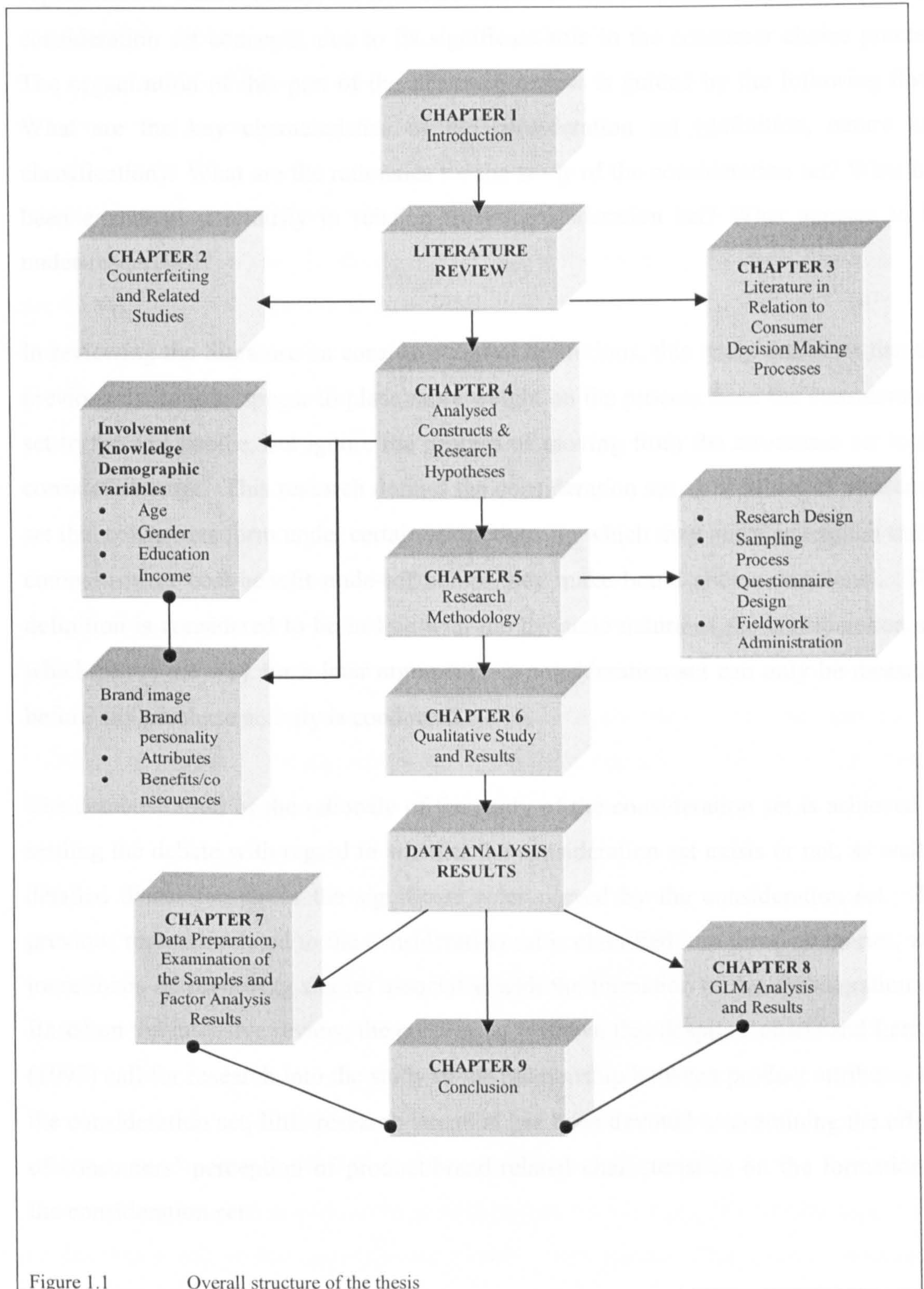


Figure 1.1 Overall structure of the thesis



After a detailed discussion of the pros and cons of the Individual Choice Model and the Model of Consumer Evaluation and Choice, it was decided that the Individual Choice Model forms the theoretical foundation of the present research, as it appears to be more sophisticated. Subsequently, the literature review in this chapter mainly concentrates on consideration set concepts, due to its significant role in the consumer choice process. The organisation of this part of the literature review is guided by the following flow: What are the key characteristics of the consideration set (definition, nature and classification)? What are the rationales for the study of the consideration set? What has been examined previously in relation to the consideration set? What appears to be under-researched?

In reviewing the literature on consideration set definitions, this study discovers that the previous definitions appear to place more weight on the process from the consideration set to the end choice, but ignore the process of moving from the awareness set to the consideration set. This research defines the consideration set as ‘a subset of awareness set that consumers form under certain restrictions, in which they make an explicit utility comparison or cost-benefit trade-off before they make brand choice decisions’. This definition is considered to be in line with the dynamic nature of the consideration set, which paves the way for a later argument – a consideration set can only be measured before any purchase activity is conducted.

The demonstration of the rationale of the study of the consideration set is achieved by settling the debate with regard to whether the consideration set exists or not, as well as detailed discussion about the significant roles played by the consideration set. The previous research related to the consideration set is classified into three categories, with more focus on reviewing studies associated with the formation of the consideration set. Based on the intensive review, the conclusion is drawn that despite Roberts and Lattin’s (1997) call for research into the study of the relationship between product attributes and the consideration set, little research attention has been devoted to examining the effects of consumers’ perception of product/brand-related characteristics on the formation of the consideration set.

The research aim was developed based on the integration of the identified research gaps in both counterfeiting-related literature and consumer choice process literature. Despite



the fact that choice is the final stage in the consumer choice process, it has been decided to replace the final choice with purchase intention in the research conceptual model. The justifications of this action are as follows. First, data on actual behaviour are unavailable. This is particularly true in study of consumer behaviour in relation to counterfeits. Second, in general, the relationship between purchase intention and purchase is positive and significant. Third, the concept of consumer purchase intention is the most widely used connotive measure in marketing effectiveness research.

Chapter 4 proceeds with a review of a wide range of literature related to determinants of consumer choice process. Based on this review of the literature, the factors influencing the formation of the consideration set and consumer purchase intention are identified and expounded. The identified factors are: product involvement, self-assessed product knowledge, demographic variables (age, gender, education, and household income) and consumers' perceptions of a certain brand. It is at this stage that the conceptual research model is formed.

Another focus of chapter 4 is on hypotheses development. Based on previous research, a set of hypotheses are developed at this stage, which suggest that consumers perceptions of CBP and BP are influenced by consumer self-assessed product knowledge and level of product involvement, and that likelihood of consideration and tendency of purchase of both counterfeit and original version of a brand is a function of these analysed variables.

Chapter 5 describes the research methodology in detail. The study relies principally on the quantitative method with the complement of a piece of qualitative research (presented in Chapter 6), which is used to assist in the construction of the research instrument used in the principal research. Therefore, the methodology used for the data collection for the principal research adheres to the quantitative method requirement. The choice of the studied brands and products is justified through reviewing relevant literature and discussion of available sources. The overall research design is illustrated, followed by a detailed discussion of sample design. In addition, this chapter endeavours to develop a robust and user-friendly research instrument. The research instrument development processes, problems identified through two piloting tests, and solutions to the listed problems are reported in detail. In order to reduce the length of the

questionnaire, a new scale has been developed by the researcher based on the well-known Likert scale and the Repertory-grid technique. Application of this new scale assists in reducing the research instrument almost by half, which can be considered a remarkable achievement.

Finally, issues concerning fieldwork administration are presented at the end of this chapter. Specifically, this research employed eight fieldworkers to conduct data collection. The eight fieldworkers were recruited by the researcher personally. They all received proper training before they were sent into the field. Justification for the use of touch and gaze techniques, appealing statements and incentives in data collection process are provided.

Chapter 6 is an extension of Chapter 5. Given its importance to the construction of the research instrument of this research, as well as the rich nature of this part of the research, it is reported separately as an individual chapter. More specifically, Chapter 6 focuses on the qualitative research organisation and presenting the focus group discussion results. This chapter serves to illustrate the robust and user-friendly requirements of the research instrument. The objectives of the qualitative study are to identify the criteria used by consumers to evaluate the studied brands, as well as to establish plain language/vocabulary that can be adopted in the research instrument. Four focus group discussions were used to collect data. The data collected is then analysed using the content analysis technique. Detailed results are presented.

Chapters 7 and 8 deal with data analysis issues and research results. Chapter 7 handles the issues related to the survey response, validity and reliability of the collected data, respondents' profile analysis, validity and reliability of measurements and computing values for new variables and generating factor scores. The statistical techniques adopted at this stage include descriptive statistics, binominal tests, one-sample statistics, factor analysis, Pearson correlation analysis, item-total correlation, Cronbach's coefficient alpha, and collinearity statistics.

Chapter 8 focuses on regression analysis and presenting regression results. A series of tests were conducted before running regression. These include tests of multicollinearity, normality, consistent variance and casewise diagnostics. To test the hypotheses



developed in Chapter 4, the method of generalised linear model is used to estimate regression equations across 4 brands and 2 versions of each brand incorporating the variables of product involvement, product knowledge, perceived brand image, and demographic variables (age, gender, education attainment, and household income). In the cases where the normality distribution assumption is severely broken, R Commander's super data transformation functions (Box-Cox and Box-Tidwell) are utilised. Both before and after data transformation regression results are reported, a decision is made on which equations are to remain for further interpretation and discussion. Interpretations of results and discussions are presented in detail in this chapter.

Finally, chapter 9 summarises the research results and provides a detailed discussion of the overall research findings. The research limitations and suggested areas for further research are presented. It also highlights the original contributions to theory and methodology that this study has made, as well as managerial implications for both marketers and policy makers.

## 1.9 Summary

This introductory chapter has sought to provide a description and brief explanation of the chronology and substance of the present study. It has conveyed the initial research problem, provided a rationale for the study, outlined the aim and objectives of the thesis, and provided an overview and chronological outline of the chapters through indication of the structure and sequence of the thesis. In so doing, the chapter has provided an account of the purpose, aim and objectives of the study, as well as how the objectives will be achieved.

## **Chapter 2   Counterfeiting and Related Studies**





## Chapter 2 Counterfeiting and Related Studies

### 2.1 Introduction

Counterfeiting is not a new business practice. However, it has expanded rapidly over the last few decades. Following the introduction section, the main body of this chapter starts off by drawing an overall picture of the counterfeiting phenomenon in relation to its development, scope, impact, producers and recipients. The counterfeiting situation in the UK is presented in detail in the third section, as this research is to be conducted in the UK. Section four provides a detailed discussion of a number of terminologies (counterfeiting/counterfeit product, imitation, and piracy). This research argues that misuse, misunderstanding and interchange of these terms appear to be common in previous studies, which has caused difficulties in terms of comparison of previous research findings. This section points out that under some circumstances, imitation, counterfeiting, and piracy were defined differently, whilst in some cases they were perceived as the same kind of practice. Therefore, to define the term counterfeiting is crucial for any study concerning counterfeits in order to avoid causing unnecessary confusion.

Based on the detailed discussion of the definitions of counterfeiting/counterfeit product, the definition adopted in this study is decided upon and reasons for the choice are provided in section five. In a response to the wide spread of counterfeits, anti-counterfeiting campaigns are on the agendas of supranational organizations, national governments and manufacturers. Issues related to anti-counterfeiting are reviewed in section six. Section seven discusses how counterfeits are classified and which categorisation this research focuses upon. Past research on the study of counterfeiting is reviewed in section eight. The review mainly focuses on studies investigating consumers and counterfeits. Principal research streams are illustrated in detail. The research problem is identified based on the detailed literature review and presented in section nine. The chapter ends with a brief summary.

The purpose of this chapter is to draw a full picture of counterfeiting from the perspectives of both counterfeiting as an economic phenomenon, and previous related

research. Thereafter, an obvious research problem is identified and a clear research scope drawn for the current study – non-deceptive counterfeiting in the UK.

## 2.2 The Counterfeiting Phenomenon: Development, Scope, Impact, Producers and Recipients

Although counterfeiting is currently a topic of keen global interest, it is hard to trace when it first began. Certainly, this phenomenon is not new. For example, counterfeit painting became so common in the late Ming Dynasty (1368-1644) in China that it was recorded that only one in ten paintings was estimated to be genuine (Clunas 1991). Counterfeiting was listed in an English statute of 1352 as one of the “seven heads of treason”, a crime punishable by hanging or burning at the stake. Reports of women being sent to the stake for counterfeiting coins can be found until the mid-1790s. American law extended the concept to product counterfeiting in the 1800s, but it had always been strict with currency counterfeiting. Comprehensive trademark legislation (the Trademark Act of 1870) was enacted in the United States in 1870. All this is evidence that counterfeiting has existed for several hundred years at least.

Although counterfeiting is not new, it had never been such a serious concern to national governments, supranational organizations and legitimate manufacturers until the 1970s. Harvey and Ronkainen (1985) state that counterfeiting has been a problem for a long time, yet it was only in the 1970s that it mushroomed. Indeed, it is estimated that the value of counterfeit goods in the world market has grown by 1100% since 1984 (Blatt 1993; Carty 1994). The International Anti-Counterfeiting Coalition estimates that counterfeit products accounted for \$200 billion in lost sales for United States companies in 1994, up from \$60 billion seven years previously (Chaudhry and Walsh 1996; Freedman 1999). Globally, the sales of counterfeit products are estimated to be about \$300 billion (Gentry et al. 2001; Chaudhry and Walsh 1996). The International Chamber of Commerce estimates that counterfeit products account for 8 per cent of world trade (Freedman 1999). It should be noted that, accurate records of the growth and magnitude of product counterfeiting are unavailable, since companies must estimate volumes on the basis of seizures made and sudden unexplained drops in their market. The same is true for industry organizations and regulatory authorities, who can only estimate the impact on total trade and the economy generally. However, these statistics,



despite their wide-ranging differences, imply that counterfeiting is growing rapidly and that the growth will continue.

The preferred targets of counterfeiters are products which carry a high brand image and require a relatively simple production technology, such as clothing, consumer electronics, media, cigarettes, watches and toys (International Anti-Counterfeiting Coalition 2003). However, counterfeiting no longer involves just currency (Anti-Counterfeiting Group Survey Report 2004) and highly visible branded consumer goods; the scale of counterfeiting has spread beyond this. Large scale counterfeiting has emerged in a variety of industries, including medical equipment, prescription drugs (Granzin 1992; Bikoff 1983; Diamond 1981; Schwartzman 1976), agricultural implements (Harvey 1988), auto parts (Bikoff 1983; Fletcher and Wald 1987), sports equipment (Gentry et al. 2001), high-technology consumer electronic products (Grossman and Shapiro 1988a) and even aeronautical instruments and military parts. Counterfeit transistors have been discovered among parts destined for use in U.S. space shuttle tests (Bikoff 1983; Roberts 1985). Indeed, no product categories are left unscathed (Shultz II and Saporito 1996). The spectrum of goods being counterfeited is limited only by the outer bounds of the human imagination.

Counterfeiting has an effect on four involved communities, consumers, legitimate manufacturers, brand owners and society as a whole. In general, it is regarded as a serious economic, social, and political problem. It affects consumers' confidence in legitimate products, destroys brand equity and companies' reputations (Wilke and Zaichkowsky 1999), causes loss of revenues (Grossman and Shapiro 1988a, b; Bush et al. 1989), increases costs associated with trying to contain infringement, impacts on hundreds of thousand of jobs (Bamossey and Scammon 1985), and threatens consumer health and safety (Grossman and Shapiro 1988a; Chakraborty et al. 1996; Cordell et al. 1996; Tom et al. 1998). Moreover, in some cases the financial benefit generated from counterfeits might be used as financial support to terrorism (Playle 2003). Counterfeiting has emerged as a major headache for global marketers (Blatt 1993; Sweeney et al. 1994).

In the Far East, product counterfeiting takes place on a wide scale in China, Taiwan, South Korea, Singapore, Indonesia and Malaysia, but it is by no means restricted to the

Far East. About 50% of counterfeit products come from the Far East, 25% from New York and the remainder from other countries (Delener 2000). The U.S. is not only a main recipient of counterfeits, but also a significant counterfeit generator. US industries estimated that they suffered losses of US\$5.53 billion - more than one-third of global losses – as a result of piracy of copyrighted products in Asia (Ang et al. 2001), whereas Asia accounts for more than one-third of the losses arising from counterfeiting (Asian Wall Street Journal 1999).

### 2.3 Counterfeiting in the UK

Unlike the U.S. which has proven to be not only a major victim of IPR infringement, but also a major source of counterfeit merchandise (Nill and Shultz II 1996), the UK is low on the list of producers of counterfeits; however, it is perceived to be one of the main recipients of counterfeits in the world (Kay 1990). In 2001, the Anti-Counterfeiting Group (ACG) estimated that the cost to the UK economy alone of counterfeit goods was at least £2.8 billion in 2001; this figure had increased to about £10 billion in 2003 (ACG Survey Report 2004). It is no longer just luxury brands that are at stake, but also a wide array of consumer goods including such products as soap powder, spirits, food, pharmaceutical products (Stewart 2003), prints (Key 1990) and software (Chaudhry and Walsh 1996).

In the UK there is evidence that the consequences of counterfeiting to the legitimate producer include not only lost revenues, but also the high cost of combating infringement. For example, Marks and Spencer's invested in a 'smart tag' in order to make it easier to separate the genuine from the counterfeit (Stewart 2003). Counterfeiting also causes about 4100 job losses per annum in the UK (ACG Survey report 2004). It is reported that a Scottish woman died after drinking fake vodka in 2003 (ACG Survey Report 2004). Furthermore, recent investigations initiated by UK customs officials seem to confirm that counterfeiting and piracy are linked to drugs and terrorist networks (Playle 2003).

A stricter IPR law against counterfeiting is now enforced in the UK, based on the 2002 Act that came into force in November 2002. The 2002 Act (which amends the Copyright, Designs and Patents Act of 1988 and the Trade Marks Act of 1994) tightened up the regulation of copyright and trademark infringement in an effort to



reduce the losses being sustained by British businesses as a consequence of counterfeiting and piracy. The new maximum penalty for these offences for conviction on indictment is an unlimited fine and/or up to 10 years in prison to reflect the seriousness of these crimes (The Patent Office 2002).

Regardless of the damage caused by counterfeiting and the strengthening of law enforcement, a survey commissioned by the Anti-Counterfeiting Group demonstrated that in 2003, about one-third of consumers would knowingly purchase counterfeit goods if the price and quality of the goods were right, and 29% of subjects saw no harm in product counterfeiting so long as the products did not put the purchaser at risk (ACG Survey Report 2004). These results are in line with previous research findings (Bloch et al. 1993; Wee et al. 1995; Tom et al. 1998; Phau et al. 2001).

### 2.4 Counterfeiting/Counterfeit Product, Imitation, and Piracy

This section deals with issues related to counterfeit definition. The current situation and the problems caused by lack of a fixed definition are discussed. A number of terminologies (counterfeit, imitation, and piracy) used by previous researchers in studies of the counterfeiting phenomena are analysed, with the aim to differentiating them literally, as well as demonstrating that misunderstanding and misuse of these terms have occurred in previous research. Finally, a definition that is considered suitable and is commonly accepted by prior researchers is chosen for the current research.

#### 2.4.1 The Overall Situation

As noted above, counterfeiting has been a concern for national governments and legitimate manufacturers for a long time. Nevertheless, there is no commonly accepted definition of this phenomenon. Consequently, researchers have been using counterfeiting, counterfeit product, imitation, and piracy interchangeably. A generally acceptable generic definition and a number of characteristics are proposed by the General Agreement on Tariffs and Trade (GATT): The intent to wrongfully benefit through deceit from the efforts of a firm to establish and maintain a product or corporate image with the consumer or the public at large. This statement indicates that counterfeiting is driven by profit, and that the practice is regarded as deceitful, and is wrong. The GATT definition of counterfeiting is however far too general, which raises the following questions: a) What are the relationships between trademark, copyright and

patent? b) What are the differences between counterfeiting, imitation, piracy and passing off? Unfortunately, no fixed answers to these questions have been found so far. Therefore, it is not surprising that researchers have different understandings of the nature of counterfeiting.

#### 2.4.2 Analysis of Definitions of Investigated Terminologies

The majority of definitions/understandings of counterfeiting, imitation, and piracy which have appeared in previous studies of counterfeiting will be listed. In order to draw a clear picture, they are presented in three tables. These three tables have the same format, with each of them containing five major components: terminology, definition, original source, cited by and defined by. “Terminology” refers to the phrase used in the original source, either articles or law dictionaries. In order to avoid any possible misinterpretation from editing, the expression(s) was (were) copied directly from the original works of previous researchers and pasted into the three tables. The “original source” represents the source of the definition. The “cited by” and “defined by” refer to whether the definition is defined by the author or cited from other sources. One point for clarification is that it is assumed that the definition is given by the author(s) so long as the author(s) did not state where it is originally from. As it is the intention to argue that people hold different understandings with regard to “counterfeiting” and “counterfeit products”, but do not searching for correct answers to these definitions, therefore, some expressions that are displayed in the three tables might not necessarily be held as proper definitions. The principle, insofar as it represents the author’s understanding of the relevant terminology, is displayed in the table.

Table 2.1 is a review of the definition/understanding of counterfeiting/counterfeit product adopted by previous researchers. Counterfeiting is categorised into commercial counterfeiting and monetary counterfeiting. Commercial counterfeiting is the counterfeiting of a brand name or trademarked merchandise. A counterfeit is a spurious mark that is identical with or is substantially indistinguishable from a registered mark (Bamosy and Scammon 1985). Monetary counterfeiting refers to forged money (see Black’s Law Dictionary, 5<sup>th</sup> Edition). In fact, this usage can be traced back to 1650 (Scott 1953). Generally speaking, before commercial counterfeiting burgeoned in the 1970s, counterfeiting was mainly used to refer to the production of fraudulent money.



Table 2.1 Definitions of counterfeiting counterfeit products

Terminology		Definition	Original Source	Cited by	Defined by
1	CP	CPs are those bearing a trademark that is identical to, or indistinguishable from, a trademark registered to another party and infringes the rights of the holder of the trademark.	Scrivener Regulation	Chaudhry and Walsh 1996	
2	C'ing	The unauthorized use of a registered trademark on a product that is identical or similar to the product for which the trademark is registered and used	US International trade Commission 1984	Grossman and Shapiro 1988a	
3	C'ing	The intent to "wrongfully benefit through deceit from the efforts of a firm to establish and maintain a product or corporate image with the consumer or the public at large.	General Agreement of Trade and Tariff	Grossman and Shapiro 1988b	
4	CP	A CP is designed to "be like" the original and provides consumers with a less expensive copy	Consumer Evaluations of Brand Imitations		d'Astous and Gargouri 2001
5	C'ing	C'ing refers to the mere reproduction of a trademark.	French law	Kapferer 1995a	
6	CP	A CP is one which the manufacturer produces with the intention of deceiving the consumer by leading buyers to believe that they are purchasing the genuine article.	Brand Imitation: do the Chinese Have Different Views?		Lai and Zaichkowsky 1999
7	C'ing	C'ing refers to the unauthorized copying of the content of a fixed medium of expression, such as films, musical recordings, and computer software.	Enforcement against Counterfeiting in the People's Republic of China		Chow 2000
8	C'ing	C'ing refers to a "direct" copy.			Wilke and Zaichkowsky 1999
9	C'ing	C'ing is by definition: theft.	Nia and Zaichowsky 2000, Nill and Schultz 1996	Green and Smith 2002	
10	C'ing	C'ing – the production of copies that are identically packaged including trademarks and labelling, copied so as to seem to a consumer the genuine article.	Kay, 1990	Wee et al 1995	
11	C'ing	C'ing is the unauthorized production of goods that are legally protected by trademarks, copyrights or patents.	Protecting Intellectual Property: Strategies and Recommendations to Deter Counterfeiting and Brand Piracy in global Markets		Shultz II and Saporito 1996
12	C'ing	C'ing can be described as the fraudulent practice of affixing a false trademark to a product.	Product Counterfeiting: Consumers and Manufacturers Beware		Bamossey and Scammon 1985
13	C'ing/CP	Commercial counterfeiting is the counterfeiting of brand name, trademarked merchandise... A counterfeit is a spurious mark which is identical with or is substantially indistinguishable from a registered mark.	The Lanham Act, Section 1127	Bamossey and Scammon 1985	
14	C'ing	Counterfeit: to forge: to copy or imitate, without authority or right, and with a view to deceive or defraud, by passing the copy or thing forged for that which is original or genuine. Most commonly applied to the fraudulent and criminal imitation of money or securities.	Black's Law Dictionary 5 <sup>th</sup> Edition		
15	CP	There are four types of counterfeits: <ul style="list-style-type: none"> <li>• True CPs that look as much like the original as possible and use the same brand name</li> <li>• Look-alikes that duplicate the original and bear a different name, but not a private label of a branded industrial product</li> <li>• Reproductions that are not exact copies</li> <li>• Unconvincing imitations (Harvey, 1987)</li> </ul>	Assessment of the Impact of Counterfeiting in International Markets: the Piracy Paradox Persists		Chaudhry and Walsh 1996
16	CP	There are two kinds of counterfeits: deceptive and non-deceptive counterfeiting.	Foreign Counterfeiting of Status Goods		Grossman and Shapiro 1988a
17	C'ing	Product counterfeiting, commonly defined as the unauthorized copying of trademark or copyrighted goods, harms legitimate producers through lost sales.	Consumer "Accomplices" in Product Counterfeiting		Bloch, Bush and Campbell 1993
18	CP	Product designed to imitate a genuine product, typically those associated with a particular trademark or brand name. It is made to resemble, as closely as possible, the authentic product, with the objective of deceiving the consumer and defrauding the producer.	Pricing Strategy and Practice: Pricing and Pirate Product Market Formation		Papadopoulos 2004
19	CP	CPs are those bearing a trademark that is identical to, or indistinguishable from, a trademark registered to another party and infringe the rights of the holder of the trademark.	Scrivener Regulation	Bian and Veloutsou 2004, 2005, 2006	

Note: C'ing = Counterfeiting; CP = Counterfeit

Some researchers believe that commercial counterfeiting, by its nature, is theft with an aim to deceive consumer (e.g. Green and Smith 2002), and is therefore illegal, whereas other consider that commercial counterfeiting to be more complicated than is thought. These researchers classify counterfeiting into different categories (e.g. Chaudhry and Walsh 1996; Grossman and Shapiro 1988a). According to these authors, some categories are illegal, but some are legal. Table 2.1 also shows that in some cases, researchers do not distinguish between counterfeiting, imitation and copyright infringement (e.g. Papadopoulos 2004; Chow 2000; Chaudhry and Walsh 1996; Bloch et al. 1993).

Table 2.2 Definitions of imitation

Terminology		Definition	Original Source	Cited by	Defined by
1	Imitation	Brand imitation is designed so as to “be like” and make consumers “think of” the original brand.	Consumer Evaluations of Brand Imitations		D’Astous and Gargouri, 1999
2	Imitation	Imitation is akin to a certain degree of resemblance.	Brand Confusion: Empirical Study of a Legal Concept Psychology & Marketing		Kapferer 1995
3	Imitation	In using the word “imitate”, what is typically meant is an effort to reproduce the major ingredients or functional properties of the product, perhaps to emulate promotional them, advertising/promotional strategy, distribution, price and other components of the marketing mix; not to “copy” those distinctive and stylistic (non-functional) aspects of the product which have become trademarks	Consumer “Confusion” of Origin and Brand Similarity Perceptions		Loken, Ross and Hinkle 1986
4	Imitation	The making of one thing in the similitude or likeness of another: as a counterfeit coin is said to be made “in imitation” of the genuine. An imitation of a trademark is that which so far resembles the genuine trademark as the be likely to induce the belief that it is genuine, whether by the use of words or letters similar in appearance or in sound, or by any sign, device, or other means.	Black’s Law Dictionary 5 <sup>th</sup> Edition		
5	Imitation	Brand imitation – or “passing off”, in legal language – is based on similarities.	Brand Imitation and Its Effects on Innovation Competition, and Brand Equity		Wilke and Zaichkowsky 1999
6	Imitation	Imitators need not copy directly; they need only borrow or copy some aspects or attributes of the original.	Brand Imitation and Its Effects on Innovation Competition, and Brand Equity		Wilke and Zaichkowsky 1999
7	Imitation	In merchandising jargon, an imitation is a copy of an original that is not sufficiently similar to constitute a counterfeit.	Product Counterfeiting: Consumers and Manufacturers Beware		Bamosy and Scammon 1985
8	Imitation	Imitation is legal manufacturing of look-alikes (including many generics) or ‘knock-offs’, while overruns are associated with outsourced manufacturers who produce more than the contracted amount and distribute the extras through unauthorized channels.	Brand imitation: do the Chinese have different views?	Gentry et al. 2006	Lai and Zaichkowsky 1999

Table 2.2 displays the interpretations of imitation that have appeared in previous academic articles. As mentioned previously, the term ‘imitation’ was used to refer to



counterfeiting in some counterfeiting studies. Nevertheless, in no case does the literature reviewed here show that counterfeiting was used to refer to imitation. It seems therefore that researchers who investigated imitation-related issues have a clear understanding of imitation practice. Researchers seem to agree that the aim of imitation is to ‘be like’, but not to ‘be’ (e.g. d’Astous and Gargouri 1999; Wilke and Zaichkowsky 1999; Bamossy and Scammon 1985)

Compared with piracy and counterfeiting, imitation is a more general and neutral term. Researchers studying imitation are fully aware of the differences between counterfeiting and imitation. Counterfeiting is direct copy, whereas imitation means ‘indirect copy’ (e.g. Bamossy and Scammon 1985). As Kapferer (1995b) states: “The imitation is subtle, often based on partial differences: the imitator recreates an overall similarity, even if the details of the packaging differ between the national brand and the copying own-label product.” The researchers in the study of imitation appear to be fully aware of these differences. From a legal perspective, imitation also defers to both piracy and counterfeiting as both piracy and counterfeiting are illegal according to legislation; whereas, imitation does not necessarily break the law unless it is proven that it has caused confusion to consumers (Bamossy and Scammon 1985).

Table 2.3 Definitions of piracy

Terminology	Definition	Original Source	Cited by	Defined by
1 Piracy	Pirated goods are goods that are copies made without the consent of the holder of the copyright or related rights.	Scrivener Regulation	Chaudhry and Walsh 1996	
2 Piracy	Piracy is counterfeiting. The intention is not always to deceive the consumer. The consumer is aware that the product he is buying is an unauthorized copy of the original product.	Product piracy: The problem that will not go away		McDonald and Roberts 1994
3 Piracy	Piracy is the unauthorized use of copyright or patented goods or ideas. Pirates are engaged in all processes of IPR theft including, for example, the distribution and sale of counterfeit products or the theft of technology that enables production capability.	Protecting Intellectual Property: Strategies and Recommendations to Deter Counterfeiting and Brand Piracy in Global Markets		Shultz II and Saporito 1996
4 Piracy	When a counterfeit is sold at a fraction of the usual selling price, this is said to be a signal to consumers that the goods are counterfeit. Such a case is usually referred to as piracy, since the manufacturer’s intention is not to deceive the consumer as to the true origin of the goods.	Product Counterfeiting: Consumers and Manufacturers Beware		Bamossy and Scammon 1985
5 Piracy	The term pirated brand refers to products that are also copies of items, but they are produced in the knowledge that the customer will be aware that the item is a fake, so it is usually sold at a fraction of the copied goods.	Understanding Consumer Demand for Non-deceptive Pirated Brands		Prendergast, Chuen and Phau 2002
6 Piracy	Piracy, like counterfeiting, involves the unauthorised duplication or reproduction of a copyright or patented product. Piracy, while defrauding right holders in the same way as counterfeit products, does not include the act of deception.	Pricing Strategy and Practice: Pricing and Pirate Product Market Formation		Papadopoulos 2004
9 Piracy	Piracy is usually limited to the copying of software, music, or videos.	Brand imitation: do the Chinese have different views?	Gentry et al. 2006	Lai and Zaichkowsky 1999

Table 2.3 represents a summary of the diverse definition/understandings of piracy held by previous researchers. It is commonly accepted that piracy involves unauthorised duplication and reproduction of copyright or patented products (Chaudhry and Walsh 1996; Papadopoulos 2004; Predergast et al. 2002). Both pirated goods and counterfeits are infringements of intellectual property rights (copyright, patent and trademark).

Some previous researchers believe that piracy is counterfeiting, with the only difference being that piracy does not tend to deceive the consumer (e.g. McDonald and Roberts 1994). The consumer is aware that the product he is buying is an unauthorised copy of the original product (McDonald and Roberts 1994; Bamossy and Scammon 1985; Predergast et al. 2002). Nevertheless, some researchers seem to differentiate literally between piracy and counterfeiting. They believe that piracy is like counterfeiting, but is not counterfeiting. Piracy infringes copyright and patent, whereas counterfeiting is an offence against trademark (e.g. Chaudhry and Walsh 1996; Papadopoulos 2004).

Table 2.1, Table 2.2 and Table 2.3 represent summaries of definitions/understanding of counterfeiting and counterfeit products, imitation, and piracy which have appeared in academic works over the last few decades. The tables clearly show that some of the definitions of counterfeiting noted above reflect only part of the picture, and it is also clear that people hold different understandings of the same terminology. Misunderstandings and even misuse of the terms do exist. Quite often imitation and piracy are used to refer to counterfeiting rather than the other way around. Furthermore, some articles have adopted different terms to refer to the same practice, for example Ang et al. (2001), Kapferer (1995a), Foxman et al. (1990) and Gentry et al. (2001). To judge which definition/understanding is correct is beyond the scope of this study. What is stressed here is that it is necessary to distinguish brand imitation from counterfeit products (Kay 1990), and that counterfeiting should be distinguished from copyright piracy, which refers to the unauthorized copying of the content of a fixed medium of expression, such as films, musical recordings, and computer software (Chow 2000).

From the tables in section 2.4 it can also be seen that, in some cases, the authors did intend to distinguish the differences between these terminologies. However, one problem in developing countries is the absence of a uniform definition of the practice



(Russel 1983). Furthermore, the problems with laws is that (1) they can change over time, (2) they vary from country to country, (3) they can vary within a country, such as the United States, (4) each case is dealt with separately, and (5) the interpretation of the laws as they apply to each case is made by different people with different experiences, beliefs, and values (Wilke and Zaichkowsky 1999). Usually, the courts side with the manufacturer, and see no difference between pirated and counterfeit goods either. All these could be triggers of the misunderstandings and mixed use of different terms.

Having said all of the above, generally speaking these three terms refer to different practices. Although it is very true that people hold distinctive views on whether these practices are good or bad, it is clear that to some degree all of these three practices can create similar problems for original brands because under certain circumstances they all infringe the original's image and profits.

### 2.5 Definition of Counterfeiting Used in This Study

As revealed earlier, counterfeiting has been defined in many ways by both researchers and practitioners. It can be easily confused with imitation and piracy by both researchers and readers. Therefore, in line with Phau et al. (2001) and Hoe et al. (2003), it is suggested that it is necessary to have a clear demarcation of counterfeiting before researchers carry out any investigation. This would be helpful for the researchers in identifying relevant literature, and to have clear guidance on their overall research plan; it would also be helpful for readers in interpreting the research findings.

The definition of a counterfeit product used in this study is taken from Chaudhry and Walsh (1996): counterfeit products are those bearing a trademark that is identical to, or indistinguishable from, a trademark registered to another party and infringes on the rights of the holder of the trademark (Scrivener Regulation). This definition is consistent with the views of both practitioners and researchers, has been widely adopted by previous researchers (e.g. Bamossy and Scammon 1985; Grossman and Shapiro 1988a, b; Kapferer 1995a; Chaudhry and Walsh 1996; Bian and Veloutsou 2004, 2006; Veloutsou and Bian 2005), and it fits the studied products of this research well. In order to achieve a common understanding of counterfeit products between the research participants, the definition adopted is displayed on the cover page of the self-administered questionnaire.

## 2.6 Anti-Counterfeiting, Anti-Counterfeiting Outcomes and Proposed Reasons

The negative impacts caused by counterfeit practices have drawn a great deal of attention from supranational organizations, national governments, legitimate manufacturers and brand holders (Green and Smith 2002). In response to the fast-expanding counterfeiting phenomenon, national anti-counterfeiting legislations have been strengthened (e.g. US Trade Mark Counterfeiting Act 1984, UK The IPR 2002 ACT), international legal anti-counterfeiting measures have been developed (e.g., the General Agreement on Tariffs and Trade, Trade-Related Intellectual Property Rights), various supranational anti-counterfeiting organisations (e.g. the International Anti-counterfeit Coalition, Anti-counterfeiting Group) have been set up with the same purpose - to eliminate counterfeiting. Moreover, individual firms have been dedicated themselves to curb counterfeiting. For example, Louis Vuitton employs sixty full-time people at various levels of responsibility to work with teams of investigators and lawyers in order to protect its brand from counterfeiters (LVMH 2006). Due to both the time and wordage restrictions on this research, as well as the fact it is beyond the scope of this study, the detailed legal framework is not reported here.

Despite the increased efforts of national governments, supranational organizations and also individual manufacturers, the loss figure caused by counterfeiting continues to climb. For example, as noted earlier, the value of counterfeit goods in the world market has grown by 1100% since 1984; within seven years the estimated value of counterfeit products increased by \$140 billion (Chaudhry and Walsh 1996; Freedman, 1999) The estimated figure reached £10 billion in 2003 in the UK, which is almost 3 times more than in 2001 (ACG 2004), and the International Chamber of Commerce (ICC) projected that the counterfeit market would soon exceed \$500 billion per year (ICC 2003). Clearly, the reality is business as usual for most IPR pirates (Gentry et al. 2006). Overall, the success of governments has been limited. Even within the U.S., governmental policing efforts have met with limited success (Olsen and Granzin 1992).

Several factors have contributed to the growth of this phenomenon. Apart from the obvious financial incentive (Ang et al. 2001; Shultz II and Saporito 1996; Nill and Shultz II 1996; Harvey and Ronkainen 1985), the increase may stem from decentralization of political power in many regions, as regions become more concerned



about the immediate welfare of local companies, employees of those companies and other regional stakeholders. This is especially true in transitional economies such as China, Vietnam and Russia (Shultz II and Le 1993; Shultz II and Ardrey 1995). Furthermore Harvey (1988) and Roberts (1985) state that counterfeiting is regarded as an industrial development strategy for some developing countries. According to Harvey, some producers in developing countries have not mastered the ability to develop products of their own, however, they have progressed enough to produce replica products. Since they have not gained a reputation that would help their products to stand on their own, it is more likely that they adopt a counterfeiting strategy.

At a more basic level, some countries and many IPR pirates refuse to accept the ideas and concepts espoused by the WTO and pressure from developed countries; indeed, they may even acknowledge that they engage in or support counterfeiting (Chow 2000). Bush et al. (1989) claim that counterfeiting continues to flourish because multinational marketing has created high worldwide demand for well-known brands. In addition, technological advances enable counterfeiters to produce brand name products easily (Gentry et al. 2001; Delener 2000) and the removal of trade barriers makes it likely that counterfeiting will continue to abound (Cottman 1992; Harvey 1988; Kay 1990). Inadequate penalties for commerce in counterfeiting and weak enforcement of the respective laws and regulations have also been blamed for the growth in counterfeit trade (Bush et al. 1989; Kay 1990; Harvey 1987; Roberts 1985). Irrespective of these issues which are considered responsible for the wide spread of counterfeiting, a number of researchers claim that counterfeit will always exist and grow so long as the demand for them is still strong (Robert 1985; Bloch et al. 1993; Chakraborty et al. 1996). This statement is in the same vein as the economic theory which suggests that if there is little or no demand for a product, supply will also decrease.

It would be naïve to claim that the demand for counterfeit products should take full responsibility for the boom in counterfeiting, but it is certainly one of the main reasons why anti-counterfeiting campaigns appear to achieve little success despite the efforts by countries to improve and enforce relevant legislation (Bamosy and Scammon, 1985). It is also well-recognized that counterfeiting activities can be It is argued that it is crucial to understand why consumers are accomplices to counterfeiting, before victims of counterfeiting can make any successful achievements in curbing the practice.

Therefore, the study of counterfeiting from the consumers' perspective will be very valuable.

## 2.7 Types of Counterfeiting and Choice of Non-deceptive Counterfeiting Context

Consumers are not always deceived when involved in counterfeiting transactions. Grossman and Shapiro (1988a) classify the practice of consumers knowingly purchasing counterfeit products as non-deceptive, and classify unwitting purchase as deceptive. Despite the fact that Grossman and Shapiro's (1988a) classification of counterfeiting is widely accepted, the way that they classify counterfeiting by drawing a clear line between deceptive and non-deceptive may be somewhat stringent. It is not always the case that either consumers do not know or are fully aware that what they are buying is the genuine branded product or its counterfeit counterpart. For example, consumers might be suspicious about goods, but may assume they are stolen merchandise, or they may think that the seller has obtained the goods through parallel import arrangements (Wilke and Zaichkowsky 1999). This study extends Grossman and Shapiro's (1988a) counterfeiting categorization by introducing a third notion. Here, in the scenario which consumers are fully aware that they are buying non-genuine brands is named as non-deceptive counterfeiting. In contrast, if goods are counterfeit products but the consumers are given clear indication that the goods are genuine when they are purchased, this scenario is labelled deceptive counterfeiting. The third category is named blur counterfeiting, as it refers to the reality that, in some cases, consumers are not sure whether products are counterfeit versions, genuine versions, genuine versions but from parallel import arrangement, genuine versions which are on sale, or even stolen merchandise, when they pursue purchases.

Green and Smith (2002) suggest that non-deceptive and deceptive counterfeiting have different characteristics. Non-deceptive counterfeits are considered to pose little or no health or safety risk to the public, have little demonstrable impact on brands being counterfeited, can even provide some demonstrable benefit (e.g. employment) to the nation, and consumers can be viewed as accomplices in the activities. In contrast, deceptive counterfeits are believed to bring potential health and safety risks to consumers, lead to calculable losses to governments, damage brand equity and cause loss of sales. Therefore, in comparison to non-deceptive counterfeits, deceptive



counterfeits are likely to receive a more enthusiastic response from local authorities for requests for intellectual property protection (Green and Smith 2002).

This study only focuses on the non-deceptive counterfeit. The choice of the non-deceptive counterfeit context is considered important, because only under these circumstances is it possible to investigate consumers' true perceptions of counterfeit branded products. Moreover, only under these circumstances will consumers' perceptions of counterfeit products reflect their demand for counterfeit products, and thereafter influence their choice processes.

### 2.8 Past Research on Counterfeiting

This section consists of two sub-sections. The first sub-section aims to review the relevant works on the study of counterfeiting. The second sub-section focuses on reviewing literature in the study of consumer and counterfeiting, and points out that the study of the influence of consumers' perceptions of counterfeits on consumer choice is overlooked and more work is required.

#### 2.8.1 Overview of Past Studies

As noted earlier in this chapter, counterfeiting has emerged as a major problem for global marketers since it started spreading globally in the 1970s. It has been more than three decades since counterfeiting first drew the attention of researchers; however, it appears that the study on this phenomenon is still very limited. In reviewing the limited literature, the research works can be categorised into four broad categories: general study; normative impact study; anti-counterfeiting strategy study and consumer study.

The general study covers literature published in journals, which look at general issues regarding counterfeiting. Most of these articles cover a wide range of the aspects of counterfeiting. These articles are by Wilke and Zaichkowsky (1999), Roberts (1985), Chaudhry and Walsh (1996), Nill and Schultz II (1996), Harvey and Ronkainen (1985), Chow (2000), Bikoff (1983), Lai and Zaichkowsky (1999), Globberman (1988) and Stone (2001). The normative impact study group consists of Pepall and Richards (1994), Grossman and Shapiro (1988a, 1988b), and Yao (2005) who have examined the impact of counterfeiting on innovation, social welfare, status goods, trade and monopolists. The anti-counterfeiting strategy study category includes Green and Smith

(2002), Harvey and Ronkainen (1985), Harvey (1987, 1988), Olsen and Granzin (1992), Nejdet (2000), Bush et al. (1989) and Shultz II and Saporito (1996).

Realising the significance of studying counterfeiting from the consumers' perspective, more recently researchers have devoted more attention to the examination of consumer-related issues. These articles will be reviewed and discussed in detail in the following section. In contrast, no detailed discussion is provided here in relation to the other three aforementioned research streams (general study; normative impact study; anti-counterfeiting strategy study), as this research focuses on examination of counterfeiting from the consumers' perspective.

### 2.8.2 Consumers and Counterfeits

In order to achieve a clear view of the previous studies on the demand side of counterfeiting practice, Table 2.4 aims to list the majority of works published in the last three decades in consumer based study relating to counterfeits. However, it is acknowledged that a few works may have been overlooked due to the limitation of the search sources. Nevertheless, it is believed that the review is rich enough to provide a full picture of what has been investigated in the study of consumers and counterfeits, what the research findings are and the applied research methods.

Table 2.4 Consumer and counterfeiting/counterfeits studies

Authors	Title	Sample	Method	Finding
Bamossy and Scammon 1985	Product Counterfeiting: Consumers and Manufacturers Beware	38 consumers, US	Telephone survey	Consumers did seem to have clear ideas about the potential consequences of counterfeit goods, for example manufacturers' loss of profits and goodwill and consumers monetary loss and lost jobs in the U.S.
Cordell and Wongtada 1991	Consumer Responses to Counterfeit Products	219 undergraduates	Survey	Students selected the counterfeit product versus authentic one without regard for legality and public welfare.
Bloch, Bush and Campbell 1993	Consumer "Accomplices" in Product Counterfeiting	100 adult consumers at each of two locations in US	Survey	Over one-third of the consumers knew that counterfeiting was illegal, yet preferred the counterfeit product over both authentic and non-logo one.
Wee, Tan and Cheok 1995	Non-price Determinants of Intention to Purchase Counterfeit Goods	265 students and 251 working adults	Survey	Non-price determinants, particularly those relating to perceived product attributes and attitude towards counterfeiting, affect consumer's intention to purchase counterfeit product.
Cordell, Wongtada and Kieschmich, Jr. 1996	Counterfeit Purchase Intentions: Role of lawfulness Attitude and Product Traits as Determinants	221 students	Survey	Consumers' willingness to purchase counterfeit products is negatively related toward lawfulness; brand, price and retailer condition influence willingness to purchase high and low involvement product differently.
Dodge et al. 1996	Consumer Transgressions in the Marketplace: Consumers' Perspectives	532 adult consumers	Survey	Consumers are ethically predisposed as they generally express little tolerance for behavioural transgressions on the part of the customer. They expressed greater intolerance of those actions that comprise the indirect economic consequences factor.



## Chapter 2 Counterfeiting and Related Studies

Chakraborty, Allred and Bristol 1996	Exploring Consumers' Evaluations of counterfeits: The Role of Country of Origin and Ethnocentrism	130 students	Survey	Ethnocentrism and country of origin of the original manufacturer jointly influence consumer perceptions of risk and attitudes about counterfeits.
Tom, Garibaldi, Zeng and Pilcher 1998	Consumer Demand for Counterfeit Goods	Three phases: 1. 129 consumers, 79 from the mall, 50 from the flea market; 2. 232 consumers from mall and 203 from flea market; 3. 142 from mall and 126 from flea markets	Survey	The results suggest the existence of a typology of consumer accomplices, sly shoppers who purposely purchase counterfeits to demonstrate their consumer shrewdness and economically concerned shoppers whose intentional purchase of fake goods is driven by economic concerns.
Chakraborty, Allred, Sukhdial and Bristol 1997	Use of Negative Cues to Reduce Demand for Counterfeit Products	87 undergraduate students, U.S.	Experimental	Cuing negative aspects of consumers' typical beliefs about counterfeits, such as the high failure rate of counterfeits and the country of origin of the counterfeit relative to that of the legitimate product, can reduce their intentions to knowingly purchase counterfeit products.
Albers-Miller 1999	Consumer Misbehaviour: Why People Buy Illicit Goods	92 MBA students, US	Survey	The main effects of product type, buying situation and price were all significant predictors of willingness to buy. The interactions of risk with product type and price with product type were also significant predictors for some clusters.
Ang 2000	The Influence of Physical, Beneficial and Image Properties on Responses to Parallel Imports	423 adults, Singapore	Survey	Perception and not demography or past product experience influence purchase intention of parallel imports. Perception of beneficial and image properties, more so than perception of physical properties, influenced purchase intention.
Nia and Zaichkowsky 2000	Do Counterfeits Devalue the Ownership of Luxury Brands?	74 participant from a area with the highest income in the city	Survey	70 percent of respondents indicated that the value, satisfaction, and status of original luxury brand names were not decreased by the wide availability of counterfeits. The majority of them disagreed that the availability of counterfeits negatively affects their purchase intentions of original luxury brands.
Gentry, Putrevu, Shultz and Commuri 2001	How Now Ralph Lauren? The Separation of Brand and Product in a Counterfeit Culture	International students	Interview	After consumers make a brand choice in a purchase context, search may ensue and further evaluation takes places between a genuine article and various counterfeits
Ang, Cheng, Lim. and Tambyah 2001	Spot the Difference: Consumer Response towards Counterfeits	Consumers aged 15 and above, Singapore	Survey	Compared with those who did not buy, those who bought the counterfeits view such purchases as less risky, and trust stores that sell counterfeits more. They did not see counterfeits as unfair and did not see people who buy them as unethical. The more value-conscious and less normatively susceptible one was, and the less integrity one had, the more favourable was one's attitude towards piracy. Males and those from lower income groups held more favourable attitudes. Attitude towards piracy was significant in influencing purchase intention.
Phau, Prendergast and Chuen 2001	Profiling Brand-Piracy-Prone Consumers: An exploratory Study in Hong Kong's Clothing Industry	9 consumers formed a focus group, 100 consumers, Hong Kong	Focus group and survey	Low spenders on pirated brands of clothing are mainly people aged 19 to 24 with a blue-collar occupation, relatively low monthly income, secondary education level, and no children. High spenders on pirated brands are in the age bracket 25-34 with white-collar jobs, a monthly income of HK\$10,000 to HK\$19,999, tertiary or university education and children. Price was not the sole determinant for purchase. They bought the pirated brands mainly for private use.
Prendergast, Chuen and Phau 2002	Understanding Consumer Demand for Non-deceptive Pirated brands	200 consumers over 15 years old, Hong Kong	Survey	Low spenders on non-deceptive counterfeits are mainly students or blue-collar workers between the ages of 19 and 24, with secondary education and earning a monthly income of HK\$1,999 or below. High spenders on non-deceptive counterfeit brands are mainly white collar workers between the ages of 25 and 34, with tertiary education and earning a monthly income

				of HK\$10,000 to HK\$19,999.
Penz and Stöttinger 2003	Brands and Counterfeits – What Do They Have in Common?	Adults	Combined approach (survey and interview)	Consumers have a very clear picture of the benefits of brands over counterfeits.
Harvey and Walls 2003	Laboratory Markets in Counterfeit Goods: Hong Kong versus Las Vegas	Undergraduates, 20x3 both in Hong Kong and Las Vegas	Experimental	Subjects in Hong Kong are more likely to purchase the counterfeit good than are subjects in Las Vegas; the price and penalty elasticities are substantially larger in Las Vegas than in Hong Kong; and that in both locations the price effects of legitimate and counterfeit goods are asymmetrical in the monetary price and expected penalty cost. An equal increase in the price of authentic goods and the expected penalty cost of counterfeit goods increase the probability that a consumer will purchase the authentic goods.
Hoe, Hogg and Hart 2003	Faking it: Counterfeiting and Consumer Contradictions	20 interviewees, UK	Interview	Consumers are willing to buy and wear the fakes but condemn the duplicity of those who do.
Bian and Veloutsou 2004	Perceived Risk When Purchasing Non-deceptive Counterfeit Products	165 consumers aged 18 and above, UK	Survey	The constants of perceived risk are interdependent and the six risk dimensions account for a high percentage of the total variance in the overall risk measure. Financial risk appears to be the most powerful explanatory component.
Pens and Stöttinger, 2005	Forget the “Real” thing-Take the Copy! An Explanatory Model for the Volitional Purchase of Counterfeit Products	1040 subjects (quota sample), Austria	Survey	The fewer the obstacles to purchase counterfeits in terms of time needed to find them, geographic barriers, etc., the more likely consumers will intend to buy them. At a price level which is only slightly cheaper than the original, the embarrassment potential did not affect the intention to purchase, while the subjective norm did. At a very small discount, the financial risk of making the wrong decision by buying a fake product and not the slightly more expensive original is rather high. If the price discount is high, the financial is reduced, while the social risk increases. Self identity, price consciousness and the access to fake products displayed very little to no effect on the intentions to purchase counterfeits.
Veloutsou and Bian 2005	Consumer’s Attitudes Towards Non-Deceptive Counterfeit Brands in the UK and China	230 consumers aged 18 and above in the UK and 296 in China	Survey	All respondents do not have a very high opinion of counterfeit brands, while Chinese value them even less. Consumers find it difficult to distinguish between the genuine and the counterfeit brands, and when they are compared with the genuine, the British believe that counterfeits are even less trustworthy.
Bian and Veloutsou 2006	Consumer’s Attitudes Regarding Non-Deceptive Counterfeit Brands in the UK and China	230 consumers aged 18 and above in the UK and 296 in China	Survey	Not all respondents have a very high opinion regarding counterfeit brands, while Chinese value them even less. Consumers find it difficult to distinguish between the genuine and the counterfeit brands, when they are compared with the genuine, the British believe that counterfeits are even less trustworthy.
Veloutsou and Bian (waiting for the authors’ verification)	A Cross-National Examination of Consumer Perceived Risk in the Context of Non-Deceptive Counterfeit Brands	525 responses aged 18 and above	Survey	The interrelationships between the dimensions of perceived risk are supported. The psychological risk is the only dimension of risk that with no doubt contributes to the formation of the overall risk in both contexts. Social risk did not appear to be an issue. The British seem to have a higher performance and psychological risk and lower social, time and physical risk than the Chinese. The financial, physical and the performance risk are generally ranked higher than the other types of risks. Physical risk is significantly higher than most of the other types of risk, but it is viewed in a similar manner with the performance risk from the British. Financial risk is the third most important type of risk.



According to Table 2.4, it is clear that later researchers showed a greater interest in the study of counterfeiting from consumers' perspectives since Cordell and Wongtada's (1991) exploratory study found that students, when faced with a paper and pencil choice of a counterfeit versus legitimate goods, selected the counterfeit without regard for legality or public welfare. It has been argued that counterfeits allow consumers to unbundle the status and quality attributes of the branded products (Grossman and Shapiro 1988a) and that counterfeiting can damage the reputation of the genuine brand (Wilke and Zaichkowsky 1999). Therefore, examination of the final purchasers' views and attitudes towards counterfeiting is important.

That said, the academic research examining consumers and counterfeits is still relatively limited and some of the output very descriptive. For example, researchers attempted to profile the consumers who buy counterfeits. Previous research findings suggest that demographic characteristics do not have a consistent relationship with the purchasing or the intention to purchase of counterfeit brands (Table 2.5). Bloch et al. (1993) reported that age and household income were not effective criteria for distinguishing between counterfeit accomplices and consumers who would choose genuine brand clothing. These findings were contradictory to the findings of a number of other studies. Tom et al. (1998) claimed that the brand-counterfeit-prone consumers were younger and earned less than consumers who preferred genuine products in all stages of purchase behaviour (pre-purchase, purchase, and post-purchase). Phau et al. (2001) suggested that low spenders on counterfeit branded clothing were young, with a blue-collar occupation, relatively low monthly income, lower education level, and no children; high spenders on counterfeit branded clothing were in the 25-34 age bracket with white-collar jobs, a higher income, higher education level, and children. Other studies provided inconclusive results. Wee et al. (1995) found that although educational level and household income affected consumer purchase intention, age did not seem to have any power in terms of explaining consumers' intentions of purchasing counterfeits. In addition to demographic variables, past research discover that counterfeit accomplices are more likely to perceive purchase of counterfeits as less risky and less unfair to legitimate brand owners than people who do not buy (Ang et al. 2001).

In the past, some researchers have suggested that consumers have clear ideas about the potential consequences of counterfeit goods in the marketplace and are aware of the

manufacturers' loss of profits and goodwill, and loss of jobs in the country of production (Bamossy and Scammon 1985; Bloch et al. 1993). Moreover, it seems that the ethical issue is clear enough to consumers (Nia and Zaichkowsky 2000; Nill and Schultz II 1996). Counterfeiting is, by definition, theft (Green and Smith 2002). Consumers have a very clear picture of the benefits of brands over counterfeits (Penz and Stöttinger 2003). Thus, on one hand, consumers condemn the duplicity of those who buy counterfeits (Hoe et al. 2003), while on the other hand however, it seems that they are willing to buy counterfeit goods when they are available (Hoe et al. 2003). Previous studies suggested that 17 to 38% of the respondents claimed that they would purchase counterfeit brands for products such as clothing, CD's, software, purses, perfumes, videos, and watches (Bloch et al. 1993; Wee et al. 1995; Tom et al. 1998; Phau et al. 2001). However, counterfeit-prone consumers differ by product types (Wee et al. 1995; Tom et al. 1998). Surprisingly for some, a number of consumers may even select counterfeits without considering legal or public welfare issues (Cordell and Wongtada's 1991; Bloch et al. 1993).

Table 2.5 Counterfeit-prone consumer profile

	Age	Household Income	Education	Studied products
Bloch et al. 1993	No explanatory power	No explanatory power	-----	Clothes
Wee et al. 1995	No explanatory power	Negative relationship with fashionable items	Functional products: positive relationship Fashionable items: negative relationship	Literature Software Wallets/purses Watches
Tom 1998	Negative relationship	Negative relationship	-----	CDs, Software T-shirts Purses Clothing Perfumes Videos Watches Tapes
Phau et al. 2001	Lower spender: 19-24 Higher spender: 25-34	No straight-line relationship	No straight-line relationship	Clothes

Although anecdotal evidence suggests that price could be the main factor driving the buyer's intention to purchase counterfeit brands (Dodge et al. 1996; Bloch et al. 1993), researchers have challenged this view. Non-price factors, such as attitude, brand status, educational level, household income, appearance, image, perceived fashion content, purpose and quality, and retailer conditions, have been proven to have a significant impact on consumers' intention of purchasing counterfeits (Wee et al. 1995; Cordell et al. 1996; Albers-Miller 1999; Phau et al. 2001). The customer's ethnocentrism and the genuine manufacturer's country of origin jointly influence consumer perception of risk and attitudes on counterfeits and are therefore mediating factors in the formation of



consumers' evaluations, feelings towards, and intention to purchase counterfeit brands (Chakraborty et al. 1996). Furthermore, negative views and experiences from counterfeits, such as the high failure rate of counterfeits and the country of origin of the counterfeit could reduce consumers' purchase intention (Chakraborty et al. 1997). Researchers claimed that increases in the expected cost, such as the cost of penalties, could decrease consumers' willingness to buy counterfeits (Harvey and Walls 2003). Most recently, research findings reveal that the influential power of a variable may vary along the change of price difference between the counterfeit product and its counterpart original version. For example, at a very small discount, the financial risk of making the wrong decision by buying a counterfeit and not the slightly more expensive original is rather high. If the price discount is high, the financial risk is reduced, while the social risk increases (Penz and Stöttinger 2005). These authors also claimed that consumer self-identity, price consciousness and access to counterfeits displayed very little to no effect on the intention to purchase counterfeits.

The effect of counterfeits on genuine brands is unclear. The majority of genuine brand owners agree with the view that the value, the satisfaction provided from, and the status of the genuine luxury brand names are decreased by the availability of counterfeits. However, consumers do not believe that the availability of the counterfeits negatively affects the purchase intentions of the original luxury brands (Nia and Zaichkowsky 2000). Consumers also consider that both counterfeits and the original branded products are fun and worth the money they paid for them (Nia and Zaichkowsky 2000). Finally, consumers believe that counterfeits are less trustworthy (Bian and Veloustou 2006); they regard counterfeits as low-grade versions that offer less value for less cost, but consider that this is an acceptable compromise (Gentry et al. 2001).

The most recent cross-cultural studies have discovered that consumers from different countries may have varying perceptions of counterfeits. Despite the fact of the wider spread (accounting for 10 percent of products in the retail market) of counterfeits in China (Hung 2003), Chinese have even lower attitude toward counterfeit brands than the British (Bian and Veloustou 2006). The British are concerned more about performance and psychological risk than the Chinese, whereas, it seems that the Chinese are more worried about social risk and physical risk than the British (Veloustou and Bian, forthcoming). The cross-cultural studies also reveal that Hong Kong

consumers appear to be more counterfeit-prone than Las Vegas consumers. The price elasticities are substantially larger in Las Vegas than in Hong Kong, and Hong Kong consumers are more likely to purchase the counterfeit version (Harvey and Walls 2003).

## 2.9 Identified Research Problem

As can be seen from the last section, the existing studies on consumer behaviour related to counterfeits mainly focus on finding answers to questions such as “whether or not consumers purchase counterfeits”, “who buys counterfeits?”, “what factors influence consumers’ intentions to purchase counterfeits?”, and “ what are consumers’ attitudes towards counterfeits?”. Studies on consumers’ perceptions of counterfeits are scarce. Moreover, few works have examined counterfeits from a brand perspective. This is demonstrated by the majority of past studies which investigated a single product class or multiple product classes rather than specific brand(s). More detailed discussion regarding this point is provided in Chapter 5.

Penz and Stöttinger (2003) state that when look into consumers’ motives for buying counterfeits, this cannot be effective without investigating their notion of brands. Brands are powerful entities to organisation and customers, because they blend functional, performance-based values that are rationally evaluated, with emotional values that are affectively evaluated (de Chernatony 2001). There are three types of assets that provide the sources of earnings for brand owners. They are tangible assets, brands and other intangible assets. Depending on the market, up to 70 percent of earnings can be attributed to the brand (Perrier 1997). The most valuable assets that many companies possess are intangible ones, namely, the brands they own (Green and Smith 2002; Keller 1991; Meters-Levy et al. 1994). For example, in 2005 Sony was estimated to be worth US\$10.75 billion, Levi’s at US\$2.26 billion, and Hewlett-Packard US\$ 18.87 billion (Berner and Kiley 2005).

The objective of investing in brand development is to create an identity around which products and services come to be recognized and valued by customers, and from which customer loyalty is built (Levy and Rook 1981). A successful brand is an identifiable product, service, person or place, augmented in such a way that the buyer or user perceives relevant, unique, sustainable added values which match their needs most closely (de Chernatony and McDonld 1998). Given that the consumer has come to



realize that a particular brand represents better quality, unique features, style and/or excellent service, successful brand goods usually demand a higher price in the marketplace. Global or national brands are the main creators of wealth (Hopkins et al. 2003; Perrier 1997).

Brands and concepts associated with them are the prerequisites for counterfeiting. A counterfeit must copy a trademarked brand (Cordell et al. 1996). It is more than likely that if branded products did not attract consumers, they would not be counterfeited (Bloch et al. 1993; Cordell et al. 1996). According to Harvey and Ronkainen (1985), successful branded products have the highest attractiveness level to counterfeiters. In fact, it is the most successful brands like Chanel, Rolex and Gucci which are the primary targets of counterfeiters.

A number of researchers have devoted their efforts to investigating the forces driving the growth of counterfeiting (e.g. Harvey and Ronkainen 1985; Grossman and Shapiro 1988a; Cordell et al. 1996). It is commonly agreed that the consumer plays a crucial role in counterfeit trade and willing consumer participation is in evidence worldwide (Cordell et al. 1996). If consumers did not buy counterfeit products, counterfeiting would not be an issue (Roberts 1985; Charkraborty et al. 1996). In other words, consumer demand for counterfeits is one of the reason why counterfeiting is spreading.

Counterfeit activities can be reduced by attacking either the supply of counterfeits or the demand for counterfeits. Although companies and governments have managed to restrict the supply of counterfeits, counterfeiters have consistently demonstrated their abilities to find new ways to serve consumers. As long as the demand is still thriving, it will continue to impel the supply. Given that the counterfeit business is booming, and that a large portion of losses can be attributed to consumers who wilfully purchase counterfeit goods, it is believed that before companies design, implement and sponsor marketing and advertising campaigns that can reduce the demand for counterfeit, a better understanding of their consumers is a key to their success with their campaigns.

As Lewin (1936) points out that people respond on the basis of their perception of reality, not a reality per se. Porter (1976) confirms that perceptions are important to study, even if they are misconceptions of actual events. Therefore, study of counterfeits

from the consumers' perspective at brand level is crucial. Specifically, a study of consumers' perceptions of the original brands as opposed to the counterfeits, and how these perceptions toward these two versions of one brand might thereafter influence individual consumer choice processes should be the starting point for any company to achieve a true understanding of their consumers, due to very little work having modelled consumer choice processes from brand perspective in the literature, particularly in the context of non-deceptive counterfeiting.

## 2.10 Summary

This chapter outlines the current overall situation of counterfeiting both worldwide and in the UK. In general, counterfeiting is booming and this trend will continue. Therefore, it has become a concern to all involved communities. Supranational organisations, national governments and legitimate manufactures have been putting great effort and financial input into trying to curb counterfeiting. Nevertheless, the outcome does not meet expectation. Counterfeiting is growing rather than shrinking, and there has been a tremendous growth of counterfeiting in the last two decades worldwide. The UK is not listed as one of the main counterfeit producers; nevertheless, it is one of the main recipients of counterfeits. The counterfeit situation in the UK is not much different to the general situation worldwide – counterfeiting is expanding. It is believed that as long as the demand exists, counterfeiters will always find ways to serve this demand.

Although counterfeiting is not a new to concept, it appears that some researchers have difficulties in differentiating it from imitation and piracy. Misunderstanding, misuse, and using two or more terminologies interchangeably in one piece of research is not a matter of unique. Therefore, this chapter provides a thorough review of the definitions and understandings of these terms. In addition, similarities and differences between them are also discussed. This research strongly suggests that it is necessary to set up a clear boundary for the counterfeit concept before any research is carried out. Counterfeit product in this research is defined as: those bearing a trademark that is identical to, or indistinguishable from, a trade mark registered to another party and infringes on the rights of the holder of the trademark (Chaudhry and Walsh 1996).



Research in study of counterfeiting can be categorised into four main streams (general study, normative impact study, anti-counterfeiting strategy study and consumer study). Consumer study is attracting more and more research interest recently. Past research in this area mainly try to answer questions such as “Do consumers buy counterfeits?”, “Who buys counterfeit?”, “Why do consumers purchase counterfeit?” and “What are consumers attitude toward counterfeits?” with most recently cross culture study of counterfeiting has begun to gain some attention. In general, previous research findings in relation to “Who buys counterfeits” are not consistent. However, a number of studies reveal that consumers are aware of the negative effects and ethical issues related to counterfeits, nevertheless, they are still willing to buy them when they are available. The percentage of counterfeit prone consumers differs by product types and ranges 17 to 38 percent of the respondents.

Previous work almost all investigated product class or classes, leaving examination of specific brand(s) under-researched. In addition, it appears that there is little work which investigated consumers’ perceptions of counterfeits as opposed to their counterpart original branded products from a brand perspective, and no research has modelled how consumers’ perceptions of brands could influence different consumer choice processes.

This chapter further looked at categorisation of counterfeits and challenged Grossman and Shapiro’s (1988a) two types of counterfeits notion. It is argued that to classify counterfeits into either deceptive or non-deceptive might have overlooked the reality that in some cases consumers are not sure whether products are counterfeits or not when they are purchased. This scenario should not be ignored and is labelled as ‘blur counterfeiting’ in the current study. This research is to investigate non-deceptive counterfeiting in the context of the UK market.

Following the identified research gap in the study of counterfeits from consumers’ perspective, the next chapter will explore the literature in relation to the consumer choice process. This will be followed by a clarification of the research aim based on the defined research gaps in two bodies of literature – counterfeiting and consumer choice process.

## **Chapter 3 Literature Relative to Consumer Choice Processes**



## **Chapter 3**

### **Literature Relative to Consumer Choice Processes**

#### **3.1 Introduction**

The overall context of this research was outlined in the last chapter. In addition, the last chapter also reported the identified research gap in the study of counterfeiting related issues in literature. After the intensive review of the literature on counterfeiting, it is now necessary to look at consumer choice process theory in order to understand how consumers come to a choice decision.

Hence, this chapter reviews the literature related to consumer choice process. The main body of this chapter starts with a general discussion of two choice process related models, highlighting the focus of the literature review of this chapter. Following this, a detailed picture of the consideration concept is drawn and its significant role in consumer choice process is discussed. Thereafter, an outline of the literature in relation to consideration sets is presented. Based on the review, the research problem in relation to consumer choice process is defined. Finally, the research aim and objectives are defined, followed by the establishment of a clear research scope. The reasons for the choice of purchase intention as a response variable other than the choice set or even the final choice concepts are given. The chapter ends with a chapter summary.

#### **3.2 Models Related to Consumer Choice Process**

Following the boom of the economy worldwide after World War II, the constraints shifted from supply to demand in the market place. As a result, the study of consumer behaviour began to attract increasing research attention. Numerous researchers in the past have focused on the investigation of the consumer decision-making processes and consumer choice processes. Given that consumers are facing more and more choices for one single demand, it is crucial to ensure that a brand or a product which might finally lead to a purchase is considered. This section discusses two choice models which have a great impact on the study of consumer choice process. They are Srinivasan's (1987) consumer evaluation and choice model and Shocker et al's (1991) individual choice model.

One thing worth noting here is that this research distinguishes the consumer decision-making process and the consumer choice process, despite the fact that some researchers may believe that there is no difference between these two concepts. The reason for this approach is that these two concepts have distinguishable subjects. Consumer choice process focuses on the processes that an individual brand/product goes through before a consumer comes to a purchase decision. The subject is a brand or a product. In contrast, the consumer decision-making process investigates the processes that a consumer goes through before he/she makes up his/her mind to purchase. In this case, the consumer is the subject. This distinction allows us the establishment of a clear boundary for the literature review. It makes it unnecessary to review the massive amount of previous work related to the consumer decision-making process. As a result, it makes the literature review more focused and ensures that the literature directly serves the research aim.

#### 3.2.1 The Model of Consumer Evaluation and Choice

Historically, the cognitive-rational and hedonic aspects of choice have been treated as two mutually exclusive elements by the modellers of these two schools. The cognitive-rational school believes that consumers solve their consumption problems in a 'rational' and 'analytical' way. These consumers' behaviour is goal-directed, calculated and predicated on some knowledge of costs and benefits of alternative choices (Peter and Tarpey 1975). The consumers are assumed to be benefit-driven and risk-averse, but are constrained by the complexity of the task itself, their own ability to cope with the complexity of the task, and limited time, information sources and even monetary resources. On the other hand, the hedonic school argues that consumers purchase products for certain abstract, intangible, aesthetic, symbolic, and hedonic benefits through a process very different from the one used in the cognitive-rational model (Srinivasan 1987), but not only for the utilitarian and functional benefits. They view the process as emotional in comparison to rational (Hirschman 1982).

It is still debatable whether or not the cognitive-rational and the hedonic aspects should be laid on the two ends of a continuum. For example, Hirschman (1982) asserts that "a growing body of evidence suggests that sensory-emotive stimulation seeking and cognitive information seeking are two independent dimensions". On the contrary, Holbrook (1981) suggests that all consumer behaviour does contain some symbolic



components. Therefore, it should make sense to regard cognitive-rational and hedonic aspects as mutually inclusive in the consumer choice process. In line with this view, Srinivasan (1987) developed the consumer evaluation and choice model, which is an integrative approach of both cognitive-rational and hedonic thoughts.

This model (Srinivasan 1987) consists of four processes (Figure 3.1). According to the author, the evoked set is a subset of the awareness set which meets the criteria such as functional (salience on a major performance variable), social (peer group recommendation), personal (intuitive appeal), or risk reduction (well-known brand); the choice set is a subset of the evoked set consisting of few brands (often two). He asserts that the choice set is arrived at from the evoked set using a cognitive-rational eliminative process (Denoted I), whereas the final choice is made from the choice set by a hedonic process (Denoted II), primarily involving personal and psychological variables. The author further advanced the view that in business-to-business buying situations, the second stage can be a cognitive-rational one, indicated by II-A. In impulse-buying situations, the cognitive-rational process may be entirely skipped and the process may involve only the hedonic element (indicated by I-A). In situations with very high perceived risk, the exogenous risk reduction pathway is taken when the consumers opt for a well-known brand, the brand owned by friends, or from a reputable dealer (indicated by III).

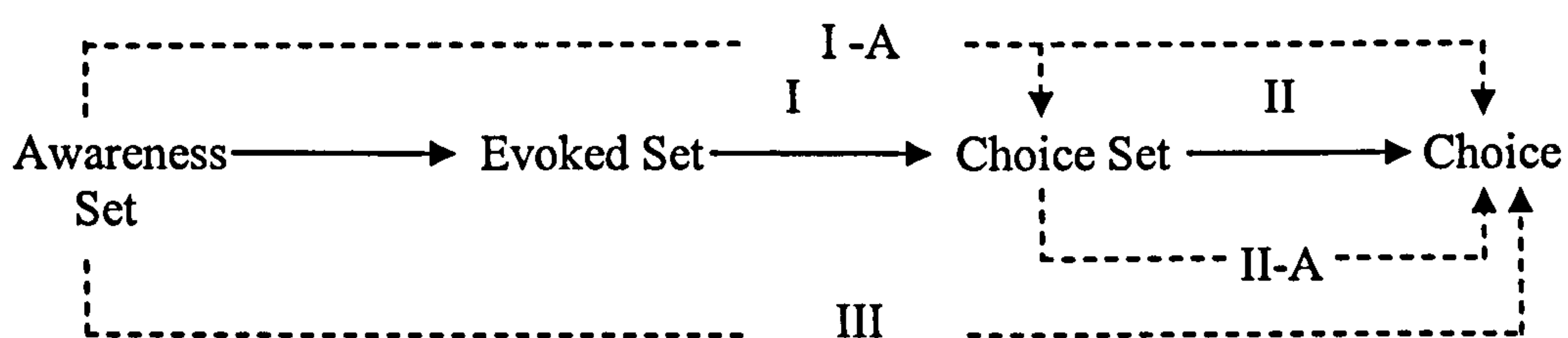


Figure 3.1: Model of consumer evaluation and choice (adopted from Srinivasan, 1987)

As noted earlier, Srinivansan's (1987) consumer evaluation and choice model is an integration of cognitive-rational and hedonic thoughts. The author advanced this model, but did not provide any empirical backup. In addition, Srinivasan did not explain what he meant by awareness set, neither did he provide any background information or sources for any of the processes that he included in the model. However, the model

does share some common features with the model of individual choice, developed by Shocker et al. (1991).

### 3.2.2 The Model of Individual Choice

Focusing on the individual decision maker, Shocker et al. (1991) developed the individual sequential choice model which the authors claim as a stylized “process” by which this individual arrives at a choice (Figure 3.2). The model of individual choice involves a series of hierarchical or nested sets of alternatives. Shocker et al. (1991) suggest that the universal set refers to the totality of all alternatives that could be obtained or purchased by any consumer under any circumstance. The awareness set is defined as the subset of items in the universal set of which, for whatever reason, a given consumer is “aware of” and which are believed appropriate for the consumer’s goal or objective. The consideration set is viewed as consisting of those goal-satisfying alternatives salient and accessible on a particular occasion. Because consumers may not be exposed to all brands and because consumers may not encode all brands to which they have been exposed, the consideration set is usually much smaller than the universal set and even the awareness set (Alba and Chattopadhyay 1985). Finally, the choice set is defined as the final consideration set. More specifically, the choice set contains the set of alternatives considered immediately prior to choice.

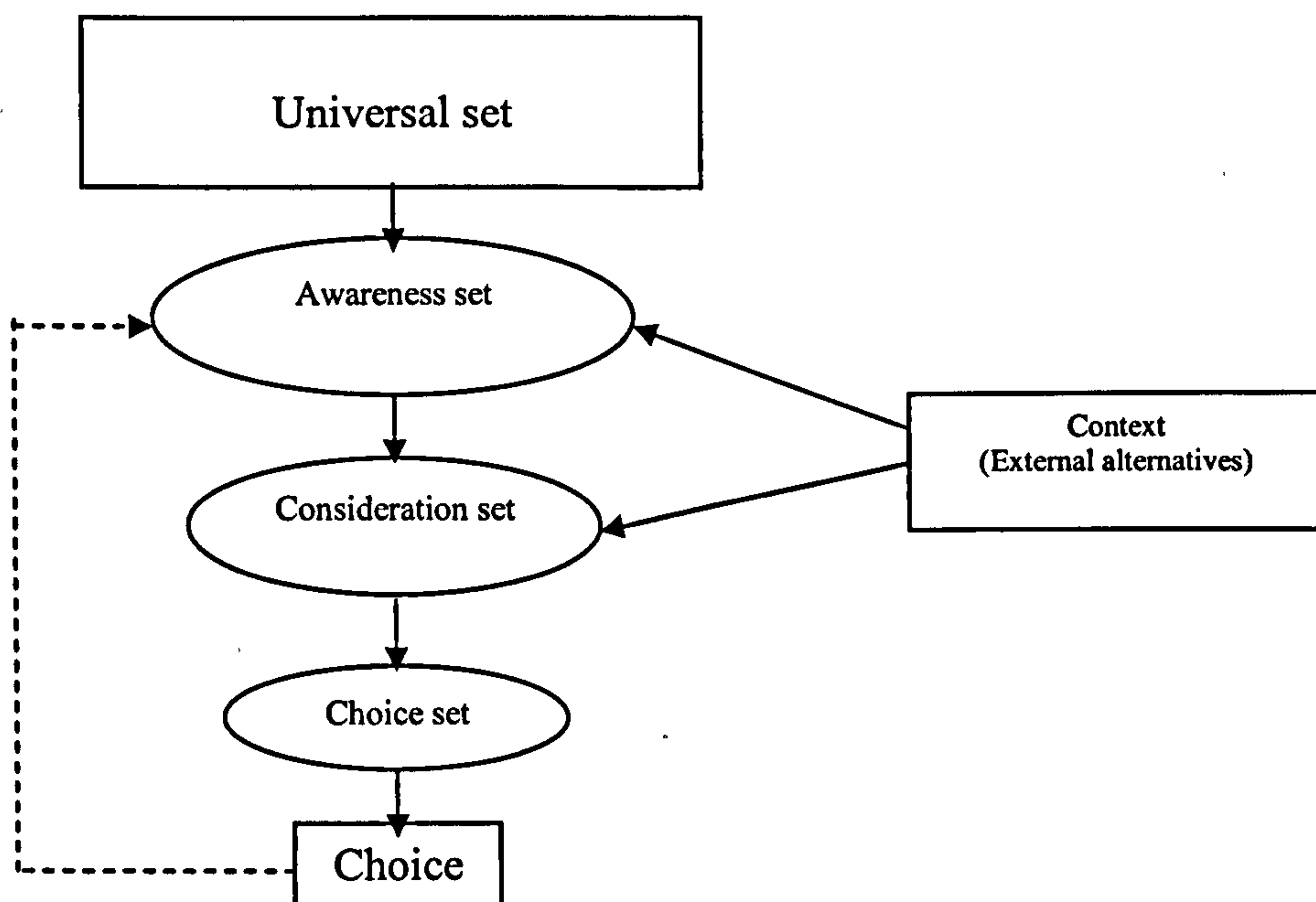


Figure 3.2 Model of individual choice (adopted from Shocker et al. 1991)



The model is hierarchical or nested in nature. However, this it not to say that the process of nesting from a bigger to a smaller set implies sequencing, since certain set formations may occur simultaneously (Shocker et al. 1991). This model allows the influence of post-purchase evaluation (dotted line) and purchase situation. In contrast to the model of consumer evaluation and choice (Srinivasan 1987), Shocker et al. (1991) do not give their own view as to how the consideration set is formed and the end choice is made. However, these authors did acknowledge the fact that previous researchers had proposed that different processes may be involved in moving from awareness to consideration and from consideration to choice (Nedungadi 1990), and that some even postulated non-compensatory models for determining the composition of the choice set and compensatory models for evaluating options in the set in order to make a choice (Wright and Barbour 1977; Bettman 1979; Gensch 1987).

The Model of Individual Choice (Shocker et al. 1991) appears to have been developed without acknowledging Srinivasan (1987) (judgement based on the citation references). Nevertheless, these two models show a great deal of similarity. The most noteworthy points are, first of all, that both models emphasise that consumer choice processes are separate and discrete, and are assumed to have well-defined boundaries. Second, they both focus on decisions made by choosing from alternatives which are actively processed or considered at or near the time of decision. Third, they give a great deal of attention to the two processes of moving from consideration to choice set and choice set to final choice. Fourth, both believe that the consumer is thought to first screen alternatives using relatively simple criteria before making a thorough analysis and choice from the reduced set of brands. Finally, neither of them pays sufficient attention to the process of moving from awareness to consideration.

In comparison to the Model of Consumer Evaluation and Choice (Srinivasan 1987), the Individual Choice Model (Shocker et al. 1991) is more simplified in that it focuses only on the individual choice process. However, inclusion of the universal set and the clear description of the awareness set provide the model with solid background logic. The acknowledgement of previous relevant work illustrates the theoretical backup for the newly-developed model. The acceptance of the impact of the post-purchase evaluation implies that experience can teach and thus affect those alternatives considered, as well as those chosen at later times, which is consistent with research findings on the



influence of the post-purchase evaluation on consumer decision-making (e.g. Mukhopadhyay 2005).

Considering all of the pros and cons, the Individual Choice Model (Shocker et al. 1991) is can be seen as more sophisticated, and is where this current research begins. After careful consideration of both views, the Individual Choice Model has been adopted as the theoretical foundation of this research. However, in comparison to both Shocker et al. (1991) and Srinivasan (1987) who place more weight on addressing the processes of moving from the consideration set to the choice set and from the choice set to the final choice, the process of moving from the awareness set to the consideration set is the focus of concern in this present study. The following sections will provide a detailed review relative to the consideration set concept.

### 3.3 The Characteristics of the Consideration Set

While Shocker and his co-authors used the term ‘consideration set’ in the Model of Individual Choice, Srinivasan (1987) adopted the term ‘evoked set’ in his Consumer Evaluation and Choice Model. Issues relating to either evoked set or consideration set concepts were not discussed in last section; these are discussed in this section. The discussion will concentrate on consideration set characteristics. These include consideration set definitions, the dynamic nature of consideration sets, types of consideration set, the rationale for consideration sets and the importance of consideration sets.

#### 3.3.1 The Definition of the Consideration Set

The study of the consideration set was pursued initially under the rubric of evoked set analysis, first used by Howard (1963). Since the introduction of the term by Howard (1963), the concept of “evoked set” has gained considerable attention from researchers (Mehta et al. 2003). However, “evoked set” has been used with several different meanings, from “brands the consumer would consider” to “brands acceptable to the consumer.” Wright and Barbour (1977) first used the term “consideration set” to replace “evoked set” to describe “brands that a consumer will consider.” A review of previous literature reveals that the terminologies used by authors are not only restricted to “consideration set” and “evoked set” (Shocker et al. 1991). For example, some authors use “evoked set” (e.g. Howard 1977; Bettman 1979; Turley and LeBlanc 1995),



some use “relevant set” (e.g. Silk and Urban 1978), some use “choice set” (e.g. Nedungadi 1990; Manrai and Andrews 1998; Bronnenberg and Vanhonacker 1996), while other researchers use “consideration set” (e.g. Shocker et al. 1991; Mehta et al. 2003). It appears that “consideration set” is more widely adopted than the other equivalent terms. In addition, it is not clouded by the ambiguity surrounding “evoked set”. Therefore, “consideration set” is used in this study.

A number of researchers have proposed definitions for “consideration set” (e.g. Reilly and Parkinson 1985; Roberts and Lattin 1991; Wright and Barbour 1977; Shocker et al. 1991). Most recently, “consideration set” was defined as “the set of brands (a subset of all the brands in the product category) over which a consumer makes an explicit utility comparison or cost-benefit trade-off before she makes her brand choice decision” (Mehta et al. 2003, p. 58). This definition is in a similar vein to that of Lleser et al. (1999), who claim the consideration set is the collection of brands that have been examined by the consumer. Generally speaking, a consideration set is perceived to consist of the brands or products that a consumer would consider purchasing to achieve a purchase goal by previous research (e.g. Reilly and Parkinson 1985; Roberts and Lattin 1991; Wright and Barbour 1977).

Despite their wide acceptance, this work argues that these previous definitions appear to be problematic. For instance, they only focus on the process from consideration set to choice of consumer decision-making, but ignore the process moving from the awareness set to the consideration set, i.e. the formation of consideration set. Therefore, the consideration set description is not a complete explanation of the marketing situation. Acknowledging the handicap of the previous definitions, this research defines consideration set as ‘a subset of awareness set consumers formed under some restrictions, over which consumers make an explicit utility comparison or cost-benefit trade-off before they make brand choice decisions’. This definition clarifies the relationship between the awareness set and the consideration set, reveals the processes that a brand/product goes through from the awareness set to the consideration set, and from the consideration set to the final choice, and illustrates the dynamic nature of the consideration set.



If it is acceptable to say that to some extent the evoked set and the consideration set are conceptually similar, then the introduction of the process from the awareness set to the consideration set and the definition of the consideration set proposed in the present study are supported by previous research. For example, Narayana and Markin (1975) argued that there were three subsets within the awareness set: evoked set, inert set and inept set. The evoked set consists of the selected brands that the consumer considers while making a purchase as a result of having given them a positive evaluation. The inert set refers to those brands in the product category for which the consumer has neither a positive nor a negative evaluation; the inept set consists of those brands the consumer has rejected from his purchase consideration. The authors suggest that the change in the consumer's perception is caused by a dynamic marketing environment, for example, the introduction of new brands can result in changes to the awareness set. Consequently, the change in the awareness set will lead to changes in the evoked set, inert set, or inept set. Similarly, the brands in the evoked set may move to either the inert set or the inept set, or vice versa. This implies a dynamic process related to the formation of the evoked set. This is consistent with Nedungadi (1990), who suggests that different processes may be involved in moving from awareness to consideration and from consideration to choice, which also indicates the existence of the formation process of the consideration set.

#### 3.3.2 The Dynamic Nature of the Consideration Set

Early work proposes that the consideration set is relatively static (e.g. Howard and Sheth 1969; Silk and Urban 1978). Hoyer (1984) points out that this is because much of the research on consumer behaviour examines isolated, discrete events. Rather than considering the consideration set as a static construct, later researchers argue that the consideration set is dynamic (e.g. Hauser and Wernerfelt 1990; Punj and Srinivasan 1989; Ratneshwar and Shocker 1991; and Nedungadi 1990). Punj and Srinivasan (1989) take another step forward by asserting that the consideration set (evoked set) should include an "initial evoked set" (a set of brands the consumer considered soon after the problem recognition) and "final evoked set" (a set of brands the consumer considered just prior to purchase). Shocker et al. (1991) state that the consideration set is dynamic both within and across usage occasions. For example, in the case of cross-usage occasions, a consumer includes a less luxurious brand in the consideration set for



private usage occasions; in contrast he/she might exclude it from the consideration set for public usage occasions. This is because the content of the consideration set can evolve as costs and benefits over time; hence this might possibly lead to items being removed from the set (Hauser and Wernerfelt 1990). In the case of a specific usage occasion, the content of the consideration set might change subject to different purchase situations and different stimuli.

In studies of industrial buyers, later researchers distinguish between static and dynamic considerations sets. The static consideration set is also called a 'closed set', implying that consumers only consider previously used suppliers, whereas the dynamic consideration set, also labelled an 'open set', where consumers also consider other alternatives, not only previous suppliers (Gensch and Soofi 1995). This study argues that a 'closed set' only exists for a certain period of time. It cannot possibly be static forever, given the fast-changing marketing environment. Therefore, the consideration set is dynamic in nature. This is also true even in the case of industrial purchases.

To acknowledge the dynamic nature of the consideration set is important in the process of the research design. Basically, it suggests that consideration should be measured before purchase activity and the formation of the choice set. The composition of the consideration sets might differ between before-purchase and after-purchase behaviour. Moreover, the dynamic nature of the consideration set also cautions researchers to be aware of the influence of purchase and usage situations on the consideration set and to take them into account in their research planning process. It also provides guidance on the interpretation of research findings.

#### 3.3.3 Types of Consideration Set

Previous research suggests that consideration sets can be either memory-based or stimulus-based (e.g. Shapiro et al. 1997; Nedungadi 1990). When brands/products are not available for consideration and must be retrieved from memory, the consideration set is entirely memory-based (Alba and Chattopadhyay 1985; Nedungadi 1990; Desai and Hoyer 2000). In the case of brands/products being available and in view in a purchase environment, the consideration set might be entirely stimulus-based (e.g. Parkinson and Reilly 1979; Reilly and Parkinson 1985; Nowlis and Simonson 2000). Here 'might be entirely stimulus-based' is used rather than 'entirely stimulus-based'

because ‘entirely stimulus-based’ only appears where the whole range of brands/products included in the awareness set is available and in view. In addition, the consumer has no purchase experience, and has not obtained any information about any brand or product of this product sector before. This rarely happens in real life. More rigorously, in most cases ‘stimulus-based’ is used to represent ‘memory-stimulus-based consideration set’, which implies that consumers not only respond to stimulus cues but also actively evoke previously-obtained memory. In this research, because pictures of the original branded products as well as counterfeit examples are presented to participants, the ‘stimulus-based’ consideration set is examined. More detailed reasons as to why a ‘stimulus-based’ approach is used in this study are given in Chapter 5.

#### 3.3.4 The Rationale for the Consideration Set

Since the concept was first used in marketing in the 1960s, the consideration set has gained considerable acceptance by researchers and practitioners, even though it is not directly observable. A large body of research on consideration sets has evolved within the past three decades. Despite the assumption that individuals navigate through a series of sets of alternatives (e.g. universal set, awareness set, consideration set, and choice set) in order to arrive at a choice being commonly accepted (e.g. Shocker et al. 1991; Priester et al. 2004), the fundamental issue in terms of whether consideration set exists or not has not been settled. Notably, Horowitz and Louviere (1995) question the conventional view regarding the existence of the consideration set and conclude that beyond information that enables modellers to specify the preference function more precisely, the measurement of consideration sets offers no improvement in the predictive performance of choice models. This section provides both empirical and theoretical back up to the rationale for the consideration set with the aim of justifying the significance of the current study.

##### 3.3.4.1 Empirical Evidences

Shocker et al. (1991), and Hauser and Wernerfelt (1990) reviewed previous research findings. Based on the previous research, these authors assert that consideration sets exist, they are dynamic, they change with time and occasion, and they are affected by consumer contexts and purposes. The support for the notion of the existence of the consideration set suggested by previous researchers is as follows:



A number of researchers report that the size of the consideration set is relatively small (e.g. Hauser et al. 1983; Grønhaug 1973). Most studies suggest that the consideration set size is in the range of 3 to 6, and in extreme cases with a minimum size of 2 and a maximum size of 8, whereas the size of the awareness set is between 6 to 47 (Hauser and Wernerfelt 1990). The empirical results indicate that the category of considered brands is more likely to account for a limited percentage of the awareness set. In other words, the fact that the consideration set is only a subset of the awareness set is empirically evidenced. For a summary of the consideration set size-related studies, refer to Hauser and Wernerfelt (1990).

Nedungadi (1990) reports that changing the probability of brand consideration does have an effect on probability of choice, but it does not affect brand evaluation. These results imply that inclusion in the consideration set is crucial for any brand if it is to be chosen in the final choice process; brands are considered to have more chance of being selected for purchase. Therefore, a conclusion can be drawn that a consideration set formation is a process consumers go through before they come to a final choice stage.

Ratneshwar and Shocker (1991) found that different goals would result in different products/brands being included in the consideration set. If this research finding can be explained as purchase consideration being goal-driven, then it might also be safe to conclude that a brand/product will go through the consideration set before it can be chosen. This was supported by Srivastava et al. (1984) who found that different usage situations could result in different brand inclusions of the consideration set.

Most notably, Hauser and Wernerfelt (1989) suggest that 70 percent of the variance accounted for in choice is explained by consideration. Hauser (1978) reports that the consideration set accounts for 78 percent of the explainable uncertainty in choice data, while a heterogeneous/multinomial logit model based upon consumer preference accounts for only 22 percent. Obviously, these research findings suggest that consideration sets have remarkable explanatory powers over the final choice; the prediction accuracy of consumer choice can be improved more than two-fold with the inclusion of the consideration set in the choice process. Hence, these results are strong and sufficient back-up to the rationale for the consideration set.

#### 3.3.4.2 Theoretical Supports from Other Disciplines

Apart from the empirical supports, the consideration set also has solid theoretical support. Consumers' motivations to simplify the choice process and optimise the choice outcome are the two main rationales for the formation of the consideration set (Chakravarti and Janiszewski 2003). The psychological literature asserts that consumers have limited cognitive ability (e.g. Miller 1956). Hence, when they encounter a large set of alternative brands, they normally use screening criteria to reduce the number of alternatives and form a consideration set, which will simplify the choice process (Mehta et al. 2003; Troye 1984; Urban et al. 1993), because they cannot make explicit comparisons across all the brands. In stimulus-based situations, the consumer may be exposed to various brands but fail to recognize some of them even though they are appropriate to requirements. In a memory-based choice situation, the consumer may fail to recall all brands or options that are available to them (Hutchinson et al. 1994). Inability to recall or recognise all brands they are aware of results in an actual consideration set that is smaller than the awareness set (Manrai and Andrews 1998).

The idea behind the second rationale is that a consumer is uncertain about the attributes and consequences of their purchase behaviour and therefore must actively search for information about the alternative brands. Because information acquisition is a costly and time-consuming process, there is a strong tradition in economics of questioning the cost-effectiveness of consumers' processing information on all the brands of which they are aware (Stigler 1961). Information searching stops when the benefits are traded off by the total cost (Robbets and Lattin 1991, 1997; Hauser and Wernerfelt 1990; Roberts 1989). Consequently, consumers can only seek information for a limited number of brands/products given the cost restriction. To summarise, despite the reality not being directly observable, the existence of consideration sets is a logical outcome of theories of economics and psychology (Shocker et al. 1991).

Although Horowitz and Louviere's (1995) concern about the existence of the consideration set is not the mainstream of the research related to consideration sets, it does however caution later researchers against the blind use of the consideration set. Based on the rationales of existence of the consideration set noted above, this research,



in line with the conventional view, assumes that consumers create a downsized consideration set in the process of decision-making.

### 3.4 Significant Roles Played by the Consideration Set

Despite the debate about the rationale for the consideration set noted above, the notion of consideration has become a fundamental principle of research associated with decision-making processes (Alba et al. 1991; Hauser and Wernerfelt 1990; Kardes 1994; Roberts and Lattin 1991; Shocker et al. 1991). It is believed that inclusion of a brand/product in a consideration set is often necessary for eventual choice (e.g. Howard and Sheth 1969). Research results have shown that consideration effects have an important influence on consumer choice (e.g. Roberts and Lattin 1991; Hauser and Wernerfelt 1990; Nedungadi 1990). The consideration set helps simplify purchasing decisions (Krieger et al. 2003). More specifically, consumers only evaluate brands that pass into their consideration sets because they expect that the products will perform well (Nedungadi 1990).

The importance of the consideration set and its remarkable power to predict the consumer's final choice has been explored by empirical research. As noted earlier, Hauser and Wernerfelt (1989) suggest that 70% of the variance accounted for in choice is explained by consideration, and Hauser (1978) argues that the consideration set accounts for 78% of the explainable uncertainty in choice data while a heterogeneous/multinomial logit model based upon consumer preference accounts for only 22%. Moreover, research findings also show that, when four different unobserved effects are simultaneously present (i.e. choice set effects, heterogeneity in preference and market response, state dependence, and serial correlation), a two-stage logit model with consideration sets produces the most valid parameter estimates. Therefore, it is concluded that the two-stage models tend to give more accurate predictions than a one-stage multinomial logit model (Manrai and Andrews 1998).

To summarize, the consideration set helps to simplify consumer purchasing decisions, and has significant implications for marketing strategy (Nowlis and Simonson 2000) and allocation of marketing resources (Krieger et al. 2003; Desai and Hoyer 2000). Since inclusion of a product in a consideration set is often a necessary precondition for choice (Howard and Sheth 1969; Alba et al. 1991; Hauser and Wernerfelt 1990; Kardes

1994; Roberts and Lattin 1991; Shocker et al. 1991), unless a product is included in the consideration set, it will not be chosen (Nedungadi 1990). It is one of the important barriers that a new brand must be able to overcome (Kardes et al. 1993). All of these imply the importance of achieving a better understanding of the consideration set.

#### 3.5 Previous Research Related to the Consideration Set and Findings

The focus of this section is a review of literature related to the consideration set. Three broad categories of literature are identified. The first subsection outlines the literature relative to consumer choice modelling. The second section discusses literature in the study of consideration set characteristics (size and composition). The third subsection concentrates on literature concerning consideration set formation. The fourth section reviews one particular work that investigates the influence of attitude and attitude strength on consideration set formation. This is followed by constructive comments on this work and a challenge to its research findings.

##### 3.5.1 The Consideration Set and Consumer Choice Models

The introduction of the consideration set evoked a great shift in relation to modelling consumer decision-making. Recognisably, this construct has been commonly used in terms of modelling consumer choice behaviour since the late 1980s (e.g. Roberts 1989; Hauser and Wernerfelt 1990; Roberts and Lattin 1991; Shocker et al. 1991; Ratneshwar and Shocker 1991; Andrews and Srinivasan 1995; Turley and LeBlanc 1995; Chiang et al. 1999; Wu and Rangaswamy 2003; Vroomen et al. 2004). Models which take the consideration set as a separate stage are named two-stage logit models, as opposed to the heterogeneous/multinomial logit model which supposes that consumer choice is made directly from the awareness set. The inclusion of the consideration set in the two-stage models helps to relax certain restrictive assumptions (e.g. consumers choose from the full set of available brands/products in the market place on each purchase occasion) inherent in Luce-based discrete choice models, such as multinomial logit models (Vroomen et al. 2004; Manrai and Andrews 1998). The two-stage models assume that consumers form a consideration set due to limited cognitive capability and cost restriction involved in information searching (e.g. Miller 1956; Mehta et al. 2003; Troye 1984; Urban et al. 1993; Stigler 1961; Robberts and Lattin 1997), from which the final choice will be made.



Compared to the conventional one-stage discrete choice models (see Manrai 1995 for a review), the two-stage models are considered to represent better the underlying process which consumers are believed to use in selecting a brand or a product from a set of alternatives of awareness (Shocker et al. 1991; Gensch 1987) and to perform better than basic logit models (Manrai and Andrews 1998; Vroomen et al. 2004). Given that the objective is not to develop another consumer choice model, and a relatively thorough review has been conducted by previous researchers, a detailed review of two-stage discrete choice models is not provided in this research in order to avoid replication. For those who are interested, see Manrai and Andrews (1998) for a review of the two-stage discrete choice models.

#### 3.5.2 Research Related to the Characteristics of the Consideration Set

A few aspects of the consideration set have attracted attention. Nevertheless, the primary orientations of empirical work have been toward investigation of consideration set size and issues associated with composition of the consideration set. Previous studies of the consideration set size have been largely descriptive, reporting the consideration/evoked set size and searching for correlations between consideration set size and involvement (e.g. Lapersonne et al. 1995; Brisoux and Chéron 1990; Elliot and Warfield 1993), information search (e.g. Belonax and Mittelstaedt 1978), advertising (e.g. Mitra and Lynch 1995), variety seeking (e.g. Sivakumaran and Kannan 2002), knowledge (e.g. Aurier et al. 2000; Punj and Srinivasan 1989), experience (e.g. Johnson and Lehmann 1997), familiarity (e.g. Aurier et al. 2000; Alba and Hutchinson 1987), brand preference (e.g. Mitra and Lynch 1995), and socio-demographic characteristics (e.g. Grønhaug 1973). Please see Hauser and Wernerfelt (1990) and Shocker et al. (1991) for a detailed review.

Since Roberts and Lattin (1991) developed a cost-benefit model intended to describe the composition of a consumer's consideration set at a certain point in time, quite a few studies have examined consideration set composition related issues (e.g. Desai and Hoyer 2000; Bronnenberg and Vanhonacker 1996; Andrews and Srinivasan 1995; Hutchinson et al. 1994; Kardes et al. 1993; Troye 1984). These studies attempt to identify the descriptive characteristics of the consideration set and what kinds of products are included in the consideration set.



### 3.5.3 Research Related to the Formation of the Consideration Set

The aspects related to the formation of the consideration set have also attracted attention; for example what the factors are that influence the formation of the consideration set are has attracted research interest. This has been particularly true in the last twenty years. Broadly speaking, the past research can be classified into two categories, according to the research context-stimulus-based approach and memory-based approach.

Previous research findings suggest that in the context of stimulus-based choice situations, advertising (Mitra 1995), pioneering products (Kardes et al. 1993), packaging (Garber Jr. 1995), brand familiarity (Baker et al. 1986), in-store display activities and feature ads (Mehta et al. 2003), goal-conflict and goal-ambiguity (Ratneshwar et al. 1996), strength of association between the brand and the choice category (Posavac et al. 2001), involvement and consumer sensitivity of type II error (Chakravarti and Janiszewski 2003), influence of incidental exposure to an advertisement (Shapiro et al. 1997) and influence of implicit memory for familiar brand names (Coates et al. 2004) all have an impact on the formation of the consideration set.

Mitra (1995) found that when subjects exposed to differentiating advertising are compared to subjects who are not exposed to advertising, the consideration set composition of the former group is more stable. Kardes et al. (1993) reveal that a pioneering brand is more likely to be retrieved and considered compared with followers. Garber Jr. (1995) suggests that a sufficiency of the visual attributes' typicality and novelty will indicate a greater likelihood of attention, and that the appropriateness of a visually novel brand will indicate a greater likelihood of consideration. Baker et al. (1986) suggest that brand familiarity is unlikely to exert a robust effect on consumers' brand attitudes and consideration when extensive product knowledge is available or when involvement is high. Mehta et al. (2003) explore the idea that although in-store display activities and feature advertising do not influence quality perceptions, they do reduce consumer search cost for a brand, thereby significantly increasing the probability of the brand being considered. Ratneshwar et al. (1996) find that cross-category consideration is high when there is either goal conflict or goal ambiguity. Posavac et al. (2001) find that a brand is more likely to be included in the consideration set, and indicated as an intended choice, if the association between the brand and the choice



category is strengthened as opposed to not strengthened. Chakravarti and Janiszewski (2003) look at the influence of macro-level motives on the consideration set composition in novel purchase situations. They find that priming different macro-level motives predisposes consumers to employ different types of screening strategies. The screening strategies interact with characteristics of the stimuli, consumption goals, and situational variables to determine the content of consideration sets. Shapiro et al. (1997) examine the effects of incidental advertising exposure on the formation of the consideration set. They find that the incidental advertising exposure effect is fairly robust, occurring across a variety of occasions (both memory- and stimulus-based choice situations, both familiar and unfamiliar purchase situations, and across different product classes).

A brand name must be represented in a consumer's consideration set in memory if it is to be chosen (Hauser and Wernerfelt 1990). Nedungadi (1990) focuses on the memory-based choice situation and suggests that brand accessibility (ease of retrieval) and external cues (e.g. brand organization in memory and brand primes) are two potentially important factors in the formation of the consideration set. Desai and Hoyer (2000) also investigate the memory-based choice situation and reveal that familiarity of usage occasion and usage location has impacts on consideration set stability, size and marginal variety. It can clearly be seen that study in this area is still very arbitrary and there is no real pattern appearing in terms of research finding and perspective from which the research was conducted.

#### 3.5.4 Attitude, Attitude Strength and the Consideration Set Formation

Based on the well-developed attitude strength and choice theory, Priester et al. (2004) propose that attitude and attitude strength toward the alternative is a fundamental antecedent of consideration. This is the only work found that investigates the formation of consideration set from consumers' perspective. Specifically, the authors examine the influence of consumers' preference, attitude and attitude strength toward brands/products on the consideration set formation. The research findings of two experimental studies (the product studied is toothpaste) support these authors' arguments and suggest that attitude together with attitude strength influence the formation of the consideration set, and the influence of attitude strength on behaviour is mediated by consideration. These authors conducted a third piece of experimental

research using a different product (candy bars) in order to examine the reliability and convergent validity of their conceptualization of attitude strength. Research findings from the third study provided further support to the authors' research hypothesis.

Priester et al. (2004) do raise concerns in relation to generalisability and reliability of their research findings. One of the concerns is related to the studied product. The authors recognise that the apparently consistent research results across two experimental studies might be caused by the specific studied product category – toothpaste. As noted earlier, these authors conducted a third study to re-test their previous finding and came out with supportive findings. As a result, the authors do not suggest further concerns for applying the proposed 'Attitudes, Attitude Strength and Consideration and Choice' (A2SC2) model on other product classes.

### 3.5.5 Critiques of the A2SC2 Model

This research would argue that the A2SC2 model proposed by Priester et al. (2004) may not apply to all alternative product categories universally. The first question raised concerns the stability of Priester et al.'s (2004) research results. Although it appears that the research findings are consistent across three studies and two product categories, it is also true that the authors only examined low-price product categories. Moreover, past studies indicate that the link between attitude toward the object and behaviour is not always clear (Spears and Singh 2004; Cobb-Walgren et al. 1995). In some cases, attitudes appear to have a direct effect on behaviour (e.g. Bagozzi and Warshaw 1992; Bagozzi and Yi 1988), while in others they do not (e.g. Bagozzi 1981, 1992). Therefore, it makes sense to ask whether or not the apparently consistent results are generated by chance.

The second question is related to the attitude strength measurement that Priester et al. (2004) developed. The concept of attitude strength holds that attitudes that possess equivalent extremity can differ as to their underlying strength. Strong attitudes possess the following properties: they come to mind faster, persist over time, resist counterpersuasive attempts, and guide behaviour more than weak attitudes (Fazio 1995; Petty and Cacioppo 1986; Petty et al. 1995). Thereby, previous research suggests that a theoretically meaningful indicator of attitude strength is the speed with which an attitude comes to mind (Priester and Petty 2003). A number of researchers used this



indicator to guide their measure of attitude strength (e.g. Fazio et al. 1989; Priester and Petty 2003). Priester et al. (2004) used four item, 11-point scales to measure this concept. One scale is anchored with “not at all important” and “extremely important”, the second with “not at all self-relevant” and “extremely self-relevant”, the third with “not certain at all” and “extremely certain”, and the fourth scale with “have not thought about it at all” and “have thought about it a great deal”. Although the authors claim that the reasons for choosing these measures is to reflect the antecedents of elaboration and consequences associated with attitude strength, it could be argued that three out of the four scales seem to be very similar in involvement measures, the exception being the third one. Therefore, there is a strong chance that the score generated from using this proposed measure actually measured the involvement rather than attitude strength. One more reason to question the viability of using the Priester et al. (2004) proposed scale to measure attitude strength lies on the measurement validity. It is beyond the research scope to delve into scale construction. However, one very obvious shortcoming of this scale is that it measures the antecedents and consequences of the attitude strength but not the concept itself, according to the authors’ own claim.

A further question relates to whether Priester et al. (2004) should have designed their research in the first place. This might seem to be a very strong statement. However, the argument is based on the following. Firstly, it is well-documented that attitudes are generally a poor predictor of marketplace behaviour, therefore any more attempt to test their explanatory power on consumer behaviour will only add one more example to either the ‘yes’ category (the ‘yes’ attitude appears to have a significant effect on consumer behaviour) or the ‘no’ category (the ‘no’ attitude appears not to have significant explanatory power on consumer behaviour). Secondly, the authors examined the influence of consumers’ attitudes toward individual brands on consideration and choice. It appears that the research design was developed from the Fishbein and Ajzen (1975) reasoned action theory or Ajzen’s (1991) planned action theory. Nevertheless, both reasoned action theory and planned action theory are about attitude toward behaviours, not objects. In fact, based on a number of empirical research findings, Fishbein and Ajzen (1975) made it very clear that reasoned action theory should not be applied to objects, as did the authors of the planned action theory. For those who are interested in this point, please refer to these two benchmark works.

Given the above, it can be proposed that to apply the A2SC2 model to luxury branded products would be problematic. Moreover, this research further argues that it is not necessarily consumer attitude, or even attitude strength, which guides formation of consideration set. One simple example offered here is that a consumer may have a very positive attitude and high attitude strength towards a Rolex watch, however s/he may never consider buying one, due to a shortage of money.

#### 3.6 Identified Research Problem

The review of literature on consumer choice process reveals that the study of determinants of the consideration set has become attractive to researchers recently due to its importance. Studies related to the consideration set can be categorised into three very broad streams. The first stream of previous studies investigates contributions of the consideration set to consumer choice models. The second stream focuses on exploring the characteristics of the consideration set. Most recently, researchers' interests shifted to issues concerning the formation of the consideration set. The past research is categorised as the third research stream in the study of the consideration set. However, research in this area still appears to be very much arbitrary, with no clear pattern emerging from it.

Roberts and Lattin (1997) called for research into the nature of the relationship between product attributes and consideration. Interestingly, it appears that this area has not received the attention it deserves. The effects of consumer attitude and attitude strength toward low-involvement brands (objects) on the formation of the consideration set have been investigated (e.g. Priester et al. 2004). According to the authors, the research results are convincing. However, the theoretical logic of the research and the validity of the measure they adopted are questioned. The influence of attitude toward brands in the consumer choice process is challenged considering that both the reasoned and planned action theories are about attitude toward behaviours not objects. This research proposes that the research findings of Priester et al. (2004) should be viewed with caution and might not be applicable to luxury brands. Apparently, little research attention has been devoted to the investigation of the effects of consumers' perceptions of product/brand related characteristics on the formation of a consideration set, leaving unanswered the question of what inherent characteristics of a brand/product determine its entry into the consumer consideration set.



The study of the impact of consumer perception of a brand/product on the formation of a consideration set is considered important and valuable. First of all, consumer behaviour is, at root, driven by perceptions of a brand. Perceptions are in the hearts and minds of consumers, and are actually driving brand equity (Biel 1992). It is perceptions that provide the grounds for purchasing decisions (Friedman and Zimmer 1988; Borgers and Timmermans 1987). Secondly, attitude is a “summary evaluation” of an object or behaviour (Giner-Sorolla 1999), whereas consumer perceptions are defined as the selection, organisation and interpretation of marketing and environmental stimuli into a coherent picture (Assael 2004). Therefore, the study of perceptions can provide marketers with a more detailed picture about how their brand is perceived by consumers compared with the investigation of attitude. Thirdly, modelling influence of consumers’ perceptions towards a brand on consumer brand choice process will help to reveal the significantly influential factors related to the brand. Based on this, marketers will be in a position to work out more effective marketing strategies.

Some researchers argue that the reason for the lack of research into determinants of the formation of the consideration sets is that this construct is not usually directly observable; hence a researcher has to estimate it from observed purchase data (Roberts and Lattin 1997; Vroomen et al. 2004). Some argue that the size of the consideration set is easier to measure than its composition (Punj and Srinivasan 1989). These authors further argue that it might be the conventional view that strongly favours non-compensatory process at the consideration phase and compensatory process at the choice phase (e.g. Gensch 1987) which deters researchers. Roberts (1989) challenges the widely-accepted conventional view and argues that both compensatory and non-compensatory processes are appropriate on the basis of Narayana and Markin’s (1975) classification of non-considered alternatives into inept and inert brands. Later researchers (e.g. Roberts and Lattin 1991; Desarbo and Jedidi 1995) choose to model consideration as a compensatory process, given its apparent robustness (see Johnson and Meyer 1984). This research has decided not to take any side on this but rather to let the research results speak for themselves at the end.

#### 3.7 Research Aim

To integrate the research problems identified in the two bodies of literature, studies on counterfeiting and consumer choice process, this research aims to investigate

consumers' perceptions of counterfeit branded products as opposed to genuine branded products, as well as to uncover the underlying determinants of the formation of the consideration set and purchase intention in the context of non-deceptive counterfeiting. More specifically, it examines the influence of consumers' perceptions of these two versions of a brand together with some other exploratory variables on the formation of the consideration set and the tendency of consumer choice. Accordingly, this research seeks to fill the identified research gaps: consumers' perceptions of counterfeit branded products as opposed to their original counterparts have not received the research attention they deserve; the majority of research the in study of counterfeits has used either qualitative or quantitative research methods; few research has examined counterfeiting from brand level; and what brand characteristics might influence consumer decision processes appears to be unknown.

#### 3.8 Research Scope

Luxury branded products (both original and counterfeit versions) are chosen as the centre of this study, with consumers as the subjects. The research focuses on modelling the influence of consumer perceived brand image (the subjective/perceptual judgements of the brands rather than the objective physical attributes), the perceived product involvement, the self-assessed knowledge and consumer demographic variables on formation of consideration set and purchase intention. This research does not deny that other factors could significantly influence the consumer choice process, for example self-image (e.g. O'Cass and Lim 2002; Quester et al. 2000) and perceived similarity (e.g. Baker et al. 2002; Dhar et al. 1999) are found to be significantly influential to consumer purchase choice and consumer purchase intention. Nevertheless, due to the time restriction for this project, it was decided that other than the above noted, no other factors are to be considered.

#### 3.9 Decision on Inclusion of Purchase Intention vs. Choice

According to the model of individual choice (Shocker et al. 1991), the final response variable is the 'choice'. However, many investigations designed to study the determinants of behaviour have not actually observed behaviour, as data on actual behaviour are normally unavailable, but have instead used measures of behavioural intentions as their criteria. Due to its not being easy to set up a selling scenario for both counterfeit and original branded products, the actual purchase behaviours are difficult to



measure properly in this study. As a result, examining purchase intention seems more appropriate, since the tested branded products are not actually purchased by research participants. Therefore, in this research, purchase intention is the final outcome variable.

Purchase intention originally evolved from the psychological construct of behavioural intention. Behavioural intention is the subjective probability of performing overt behaviour (Ajzen and Fishbein 1973), which suggests that with little variation, people do what they say that they are going to do. Marketing researchers define purchase intention as the personal action tendencies or likelihood to make an effort to purchase a brand (Spear and Singh 2004; Grewal et al. 1998; Bagozzi and Burkrant 1979; Ostrom 1969). Based on the intention-behaviour model (e.g. Ajzen and Fishbein 1973), researchers propose that purchase intention approximates purchase behaviour. Supporting evidence suggests that the relationship between intentions and purchase is generally positive and significant (e.g. McNeil 1974; Taylor et al. 1975; Tauber 1975), however the strength of the relationship varies from study to study. Some research reveals relatively poor correlations. For example, Bonfield (1974) calculated a total sample  $r = 0.44$  between intentions and fruit drink choices, and Harrell and Bennett (1974) obtained  $r = 0.37$  when intentions and physician prescribing behaviour were compared.

Despite the debate over the exploratory power of purchase intention over purchase behaviour between early researchers, the concept of consumer purchase intention is commonly used in measuring marketing effectiveness (Andrews et al. 1992; Beerli and Santana 1999). Moreover, it has attracted extensive interest from marketing researchers. Recent research has suggested that attitude (Laroche & Brisouz 1989; Laroche et al. 1996; Prendergast and Hwa 2003), knowledge (familiarity and experience) (Anand et al. 1988; Brucks 1985; Heath 1990; Laroche et al 1996; Zajonc and Markus 1982; Pope and Voges 2000; Chang 2004), and demographic variables (Prendergast and Hwa 2003) have a great impact on consumer purchase intentions. Moreover, the consumer's intention to buy a specific brand is also determined by attitudes toward other competing brands in the choice set (Simonson and Tversky 1992; Jaccard 1981; Malhotra 1986; Nantel 1986).

All in all, the use of purchase intention to replace the choice is considered appropriate for the present research. In line with Spears and Singh (2004, p. 56), the purchase intention in the present research refers to ‘an individual’s conscious plan to make an effort to purchase a brand’.

#### 3.10 Summary

This chapter provides the theoretical foundation of this research. Although some researchers do not differentiate between consumer decision-making process from consumer choice process, this research argues, judged on having investigated different objects, that they are distinguished concepts. Consumers are the studied objects for the consumer decision-making process, whereas for the consumer choice process, brands or products are examined. The effort this research puts into distinguishing these two concepts assists in drawing a clear literature review boundary for the current study. More specifically, this chapter only reviews literature related to consumer choice process, as to gain an understanding of the reasons why a brand is considered and eventually purchased is of interest to this research.

The Model of Consumer Evaluation and Choice (Srinivasan 1987) and the Model of Individual Choice (Shocker et al. 1991) are discussed in detail. It is revealed that both models acknowledge the process from awareness set to consideration/evoked set. Nevertheless, neither of them focuses on this critical process. Compared to the earlier model, the later model is individually focused and provided with abundant theoretical backup, and is thus considered better suited to this research.

A number of terminologies have been used by previous researchers to refer to the consideration set. Given that it appears to be the most widely adopted term and that the use of this term can avoid the ambiguity surrounding “evoked set”, it was decided to use “consideration set” in the current study. This research defines the consideration set as ‘a subset of an awareness set consumers formed under some restrictions, through which consumers make an explicit utility comparison or cost-benefit trade-off before they make brand choice decisions.’ Building on previous commonly-accepted definitions, the definition proposed by this research further highlights the process from awareness to consideration and also the dynamic nature of the consideration set.



The dynamic nature of the consideration set is discussed in a number of past studies. It is believed that the composition of the consideration set varies with time and in different situations (Hoyer 1984; Shocker et al. 1991; Hauser and Wenerfelt 1990). The acknowledgement of this dynamic nature is crucial at the research planning stage. Simply, it determines that it will not make any logical sense if the consideration set is explored after purchase behaviour. Moreover it also provides guidance on research result interpretation.

Despite Horowitz and Louviere's (1995) questioning the existence of the consideration set, in line with a number of other researchers (e.g. Shocker et al. 1991; Priester et al. 2004), this research argues that the consideration set does exist, although it might not be directly observable. Both empirical and theoretical supports to this argument are presented and discussed, based on past research. This further assists in justifying indirectly that the study of consideration set related issues is worthwhile. The direct support is provided by the important role it plays – unless a brand/product is included in the consideration set, it will not be chosen (Nedungadi 1990).

Research on the study of the consideration set can be classified into the consideration set and consumer choice models category, research related to characteristics of the consideration set (consideration set size and composition) category, and research related to the formation of the consideration set category. The review focus is placed on the last category due to its direct relevance to this research. The review discovers that study of the consideration set formation has not received the attention that it deserves; the existing research appears to be arbitrary, and research findings do not show any pattern.

Most recently, the influence of attitude and attitude strength on the formation of the consideration set was examined by Priester and his colleagues. Despite the consistent results across three separate studies, the generalisability of Priester et al's (2004) results is challenged. First, considering the fact that the link between attitude toward the object and behaviour is debatable, it is questioned whether or not the results of Priester et al. (2004) were generated by chance. Second, it is argued that the scale Priester et al. (2004) used to measure the attitude strength lacks content validity, since they measured the antecedents and consequences of this concept according to the authors. On close examination of the statements they adopted in their research instrument, it is believed

that to a great extent they measured the product involvement notion but not the attitude strength concept. Third, it is suggested that as the attitude concept having been well documented as a poor predictor of marketplace behaviour, Priester et al. (2004) may have not added anything new to knowledge at all. Moreover, Priester et al. (2004) might also face the possibility of having misunderstood the well-established reasoned action theory and planned action theory if the authors claim that their research stems from these two benchmark works, as both of these works make it very clear that one should not apply these two theories to objects.

Based on the literature review, it is concluded that the formation of the consideration set deserves more research attention. Little research begins from the study of the influence of the inherent characteristics of the objects (brand or product) on the consumer choice processes. Consumer attitude toward a brand or product might not provide a good prediction as to the inclusion of a brand or product in the consideration set or eventual choice. In contrast, perceptions toward a brand or product are the real drivers of consumer behaviour (Biel 1992; Friedman and Zimmer 1988; Assael 2004).

It is at this stage that a clear research aim is established by integrating the identified research gaps in two bodies of literature. In fact, the research aim is two-fold. This research attempts to investigate consumers' perception of counterfeit branded products as opposed to the original branded products, as well as to discover the determinants of the formation of consideration set and purchase intention in the context of non-deceptive counterfeiting. Research which focuses on the interplay between consumers' perceptions of a particular brand or product is thus likely to enhance understanding of how a brand (counterfeit or original) or product enters and is retained in the consideration set, and is probably eventually selected. To achieve this goal, the influence of brand image, product involvement, self-assessed product knowledge and four selected demographic variables are examined in the stimulus-based situation. According to the model of Individual Choice (Shocker et al. 1991), the final response variable should be 'choice'. This research has decided to replace 'choice' with 'purchase intention', since to set up a selling scenario for both counterfeit and original branded products is considered practically unachievable.



Chapter 2 and 3 have reviewed literature on the study of counterfeiting as well as relevant literature on the study of consumer choice process. Based on the intensive literature review, research problems are identified, the research aim is sharpened, and a clear research boundary has also been established. The following chapter will focus on reviewing literature related to the above noted concepts (brand image, product involvement, product knowledge and selected demographic variables) and presenting the research hypothesis and the research conceptual model.

**Chapter 4    Analysed Constructs and Research  
Hypotheses**





## **Chapter 4    Analysed Constructs and Research Hypotheses**

### **4.1    Introduction**

Chapter 2 provided detailed information of the research context as well as the identified research problem in relation to the study of counterfeiting. Guided by the identified research problem in Chapter 2, Chapter 3 discussed literature concerning consumer choice processes. The literature review further discovered that the determinants of the formation of the consideration set and the choice from product/brand level appears to be under-researched, despite the significant role played by the consideration set in consumer choice process. To integrate the research problems identified in Chapter 2 and Chapter 3, it is acknowledged that little research has examined this issue in the context of non-deceptive counterfeiting. Thereby, the two-fold research aim of the present research is to investigate consumers' perceptions of counterfeit branded product as opposed to genuine branded product, as well as to uncover the underlying determinants of the formation of the consideration set and purchase intention from the brand level in the context of non-deceptive counterfeiting.

A review of the consumer behaviour literature helped to identify four main constructs which influence consumer choice processes. They are discussed as product involvement, self-assessed product knowledge, demographics (gender, age, education, and household income), and brand image variables (product attributes, benefits, brand personality and perceived consequences). The discussion about brand image variables mainly focuses on the brand image concept itself and brand personality. The detailed discussion about brand image is to clarify relationships between the three closely associated and easily misunderstood constructs – brand, brand identity and brand image, and to illustrate the rationale of investigation of brand image in the current study. The effort devoted to analysing brand personality is drawn by its abstract and complex nature.

The purpose of this chapter is to provide a theoretical background of the variables affecting the consumer choice processes, more specifically, the formation of consideration set and purchase intention, and hence to provide a foundation for the research conceptual model and develop the research hypotheses. Following the analysis

of the investigated explanatory variables, the research hypotheses are proposed. This chapter finishes with a brief chapter summary. The research conceptual model is reported in this section. It is here that it can be clearly seen that the organisation of this chapter is led by the flow of the research conceptual model.

## 4.2    Involvement

Like most marketing concepts, the involvement construct originates from the discipline of psychology. Involvement was pioneered by Sherif and Cantril (1947). These authors describe involvement as the state of an organism when presented with any stimulus which is ego-central, or when any stimulus is either consciously or subconsciously related to the ego. In marketing, the concept appears to be more complex. Cohen (1983, p. 325) states that there may well be '1000 great ideas' on the concept of involvement. Not surprisingly, there is no commonly accepted definition of this hypothetical construct. Involvement is used to refer to: personal relevance to message and product (Petty and Cacioppo 1981; Petty et al. 1983; Engel and Blackwell 1982; Greenwald and Leavitt 1984; Richins and Bloch 1986; Zaichkowsky 1985; Celsi and Olson 1988); arousal, interest, or drive evoked by a specific stimulus (Park and Mittal 1985); a person's activation level (Cohen 1983); goal-directed arousal capacity (Park and Mittal 1985; Park and Young 1986); an individual's subjective feeling of the importance of the judgement process or importance of the object about which judgement is being made (Mantel and Kardes 1999); the familiarity or attachment to the product and the congruency between the product and the values of the individual (Lastovicka and Gardner 1978).

In addition, involvement is a complex construct that can be viewed from different aspects such as involvement with advertising (Krugmen 1962, 1965, 1967, 1977), with a product or product category (De Wulf 2001; Mittal 1995; Howard and Sheth 1969; Hupfer and Gardner 1971; Zaichkowsky 1985), with a purchase decision (Ganesh et al. 2000; Clarke and Belk 1978; Zaichkowsky 1985; Slama and Tashchian 1985; Mittal and Lee 1989), with shopping (Josiam et al. 2005), with consequences of the product on the individual in terms of his/her cognitive response (Richins et al. 1992), with responses to involvement (Laaksonen 1994), and more recently. with purchase channel (Lueg 2006). The list of different aspects of the involvement concept given here is far from exhaustive.



Given what has been noted earlier, one should not be surprised by the complex nature of the involvement construct. As early as 1947, Sherif and Cantril alerted researchers to the fact that people can develop many different types of involvement. Slama and Tashchian (1985) further claim that involvement can derive from activities, objects, ideas, social issues, and so on. Rothchild (1984, p. 217) proposes: 'It is driven by current external variables (the situation; the product; the communication) and past internal variables (enduring; ego; central values)'. In a similar vein, Chung and Zhao (2003) note that the characteristics of the person, the physical characteristics of the stimulus, and the situation are the three antecedents of the involvement. The involvement exists in a process. The complexity of this concept is determined by its nature. In line with the complex nature of the involvement construct, there is no single direction that involvement research is taking. Sometimes these concepts are discussed in the context of a rather broad domain, while at other times they are used to describe more specifically a particular aspect of the involvement construct (Meuhling et al. 1993).

Following the awareness of the complexity of the involvement construct, Cohen (1983) suggests that relationships among overly broad constructs are necessarily imprecise, and this impairs our ability to refute propositions and reformulate theories. Previous researchers have concluded that involvement is best dealt with when it is conceptualised within a particular domain (e.g. Dholakia 1997; Meuhling et al. 1993; Batra and Ray 1985; Lutz 1985). Consistent with this, product involvement is considered to be appropriate here because this research is to examine perceived involvement of product level. More specifically, it is interested in the influence of product involvement of two specific product classes (watches and handbags) and consumers' perceptions, and on consumer choice processes (possibility of being considered, possibility of being chosen) of two versions (counterfeit version and original version) of each brand (four luxury brands are examined in the current study).

### 4.2.1 Product Involvement

Since it was first introduced to marketing, the concept of involvement has been a major centre of interest in consumer research literature (Brisoux and Chéron 1990). A substantial amount of research attention has been given to the study of the influence of

product involvement on consumer information searching, processing and purchasing behaviour (Rothschild 1984). Product involvement has been extensively used as a moderating or explanatory variable in consumer behaviour (Dholakia 1997; 1998). The level of involvement has been shown to determine the depth, complexity and extensiveness of cognitive and behavioural processes during the consumer choice process (e.g. Houston and Rothchild 1978; Laurent and Kapferer 1985; Kleiser and Wagner 1999; Kokkinaki 1999; Chakravarti and Janiszewski 2003). It is regarded as a central framework, vital to understanding consumer decision-making behaviour and associated communications (Fill 1999). Purchase decisions made by consumers vary considerably, and one of the factors thought to be the keys to brand choice decisions is the level of involvement (in terms of importance and relevance) a consumer has with either the product or the purchase process.

### 4.2.1.1 Product Involvement Definition

The meaning and definitions of product involvement differ across researchers (Chung and Zhao 2003). De Wulf et al. (2001) and Mittal (1995) conceptualise product involvement as a consumer's enduring perceptions of the importance of the product category based on the consumer's inherent needs, values, and interests. Ratchford (1987) underlines the risk incurred, or the importance of the decision. Laurent and Kapferer (1985) propose a multidimensional concept distinguishing five facets: interest, pleasure, value of the sign, risk importance, and the likelihood of making the wrong choice. Dholakia (2000) defines product involvement as an internal state variable that indicates the amount of arousal, interest or drive evoked by a product class. For this study, the definition of product involvement is taken from Zaichkowsky (1985, p. 342): 'A person's perceived relevance of the object based on inherent needs, values and interests'.

Zaichkowsky's (1985) definition contains the general viewpoints of several researchers (e.g. Krugman 1967; Clarke and Belk 1978; Mitchell 1979; Greenwald and Leavitt 1984; Rothschild 1984; Dholakia 2000), and it has been commonly adopted by recent researchers (e.g. Kokkinaki 1999; Kleiser and Wagner 1999; McGrath and Mahood 2004). It also responds to Laurent and Kapferer (1985) who claim that 'product involvement' is often used interchangeably with 'perceived product involvement' in marketing literature. More specifically, this definition falls within the domain of



cognitive approaches to defining involvement (Laaksonen 1994); it is subject-centred. In addition, adoption of this definition also secures the legitimacy of using the Revised Personal Involvement Inventory (RPII) to measure product involvement in this research, simply because the RPII is a verified version of the Personal Involvement Inventory (PII), developed by Zaichkowsky (1985) based on this definition (see Chapter 5 for details).

#### 4.2.1.2 Enduring Involvement vs. Situational Involvement

Houston and Rothschild (1978) first make a distinction between enduring involvement and situational involvement. According to these authors, situational involvement refers to the degree of involvement evoked by a particular purchase situation and is essentially context-dependent and temporary, whilst enduring involvement reflects a general and permanent concern with the product class, and is long-lived (Houston and Rothschild 1978). It is believed that enduring involvement derives from the perception that the product is related to centrally-held values (Arora 1982).

Despite the fact that some theorists generally accept Houston and Rothschild's (1978) view and believe that involvement comprises enduring and situational involvement (Bloch et al. 1989; Richins and Bloch 1986), it is still debatable whether product involvement is an enduring or a situational concept. The main stream of researchers believes that product involvement consists of the enduring involvement and situational involvement. For example, Baker and Scribner (2002) suggest that to consider product involvement to be perceived, personal relevance allows for products to have different levels of involvement associated with them for different persons and in different situations. In the same vein, Dholakia (1998) claims that enduring involvement and situational involvement are two types of involvement associated with a product class. In contrast, some researchers propose that product involvement is long-lived, determined by the stable elements of the individual's identity, and therefore should be labelled enduring involvement (Laaksonen 1994; Lee 2000). Some researchers (e.g. Chung and Zhao, 2003) claim that enduring involvement and situational involvement are two distinct types.

In line with Baker and Scribner (2002) and Dholakia (1998), this research would argue that enduring involvement and situational involvement should be regarded as two sub-



constructs of the product involvement. These two sub-constructs are labelled ‘enduring product involvement’ and ‘situational product involvement’ in order to distinguish them from enduring and situational involvement. Figure 4.1 represents the influential factors of situational product involvement and enduring product involvement, as well as the proposed interrelationship between these two concepts and product involvement. This research proposes that situational product involvement and enduring product involvement coexist in most cases. It is a matter of who is playing a dominant role rather than what kind of involvement product involvement should be labelled as. For example, an individual will perceive a car as having a high level of product involvement in their daily life. This kind of product involvement should be classified as enduring involvement, as a car is a durable product and normally it is an expensive product, therefore the involvement is long-lived. However, the perceived product involvement will increase if the individual is going to drive his/her car to a job interview for a very senior position. Under these circumstances, the situational involvement is highlighted particularly, and it may take the lead. When this happens, that is not necessarily to say that the enduring involvement diminishes completely.

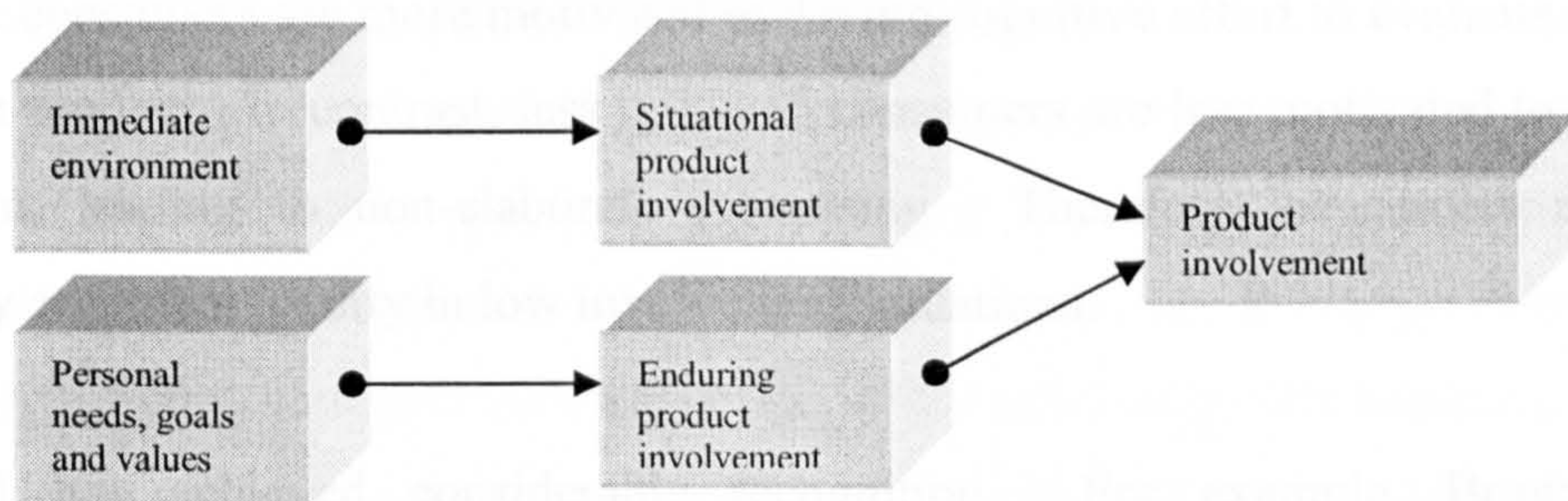


Figure 4.1 Influential factors and interrelationships between situational product involvement, enduring product involvement and product involvement

#### 4.2.1.3 Enduring Involvement – Focus of the Present Study

This study sets out to measure enduring product involvement. In reality, it is more likely that enduring involvement would be measured unless a particular situation at a particular point of time is highlighted. This is because the situational involvement is transitory and is largely a function of short-term changes in the consumer’s immediate environment (Rothschild 1979), and therefore the level of situational involvement is not only product specified, but also varies according to different situations. A few researchers examined the effects of situational involvement in laboratory experiments



(e.g. Petty et al. 1983) as it can be manipulated more easily. Nevertheless, measuring enduring involvement might appear to be more practically valuable due to its being subject-centred (Broderick and Mueller 1999), relatively long-lived and stable (Laaksonne 1994). It is also true that more measures developed by previous researchers are designed to measure enduring involvement specifically, with very few exceptions (e.g. Laurent and Kapferer 1985) which propose a measure of both enduring and situational involvement (Havitz and Howard 1995).

#### 4.2.2 Product Involvement Hypotheses

Petty and Cacioppo (1981) propose the Elaboration Likelihood Model (ELM). The ELM suggests that persuasion can occur via two routes – the central and peripheral routes. According to the authors the central routes refer to the elaborate processing, the peripheral routes represent the non-elaborate processing. The tenet of the ELM is that different methods of inducing persuasion may work best depending on whether the elaboration likelihood of the communication situation is high or low. According to the ELM, consumers' processing information differs with their level of involvement. More specifically, when the level of involvement is high the central routes apply, which means that consumers are more motivated to devote cognitive effort to evaluate the true merits of a product. In contrast, less involved consumers are less motivated to process information, leading to non-elaborate processing. Therefore, consumers are less affected by argument quality in low involvement situations.

The ELM has achieved considerable recognition. For example, Browne and Kaldenberg (1997) note that under high involvement conditions, buyer decision processes are thought to proceed through extended decision-making, a series of sequential stages involving information search and evaluation of criteria; Celsi and Olson (1988) report that the extent to which a product is viewed as personally relevant, in that it is perceived in some way to be instrumental in achieving their personal goals and values, makes the consumer likely to be more motivated to process information about it; in contrast, consumers neither wish nor are able to exert a lot of effort to process information in a low involvement situation (Chung and Zhao 2003).

Based on the above, it is rational to assume that if the level of product involvement is high, consumers are more likely to put more effort into evaluating two versions of one

brand in the context of non-deceptive counterfeiting. Deliberative information processing involves the scrutiny of available information and an analysis of positive and negative features, of costs and benefits (Fazio 1990). Given that CBP are considered as a low grade of BP in the context of non-deceptive counterfeiting (Nia and Zaichkowsky 2000; Penz and Stöttinger 2003), there is more chance that consumers would be able to distinguish the difference between CBP and BP in relation to product attributes, costs and benefits, and hence develop different perceptions of CBP versus BP and show more preference for the BP than CBP.

On the other hand, the differences between CBP and BP in relation to product attributes, benefits and consequences might not be recognised easily, if the level of product involvement is low, due to lack of motivation, effort and even capability in relation to processing information. Therefore, consequently consumers' perceptions of CBP and BP might not differ significantly under these circumstances, which will lead to more favourable perceptions of CBP.

Given that consumers in a higher product involvement situation are more likely to be able to define the difference between CBP and BP related to the quality argument in the context of non-deceptive counterfeiting, thus they may regard CBP as a lower grade of BP, with low price and low quality. Consumers look for more personal, experimental and symbolic gain other than maximising product functionality in a high involvement situation than low (Solomon et al. 1985). Low price and low quality products, CBP in this case, will not pay off the personal treat, excitement, status desired by the consumers. Therefore, it is less likely that CBP will be included in the consumers' consideration set, if the product class is perceived as high involvement to the consumers.

In addition, Petty and Cacioppo (1981) find that consumers accept fewer alternatives when they have high level of product involvement. This is consistent with Lapersonne et al's (1995) research finding. Nevertheless, Brisoux and Chéron (1990) show that product involvement does not appear to affect consideration set size significantly. Although these findings are not identical, however, they indicate that it is unlikely that consumers will form a larger consideration set in a high product involvement situation. As a result, there is less chance of CBP being included in the consideration set as a late



invader. This notion is also supported by the social judgement theory. According to the social judgement theory (Sherif et al. 1965), a high level of involvement leads to more negative evaluations of a communication because a high level of involvement is associated with extended “latitude of rejection.” Thus, CBP is thought to have a high possibility of being rejected as an invader and late entrant compared with BP, because their negative traits are enhanced, and they are more likely fall within the unacceptable range of products in the situation of high involvement.

The ELM suggests that a low level of product involvement would probably create low consumer motivation to process information, which leads to a greater possibility of the peripheral route of persuasion. In the context of non-deceptive counterfeiting, the counterfeit brand name and logo may serve the peripheral route of persuasion. Hence, CBP is more likely to be included in the consideration set in the low product involvement situation due to consumers tending to purchase impulsively. In contrast, for products with a higher consumer involvement, consumers would spend more energy on consumption-related activities, and hence make more rational decisions. In such situations, consumers who have a high level of involvement will generate more positive perception toward BP due to its being commonly recognised as a superior version as opposed to CBP. As a result, the BP is more likely to be included in the consideration set.

The consideration set as shaped by the consumer’s involvement with the product category, has significant implications for choice. Following from Kardes et al. (1993), only considered brands can be chosen. Then, as explained earlier, the CBP is more likely to be considered as a low involvement product, and it has more chance of being purchased than BP. On the other hand, the original BP is more likely to be chosen when the involvement is high. As a result, the following hypotheses are proposed.

$H_{involvement1}$  : The level of product involvement has a positive relationship with the likelihood of consideration and the purchase intention of BP.

$H_{involvement2}$  : The level of product involvement has a negative relationship with the likelihood of consideration and the purchase intention of CBP.

### 4.3    Product Knowledge

Traditionally, product knowledge has been treated as a mono-dimensional construct (e.g. Hutchinson 1983), and most often referred to as product familiarity or prior product knowledge. It is normally considered that consumers have some experience with or information about a particular product category (Alba and Hutchinson 1987). Later researchers note that the product knowledge is a bi-dimensional construct. Some researchers propose that consumer product knowledge has two major components: familiarity and expertise (e.g. Jacoby et al. 1986; Alba and Hutchinson 1987; Mishra et al. 1993). Familiarity is defined as the number of product-related experiences that have been accumulated by the consumer. Expertise represents a consumer's ability to perform product-related tasks successfully (Alba and Hutchinson 1987). Laroche et al. (2003) note that the knowledge is conceptualised with two related dimensions: experience and expertise. These authors argue that experience and expertise are different dimensions of product knowledge. More specifically, they consider that experience is concrete, operational, and actualised by the consumer. Expertise is potential, latent and virtually realisable by the consumer. A close study reveals that Laroche et al's (2003) concept is in line with the above reported "familiarity and expertise" thought and brings in nothing new. Scribner and Weun (2001) propose that product knowledge consists of three dimensions: brand knowledge, attribute knowledge, and experience knowledge. They further claim that these dimensions are likely to have different effects on consumer behaviour. Scribner and Weun's (2001) statement moves one step forward by taking the brand dimension into the product knowledge construct.

In the past, some research has used the terms familiarity, expertise, and experience interchangeably when referring to product knowledge (e.g Punj and Srinivasan 1989; Jacoby et al. 1986; Laroche et al.1996). Part of the reason is that these three concepts overlap with each other. For example, a consumer's purchase experience contributes to the degree of his/her product familiarity as well as expertise. In general, product experience is a necessary but insufficient condition for consumer expertise and familiarity (Rao and Monroe 1988). This stand is particularly important for this research, because it is one of the reasons why measures of consumers' experience are not used in this research. More details are reported in the measures of knowledge section of Chapter 5.

#### 4.3.1    Definition and Types of Product Knowledge



In general, product knowledge refers to the information stored within memory (e.g. Engel et al. 1993; Alba and Hutchinson 1987; Park et al. 1994). Brucks (1985) and Park and Lessig (1981) distinguish objective knowledge and self-assessed knowledge (also named as subjective knowledge, e.g. Brucks 1985; Berger et al. 1994). Objective knowledge is accurate information about the product class stored in long-term memory. Self-assessed knowledge is consumers' perceptions of what or how much they know about a product class, which indicates self-confidence levels as well as knowledge level (Brucks 1985). Based on research in subjective probability assessment (Fischhoff et al. 1977) and feeling-of-knowing (Schacter 1983), Park et al. (1994) further suggest that another reason for a need to distinguish objective and subjective knowledge is that what people think they know and what they actually know often do not correspond. Research findings support this assertion and suggest that the mechanisms through which subjective knowledge and objective knowledge affect information search (Bettman and Park 1980; Brucks 1985; Park and Lessig 1981) and information processing (Park et al. 1988) may be different.

Based on previous studies, Rao and Monroe (1988, p. 255) propose that prior product knowledge is defined as knowledge which can "encompass the amount of accurate information held in memory about product alternatives as well as buyers' self-perceptions of this product knowledge". 'The amount of accurate information' refers to the objective knowledge; 'the buyers' self-perceptions of product' represents the self-assessed knowledge. Clearly, what Rao and Monroe (1988) suggest is that product knowledge is a combination of objective knowledge and subjective knowledge. Research findings show that subjective knowledge and objective knowledge are highly correlated (e.g. Rao and Monroe 1988). This raises questions as to how product knowledge should be measured and whether Rao and Monroe's (1988) definition of knowledge is better than the others. To judge the appropriateness of Rao and Monroe's (1988) product knowledge definition is beyond the scope of the current study. The question as to how product knowledge should be measured in the present study will be dealt with in further detail in Chapter 5.

### 4.3.2 Self-assessed Product Knowledge Is to Be Examined

It was decided that self-assessed product knowledge is to be examined in this research. The discussion about the choice of the appropriate knowledge measures in Chapter 5 also presents detailed reasons for the investigation of the self-assessed knowledge in



this study. The self-assessed knowledge definition suggested by Brucks (1985) is adopted (see section 4.3.1 for detail). In order to avoid repetition, no more discussion is provided here. For those who are interested, please refer to the noted chapter.

#### 4.3.3 Self-assessed Product Knowledge Hypotheses

Consumer product knowledge has been studied in a variety of different ways in recent years (e.g. Baker et al. 2002; Alba and Hutchinson 2000; Brucks 1986; Park et al. 1994; Raju et al. 1995; Rao and Monroe 1988). It has been recognised as a characteristic in consumer research that influences all phases in the decision process (Bettman and Park 1980).

Consumers with various levels of product knowledge are different in their perceptions of product attributes (Laroche et al. 2003; Baker et al. 2002; Blair and Innis 1996). Marks and Olson (1981) propose that consumers with higher levels of product knowledge have better developed and more complex schemata, with well-formulated decision criteria. Therefore, it is rational to suggest that when they process information, less cognitive effort is required and relevant knowledge structures can be activated automatically; this allows consumers with higher level of product knowledge to be able to process more information (Alba and Hutchinson 1987).

This research argues that, given better-developed and more complex schemata, consumers with higher levels of product knowledge have better cognitive capacity to evaluate comparative alternatives. In this study, the comparative alternatives refer to CBP and BP. Kempf and Smith (1998) further suggest that consumers with higher levels of product knowledge are more diagnostic and informative than those who have lower levels of product knowledge. Therefore, the higher the level of product knowledge a consumer possesses, the less chance he/she will generate evaluation bias.

In the context of non-deceptive counterfeiting, when consumers are exposed to CBP and BP, consumers with higher levels of product knowledge are more likely to be able to distinguish the CBP and BP, due to higher cognitive capacity. As a result, differences between consumers' perceptions toward CBP and BP become clearer when consumers' product knowledge increases, whereas these differences become less identifiable when consumer's product knowledge level decreases. Given that CBP are considered to be a



low grade of BP (Nia and Zaichkowsky 2000; Penz and Stöttinger 2003), consumers become more favourable to CBP when the level of product knowledge is low. In contrast, consumers are more favourable to BP when the level of the product knowledge is high.

In terms of knowledge within the product category, greater knowledge might lead the consumer to know and try more products. Conover (1982), and Alba and Hutchinson (1987) suggest that consumer product knowledge is linked to the existence of a more complex cognitive structure that leads to wider consideration sets. Johnson and Lehmann (1997) have shown that the consideration set size increases as the consumer becomes more experienced, when this set is constructed in terms of products or brands. But, conversely, the development of procedural knowledge associated with more familiarity would lead the individual to restrict his/her consideration set for efficiency motives. Thus, a higher level of product knowledge would enable the consumer to remove unsatisfactory products, so as to reduce his/her set size, particularly when it is constructed in terms of brands (Raju and Reilly 1980; van Trijp et al. 1996). Due to the conflicting research results, it is interesting to explore the influence of self-assessed knowledge on the consideration set of the original branded products as well as the counterfeit version. Past research results also show that self-perceived knowledge operates as a direct influencer of purchase intentions for original branded durable products (Berger et al. 1994). In the context of non-deceptive counterfeiting, the present study has established that consumers with a higher level of product knowledge are more able to distinguish the CBP and BP. As a result, they should give greater acknowledgement to the superior grade of BP against CBP. Therefore, despite the contradictory research findings related to the influence of product knowledge on the consideration set, the following hypotheses that summarize the interpretation of the literature of this research are to be tested:

$H_{knowledge1}$  : The level of consumers' self-assessed product knowledge has a positive relationship with the likelihood of consideration and the purchase tendency of the BP.

$H_{knowledge2}$  : The level of consumers' self-assessed product knowledge has a negative relationship with the likelihood of consideration and the purchase tendency of the CBP.

#### 4.4    Demographic Variables

Demographic changes affect marketplace opportunities and threats, through changes in consumers' purchase behaviour, so it is advisable for firms to consider the individual differences of prospective buyers of counterfeit goods when designing anti-counterfeiting campaigns (Nill and Schultz II 1996). This research argues that it is also important to understand the individual difference of prospective buyers of original BP. To see if effects on the purchase intention of CBP and BP also stem from other differences across subjects, the research identified four commonly used and important demographic elements as covariates for this study: age, gender, educational attainment, and household income.

There are two main reasons for selecting these demographic variables for this study. Firstly, they are believed to have significant impact on consumers' choice processes. For instance, consumers' age, household income, gender and education are very closely related to their spending behaviour (Wilkes 1995; Engel et al. 1990; Schaninger and Danko 1993; Solomon and O'Brien 1991). Moreover, maturity which comes with age, discernment which comes with more education, and purchasing power which comes with higher household income, and purchase patterns which might be influenced by gender may covariate with other determinants in influencing the consumer's intention to purchase counterfeit products (Wee et al. 1995). Secondly, these demographic variables are also chosen because their measurements can be treated as categorical variables (dummy coding techniques can be applied), fulfilling one of the requirements for multiple regression analysis, the main analytical statistics used in this study.

##### 4.4.1   Age

Age is considered as an important variable because it is one of the most helpful proxy variables for the determination of motivation and interest of consumers (Engel et al. 1990). Consumers from the same age group usually share common requirements of products and indicate a common interest in particular fashions or trends of products in the market. It is recognised that every time consumers pass through age stages, their product requirements change accordingly. For example, younger consumers are more likely to show more interest in fashionable and trendy products than their older counterparts. In addition, Beatty and Smith (1987) suggest that as people become older, they tend to limit the amount of information they obtain about products prior to a brand



choice decision. Cole and Balasubramanian (1993) state that age may impose natural constraints on how effectively a consumer searches for information.

In contrast to earlier research findings, recent studies show that consumers from the older age category may behave similarly to other consumers from younger categories. For instance, Gunter (1998) finds that some of the older consumers can be as fashion-conscious as younger consumers. There appears some degree of heterogeneity in the older category, such as some of them being confused by too much choice, while at the same time some of them do cope well with overwhelming choice. This notion is further supported by Gunter and Furnham (1998), who report that the market segment for children is also found to be a heterogeneous one in terms of demographic and psychological character, and respect to purchase patterns.

Past research in the study of counterfeiting reveal that age is an influential factor in the intention and the actual purchasing frequency of counterfeit products for British consumers. Older consumers are less likely to want to buy counterfeit brands (Bian and Veloutsou 2006). Consumers who indicated previous purchases of counterfeit products are significantly younger (mean age 29 years) than consumers who indicated that they have never purchased counterfeits (mean age 39 years) (Wee et al. 1998). Consumers who stated a preference for the counterfeits tend to be younger (mean age 28.4 years) than consumers who stated a preference for the legitimate goods (mean age 35.4 years), and consumers who admit to purchasing counterfeit goods are younger (mean age 28.1 years versus a mean age of 34.3 years) (Wee et al. 1995). On the other hand, Phau et al. (2001) report that lower spenders on counterfeits are mainly people aged 19 to 24 with a blue-collar occupation; higher spenders on counterfeits are people in the age bracket 25 to 34. Given that the main stream of research findings suggest that older consumers are more likely to prefer BP, and younger consumers are more likely to show a preference for CBP the following hypotheses are proposed:

$H_{age1}$  :    Age of a consumer has a positive relationship with the likelihood of consideration and the purchase intention of BP.

$H_{age2}$  :    Age of a consumer has a negative relationship with the likelihood of consideration and the purchase intention of CBP.

#### 4.4.2    Household Income

Consumers' purchase behaviour is heavily influenced by their economic resources (Engel et al. 1990). It takes money to become a consumer. To most consumers, income provides the main economic resource. Therefore, it is rational to say that the level of consumers' income to a great extent determines the categories of product they seek and what brand they buy. This is particularly true in relation to luxury products. This notion is supported by Maslow's well-established Hierarchy of Needs Theory (Maslow 1954).

We are aware that disposable income might be the best measure of income for this study. Nevertheless, the household income is measured for the present research. This is because consumers might have a clearer idea about the household income than the disposable income and therefore, more accurate data can be obtained.

Peter and Olson (1994) maintain that people with similar incomes tend to have similar purchase behaviours and lifestyles. Therefore, one can expect that the consumers of different levels of household income will have different purchase behaviours. High income consumers are more likely to purchase luxury brands compared to low income consumers. Consumers who state a preference for the counterfeits tend to earn less income, while, consumers who admit to purchasing counterfeit goods earn less income (Wee et al. 1995). The interpretations and understanding of the above noted literature can be summarised as the following hypothesis:

$H_{income1}$  :        Consumer income has a positive relationship with the likelihood of consideration and the purchase tendency of BP.

$H_{income2}$  :        Consumer income has a negative relationship with the likelihood of consideration and the purchase tendency of BP.

#### 4.4.3    Gender

Although there is a general agreement that the gap between traditional male and female roles is becoming increasingly blurred, researchers do differentiate between male appeal and female appeal (Chisnall 1995). This argument is further supported by Peter and Olson (1994), who state that despite the modern tendency to downplay differences



between men and women, there is ample evidence that men and women differ in many respects besides physical characteristics.

Past research demonstrate that gender difference exists in the information processing styles and emotion involved at the time of judgement in consumption (Fisher and Dubé 2005; Dubé and Morgan 1996), as well as in the processing strategy involving memory in the advertising contexts (Meyers-Levy and Maheswaran 1991). Gender seems to influence the degree to which British consumers admit that they are willing to buy or that they actually do buy counterfeit brands. Men in the UK confessed that they were willing to buy counterfeits for their own use and as presents and that they did actually buy them, more than did women (Bian and Veloutsou 2006). As such, the following are proposed:

$H_{gender}$  : Gender will have a significant effect on CBP consumption, with males being more likely to consider CBP and intending to purchase CBP in the context of non-deceptive counterfeiting.

#### 4.4.4 Education

It seems that more educated respondents are more willing to admit that they are willing to purchase counterfeit brands (Bian and Veloutsou 2006). This is in line with Phau and Lau (2001) who claim that low spenders on counterfeits have relatively lower education level, whereas, high spenders appear to have higher education level (e.g. tertiary or university education). Apparently, previous research findings related to impact of education on purchase behaviour of CBP are not consistent. For example, Wee et al. (1995) find that consumers who stated a preference for the counterfeits have less education. Despite the clear relationship reported in the aforementioned research, Bloch et al. (1993) found that demographic variables (gender, household income, and age) were not effective in distinguishing between counterfeit purchasers and non-purchasers. Accordingly, one can conclude that previous research findings suggest that the demographic characteristics do not appear to have a consistent relationship with the purchasing or the intention to purchase counterfeit brands. For those who are interested, please refer to Chapter 2 for further details.

Nevertheless, this research believes that level of education negatively influences consumer choice of CBP; this is in line with Bian and Veloutsou (2006) and Phau et al.

(2001). The reason for choosing this stand is because the study of Bian and Veloutsou (2006) was conducted in the UK, whereas Phau et al's (2001) was conducted in Hong Kong. Consumers from these two regions are heavily influenced by British culture. In contrast, Wee et al's study (1995) was conducted in Singapore, and Bloch et al.'s (1993) data was collected in the United States, where the culture is different to that of the UK. Consumers with a higher level of educational background are more likely to have better paid jobs, and are more capable of differentiating BP and CBP. Consequently, they might appear to prefer BP. Hence, the following propositions are to be examined.

$H_{education1}$  : The level of educational attainment has a positive relationship with the likelihood of consideration and purchase tendency of BP.

$H_{education2}$  : The level of educational attainment has a negative relationship with the likelihood of consideration and purchase tendency of CBP.

#### 4.5      Brand, Brand Identity and Brand Image

According to Thorsten Nilson, the term “brand” comes from a Scandinavian word for burning (branna). “Brand” is the Swedish word for fire. Originally, this often meant burning a mark on a product, much as the cowboys of the early West began branding their cattle for identification purposes (Nilson 1996). The marketing practice of branding products dates at least to ancient Rome, when caps on wine amphorae revealed the maker's mark (Abalos 1985). Thus, branding originated from the act of putting your identifiable mark on something you had produced.

Since ‘brand’ was first used in marketing, there have been various interpretations of this concept (de Chernatony and Dall’Olmo Riley 1998). For example, brand was defined as a legal statement of ownership (Crainer 1995), and as a risk reducer (Kapfererb 1995). One of the more established definitions of a brand was proposed by the American Marketing Association (AMA) in 1960:

*A name, term sign, symbol or design, or a combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors (de Chernatony 2001, p. 21).*



This definition stresses the importance of the brand's logo and visual signifiers primarily as a basis for differentiation purposes (de Chernatony 2001) and was widely accepted by marketing researchers either with slight verification (e.g. Koch 1994) or without verification (e.g. Kotler et al. 1996; Aaker 1991). This definition was criticised for being too preoccupied with the product (e.g. Crainer 1995) and too mechanical (e.g. Arnold 1992) as well as very restrictive, since it neglects the other brand identity elements which bring brand differentiations (de Chernatony and Dall'Olmo Riley 1998).

Brands are complicated entities which involve branded products themselves, consumers, distributors, marketers, corporations, competitors (de Chernatony 2001). Although previous research has put a great deal of effort into describing them, nevertheless, no consensus has been achieved, as it appears that different researchers tried to describe them from different perspectives. For example, Séguela (1982) suggests that all brands should be described through three facets: the physical characteristics (product attributes), the character (brand personality facet) and the style (executional elements for advertising and communication). Plummer (2000) recommends that brands can be described in terms of three different classes of characteristics: physical attributes (product attributes), functional/consequences characteristics, and characteristics (brand personality facet). It is more likely that Séguela's claim is in the same vein as Aaker's (1996) brand identity benchmark work (to be reported in a later section), which is a view of brands from the marketer/strategist's perspective. In contrast, Plummer's (2000) description is drawn from the consumers' perspective. More specifically, consumers see brands as products, as persons, which can bring functional and emotional benefits.

Very recently, researchers realised that it was necessary to develop a theory for the brand (e.g. Singh 1991; de Chernatony and Dall'Olmo Riley 1998), since it appeared that lack of precision in the terminology of brands caused problems to both practitioners and academics (Mintzberg and Waters 1982; Kollat et al. 1970). Following this view, de Chernatony and Dall'Olmo Riley (1998) reviewed more than one hundred articles (more than 80% of them were published in the 1980s and 1990s) from trade as well as from academic journals, providing a broad and rich perspective of the range of definitions used. Using content analysis, the authors identified twelve main themes of



brand definitions (de Chernatony and Dall’Olmo Riley 1998). Strictly adhering to Singh’s (1991) recommendation, the authors applied the redundancy analysis to this research and laid the foundations for a theory for the brand. The authors suggest that ‘the brand is a complex multidimensional construct whereby managers augment products and services with values and this facilitates the process by which consumers confidently recognise and appreciate these values’ (de Chernatony and Dall’Olmo Riley 1998, p. 436). This definition notes that both firms and consumers are the two main stakeholders of a brand. Moreover, the authors assert that ‘by incorporating knowledge about consumers’ interpretations of brands, the virtuous cyclical process should enable firms to build powerful brands’ (de Chernatony & Dall’Olmo Riley 1998, p. 436).

De Chernatony and Dall’Olmo Riley’s (1998) study first attempted to draw two themes of descriptions of brand characteristics, brand identity and brand image, together in consideration of the formation of brand theory. The proposed brand definition stresses the importance of understanding consumers’ perception of a brand in terms of building a strong brand and brand management. Even though de Chernatony and Dall’Olmo Riley (1998) did not address the differentiation between brand identity and brand image, the definition of brand they suggested gives a strong indication that brand identity and brand image are two broad dimensions of brand and they serve different functions in the establishment of a brand.

#### 4.5.1 Relationship between Brand, Brand Image and Brand Identity

‘Brand identity is a unique set of brand associations that the brand strategist aspires to create or maintain. These associations represent what the brand stands for and imply a promise to customers from the organisation members’ (Aaker 1996, pp. 68). Accordingly, one can argue that brand identity provides a long-term direction to marketers and corporations as a whole. It only stresses what marketers want their brands to be, and what they want their brands to be to consumers, but ignores the impact of consumers’ perception on brand identity. Technically, there is no problem in terms of brand identity definition if one only focuses on what the marketers want their brand to be. Nevertheless, the problem appears when the attention is shifted to brand identity establishment. In reality, to create a brand identity is not one directional task; it involves interactions between consumers and marketers (Johar et al. 2005). In other



words, marketers are in control of brand identity design, but certainly not of how consumers perceive their brands.

It was believed conventionally that managers could exert a fairly high degree of control over brand image through careful strategic choices (e.g. Aaker and Joachimsthaler 2000; Keller 1998). This view was challenged by later researchers. Wee (2004) asserts that marketers only have limited control of the fate of their brands. Holt's (2002, 2003) and Muniz and O'Guinn Jr.'s (2001) research findings imply that marketing managers exert far less direct control over brand meaning than was commonly supposed in the previous brand management literature. Although there exists little consensus concerning to what extent marketers have control over brand image, it is very widely accepted that marketers' knowledge of consumers' perception of their brands provides useful and necessary background information when developing a brand identity (Aaker 1996; de Chernatony and Dall' Olmo Riley 1998; Holt, 2002, 2003; Muniz and O'Guinn Jr. 2001; Johar et al. 2005).

Marketers choose a brand to convey the identify they want to establish. In this sense, the brand itself is not a memory target but a cue that might facilitate recall or inference of previously learned brand association (Warlop et al. 2005). Therefore, the consumer's perception of a brand is actually the perceived brand identity, which is termed brand image. Given that what the consumer perceives might not reflect what the brand is, the consumer perceived brand image might or might not be identical to the brand identity that the marketers intend to establish. Thus, marketers have to have a good knowledge of consumers' perceptions of their brand before they take any action to reposition their brand and strength their intended brand identity. This indicates the important influential role played by the brand image in the process of brand identity establishment. Figure 4.2 generalises the relationship of brand, brand image, brand identity and the related subjects involved, as suggested by previous research. The dotted arrows indicate that what marketers want their consumers perceive is not passed on from marketers to consumers directly, whereas the solid arrows represent the actual message flow.

#### 4.5.2 Brand Image Trap and Proposed Reasons for This Trap

Aaker (1996) cautioned against 'brand image trap' in brand identity and brand management literature and indicated that 'the use of the brand image as an identity statement often goes unchallenged' (p. 69). Apparently the situation is far broader than

Aaker (1996) recognised. A close look at the relevant literature reveals that researchers used brand image, brand identity, brand personality as well as brand attitude interchangeably. For example, Chang (2002) and Bird et al. (1970) used brand image to refer to brand attitude; Graeff (1997) and Dennis et al. (2002) used brand image to replace brand personality; brand image also was used as brand identity (e.g. Bhat and Reddy 1998; Park et al. 1986; Madden et al. 2000). Roth (1995) used brand image, brand personality and brand identity interchangeably in his work.

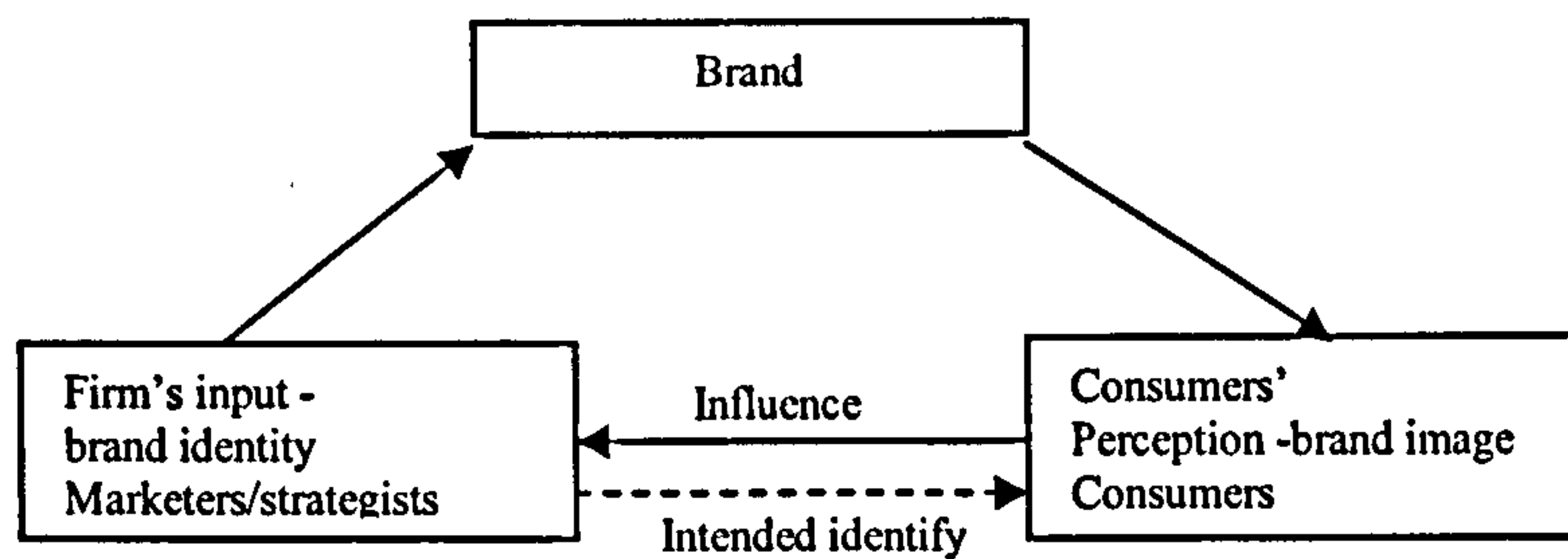


Figure 4.2 Relationship between brand, brand image and brand identity  
Adapted from de Chernatony & Dall'Olmo Riley (1998)

Aaker (1996) claims that brand image, brand identity and brand position are different concepts. Brand image is 'how a brand is perceived by consumers,' while brand identity reflects 'how strategists want a brand to be perceived' (Aaker 1996, p. 71). Aaker's work has made a great contribution to the understanding of brand image and brand identity, the two main concepts related to brand notion. However, this study did not make any effort to investigate questions concerning why these two concepts together with other constructs were used interchangeably among researchers. The current research extends Aaker's (1996) work by exploring why brand image, brand identity were used interchangeably. It is proposed that one needs to look at how brand image was defined historically and the dimensions of both brand image and brand identity.

#### 4.5.2.1 How Brand Image was Defined Historically

Since it was first introduced formally into the marketing discipline by Gardner and Levy (1955), to communicate a brand image to a target segment has been regarded as an important marketing activity (Gardner and Levy 1955; Grubb and Grathwhol 1967; Reynolds and Gutman 1984; White 1959). Particularly, it has become a commonplace in consumer behaviour research (Dobni an Zinkhan 1990). However, like some other



concepts (e.g. involvement and perceived risk), until very recently there was no commonly accepted understanding of brand image. Recent researchers claim that brand image refers to the role of brand names and other aspects of a brand's trade dress as cues that retrieve or signal product attributes, benefits, effects, or overall quality (e.g. Erdem and Swait 1998; Kirmani and Rao 2000; Henderson et al. 2003). Nevertheless, conventionally, brand image was defined differently according to different research focus (Reynolds and Gutman 1984), due to lack of a firm base or foundation on which the concept can be built (Dobni and Zinkhan 1990).

Reynolds and Gutman (1984) reveal that considerable variation exists among definitions of brand image. These authors further suggest five categories of definitions used by previous researchers. These include (1) general characteristics, feelings, or impressions (Jain and Etgar 1976), (2) perceptions of products (Lindquist 1974; Marks 1976), (3) beliefs and attitudes (May 1974; James et al. 1976; Hirschman et al. 1978), (4) brand personality (Arons 1961; Martineau 1958), (5) linkages between characteristics and feelings/emotions (Oxenfeldt 1974). More recently, Dobni and Zinkhan (1990) analysed 28 previous studies and asserted that brand image has not remained stable over a period of 35 years. The authors argue that there existed little consensus concerning how the construct should be operationalised (Dobni and Zinkhan 1990), and suggested that previous definitions could be grouped into five broad categories. These five categories are 'blanket definition' (e.g. Herzog 1963; Newman 1957), 'emphasis on symbolism' (e.g. Levy 1958; Frazer 1983; Noth 1988), 'emphasis on meanings and messages' (e.g. Durgee and Stuart 1987; Swartz 1983; Friedmann and Lessig 1987; Reynolds and Gutman 1984), 'emphasis on personalification' (e.g. Debevec and Iyer 1986; Bettinger et al. 1979; Levy 1958), 'emphasis on cognitive or psychological elements' (e.g. Reynolds and Gutman 1984).

Not surprisingly, to a great extent there exist similarities between the brand image definition categories suggested by Reynolds and Gutman's (1984) and the broad categories recommended by Dobni and Zinkhan (1990). More importantly, both of these works revealed that brand image has been assigned different meanings from the day it was introduced into the marketing discipline and there no consensus has been achieved concerning the definition of brand image. As such, this could be one of the

reasons why the brand image concept has been used interchangeably with other constructs, for example brand identity and brand personality.

4.5.2.2 Components of Brand Image and Brand Identity

Given the lack of consensus concerning the definition of brand image, it is not surprising to discover that researchers have not reached an agreement in relation to components of brand image. Dobni and Zinkhan’s (1990) work includes an extensive discussion about components of brand image suggested by previous studies. The components asserted by prior researchers are illustrated in Table 4.2. As noted earlier, Dobni does not span more than three decades. The findings suggest that no certain pattern or commonalities have emerged concerning the components of the brand image construct.

Table 4.1 Components of brand image (generalised, based on Dobni and Zinkhan 1990)

Representative researcher(s)	Date of publication	Brand image components
Hirschman et al.	1978	Factors related to physical product
Gensch	1978	Measures of the brand attributes and the “image” of the brand (image refers to a purely abstract concept which incorporates the influences of past promotion, reputation and peer evaluation of the product)
Friedmann	1986	Functional product qualities, as well as the psychological qualities of both user and product
Reynolds and Gutman	1984	Product attributes, consumer consequences and personal value
Stone et al.	1966	Its theme, its image proper, its net evaluation
Levy	1978	Physical reality of the product and the beliefs, attitudes and feelings that have come to be attached to it
Dichter	1985	Magic and a product’s morality

More recent research appears to realise the complexity of brand image construct. Aaker (1991) defines ten dimensions of brand image, namely product attributes, intangible features, consumer benefits, relative price, places, moments and forms of utilization, buyers and consumers, stars and characters attached to the brand, brand personality, product category and competitors. Plummer (2000, 1985) asserts that there are three primary components to a brand’s image. These are the physical elements/attributes (e.g. green in colour), the functional characteristics/benefits or consequences of using a brand (e.g. do not need to wash hair so often), the way the brand is characterised/brand personality (e.g. cheerful). Moreover, a few researchers (e.g. Biel 1992; Berry et al. 1988; Tauber 1988) claim that the concept of brand image must accommodate a corporate dimension in relation to service brands, as service brand values appear to be



most salient to consumers at the corporate level. This assertion enriches Plummer’s theory by adding an alternative dimension - the ‘brand as a company’.

It seems that components of brand identity did not attract as much attention from researchers as brand image did. One of the two notable works is Kapferer’s (1998) ‘brand identity prism’. According to the brand identity prism, brand identity has six dimensions (the brand personality, brand inner values, the brand relationship facet, the brand-reflected consumer facet, and the brand physical facet). Setting off from brand management, Aaker (1996) suggested that brand identity consists of four perspectives with twelve dimensions: brand as product (product scope, product attributes, quality/value, uses, users, country of origin), brand as organisation (organizational attributes, local versus global), brand as person (brand personality, brand customer relationships), and brand as symbol (visual imagery/metaphors and brand heritage).

After close study of components of brand image (e.g. Plummer 2000, 1985) and brand identity (e.g. Aaker 1996), one can comfortably claim that to a great extent the brand image and the brand identity consist of almost identical facets. This finding is interesting, but certainly not surprising, since it is along the same lines as the nature of brand image and brand identity, which claims that brand image is the concept of a brand that is held by consumers, while brand identity is what marketers/strategists want their brand to be and what they want their brand to be to consumers (Aaker 1996). Table 4.3 represents the generalised components of brand image (Plummer 2000, 1985; Biel 1992; Berry et al. 1988; Tauber 1988) and the dimensions of brand identity (Aaker 1996).

Table 4.2 Components of brand image (Plummer 2000, 1985) and brand identity (Aaker 1996)

Constructs	Brand image	Brand identity
Components	Physical attributes Plummer (2000, 1985)	Brand as product (product attributes, product scope, quality/value, uses, users, country of origin (Aaker 1996)
	Functional characteristics/benefits or consequences of using a brand Plummer (2000, 1985)	
	Characterisation/brand personality (Plummer 2000, 1985)	Brand as a person (Aaker 1996)
		Brand as a symbol (Aaker 1996)
	Brand as a company (Biel 1992; Berry, Lepkowith and Clark 1988; Tauber 1988)	Brand as a company (Aaker 1996)

### 4.5.2.3 Debriefings and Suggestions

The various brand image definitions as well as components of both brand image and brand identity in the two sub-sections above have been analysed with the aim of identifying the reasons for the so-called 'brand image trap'. The reasons discovered through the review can be summarised as follows. First, historically there was lack of a firm base or foundation on which the brand image concept can be built. Consequently, brand image was defined differently to serve different research focuses, and there was no consensus concerning the definition of brand image until more recently (e.g. Plummer 2000). Second, previously proposed brand image components did not show any clear pattern, nor did any commonality appear. Third, more recent research suggests that brand image and brand identity consist of almost identical components. It is believed that all these reasons are responsible for the interchanging use of the brand image and the brand identity.

Considering all of the above, it is necessary for any researcher to clarify what the research is examining, brand image or brand identity, at the outset before embarking on any research. Researchers should have a clear mind that brand identity and brand image are distinguishable constructs, although broadly speaking, these two concepts have almost identical dimensions. Misuse of any one of these constructs would certainly cause confusion for readers and would also make comparison and generalization of research findings difficult (Dobni and Zinkhan 1990). To have a good understanding of the difference between brand identity and brand image is also a necessity for marketers, as brand image is the most important component of brand equity (Warlop et al. 2005; Cobb-Walgren et al. 1995), while brand identity is not.

### 4.5.2.4 Significances of Brand Image

In their benchmark work, Gardner and Levy (1955) suggest that the long-term success of a brand depends on marketers' ability to select a brand meaning (image) prior to market entry, operationalize the meaning in the form of an image, and maintain the image over time. At root, brand image is important because it contributes to the consumer's deciding whether or not the brand is the one for him/her (Dolich 1969) and it influences consumers' subsequent buying behaviour (Fishbein 1967; Johnson and



Puto 1987). Managing brand image has been seen as a vital part of an organisation's marketing management strategies (Hsieh 2002).

It has been established earlier that the perceived brand image is in fact consumers' perceptions of a branded product. The perception process has long been recognised as the most significant barrier to effective communication. It is important that marketers understand the whole notion of perception so that they can determine more readily what influences consumers to buy (Schiffman and Kanuk 1991). A well-communicated brand image should help to establish a brand's position, insulate the brand from competition (Oxenfeldt and Swann 1964), enhance the brand's market performance (Shocker and Srinivasan 1979; Wind 1973), and therefore plays an integral role in building long-term brand equity (Aaker and Keller 1990; Keller 1993; Park et al. 1991; Feldwick 1996; Park and Srinivasan 1994). All in all, a favourable brand image is the key to success of a brand.

#### 4.5.2.5 Brand Image - Focus of This Study

As noted earlier the brand identity is what the marketers want their brand to be to consumers, while the brand image is about how the brand is perceived by the consumers (Aaker 1996). It is not necessary to say that the information from the sender (marketer) will definitely get through to the receiver (consumer) (Aaker and Myers 1987), since correct decoding of marketing information hinges on the consumer's perception of the communication content (Koekmoer 1991). Therefore, perceptions of brand/product are of crucial importance to the marketer, since people respond on the basis of their perceptions of reality, not reality per se (Lewin 1936; Puth et al. 1999). A number of research confirms that perceptions are important to study (e.g. Schiffman and Kanuk 1991), even if they are misconceptions of actual events (Porter and Claycomb 1997). Analysis of consumer perceptions and decision-making processes is therefore extremely important in order to understand consumer behaviour, since it can help marketers to determine more readily what influences consumers to buy (Schiffman and Kanuk 1991), and draft better positioning strategies. In the case of the presence of counterfeit products, a better understanding of consumers' perceptions of both CBP and BP, as well as their effects on consumer behaviour will assist marketers and policy makers to develop more effective campaigns against counterfeits.

This research attempts to investigate consumers' perceptions and their effects on consumer choice processes. Therefore, the brand image theory is adopted. More specifically, consumers' perceived brand image and its influence on the formation of consideration set and purchase intention are to be examined. Many academic researchers have investigated the concept of brand image from different perspectives (e.g. Aaker 1997; Gabbott and de Chernatony 2005). Recently, there has been renewed interest in the subjective and emotive aspects of consumption (Fournier 1995). It is commonly accepted that products are often purchased based not only on functional or utilitarian attributes, but also on symbolic reasons. This is more likely to be the case with 'Hi-Visible' products and luxury brands, where some personal or social meaning is to be attached to the branded product. As the present research is to examine luxury brands, product attributes, brand benefit/consequences and brand personality are the investigated dimensions related to brand image in this research. The brand personality tends to serve a symbolic or self-expressive function and, in contrast, product-related attributes tend to serve a utilitarian function for consumers (Wee 2004). In non-service brands, quite often consumers have no direct contact with companies; therefore 'brand as a company' is not examined here, even though this is considered as a component of brand image in general. This decision is supported by the findings of the focus group discussion. The focus group findings reveal that consumers are more likely to be concerned about factors related to the branded products rather than factors related to the company which own the selected brands.

### 4.5.3 Brand Personality

Brand related benefits/consequences and product attributes are fairly straightforward concepts; therefore it has been decided that no more effort will be put into reviewing the relevant literature. The most salient and relevant benefits/consequences and product attributes related to the studied brands are generated from focus group discussions. Details are reported in Chapter 6 with regard to how they are chosen and which are chosen. The focus of this section is on reviewing brand personality literature. This effort is considered necessary for a research like this as by its very nature the brand personality concept is abstract and complex. Indeed, focus group participants appeared to have great difficulties in understanding this concept, which supports the necessity of this review.



#### 4.5.3.1 Definition of Brand Personality

Like most marketing concepts, brand personality was first created by practitioners who were not marketing academics (Azoulay and Kapferer 2003), by frequently using celebrities to endorse branded products. At the very earlier stage when brand personality was first adopted by academics, it was used to refer to the non-material dimensions that a store special (Martineau 1958). Since then a few researchers have offered their definitions of brand personality (e.g. Aaker et al. 1995; Aaker 1997; Azoulay and Kapferer 2003).

Aaker's (1997) definition is widely accepted by later researchers; this suggests that brand personality is "the set of human characteristics associated with a brand" (p. 347), which includes such characteristics as gender, age, and socio-economic class as well as classic human personality traits such as warmth, concern, and sentimentality. This definition was criticised by Azoulay and Kapferer (2003), who claim that Aaker's (1997) definition is too loose, and almost covers everything related to a human being (e.g. gender and age). Azoulay and Kapferer (2003) note that definition of brand personality should closely follow the way human personality is defined and suggest that intellectual abilities, gender and social class should not be included in brand personality. They propose that 'brand personality is the set of human personality traits that are both applicable to and relevant for brands' (Azoulay and Kapferer 2003). The root of Azoulay and Kapferer's (2003) brand personality definition is the well-explored human personality in psychology. In fact, how the brand personality should be defined is still debatable. However, researchers generally agree that the brand personality originated as a non-product-based definition of the brand (e.g. Azoulay and Kapferer 2003; Aaker 1997). Despite the criticism, the present research adopts Aaker's (1997) definition, as we believe that age and gender should be included as brand characteristics. This is in line with other research, such as that of Plummer (2000, 1985).

#### 4.5.3.2 Human Personality vs. Brand Personality

Human personality is defined as 'the set of relatively stable and generally dynamic, emotional and affective characteristics of an individual's way of being, in his/her way to react to the situations in which s/he is in' (Bloch et al. 1997). According to this definition, intellectual abilities, gender and social class are excluded. Human personality deals with the affective, emotional and dynamic aspect (Azoulay and

Kaplerer 2003). It has been commonly accepted that brands, like people, can be described with adjectives (Berry et al. 1988; Plummer 1985, 2000; Poiesz 1989). Actually, much of the work in the area of brand personality was based on translated theories of human personalities (Wee 2004), and also most personality scales were closely related to the use of measures of human personality (e.g. Aaker 1997; Caprara et al. 2001). In comparison to the well-developed human personality theory, studies of brand personality have a very short history (Aaker 1995, 1997; Aaker and Fournier 1995; Caprara et al. 2001; Chung et al. 2001).

Although brand personality developed from human personality, there appear to be some obvious distinctions between these two constructs. First of all, the means through which they are perceived by consumers is different. Human personality is perceived through a human being's behaviour, physical characteristics, attitudes and beliefs, and demographic characteristics (Azoulay and Kapferer 2003; Park et al. 1986); brand personality can be transmitted to consumers both directly and indirectly (Supphellen and Grønhaug 2003; Helgeson and Supphellen 2004). The 'direct' sources of brand personality are person-based, and include human characteristics associated with a typical brand user, company employees, the CEO of the company, and brand endorsers (Aaker 1997); the 'indirect' sources involve all the decisions made by the manager relative to the brand, such as price, advertising style, packaging (Phau and Lau 2001; Batra et al. 1993; Levy 1958; Plummer 1985). Secondly, the contents of these two constructs are different. The human personality "Big Five Model" consists of personality traits of Extroversion, Agreeableness, Conscientiousness, Emotional Stability and Openness (Goldberg 1990); Aaker's (1997) five dimensions of brand personality refers to Sincerity, Excitement, Competence, Sophistication and Ruggedness. Lastly, although three out of five brand personality dimensions of Aaker's (1997) five dimension brand personality theory relate to three of the "Big Five Model" of human personality dimensions, two dimensions (sophistication and ruggedness) differ from any of the "Big Five" of human personality (Briggs 1992). This indicates that 'brand personality dimensions might operate in different ways or influence consumer preference for different reasons' (Aaker 1997, p. 353). This assumption was examined by Caprara et al. (2001). In line with Aaker's (1997) claim, the research findings suggested that 'while the psycholexical approach remains a suitable procedure



to identify brand descriptors, the factors used to describe human personalities appear to be inappropriate for describing the brand studied (Caprara et al. 2001).

#### 4.5.3.3 Significances of Brand Personality Study

As products have moved from a utilitarian perspective to a perspective of consumer and brand relationship, brand personality seems to play a very important role for all involved societies related to branded products. From the marketers' perspective, brand personality is the key element to understanding consumer brand choice (Plummer 2000); it provides some direction with regards to the brands' marketing plans (Wee 2004), and it also serves as the foundation for meaningful differentiation, especially in contexts where brands are similar with respect to product attributes (Halliday 1996; Aaker 1996; de Chernatony and McDonald 1998).

From a managerial perspective, brand personality enables firms to communicate with their consumers about the brand more effectively (Plummer 1985; Aaker 1996), it is a contemporary tool for marketing strategies to use to build and enhance stronger emotional ties of consumers to a brand, to obtain greater consumer trust and loyalty (e.g. Siguaw et al. 1999; Johnson et al. 2000), and, as a result, to sustain and increase brand equity (Phau and Lau 2001; Johnson et al 2000; Keller 1993; Batra et al. 1993). Brand personality should be seen as a key determinant of brand equity and it offers differentiation from other brands/products (Biel 1993; Aaker 1991). As such, examination of brand personality is crucial to marketers from the managerial perspective.

#### 4.5.3.4 Two Facets of Brand Personality

Plummer (2000) suggested that brand personality is a two-facet concept. The input facet refers to what marketers/strategists want consumers to think and feel about their brand (brand personality statement). In other words, the input facet refers to brand personality from the brand identification perspective. The output facet is what consumers actually do think and feel about the brand (consumer perceptions of the brand). The output facet represents brand personality from the brand image perspective. Accordingly, this research only investigates the output facet of brand personality of both CBP and BP. More specifically, it looks at consumers' perceptions of the brand personality of the studied brand products.

#### 4.5.3.5 Brand Personality Hypotheses

Brand personality factor enables a consumer to express his or her own self (Belk 1988; Hem and Iversen 2002; Aaker 1999) or specific dimensions of the self (Kleine et al. 1993); it serves as a symbolic or self-expressive function, it helps consumers differ/integrate themselves with others (Keller 1993), or to make a statement of themselves (de Chernatony and McDonald 1998). Brand personality also projects the brands' values and creates an image of the brand's typical user (Johar and Sirgy 1991), which might be the ideal image of the consumer. This brand information may actually encourage the use of a given brand as a self-expressive device by consumers who hold a similar position and want to present a like image or ideal self (Malhotra 1988).

Brand personality elicits an emotional rather than intellectual response that arouses passion and incites an affinity without rationale for the brand (Carr 1996). Such feelings about brand personality may make the brand seem more relevant to consumers (Keller 1998). As such, it assists in creating a meaningful relationship between the consumer and the brand, encourages the consumer to invest in the relationship with the brand (Fournier 1998), and instils brand loyalty (Biel 1992).

Consumers seem to prefer brands that possess a strong, favourable brand personality (Freling and Forbes 2005). Previous research suggest that favourable brand personality is a central driver of consumer preference and usage (Biel 1993; Batra et al. 1993; Sirgy 1982), as consumers are more likely to associate them with a desired group, or self-image (Aaker 1997; Lefkoff-Hagius and Mason 1993). Hence, when the perceived brand personality of the original branded products is more favourable, the more likely it is that these products will be considered and purchased. In the same vein, if the counterfeit branded products are perceived to project a positive and favourable brand personality, they are more likely to be included in the consideration set and lead to the opportunity of being purchased. Based on our understanding of the literature, we propose that:

$H_{personality1}$  : The level of consumers' favourableness of the brand personality has a positive relationship with the likelihood of consideration and the purchase intention of the BP.



$H_{personality2}$  : The level of consumers' favourableness of the brand personality has a positive relationship with the likelihood of consideration and the purchase intention of the CBP.

#### 4.5.3.6 Brand Consequences – Perceived Risk Hypotheses

Since it was first introduced by Bauer (1960), this concept has continued to receive attention from both practitioners and academics (Mitchell 1999), and perceived risk has been regarded as one of the major explanatory variables in consumer behaviour (Brooker 1984; Gabbott 1991; Mitchell and Boustani 1993; Mitchell 1999). Perceived risk has for a long time been acknowledged in the marketing literature as an important issue during buying decisions. It is a central construct in marketing, suggesting that consumers seek to reduce uncertainty and unfavourable consequences of purchase decisions (Bauer 1960; Cox 1967).

A number of studies suggest that the evidence that consumers perceive risk in choice situations is extensive (i.e. Cox and Rich 1964; Hisrich et al. 1972; Stem et al. 1977; Shimp and Bearden 1982; Mitchell and Greatedorex 1989). Consumers are often imperfectly informed about product attributes (Erdem 1998), and they can only deal with limited information even when all information is available (Gabbott 1991). Hence, the outcome of a choice is more likely to be known only in the future. Consequently, consumers are forced to deal with uncertainty and the uncertainty can create consumer perceived risk (Anand 1993).

Consumer researchers define perceived risk in terms of uncertainty and consequences (Bauer 1960; Taylor 1974; Dowling 1986; Campbell and Goodstein 2001) which can lead to frustration (Cox and Rich 1964). Perceived risk comprises multidimensional constructs, possessing financial, performance, physical, psychological, social and time elements (Jacoby and Kaplan 1972; Arndt 1967; Perry and Hamm 1969; Mandel 2003; Cox 1967; Roselius 1971; Mitchell and Baustani 1993; Cunningham 1967; Campbell and Goodstein 2001).

The focus group data revealed that in the context of non-deceptive counterfeiting, consumers are mainly concerned about social risk, financial risk and performance risk.

Of interest to this study, only these three risk dimensions are discussed in detail. In the literature, the sources of social risk, financial risk and performance risk have been identified as follows:

- **Social risk.** Social risk is one in which a negative risk would result in embarrassment, disapproval and disesteem among one's family or peers (Arndt 1967; Perry and Hamm 1969; Mandel 2003).
- **Financial risk.** Financial risk refers to when some products fail, the loss to the consumers of the money spent on the products, or the money it takes to make the product work properly, or replace it with a satisfactory product. (Roselius 1971; Mitchell and Boustani 1993).
- **Performance risk.** Performance risk means that some products generalise poor performance and lack of reliability (Cunningham 1967).

Prior studies show that in general higher value, more complicated and more involving products are more risky than lower value, low-involvement simpler convenience products (Mitchell 1999). Moreover, Derbaix (1983) finds that for goods characterised by highly visible attributes, social risk is more important than others. These findings indicate that consumers might perceive reasonably high levels of financial and social, as well as performance, risk in relation to the branded products to be examined (Rolex watches, Gucci watches, Burberry handbags and Louis Vuitton handbags) in the current study due to the luxurious and symbolic nature of these brands.

There is some inherent performance risk in buying a counterfeit instead of the legitimate product, since the former may not perform as well as the original. It is also rational to assume that consumers may face financial risk while buying counterfeit products versus legitimate products, due to the high uncertainty of their performance and unlikelihood of consumer redress (Bamossy and Scammon 1985; Cordell et al. 1996). Moreover, consumers are concerned about being found out by their peers or people whom they esteem for buying and using counterfeit branded products (Wee et al. 1995), which suggests that perceived social risk of purchasing counterfeits might be a concern to consumers.

In general, it is assumed that decision makers prefer smaller risks to larger ones, provided that other factors (e.g. expected value) are constant (Arrow 1965). Marketing



literature suggests perceived risk is more powerful in explaining consumers' behaviour since consumers are more often motivated to avoid mistakes rather than to maximise utility in purchasing (Mitchell 1999). Thus we expect that the greater risk should reduce consumers' likelihood of consideration and intentions to purchase the counterfeit (Charkraborty et al. 1996), as well as reduce the possibility of consideration and purchase intention of the original branded products. Based on our understanding of the literature we formulate the following hypothesis.

$H_{risk1}$ : The level of consumer perceived risk has a negative relationship with the likelihood of consideration and the purchase intention of BP.

$H_{risk2}$ : The level of consumer perceived risk has a negative relationship with the likelihood of consideration and the purchase intention of CBP.

#### 4.5.3.7 Products' Physical Attributes and Perceived Benefits

Product attributes can be categorized in a variety of ways (Myers and Shocker 1981). Keller (1993) suggests that attributes are those descriptive features that characterize a product or service – what a consumer thinks the product or service is or has and what is involved with its purchase or consumption. Keller further distinguishes product attributes into two product-related attributes and non-product-related attributes. The product-related attributes are defined as the ingredients necessary for the performance of the product or related to a product's physical composition, whereas non-product-related attributes are defined as external aspects of the product that relate to its purchase or consumption. The non-product-related attributes are further categorised as price information, packaging or product appearance information, user imagery and usage imagery.

Stokmans (1991) notes that a product can be viewed as a bundle of intrinsic and extrinsic attributes, or as a bundle of perceived attributes. The intrinsic attributes of the product are information cues directly linked to the product such as design, taste, and performance, and those extrinsic attributes are information cues which are indirectly connected to the product such as price, brand name, packaging, and warranties. This is consistent with a number of previous studies (e.g. Romaniuk 2003; Holden 1993).

Keller's (1993) attribute notion represents a broader view of product attributes which covers not only Stokmans (1991) product attribute concept but also brand personality attributes and benefit attributes. The author believes that the user and usage imagery are the antecedents of the brand personality component of Plummer (1985, 2000) brand image. Accordingly, Romaniuk (2003) labels Keller's (1993) attribute notion as 'brand attribute'. It seems that to a great extent Stokmans' (1991) product attribute concept is in line with the attribute component of Plummer's brand image concept, even though Plummer (1985, 2000) did not provide specific information regarding what he means by product attribute. As brand personality has been covered in a previous section, there is no need to reanalyse it. Thus, this research takes the narrower view of product attributes suggested by Stokmans (1991).

The description of a product in terms of intrinsic and extrinsic attributes is usually based on a marketer's perspective. The consumer, on the other hand, uses perceived attributes in the decision-making process (Puth et al. 1999), which is what has been named consumers' perception of product attributes. Consumers brand perceptions are formed through a transformation from objective, of physical attribute dimensions (e.g. size of a TV set in inches), to subjective or perceptual dimensions (e.g. largeness of the set). The transformation is established through a comparison of brands or similar products in the market place. For example, an ordinary TV might have been scored 'good' on picture quality. However, when high-digital TV sets enter the market, the ordinary TV will score poorly on picture quality in comparison to the high-digital one, which will certainly have a great impact on consumer purchase behaviour. Product attributes represent what a specific branded product can offer to a consumer, whereas the perceived product attributes are what the consumer believes he/she will gain from a purchase. A positive relationship between linkage of the brand and perceived product attributes and brand choice/preference has been found by multiple researchers since the 1960s (Cohen 1966; Axelrod 1968; Nedungadi 1990), which indicates that the more positive the consumers' perceptions of the product attributes of a specific brand the more chance the branded product is considered and purchased. As such, we propose the followings.

$H_{attribute1}$ : Consumers' perceptions of product attributes have a positive influence on likelihood of consideration of products and purchase intention of BP.



$H_{attribute\ 2}$ : Consumers' perceptions of product attributes have a positive influence on likelihood of consideration of products and purchase intention of CBP.

Perceived benefits are directly associated with perception of product attributes and brand personality, which are the personal values consumers attach to the product. More specifically, perceived benefit is what consumers think the product or service can do for them (Keller 1993). In the context of non-deceptive counterfeiting, benefits are what consumers believe the original branded products or the counterfeit branded product can bring them.

Traditionally, benefits are classified into three categories (e.g. Park et al. 1986): functional benefits, experiential benefits and symbolic benefits. Functional benefits are the more intrinsic advantages of product or service consumption and usually correspond to the product-related attributes. These benefits are often linked to fairly basic demands, such as better product performance and long product life etc. Experiential benefits relate to what it feels like to use the product and usually correspond to the product-related attributes. These benefits satisfy experiential needs such as sensory pleasure (e.g. fun and value for money), variety and cognitive stimulation. Symbolic benefits are the more extrinsic advantages of product or service consumption. They usually correspond to non-product-related attributes and relate to underlying needs for social approval or personal expression and outer-directed self-esteem. Therefore, the symbolic benefits are related to prestige, exclusivity, fashionable appearance etc.

Regardless of the type of benefits suggested by previous research, the factor analysis results of the present research extracted two factors related to consumer perceived benefits. These two factors are labelled 'image benefit' and 'functional benefit' (see Chapter 7 for details). One can clearly see that in most cases the 'image benefit' factor comprises the 'symbolic and experiential benefits', whereas the 'functional benefit' corresponds to 'disposability' and 'product life' (for handbags only) or 'performance' (for watches only).

Consumers use product attributes as the basis for evaluating a product, and product attributes promise benefits consumers seek when purchasing a product/brand (Puth et al.

1999). These benefits lead to certain end states or values that consumers wish to achieve (Aaker et al. 1992; Belch and Belch 1995; Kotler 1999; Mowen 1993; Peter and Olson 1994); they are what consumers want to buy (Kotler 1999). Perception of product attributes and benefit are the choice criteria a consumer uses when evaluating products and services. They provide the grounds for deciding to purchase one brand or another (Jobber 2004). Numerous previous studies have demonstrated the positive relationship between perceived benefit and consumer decision-making (e.g. Bove and Johnson 2000; Mai and Ness 1997; Cho et al. 2002). For example, past research has found that direct economic benefits such as paying a lower price influence the tolerance of questionable behaviour by consumers (Dodge et al. 1996). Prior researches in the study of counterfeiting reveal that the consumer who wilfully buys counterfeit benefits from getting the prestige (e.g. Ang et al. 2001; Bloch et al. 1993; Tom et al. 1998) and quality (Grossman and Shapiro 1988a) of the original branded product for a fraction of its price. People buy counterfeits because they believe that they are getting prestige without paying for it (Bloch et al. 1993). Past research also show that consumers purchase counterfeit products because they believe that counterfeits are comparable to originals in terms of brand, quality, and performance, but are superior as far as price is concerned (Tom et al. 1998). Ang et al. (2001) suggests that people who buy counterfeits feel that legitimate products are unfairly priced. According to the understanding of the literature, it would seem reasonable to suggest that the greater the perceived benefit from a purchase behaviour the more likely the products are going to be considered and thereafter purchased. This should be applicable to both original and counterfeit branded products. Thus, the proposed hypothesis is as follows:

$H_{benefit(image \oplus functional)}$ : Consumers' perceptions of benefits have a positive influence on likelihood of consideration of products and purchase intention of both counterfeit and original branded products.

Consumer behaviour is complex in nature. Numerous factors can have a significant effect on consumer choice. The current research selected four constructs and is to examine their influence on the formation of the consideration set and purchase intention. The four constructs were chosen because previous research has provided substantial empirical evidence of their significant influence on consumer behaviour. In addition, the influences of three out of four of these constructs on consumer behaviour



have never been tested in the context of non-deceptive counterfeiting. The only construct which has been investigated in relation to the study of counterfeiting is the demographic construct. In addition to the reason given above, this construct is to be re-examined in the present study as the research context is different to previous ones, and previous research findings do not appear to be consistent.

### 4.6     Summary

Drawing on the previous research, this chapter developed a model of determinants of consumer choices processes. This study proposes that the decision to purchase a branded product (both counterfeit and original branded versions) can be explained by a combination of variables drawn from the study of branding and consumer behaviour. The examined variables are product involvement, self-assessed product knowledge, demographic variables (age, gender, education and household income). More specifically, the likelihood of consideration and purchase tendency of a branded product is predictable based on these variables when other conditions hold unchanged.

Analysis of the involvement construct begins by demonstrating the complexity of this notion. Considering the complex nature of the involvement construct, as well as following Cohen (1983) who suggests that study based on imprecisely defined involvement can lead to the impairment of our ability to refute propositions and reformulate theories, this research determined to focus on involvement from product level and nothing else. Disregarding the various different meanings allocated to this concept by previous researchers, by product involvement we mean: “A person’s perceived relevance of the object based on inherent needs, values and interests” (Zaichkowsky 1985, p. 342). This definition is considered appropriate for the present research because it indicates that generation of product involvement involves a cognitive process; it has obtained common recognition among previous researchers, and, more importantly, the scale used to measure this concept was developed based on acceptance of this definition.

Acknowledging the distinctions between enduring and situational involvement, this research challenges previous researchers’ view that product involvement should be labelled as enduring involvement. Using perceived product involvement of a car in two different situations as an example, we demonstrate that enduring involvement and

situation involvement should be considered as two sub-constructs of product involvement. It is a matter of who plays the dominant role under certain circumstances rather than what label (enduring or situational) should be given to product involvement. To differentiate enduring and situational involvement, this research suggests that these two sub-constructs should be labelled as enduring and situational product involvement at the product level. The research focus is to examine enduring product involvement, as it is more practically valuable and because of the existence of the well-developed measuring scale.

To start with an analysis of dimensions of the product knowledge construct, this research reveals that the three major components of product knowledge (familiarity, expertise and experience) have been used interchangeably by a number of researchers to refer to this concept. This research takes the stand of Rao and Monroe (1988), who claim that product experience is a necessary but insufficient condition for consumer expertise and familiarity. This paves the way for the decision for not measuring consumers' product experiences in the current study. Objective knowledge and self-assessed knowledge are the two types of commonly accepted product knowledge. However, the relationship between these two concepts remains ambiguous. Rao and Monroe (1988) assert that product knowledge is the sum of objective knowledge and self-assessed knowledge. To study the relationship between objective knowledge and subjective knowledge is beyond the scope of this study. Nevertheless, we do believe that it is inappropriate to take the added value of the objective knowledge score and the self-assessed knowledge score as the final score of the product knowledge. This research investigates only self-assessed knowledge, and detailed reasons are provided in Chapter 5 (Justification of measure of product knowledge section).

Four demographic variables are discussed in detail in this chapter. They are age, gender, educational attainment and household income. The choice of these four variables are determined by reports of their influential power on consumer purchase behaviour in past research, as well as their all being capable of being treated as categorical variables, which satisfies the fundamental requirement for conduction of multiple regression analysis. Another thing we addressed particularly is that we are fully aware that disposable income is a better measure than household income. Nevertheless, a trade-off is made in consideration of the possibility of gathering more



biased data related to disposable income due to the limited cognitive ability of consumers. As a result, we decided to measure household income instead.

Great efforts were made in analysing brand and its related concepts. This was driven by the complex nature of these constructs and the fact that they can be easily misunderstood. The discussion about brand construct followed the chronological sequence. The topics covered included what brand means historically, how brand is interpreted conventionally in the marketing discipline, and the pros and cons of conventional brand definitions. Then we introduced de Chernatony and Dall'Omo Riley's (1998) brand definition, which suggests that 'brand is a complex multidimensional construct whereby managers augment products and services with values and this facilitates the process by which consumers confidently recognise and appreciate these values' (p. 436). We consider that de Chernatony and Dall'Omo Riley's (1998) brand definition is more sophisticated than others, given that it takes into account both brand managers' as well as consumers' contributions to the establishment of a brand.

This research further analysed the relationship between brand, brand image and brand identity. In line with the more recent research (Holt 2002, 2003; Muniz and O'Guinn 2001), the conventional claim that managers could exert a fairly high degree of control over brand image through careful strategic choices was challenged. The present research argues that marketers have only limited control over brand image, given that it is not accurate to say that what marketers want the brand to convey (brand identity) is exactly what the consumers perceive (brand image).

The 'brand image trap' caution raised by Aaker (1996) was re-examined with the current focus on investigation of underlying causes of the misuse and misunderstanding of brand image and brand identity. The investigation was carried out from definition level and component level of brand image and brand identity. It was summarised that lack of a firm base or foundation which the brand image concept can build on, as well as these two concepts possessing almost identical components are the two proposed causes for the misuse and misunderstanding of these two theoretically distinguishing concepts by researchers. This work has no intention of claiming that the proposed reasons are exhaustive, as to investigate this issue is not the main focus of the current research.

Consequently only limited time was devoted to investigating this issue. Nevertheless, this attempt opened a door to further research. In the same vein as Dobin and Zinkhan (1990), this research further argues that any misuse and misunderstanding of these related concepts might cause confusion for readers and would also make comparison and generalization of research findings difficult.

This research was set up to examine consumers' perceptions of branded products. Therefore, brand image, rather than brand identity, is the theoretical foundation of this research. Plummer's (2000, 1985) brand image theory is the guidance of the literature review. Specifically, the four brand image dimensions (brand personality, benefits, consequences, and product attributes) are analysed separately, with more effort devoted to a discussion of the brand personality concept, given its complex nature and its being difficult to understand.

Table 4.3    Research hypotheses

Investigated Construct	Code	Hypothesis Content
Product Involvement	$H_{involvement1}$	The level of product involvement has positive relationship with the likelihood of consideration and the purchase intention of original branded products.
	$H_{involvement2}$	The level of product involvement has negative relationship with the likelihood of consideration and the purchase intention of counterfeit branded products.
Self-accessed Product Knowledge	$H_{knowledge1}$	The level of consumers' self-assessed product knowledge has positive relationship with the likelihood of consideration and the purchase tendency of the BP.
	$H_{knowledge2}$	The level of consumers' self-assessed product knowledge has negative relationship with the likelihood of consideration and the purchase tendency of the CBP.
Age	$H_{age1}$	Age of consumer has positive relationship with the likelihood of consideration and the purchase intention of BP.
	$H_{age2}$	Age of consumer has positive relationship with the likelihood of consideration and the purchase intention of CBP.
Income	$H_{income1}$	Consumer income has positive relationship with the likelihood of consideration and the purchase tendency of BP.
	$H_{income2}$	Consumer income has negative relationship with the likelihood of consideration and the purchase tendency of BP.
Gender	$H_{gender}$	Gender will have a significant effect on CBP consumption, with male being more likely to consider CBP and intend to purchase CBP in the context of non-deceptive counterfeiting.
Education	$H_{education1}$	The level of education attainment has positive relationship with the likelihood of consideration and purchase tendency of BP.
	$H_{education2}$	The level of education attainment has positive relationship with the likelihood of consideration and purchase tendency of CBP.
Brand Personality	$H_{personality1}$	The level of consumers' favourableness to the brand personality has positive relationship with the likelihood of consideration and the purchase intention of the BP.
	$H_{personality2}$	The level of consumers' favourableness to the brand personality has positive relationship with the likelihood of consideration and the purchase intention of the CBP.
Perceived Risk	$H_{risk1}$	The level of consumer perceived risk has negative relationship with the likelihood of consideration and the purchase intention of BP.
	$H_{risk2}$	The level of consumer perceived risk has negative relationship with the likelihood of consideration and the purchase intention of CBP.
Product Attribute	$H_{attribute1}$	Consumers' perceptions of product attributes have a positive influence on likelihood of consideration of products and purchase intention of BP.
	$H_{attribute2}$	Consumers' perceptions of product attributes have a positive influence on likelihood of consideration of products and purchase intention of CBP.
Image and functional benefit	$H_{benefit(image \oplus functional)}$	Consumers' perceptions of benefits have positive influence on likelihood of consideration of products and purchase intention of both counterfeit and original branded products.



Research hypotheses were proposed directly after each section of the discussion of each individual construct. These hypotheses are well supported by previous research findings. As detailed discussions are provided in each section, there is no need to describe again here how they are established. For the purpose of recapping, all the proposed hypotheses are gathered together and presented in Table 4.4.

Based on the above, Figure 4.3 presents the research conceptual model. The overall discussion sequences in this chapter strictly followed the proposed model. No more detailed explanations concerning this model and interrelationships between variables are provided here, due to their having been fully reflected on and analysed in the discussion of related variables and proposed hypotheses.

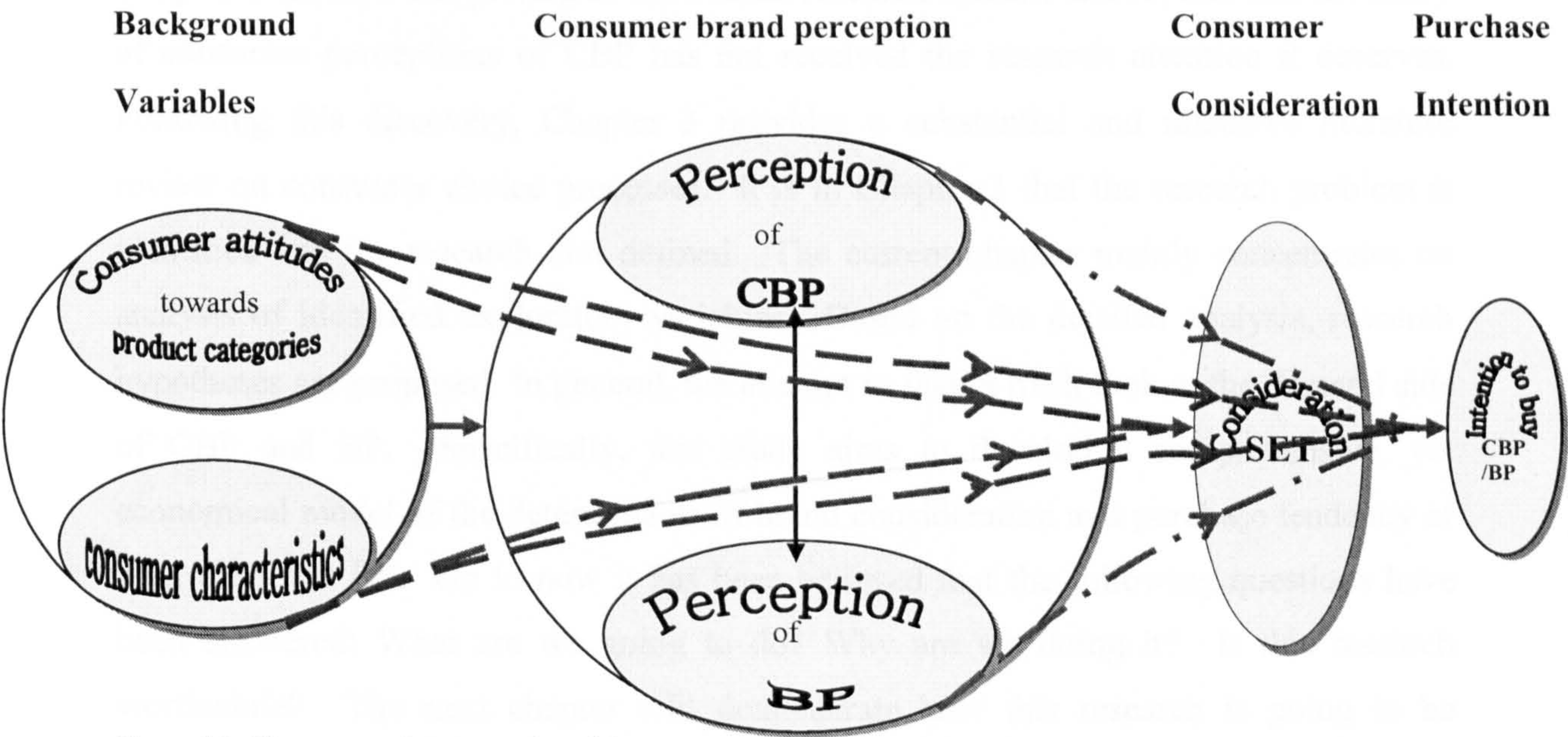


Figure 4.3 The proposed conceptual model  
Note: both the solid line and dashed line refer only to influence and do not indicate whether the relationship is positive or negative.

Consumer attitudes towards product categories of the background variables refers to the product involvement variable and self-assessed product knowledge variable, whereas the consumer characteristics refer to age, gender, educational attainment and household income. By perception of CBP and BP we mean consumers' perception of brand image of CBP and BP. We are fully aware that there are some other factors which may have a great impact on consumer choice processes of CBP and BP. Nevertheless, we decided to focus on the above noted variables, due to their substantial role in consumer decision



making. One more thing which must be clarified here is that we decided not to investigate the relationship between consumers' perceptions of CBP and BP (the vertical double arrows). This is because, first of all, this research is determined to focus on regression modelling, and secondly because the time and word constraints of this research restricted us from conducting such broad analyses. We would like to leave it for future research. Our decision is considered rational, since we believe that research should identify the most influential factors of the consumer choice process first in the context of non-deceptive counterfeiting, and then follow with examinations of consumers' perception differences of CBP and BP on these identified factors. In other words, we can see little point in conducting any investigation on factors which might have no significant impact on consumer product consideration and tendency to purchase.

Chapter 2 draws a full picture of the overall research context and reveals that the study of consumer perceptions of CBP has not received the research attention it deserves. Following this discovery, Chapter 3 provides a substantial and intensive literature review on consumer choice processes. It is in Chapter 3 that the research problem is identified and the research aim defined. The current chapter mainly concentrates on analysis of identified exploratory variables. Based on the detailed analysis, research hypotheses are proposed. In general, we attempt to take a fresh look at the demand side of CBP and BP. Specifically, this study aims to develop a comprehensive, yet economical model of the determinants of brand consideration and purchase tendency of both CBP and BP. Up to now it has been believed that the following questions have been answered: What are we going to do? Why are we doing it? Is this research worthwhile? The next chapter will demonstrate how this research is going to be conducted in order to achieve the research aim. More specifically, the research methodology will be the focus of the Chapter 5.



# Chapter 5 Research Methodology



## Chapter 5 Research Methodology

### 5.1 Introduction

Previous chapters have dealt with the literature review, reported the identified research problems and the objectives of this work, and presented the conceptual research model. This chapter focuses on research methodology issues, which are to be utilised to achieve the research objectives set out in Chapter 1.

This chapter begins with the choice of studied brands, then proceeds to cover the overall research design, the sampling design, the research instrument, the research instrument piloting and results, and ends with the fieldwork administration. Logically, the issues related to the preliminary qualitative research and results should be included in the research instrument section of this chapter. However, the preliminary research and results are reported in a separate chapter, Chapter 6, due to the important role they play in this research and their complex, rich nature.

### 5.2 Choice of the Studied Brands

This study goes through several stages in relation to the selection of the investigated brands. At the first stage, an extensive literature review on study of counterfeiting related issues is conducted. The review uncovers that previous research has mainly focused on examining product categories; few researchers have investigated individual brands. At the second stage, based on the Anti-counterfeiting Group's (ACG) Survey Report (2004) five product categories are identified as the most commonly counterfeited products; two product categories the UK consumers would knowingly purchase are also identified. The third stage attempts to determine the brands studied in this research with the help of the Trading Standards Officers. Four brands appear to fit in well with this research. All these four brands are chosen for further investigation in this study.

#### 5.2.1 Specific Brands or Product Categories? – A Review of Previous Work

A review of previous work on study of consumer demand side of counterfeiting phenomena (Table 5.1) shows that few researchers have investigated product categories in their studies (e.g. Cordell and Wongtada 1991; Bloch et al. 1993; Wee et al. 1995; Cordell et al. 1996; Chakraborty et al. 1996; Chakraborty et al. 1997; Tom et al. 1998;



Albers-Miller 1999; Nia and Zaichkowsky 2000; Phau et al. 2001; Bian and Veloutsou 2004; Harvey and Walls 2003; Hoe et al. 2003). Few studies examine specific brands, with the exception of that of Cordell and Wongtada (1991), which examines the impact of specified brands on consumers' judgement of whether or not a product is counterfeit. This can be interpreted as some researchers being led by the reality that certain product categories are more commonly counterfeited than others (Bamossy and Scammon 1985) and information about counterfeited product categories is more accessible than information about the counterfeiting situation of individual brands. Worrying that the brand equity might be damaged, brand owners are reluctant to release detailed information related to the counterfeiting situation of their brands (Shultz II and Saporito 1996). The brand owners' concern is shown by Kessler (1998) who argues that 72 percent of consumers indicate that they would avoid purchasing a company's products if those products had a reputation for being counterfeited. The erosion of brand equity could occur if consumers were aware that some portion of the available stock of a brand is actually counterfeit (Wilke 1999), because this situation could potentially erode confidence in the brand and reduce the status value that is sometimes associated with brand ownership of luxury goods (Green and Smith 2002).

Given that consumer behaviour is pretty much brand and product specified, it is rational to ask whether previous research findings based on investigation of product categories can be applied to individual brands or not. The study of individual brands in the context of non-deceptive counterfeits has not attracted the research attendance it deserves. Hence, for this research, the specific brands are examined because using specific brands can help subjects to achieve a better understanding of the studied objects, and can also fill the identified literature gap, i.e. lack of research in the study of counterfeit phenomena related to the investigation of specific brands.

### 5.2.2 Choice of Product Categories Based on Availability of the Counterfeit Version, Consumer Awareness and Acceptability

Given that the information about the current counterfeiting situation of individual brands is not publicly available, it is necessary to determine the product categories first before the studied brands are identified. This is due to information about counterfeiting situation of product categories in the UK being relatively accessible (e.g. the ACG Survey Report 2004) in comparison to that of individual brands. Five product

categories (perfumes/fragrances; clothing/footwear; watches; alcohol; electrical goods) were selected for further study based on the ACG Survey Report (2004), as the report suggests that these selected product categories are identified much more with counterfeits and perceived a higher degree of consumer awareness of counterfeit versions than other product categories such as pharmaceuticals, food and pesticides. Moreover, the ACG Survey Report (2004) also reveals that consumers appear to knowingly purchase counterfeit versions of clothing/footwear and watches when price and quality are acceptable. Therefore, it has been decided that brands in these two product categories are to be investigated in this study due to their relatively high accessibility, consumer awareness and acceptability. It is considered to be essential to ensure that the studied brands (counterfeit version) are accessible and acceptable to the target population to some extent, and have a high degree of consumer awareness. If any one of the conditions does not hold, then there is no chance that consumers will knowingly purchase them. Thereafter, the research aim will appear pointless both theoretically and practically.

Table 5.1 Product classifications and product categories studied by prior studies

Author	Product studied	Methodology	Sample
Cordell and Wongtada 1991	No detailed information available, 'a specified watch and pair of shoes (prestige brand); a kite shirt and a camera	Undergraduate student, Survey	Convenience sample (students)
Bloch et al. 1993	Knit sports shirts	Shopping mall, flea market experimental research (USA)	Normal consumers
Wee et al. 1995	Literature, computer software, leather wallets/purses and watches	Survey (South-east Asia)	Convenience sample (students)
Chakraborty et al. 1996	Auto parts	Experimental research (USA)	Convenience sample (students)
Cordell et al. 1996	A knit shirt and 35-mm camera	Experimental research (USA)	Convenience sample (students)
Chakraborty et al. 1997	Auto parts	Experimental research (USA)	Convenience sample (students)
Tom et al. 1998	CDs and software (functional products); t-shirt and purses (symbolic products)	Shopping mall and flea market, Survey (USA)	Normal consumers
Albers-Miller 1999	Color television	Survey (USA)	Survey, convenience sample (student),
Nia and Zaichkowsky 2000	Luxury goods (25 kinds of luxury brands were examined)	Shopping centre survey (Canada)	Normal consumers
Phau et al. 2001	Branded clothing	Face-to-face interview survey at railway station (Hong Kong)	Normal consumers
Harvey and Walls 2003	Authentic and counterfeit god	Experimental research (Hong Kong)	Convenience sample (underground students)
Hoe et al. 2003	Clothing	Interview, snowball technique (UK)	Self-selecting group (consumers under 30 years old)
Bian and Veloutsou 2004	Sunglasses	Shopping mall, flea market, a university Survey (UK)	Normal consumers
Bian and Veloutsou 2006	Sunglasses	Shopping mall, flea market, a university Survey (UK)	Normal consumers



### 5.2.3 Choice of Four Brands from the Two Identified Product Categories

As noted earlier, information about the current counterfeiting situation in the UK of the individual brands is not publicly available. The researcher decided to consult anti-counterfeiting enforcement officers. The officials of Trading Standards are regarded as the appropriate people for advice, because they are one of the three anti-counterfeiting enforcement forces in the UK, and they are the only ones who deal directly with consumer and trading related issues. In addition, Trading Standards plays a leading role in relation to anti-counterfeiting in the UK. The other two anti-counterfeiting enforcement forces are Police and Customs, but these two forces do not become directly involved in consumer related matters.

The Trading Standards officials confirmed that counterfeit clothing/footwear and watches were more common in the marketplace than other product categories. This is consistent with the ACG Survey Report (2004). Furthermore, they also revealed that it appears Burberry, Rolex, Gucci, Louis Vuitton, Timberland, Adidas, and Nike are the most commonly counterfeited brands, although some other brands also run a risk of being counterfeited (Wee et al. 1995). According to Trading Standards, the counterfeit versions of these brands account for around 50 percent of the CBP confiscated by Trading Standards. Although Trading Standards cannot provide more statistically sophisticated figures in relation to the percentages, nevertheless, the statements they made are in line with Green and Smith (2002), who claim that luxury brands appear to be more likely to be counterfeited than other generic brands.

Burberry, Rolex, Gucci and Louis Vuitton were eventually chosen because, firstly, they are well-known and long-established brands, and thus familiar to the respondents; secondly these brands are the most counterfeited brands, with Burberry taking the lead over Gucci, Louis Vuitton and Rolex (Poulter 2006); thirdly the counterfeit versions of these brands are available. Responding to the two determined product categories, Burberry handbags, Louis Vuitton handbags, Rolex watches, and Gucci watches were selected for further investigation in this research. The four brands selected are expected to induce a wide range of involvement levels and knowledge levels across individuals and thus to provide an appropriate research opportunity.

The Trading Standards gave their full support to this research. They provided the researcher with four identical samples (counterfeit versions) of each chosen brand from

the products they confiscated. The principal survey was conducted with the help of eight trained interviewers; therefore it was crucial to ensure that each of the research assistants had identical example sets to show research participants. This helped to ensure the information passed on to the respondents is consistent. The Trading Standards officials also confirmed that all the examples are available in the marketplace in Glasgow, and they are the CBP which consumers will normally knowingly purchase.

### 5.2.4 Selected Brands

To summarise, due to much work having been done on the study of product categories in counterfeiting related literature, but the study of specific brands having been left almost untouched, this research attempts to fill this literature gap by investigating the specific brands in the context of non-deceptive counterfeiting. Four different brands (Burberry handbags, Louis Vuitton handbags, Rolex watches, and Gucci watches) were selected for study. They were chosen because they satisfy certain criteria. Firstly, these brands (both CBP and BP) are familiar and commonly available to the subjects in the study. Secondly, the counterfeit versions of these brands appear to be more acceptable to general consumers than other CBP. Thirdly, examples of the counterfeit version of these brands are available. Finally, another goal of this study is to obtain results that can be generalised from findings of this study. To this end, four brands that belong to two product categories (clothing and watches) are examined. This allows cross-category comparison as well as inter-product category comparison. Moreover, the findings from this study will be compared to findings of the earlier studies that examined product categories.

## 5.3 The Overall Research Design

A research design is simply the framework or plan for a study, used as a guide in collecting and analyzing data (Churchill 1999). It is also regarded as a framework or blueprint for conducting a marketing research project (Aaker et al. 1997; Malhotra 1996). According to Churchill (1999), a research design ensures that the study will be relevant to the problems and will use economical procedures. Therefore, a well-defined research design is prerequisite to a successful research.

### 5.3.1 Types of Research Design

According to distinguishing fundamental objectives of different researches, research designs are classified as exploratory, descriptive and causal (e.g. Churchill 1999; Aaker



et al. 1997). Malhotra (1996) views the descriptive and causal research as sub-constructs of the conclusive research design. The major emphasis in exploratory research is on the discovery of ideas and insights (Churchill 1999; Aaker et al. 1997), seeking the possible decision alternatives, and relevant variables that need to be considered (Aaker et al. 1997). The purpose of descriptive research is to provide an accurate snapshot of some aspect of the market environment (Aaker et al. 1997). When it is necessary to show that one variable causes or determines the values of other variables, a causal research approach should be used (Churchill 1999; Aaker et al. 1997). Despite the usefulness of the classification of design types for gaining insight into the research process, it is argued that the distinctions are not absolute (Churchill 1999). More specifically, on one hand, certain types of research designs are better suited to some purposes than others; on the other hand, there might be more than one type of research design which can be used to serve one purpose. It is suggested that 'the design of the investigation should stem from the problem' (Churchill 1999, p. 99). Malhotra (1996) and Aaker et al. (1997) provide a summary of uses and types of studies, which are more appropriate for each research design, as illustrated in Table 5.2.

Table 5.2 Comparison of basic research designs (Developed from Malhotra 1996, p. 89 and Aaker et al. 1997, p. 78)

	Exploratory	Descriptive	Causal
Objective	Discovery of ideas and insights	Describe characteristics functions	Determine cause and effect relationships
Characteristics	Flexible, versatile	Marked by the formulation of specific hypotheses	Manipulation of one or more independent variables
	Often the front end of total research design	Preplanned and structured design	Control of other mediating variables
Methods	Expert surveys Pilot surveys Secondary data Qualitative research	Secondary Surveys Panels Observational and other data	Experiments Surveys

### 5.3.2 Choosing a Research Approach for the Current Study

To reiterate, the main purposes of this research are to investigate consumers' perceptions of CBP as opposed to BP, as well as relationships between the demographic variables, product involvement, product knowledge, consumers' perceptions and stages (consideration set and purchase intention) of consumer choice process. Referring to Table 5.2, the descriptive research design is applicable to serve the first purpose,

whereas the causal research design might be more suitable to the second purpose, given that the study of relationships is relevant to the element of cause and effect. Therefore, a survey is considered an appropriate approach.

One critical task that must be completed before embarking on the principal research is to generate the criteria consumers used to evaluate the studied brands. There is little prior knowledge on which to build. This is because, first of all, brand image is very much brand specific. Secondly, there is little work investigating brand image in the context of non-deceptive counterfeiting. According to recommendations from previous works (e.g. Aaker et al. 1997; Malhotra 1996; Churchill 1999), the exploratory research design is applicable to this study at this stage. Focus group discussions are utilised to fulfil this task and form the preliminary study (for details, see Chapter 6).

### 5.3.3 Stimulus- vs. Memory-based Approach

The fact is that one quarter of British people are not aware of the sale of counterfeit products (ACG Survey Report 2004). People who are aware of the existence of CBP may not have experience of the counterfeit versions of the selected brands of this study. It is likely that these people will consider that they are not eligible for participating in this study, which will bring down the response rate by at least 25 per cent. Moreover, the literature in consumer choice process study suggests that a lack of sufficient information about certain brands may be one of the reasons that these brands are included in the inert sets of many consumers. If the appropriate information were supplied, some of these brands might move into the evoked set and thus enjoy consumer acceptance and market success (Narayana et al. 1975). This research aims to investigate perceptions towards CBP of ordinary consumers and how their perceptions influence the formation of a consideration set and purchase intention, but not people who favour CBP only. Therefore, there is no sense in excluding people who lack awareness of CBP in the research sample. The solution is to use the stimulus-based approach. More specifically, CBP examples and pictures of the BP are used as stimuli and are presented to research participants before each research phase starts. The researcher acknowledges that the use of the real branded products as opposed to the pictures might achieve better results. However, due to the studied brands all being costly products, buying the genuine products is restrained by the limited research budget. Moreover, it is also considered that to present the real original products to research participants in the field



might cause security concerns. Therefore, the use of pictures of the original branded products is considered acceptable.

#### 5.3.4 Section Overview

Echoing Aaker et al. (1997) who claim ‘seldom is a data collection method perfectly suited to a research objective (aim). A successful choice (...) is achieved by combining several methods to take advantage of their best features and minimize their limitations (p. 78)’, the nature of the preliminary study of this research is exploratory, whereas the principal research is a combination of descriptive and causal research. The fieldwork of this research is conducted in three phases – preliminary qualitative research, piloting test of questionnaire, and interview survey. The details related to each stage (including rational, process, results and solutions) are reported in following sections, with the exception of the preliminary research and results, which are reported in Chapter 6.

#### 5.4 Sample Design

The sample design according to which the principal study is conducted will be discussed in detail in this section. The discussion follows the sampling procedures suggested by Churchill (1999) as outlined in Figure 5.1. It starts with defining the population and ends with collecting the data from the designated element.

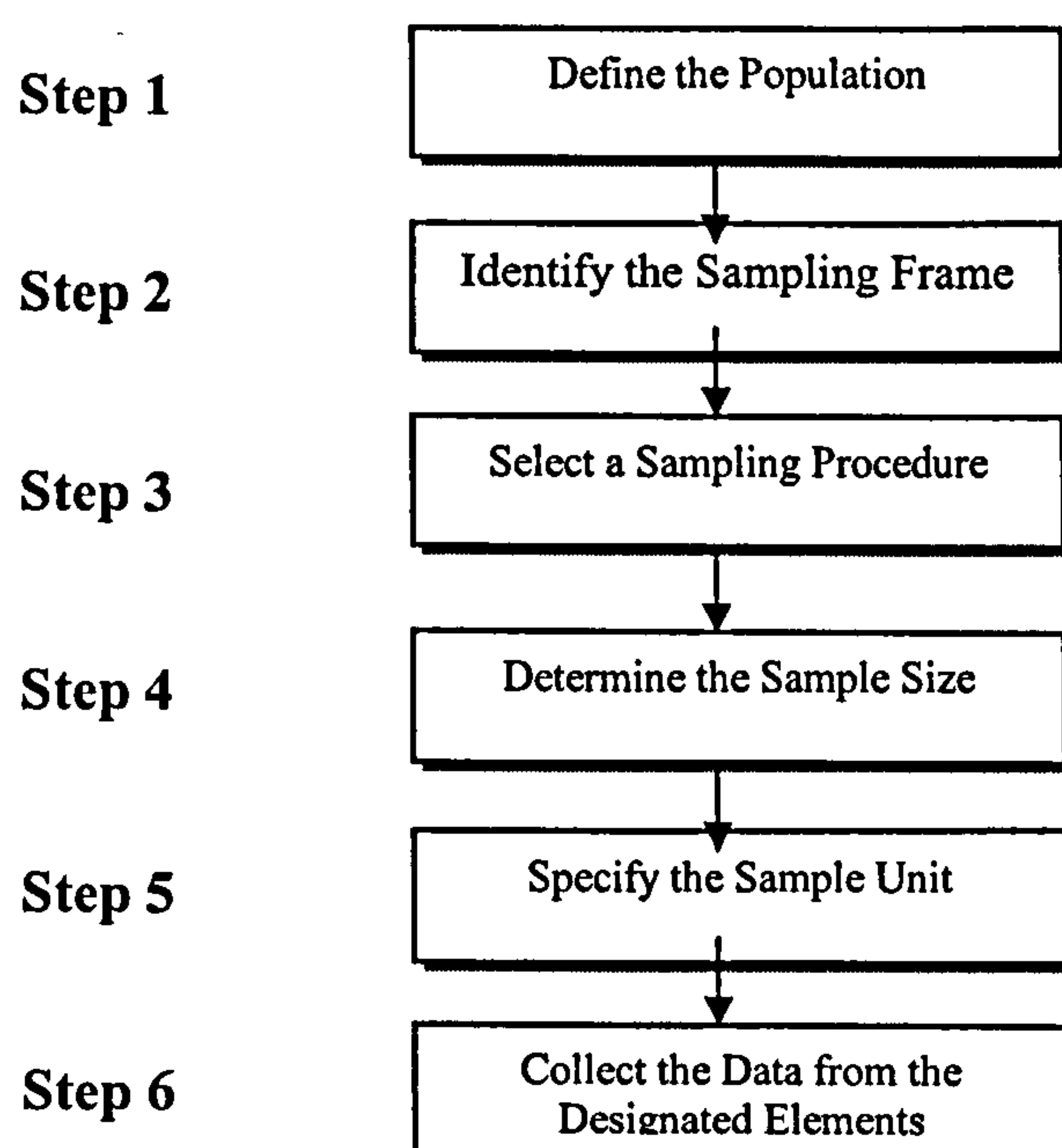


Figure 5.1 Six-step procedure for drawing a sample (adopted from Churchill 1999, pp. 498)

#### 5.4.1 Define the Population

A population is defined as the entire group under study as specified by the objectives of the research product (Burns and Bush 2000). To identify the population properly and accurately is critical at the outset, since sampling is intended to gain information about the population (Aaker et al. 1997). A properly defined population is the foundation of a research. If the population is defined improperly, the research results cannot be reliable; in some cases the respondents are unlikely to be able to provide the information requested (Aaker et al. 1997).

For the present research, the target population comprises ordinary consumers aged 18 years old and above who reside in the city of Glasgow. Glasgow was chosen for two reasons. First of all, the researcher is based in Glasgow. This makes data collection more cost-effective. Secondly, according to the Trading Standards official, the Glasgow Barras Market is one of the best-known markets in Europe for selling counterfeit goods. The counterfeit samples provided by the Trading Standards, Glasgow were confiscated from the Barras Market. Therefore, it is rational to assume that these counterfeit brands have obtained some market share regionally, which indicates that the counterfeit version of the studied branded products might not be beyond the awareness of the ordinary consumer in Glasgow.

The choice of age groups is restricted first of all by the Approval of the Ethical Research Committee. It is a requirement that the respondents should be aged 18 years old and over. In addition, it is assumed that most people who are under 18 might have very limited purchasing power compared with other age groups. This is because people tend to leave home to live independently at age around 17 to 18 in the UK. Most of them do not earn any money before they leave home. It is more likely they are financially dependent. Therefore, they are excluded from the target population.

In sum, the guidelines suggested by Aaker et al. (1997) were considered in the process of defining the target population. The guidelines considered include: serve the research objective, consider alternatives, know the market, consider the appropriate sampling unit, specify clearly what is excluded, do not over-define, should be reproducible, and consider convenience. Table 5.3 represents the defined population for the present research.



Table 5.3 The target population

Population Criteria	Target Population of This Study
Element	Ordinary consumers
Sampling unit	The individual residents of the city of Glasgow
Extent	People aged 18 and over
Time	November and December 2005

5.4.2    Specify the Sampling Frame

A sampling frame is a master list of the sample units in the population (Burns and Bush 2000). In other words, the sampling frame is the instrument in which the elements of the population from which the study samples are to be drawn are listed (Churchill 1999). For this research, the available physical sampling frames include the Glasgow Registry of Electors (2005), the Yellow Pages; BT on line 118 500 Directory Enquiries ([www.bt.com](http://www.bt.com)), the BT residential telephone book, and Royal Mail online ([www.royalmail.com](http://www.royalmail.com)).

In general, questionnaires can be administered in person, by telephone and by mail survey (Churchill 1999). The use of personal survey in this study is justified in Section 5.5.1.3. Given that the personal survey is more suitable to this research, telephone surveys and mail surveys are not discussed here. The use of any sampling frames mentioned above requires either paying a personal visit to individual households, or alternatively inviting individuals to a site arranged by the researcher. Personal visits to an individual household is not at all cost-effective and is also extremely time-consuming. If it costs two pounds on transportation for one questionnaire, for 384 questionnaires (requested sample size) the cost involved is £768. On top of that, according to DTI Employment Relations-National Minimum Wage (DTI 2005), UK minimum wage for workers aged 22 and over is £5.05 an hour, which brings the cost of labour to £1939 for 384 questionnaires (calculated based on one field worker collecting one usable questionnaire per hour). Furthermore, the use of this means might also put the field workers in a situation where they could face potential security problems, particularly when female field workers are employed. The insecurity problem can be reduced by using more than one field worker for each single household visit. However, the direct effect will be a doubled cost, at least. It would be impossible for the very tight research budget to cope with the massive expenses involved in the use of this method.

On the other hand, the means of gathering individual consumers to a site identified by the researcher is problematic as well. This is because individuals are reluctant to come to a place they do not know well, which will reduce the response rate dramatically. This was experienced in the process of organising the focus groups. In addition, it will put off individuals who are far from the site, have no transportation, or are housebound. Consequently, none of the sample frames noted above is applicable to this research. Therefore, it is decided that the samples should be drawn from randomly selected supermarkets in Glasgow. The rationale for the choice of the supermarkets is detailed in the following section.

### 5.4.3 Select a Sampling Procedure

Selecting a sampling procedure is inextricably intertwined with the identification of the sampling frame, because the choice of sampling method depends largely on what the research can develop from a sampling frame (Churchill 1999). Sampling procedure consists of two steps: specify sampling method and specify sampling plan (Tull and Hawkins 1993). The sampling method is the way the sample units are to be selected. The sampling plan refers to the operational procedures for selection of the sampling units (Tull and Hawkins 1993). These two steps are discussed in details in this section.

#### 5.4.3.1 Specify Sampling Method

##### 5.4.3.1.1 Probability vs. Non-probability

Sampling techniques can be divided into the two broad categories of probability and non-probability samples (e.g. Churchill 1999). Probability samples are ones in which members of the population have a known chance of being selected into the sample. On the other hand, non-probability samples are instances in which the chances of selecting members from the population into the sample are unknown (Burns and Bush 2000). For the current study, due to the absence of usable sampling frames, supermarkets are chosen as the sites for data collection. One may argue that this is not probability sampling. This research does not deny the limitations it might bring to this research. Nevertheless, Malhotra (1996) claims that non-probability sampling can be used if the research interests centres on the proportion of the sample that gives various responses or expresses various attitudes. In order to achieve a certain level of advantages provided by the probability sampling, this research introduces in probability elements. It is



expected that the drawbacks caused by the use of supermarkets can be compensated for by the use of probability techniques. The probability techniques utilised in this study include multi-cluster two-stage area sampling and systematic sampling.

#### 5.4.3.1.2 Multi-cluster Two-stage Area Sampling

All probability sampling plans (e.g. simple random sampling, stratified sampling and systematic sampling) require a list of population in order to draw the sample, but not area sampling (Burns and Bush 2000). Burns and Bush (2000) suggest that there are two kinds of area sampling plans: one-stage area sampling and two-stage area sampling. This research uses the two-stage area sampling plan, given that there are still too many units to be included in the sample, as well the possibility that samples of one cluster are similar to each other rather than heterogeneous (Burns and Bush 2000). The advantage of the two-stage area sampling is that it is not necessary to employ all units in a selected cluster, which can help to reduce the sample size to a desired level. The use of multi-cluster two-stage area sampling will also increase heterogeneity of the sample, consequently reduce sampling error (Burns and Bush 2000; Aaker et al. 1997). Clusters are selected using a random sampling method at the first stage. At the second stage, respondents are chosen using a systematic sampling approach.

#### 5.4.3.1.3 Select Socio-economic Clusters

In this study, twenty supermarkets are selected randomly from the list of supermarkets located in Glasgow. The list of supermarkets located in Glasgow is generated from the Yellow Pages online service. There is no official report as to how precisely the Glasgow Yellow Pages covers the supermarkets overall. However, Yellow Pages staff in Glasgow believe that it has a wider coverage than any directory provided by telephone companies. This is because the Yellow Pages is a combination of directories of all telephone companies in the UK. In addition, it also covers businesses that are not listed in directories provided by telephone companies. Individual businesses have the right to choose whether they want to be included in the Yellow Pages or not. Because it has free entry, there is no reason why businesses would choose not to be listed, particularly supermarkets in this case. Therefore, one is on solid ground in assuming that the list of supermarkets generated from the Yellow Pages website represents almost the full list of supermarkets in Glasgow.

Letters asking for assistance from supermarkets are sent off to the selected 20 supermarkets addressed to the General Manager of each individual store. The letter consists of the brief information about this piece of research, and appealing statements stressing the importance of any help they can provide, requirements of the researcher to the supermarkets, guarantee of no problem caused by this research as well as manners used to prevent these things happen, an offer for buying incentive (chocolate) used in data collection from the supportive supermarket and an offer of an executive summary of the research finding on request. The letter was triple-signed by the researcher, her two supervisors and printed on the university letterhead (Appendix 1). The rationale for choice of 20 supermarkets is based on an assumption that 25 percent positive feedback will be received. The researcher plans to conduct data collection from 4 different sites. To collect data from multi-sites is considered as vital to this research, because samples of one site might be similar to each other. The use of multi-sites will assist in increasing heterogeneous. The number of 4 sites is determined by the very limited research budget. The more sites are chosen the more cost will be in relation to transport, labour as well as the project administration.

Two written rejections were received within one week after the letter was sent off. One was by e-mail and claimed that all research related requests and charity collections etc. have to go through their Head Office; another one was a letter that claimed they were unable to accommodate the researcher's requirements due to the lack of space and also the time of the year (see Appendix 2, 3). A letter did not reach the Store/General Manager of one selected store and returned, as the store moved to somewhere else. After ten days, the researcher phoned each selected store from which the researcher had not received any response. The researcher asked to speak to the Store Manager or the General Manager directly. All stores said that they had received the letter, with the exception of one store manager claimed that they never received anything from University of Glasgow. The letter was faxed through to the store on request. An e-mail was received soon after the fax went through, rejecting the request. No explanation was given for this rejection. Twelve out of sixteen stores who acknowledged receipt of the letter decided not to support this research as requested. The main reasons given by these stores included it being company policy or that they had a lack of space in their store, particularly at that time of the year. One store promised support after Christmas.



Interestingly enough, just as expected, four stores said that they would like to support this research and asked the researcher to go to see them and talk about further details. After meeting the researcher, all four stores decided to support this research. Two stores are relatively small and located in residential areas. They are convenience stores. The other two are medium-sized stores with minimum daily sales of over £35,000. One of them is located in a shopping centre in Glasgow and perceived as a relatively expensive supermarket, with another one, located at the edge of the city, being well known for its low price strategy. The two small stores were not able to provide table and two chairs as requested due to lack of space in the stores, while the two bigger ones did not have any difficulty in meeting the researcher's requirements. Actually, both of them provided the researcher with more than she expected originally, not only in terms of facility support but also valuable access (one store allowed the researcher and the fieldworkers access to their staff dining room), financial support (one store gave the researcher 'staff discount' for the incentives the researcher bought from them).

Regardless of the size of the stores, all stores allocated the fieldworkers to inside the stores, more specifically right in front of the store exit, as requested by the researcher in the letter (see Appendix 1). These locations secured a pleasant, warm and comfortable place for conducting data collection. This is very important for any data collection conducted in winter in Glasgow. Firstly, a comfortable fixed work place makes the tough data collection process more pleasant for the fieldworkers. Secondly, it attracts more people to participate in this research. Thirdly, it makes the fieldwork administration and supervision much easier. Therefore, full support from the stores to some extent secured a better quality of data, a higher response rate and lowered the cost involved in data collection.

It is acknowledged that a shopping mall is often chosen for consumer related surveys (Aaker et al. 1997). The reasons for choosing supermarkets for this study are as follows. First of all, consumers go to supermarkets more often than to shopping malls. There is little precise information about Glasgow consumer shopping patterns by way of academic research. According to the Target Group Index (TGI) Survey (2002), 72.5 per cent of adults did their regular major shopping at least once a week, and more than 81 percent of adults did so two or three times a month, and around 90 percent of them shopped at least once a month. In addition, there appears to be a reinforcement of

weekly shopping as the norm (TGI Survey 2002). Given that the data collection is conducted every day, across two weeks, to a great extent it is rational to assume that all adults have a non-zero (but not equal) probability of being found in a supermarket.

Secondly, people need food regardless of whether he/she likes shopping or not. Supermarkets provide a wide range of food products; some even have a variety of non-food products on their shelves (for example, Tesco Extra and ASDA). As a result, supermarkets attract a wide range and variety of shoppers. A key assumption is that residents go to the nearest supermarket. Obviously, this assumption is unrealistic. However, it is believed that the multi-cluster method to some extent will be of help in reducing this bias. With regard to the non-equal probability for being chosen caused by different shopping frequencies (Sudman 1980), whether or not it leads to a biased sample is still debatable. For example, previous research finding suggest that there seems to be no basis to conclude that leaving frequency of shopping uncontrolled would lead to a biased sample (Dupont 1987). In sum, the use of supermarkets as sites for data collection is considered acceptable.

#### 5.4.3.2 Specify Sampling Plan

Numerous research books show great preference to probability samples over non-probability samples, due to probability samples allowing an assessment of the amount of “sampling error” likely to occur because a sample rather than a census was employed when gathering the data (e.g. Churchill 1999). This research argues that both probability sampling and non-probability sampling are two-stage processes. The first stage is sampling design, in which the researcher normally has full control in terms of who to choose and how to choose. The second stage is the actual sampling practice in the field, which starts when the field work begins. At this stage the researcher can only influence, but has very limited control in relation to who is going to take part in this research. Probability sampling only secures the first half of data collection. The assumption that as far as each unit of the population has the same chance of being selected, the respondents should represent the entire population well is not always correct. Therefore, it will be less confusing to rename ‘sampling error’ as ‘planned sampling error’. Whatever sampling method is chosen, the effort should be put on minimizing the both the ‘planned sampling error’ and the ‘actual sampling error’, minimize the gap between the ‘actual sampling error’ and the ‘planned sampling error’.



In the current research great effort is placed on minimizing the actual sampling error. The selection of the supermarkets intercept sample is based on the first three steps (select sampling areas and sampling points, station interviewers, sample days of the week and times of day proportionate to supermarket traffic) of the sampling procedures recommended by Sudman (1980). The interviewers are located at the supermarket entrances (all selected supermarkets have only one entrance) rather than in the supermarkets to avoid the length-biased sampling (Nowell and Stanley 1991). The opening hours of each supermarket is split into two halves. Interviewers work on two shifts. Each shift varies from six to seven hours, depending on which supermarket the interviewers are situated in. To control interviewers' fatigue, it is ensured that no extra working hours are requested. This assists in avoiding unintentional interviewer error pertaining to fatigue-related mistakes (Burns and Bush 2000).

Special efforts were made to ensure the sample selection is not based on the interviewers' judgements. The interviewers are instructed to draw a systematic sample from the shoppers at the entrance. Every  $n$ th person is selected. The number of people to be skipped is set according to a predetermined measure of shopping traffic at each location. Initially the design was that in case the people approached refused to participate, the following person is intercepted as a replacement. However, this approach proved to be unsuccessful in the field. Three reasons are offered here. First of all, in most cases the following person is very close to the person the fieldworker has just approached. Practically, it is very difficult to intercept him/her. Secondly, the fieldworker felt awkward to intercept the following person right after having been rejected. Thirdly, the following person appeared to be influenced by the person who just refused to participate into the research, given the short distance between these two people. As a solution, the fieldworkers are instructed to approach the fifth person after the rejection. This rule is kept unchanged across all locations. Personal interviews are conducted over two weeks and all way through opening hours of the chosen supermarket. These procedures cannot ensure 'full' protection against interviewer selection bias, but they help greatly to reduce it (Sudman 1980). Despite the call for weighing for shopping frequency, influence of shopping frequency is not taken into account in this study, as it would probably not affect the demographic profile of the resulting sample or the substantive results of the survey (Dupont 1987).

Low cost, greater control and flexibility are the major reasons for the popularity of the mall survey method (Hornik and Ellis 1988). Although this research is conducted in supermarkets, the characteristics are considered as being the same as the mall survey method. Nevertheless, apart from the advantages it shares with the mall survey method, it also possesses the weakness the mall survey has: vulnerability to haphazard sampling procedures and high non-response rates (Murry et al. 1989; Gates and Solomon 1982). The first shortcoming has been dealt with in previous section. The next section demonstrates devices adopted to reduce non-response rates.

Non-response error is caused by a difference between those who respond to a survey and those who do not (Tull and Hawkins 1993). It can be a serious problem (Aaker et al. 1997; Tull and Hawkins 1993). Compared with other data collection methods, mall-intercept interviews appear to have even higher refusal rates (Gates and Solomon 1982). In order to improve response rate, the gaze and touch method recommended by Hornik and Ellis (1988), the appealing verbal method suggested by Hornik (1982), in addition to the traditional incentive method (Aaker et al. 1997; Wiseman et al. 1983) are adopted. As a shopper enters the supermarket, he/she is met by an interviewer who wishes the individual good morning (afternoon, evening) and asks whether the subject is a Glasgow resident. The Glasgow resident is offered a box of chocolates (worth about £2.50) embossed with the name and logo of the university. The interviewer then introduces him/herself as a student working on a university research project and asks the shopper to participate in a 15 to 25 minute interview and ensures confidentiality.

It is expected that the use of the university logo will give the respondents an impression of seriousness of this research. The general finding from the literature is that the use of incentives is effective in increasing response rate in postal, telephone and face-to face surveys (e.g. Singer et al. 1999; Church 1993; McConaghy and Beerten 2003; Willimack et al. 1995). In addition, it will also help to reduce falsehoods, because the respondent may feel morally obligated to tell the truth considering he or she has received compensation. In other words, he or she may feel guilty at receiving an incentive and then not answering truthfully (Burns and Bush 2000). Moreover, many studies point out that incentives can improve data quality in terms of greater response completeness and greater accuracy, reduce item non-response and elicit more comments



to open-ended questions (James and Bolstein 1990; Brennan 1992; Willimack et al. 1995; Shettle and Mooney 1999).

Despite the monetary and non-monetary forms of incentive both having been found to increase response rate, the effectiveness of the monetary method is still debatable. It appears that a large monetary incentive is more effective in generating a high response rate (Goetz et al. 1984). On the contrary, a small monetary incentive might lower the response rate (Harmon and Resnik 1983). Harmon and Resnik (1983) did not offer any explanation as to this unexpected result. This research believes that there might be two reasons. First of all, a small amount of money might not be attractive to people. Secondly, it might put people who would like to contribute off if they think that is how their contribution is valued. It is decided that chocolate is to be used as an incentive in this research. Chocolate can be interpreted as a monetary attraction by some people, at the same time it can also be regarded as an appreciation from the researcher by some others who are not only attracted by the incentive. Therefore, it might be a better incentive than monetary payment.

Pre-paid incentives and conditional incentives are the two methods used by previous researchers. The conditional incentives tend to be used in surveys that are more burdensome for respondents, for example involving diary keeping (Lynn and Sturgis 1997; Lynn et al. 1998). Compared with the conditional incentives, previous research findings show that the pre-paid incentive is more effective in terms of increasing the response rate (e.g. Church 1993; Hopkins and Gullickson 1992; Goyder 1994). This research is designed to use the pre-paid incentive method.

It is a concern that incentives could increase response bias, as their motivational effect is greater in some groups of the population than others. Incentives have been found to increase co-operation rates among certain groups (e.g. James 1997; Mack et al. 1998; Tzamourani and Lynn 2000). However, it can be argued that as the groups who are more motivated by incentives tend to be those who are usually under-represented in surveys, incentives can actually reduce response bias. This is evidenced by Stratford et al. (2003), who report when incentives were used in the National Travel Survey 2002, the sample composition improved compared with population figures derived from the 2001 Census.

During the request, the interviewer either touches or gazes (if the interviewer does not feel comfortable to touch the subject) at the subject and is at all times pleasant and friendly. The following appealing expression is used: “We are earnestly asking for your generous help in answering a few questions about counterfeit branded products and branded products”. This expression is chosen is because it is the most effective in generating responses (Hornik 1982). The interviewers offer to read the questions for the respondents if they cannot read or have difficulty reading for any reason.

#### 5.4.4 Determining the Sample Size

The size of the sample depends on the basic characteristics of the population, the type of information required from the survey and the cost involved (Chisnall 1986). The sample size has nothing to do with how representative that sample is of the population, but directly affects the accuracy of results (Burns and Bush 2000). More specifically, it determines how close the sample’s statistic is to the true population value it represents (Burns and Bush 2000; Tull and Hawkins 1993).

A survey cannot be planned or implemented properly without knowing the sample size (Aaker et al. 1997). There are several method used to decide on a sample’s size. The commonly recommended methods are the confidence interval approach and the percentage approach (e.g. Burns and Bush 2000; Churchill 1999; Aaker et al. 1997). To compute a sample size using the mean requires a researcher to have some knowledge of or at least a good guess at how much variability there is in the population. In the current study, the researcher is incapable of estimating the standard deviation of the population. Given this reason, the percentage approach is utilised to calculate the sample size. The formula used is as follows:

$$n = \frac{z^2(pq)}{e^2}$$

where

$n$  = the sample size

$z$  = standard error associated with the chosen level of confidence

$p$  = estimated variability in the population

$q$  = (100- $p$ )

$e$  = acceptable sampling error



Given that in more practical terms, the marketing researcher envisions that the population value is estimated to be found in 95 percent of the repeated samplings (Burns and Bush 2000), the current research only worries about a 95 percent level of confidence. As there is no source available to indicate the variability, this research assumes there is greatest variation (50%). The level of precision (accuracy) is also known as sample accuracy. It refers to how close the sample’s statistic (for example, sample mean) is to the true population’s value it represents (Burns and Bush 2000; Malhotra 1996). This research would like the result to be accurate  $\pm 5$  percent. Five percent is considered acceptable because: first of all, there is not much more accuracy possible (Burns and Bush 2000); secondly, to increase accuracy by one percent demands a great amount of effort, time and will increase the cost dramatically. Table 5.4 and Figure 5.2 illustrate the increase of sample size related to one percent of increased accuracy. As we can see that 216 extra usable questionnaires are required (around 56% of 384) in order to increase accuracy by one percent. Obviously the extra cost and effort involved in one percent of accuracy outweighs the gain. Accordingly, the expected sample size for the current research is 384.

Table 5.4 Sample size and accuracy level

Accuracy	6%	5%	4%	3%
Sample size	267	<b>384</b>	600	1067
Increased size	-----	117	<b>216</b>	467

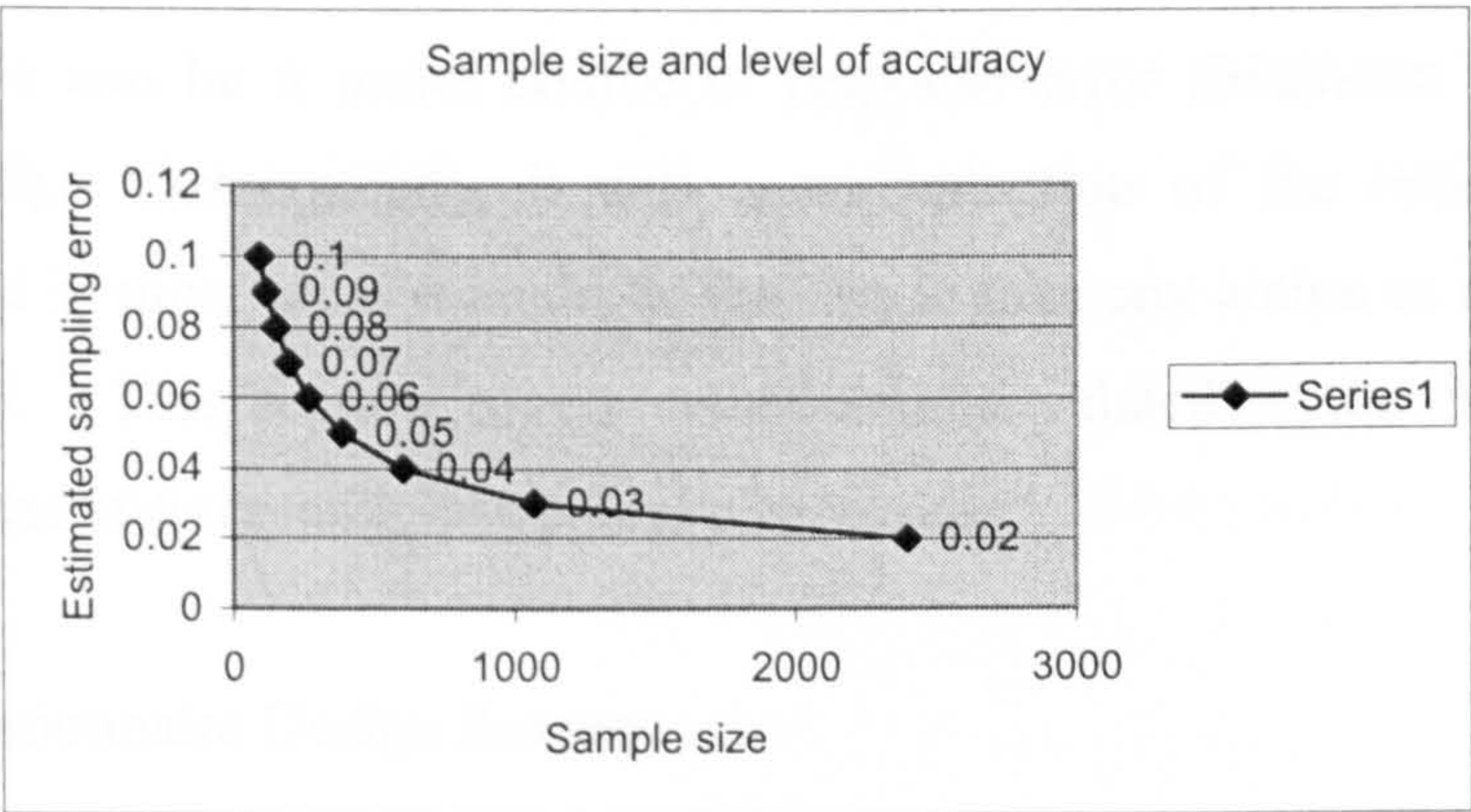


Figure 5.2 Sample size and level of accuracy

5.4.5 Specify the Sampling Unit

The sampling unit is the basic unit containing the elements of the population to be sampled (Tull and Hawkins 1993). How the sampling unit is specified, and



consequently the discussion of sample selection has been woven into the discussion of sample design. As aforementioned, the sampling unit for this study is the individual residents of Glasgow aged 18 and over.

#### 5.4.6 Section Overview

In this section, the research population is defined. The use of a non-probability sample with the introduction of an element of systematic sampling methods is justified. The approaches adopted in this research to minimize the sampling error are discussed in detail considering its substantial influence on the representative nature of the collected data. Finally, the expected sample size is calculated based on the commonly accepted percentage method and the sampling unit is specified. The requested sample size for this study is 384.

### 5.5 Questionnaire Design and Instrument Piloting and Results

Having decided on the targeted population, how the data is going to be collected and how many questionnaires need to be collected, this part of the research focuses on issues related to the research instrument – a questionnaire. A questionnaire is also called a schedule, an interview form or a measuring instrument. It is a formalized set of questions for obtaining information from respondents (Malhotra 1996). It is an important step in formulating a research design (Malhotra 1996). A well-designed standardized questionnaire can ensure comparability of the data, increase speed and accuracy of recording, and facilitate data processing. In contrast, a badly-designed questionnaire can be a major source of response error (Malhotra 1996; Kinner and Taylor 1996). Consequently, it will cause reduction of the reliability of research findings, and in most cases it could be too late to take any action to reverse this (Aaker et al. 1997). This section covers considerations related to the entire questionnaire design process and research instrument pilot results.

#### 5.5.1 Questionnaire Design Process

Acknowledging the important role of the questionnaire, numerous researchers offer suggestions on the questionnaire design process (i.e. Malhotra 1996; Aaker et al. 1997; Churchill 1999). To a great extent, these recommended processes are similar. Despite questionnaire design being more of an art form than a scientific undertaking (Aaker et al. 1997), these rules or guidelines offered by experienced researchers can be very



helpful to inexperienced researchers. They are particularly useful in avoiding serious errors (Kinner and Taylor 1996). Figure 5.3 presents the Procedure for Developing a Questionnaire suggested by Churchill (1999). This research is guided, but not restricted, by the procedure recommended by Churchill. Furthermore, the two rounds of pre-test which followed provided further assistance in obtaining an effective and efficient questionnaire.

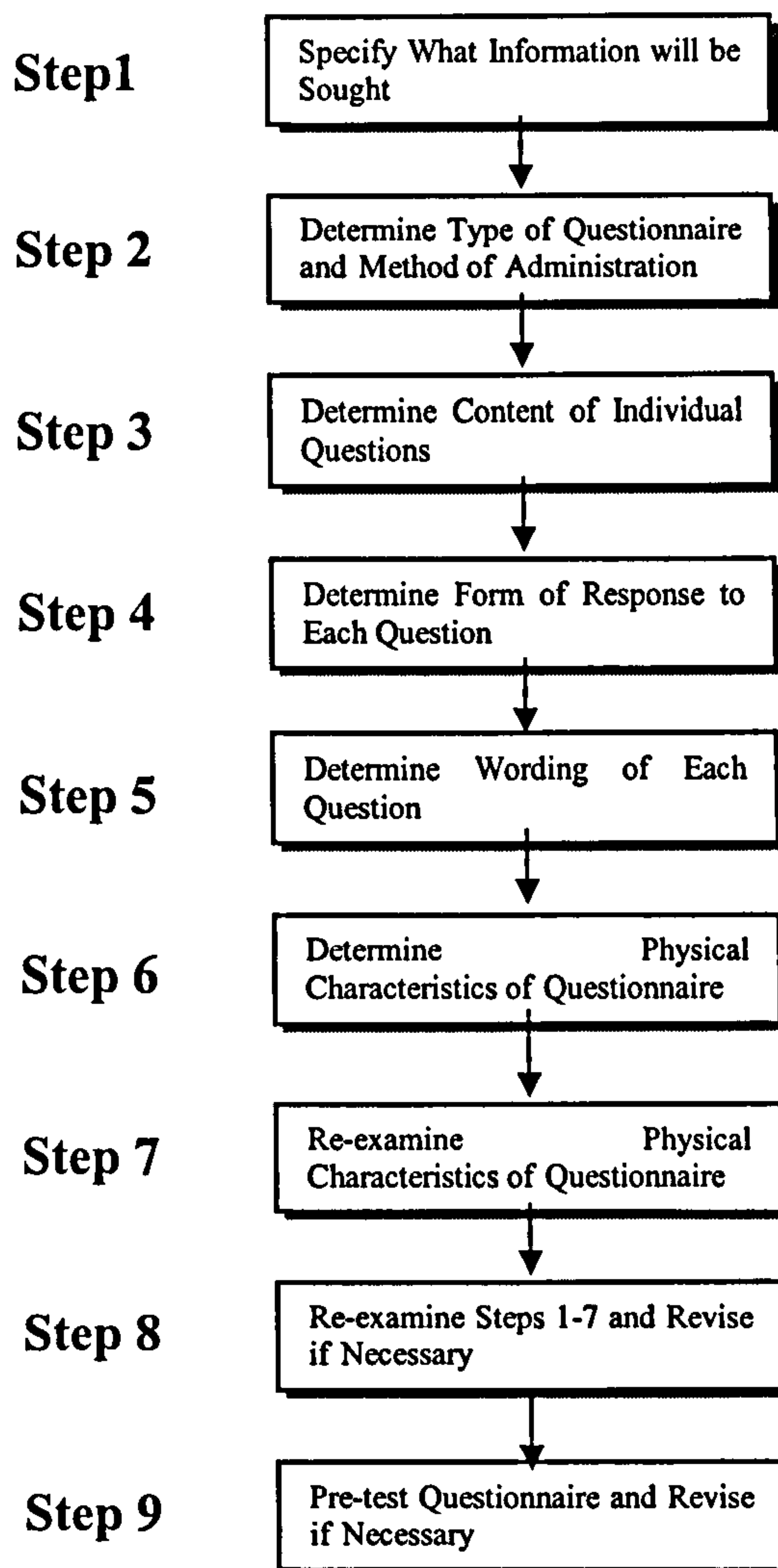


Figure 5.3: Procedures for developing a questionnaire (Churchill 1999, pp. 329)

#### 5.5.1.1 Step 1: Information Needed

The information sought for this research is determined by the research objectives and the finalised research conceptual model. A great amount of effort was put into reviewing relevant literature in order to avoid the possibility of the results being irrelevant to the research purpose or incomplete. Following the suggestion of Aaker et al. (1997), the research objectives were translated into specific information requirements

in order to ensure that the data collected through the research instrument serves the overall research purpose. Table 5.5 presents the research objectives and information requirements matched to the research objectives.

Table 5.5 Research objectives and information required

Research objectives	Information requirements
Do consumers perceive CBP and BP differently?	Consumers' perception of image (attributes, benefits/consequences and personality) of CBP and BP.
Do product knowledge, product involvement and consumer characteristics influence how the consumers perceive CBP and BP?	Consumers' self-assessed product knowledge; product involvement; and personal detail of consumers.
Do how consumers perceive CBP and BP, consumer product knowledge, product involvement and consumer characteristics influence consumer decision-making?	Likelihood of consideration of CBP and BP; level of purchase intention.

5.5.1.2 Step 2: Closed-ended Questions vs. Open-ended Questions

Broadly speaking, a question may be unstructured or structured (Malhotra 1996). Unstructured questions are also known as open-ended questions, which are not followed by any kind of choice; whereas structured questions are closed-ended, with the respondents being offered a choice of alternative replies (Oppenheim 2000; Aaker et al. 1997). Each has its advantages and disadvantages (Oppenheim 2000). It is difficult to say which is better in general. However, it is commonly accepted that open-ended questions are useful in exploratory research. The disadvantages of open-ended questions outweigh the advantages in a large survey (Malhotra 1996; Churchill 1999). The closed-ended questionnaire is utilised in this part of the study, because it is more suitable for a large survey (Churchill 1999). The closed questions are easier and quicker to answer, require no extended writing, are easy to process, are low cost, and make group comparisons easy (Oppenheim 2000). In addition, all the referenced measures adopted in this research utilise closed-ended questions in the original research, which provides more support for using the fixed-choice questions in this study.

5.5.1.3 Step 2: Determine Method of Data Collection

In general, questionnaires can be administered in person, by telephone and by mail survey (Churchill 1999; Aaker et al. 1997). The type of questions (open versus closed) and the type of data requested have important effects on the choice of data collection method (Churchill 1999). In cases where questions are simple and detailed instructions are provided in the questionnaire, mail administration can be an alternative to the personal interview. Compared to personal interviews, mail administration requires less effort and can be time-saving and less expensive than using interviewers (Oppenheim



2000). Moreover, the researcher can work on something else, for example writing up the literature review, while waiting for delivered questionnaires coming back. Regardless of the above advantages, the mailing method is not suitable for this research, given that counterfeit samples are used as stimuli in this research, which determines the complexity of the administration work. Furthermore, the limited number of the counterfeit samples provided by Trading Standards precludes the use of the mailing method. Telephone interviews limit the types of questions that can be asked to short and simple ones (Churchill 1999; Aaker et al. 1997), and thus are not considered applicable to this study.

In personal interviews, respondents see the questionnaire and interact face to face with the interviewer. Therefore, lengthy, complex, and varied questions can be asked (Malhotra 1996). Moreover, personal interviews often achieve a higher response rate; they offer opportunity to correct misunderstandings and control for incompleteness; and interviewers can succeed with respondents who have reading or language difficulties (Oppenheim 2000). After balancing the advantages and disadvantages of mail survey, telephone survey, and personal interview, it is decided that the personal survey is more appropriate to this study. Due to the very tight schedule for this research, eight interviewers (four groups with two fieldworkers each group) are trained by the researcher to conduct data collection. In doing so, time needed for the data collection is shortened by three-quarters, subject to the assumption that on average the capacity of each group of trained interviewers is equivalent to the researcher's capacity. In addition, the researcher is not tied up by data collection, which allows her to devote more time to getting administrative work organised properly.

#### 5.5.1.4 Step 3: The Content of the Questionnaire and Content of the Individual Questions

The content of the questionnaire covers measures of all constructs embraced in the research conceptual model, including product involvement, product knowledge, demographic variables, consumers' perceptions of brand image, consideration set and purchase intention. In addition to the essential questions in relation to measures of these construct, three additional questions were asked at the very beginning of the questionnaire in order to establish involvement and rapport. These questions are not directly related to the needed information and are not analysed. The information

requested and the methods used to administer the questions largely control the decisions regarding individual question content (Churchill 1999). The content of the individual questions are adapted from established measures developed by previous researchers, with the perceptions of brand image as an exception (see Chapter 6 for details). The justification for using and adapting these measures are as follows.

#### 5.5.1.4.1 Justification of Measure of Involvement

Because of the complexity of the involvement construct, many ways have been proposed to measure this concept according to different research focuses (e.g. Wright 1973, 1974; Sheth and Venkatesen 1968; Traylor 1981). Before Zaichkowsky's (1985) benchmark work, administering Likert scale items was widely used to explore the underlying concept of product involvement (e.g. Lastovicka and Gardner 1978; Traylor 1981). Laurent and Kapferer's Consumer Involvement Profile (CIP) scale was developed to measure five dimensions: (a) the importance of the product class to the individual, (b) the pleasure or hedonic value derived from the product, (c) the sign or symbolic value attributed to the product, (d) the risk probability associated with a potential mispurchase, and (e) the risk consequences associated with a mispurchase.

In line with prior research (e.g. Rothschild 1984; Laurent and Kapferer 1985), Hsu and Lee (2003) consider involvement as a continuous variable and suggest that the fuzzy mathematics method could be used to investigate the involvement. With the use of the fuzzy mathematics method the exact measurement of consumer involvement can be found; however, the advantage of this measure does not match the objective of this research. This research attempts to examine effects of product involvement on consumer choice processes rather than investigate the level of product involvement precisely.

Zaichkowsky (1985) developed the Personal Involvement Inventory (PII) with the aim of selecting items so that the same scale might be applied to product, advertisements and purchase decisions. The 20-item scale uses a 7-point semantic differential scale with bipolar adjectives as anchors and was used widely by later researchers (e.g. Baker et al. 2002; Kokkinaki 1999), due to its wider range of applicability, reported reliability and validity. However, it was criticised by later researchers for 'utilising polysyllabic vocabulary and being very lengthy; having a problem with discriminant validity; as well



as a problem with the adequacy of the behavioural criteria and construct validity' (McQuarrie and Munson 1992, p. 108).

McQuarrie and Munson (1992) verified Zaichkowsky's (1985) PII scales and suggested the Revised Product Involvement Inventory (RPPII). Compared with PII, the RPPII is only half as long (10 items), remains very reliable, uses mostly short and simple words, is strongly predictive of information search and processing, and is effective at discrimination felt involvement across situations (McQuarrie and Munson 1992). The RPPII scale contains ten seven-point items, each labelled with bipolar adjectives, such as important/unimportant, essential/nonessential, and relevant/irrelevant. Subjects' responses to these items were summed, producing a minimum score of 10 and maximum score of 70. The RPPII was adopted by recent research (e.g. Koufaris 2002). In the current study, the Revised Personal Involvement Inventory (RPPII) proposed by McQuarrie and Munson (1992) was used to measure product involvement due to its widely tested validity, with necessary verification conducted. Table 5.6 presents a comparison of three consumer involvement measures that have been reviewed in detail in this study.

#### 5.5.1.4.2 Justification of Measure of Product Knowledge

Measures of consumer product knowledge used in previous studies fall into several categories. The first category refers to the usage of a surrogate scale to measure the knowledge concept, for example consumers' actual experience with purchasing/using a product (e.g. Monroe 1976; Anderson et al. 1979; Bettman and Park 1980; Kiel and Layton 1981; Newman and Staelin 1973; Park and Lessig 1981; Marks and Olson 1981), experience of formal training (e.g. Bettman and Park 1980; Hutchinson 1983, Hutchinson and Farrand 1982; Johnson and Russo 1984; Moore and Hutchinson 1985; Srull 1983) and consumers' self-assessed knowledge (e.g. Gardner 1985; Park and Lessig 1981; Cole et al. 1986; Punj and Srinivasan 1989). The second category measures the amount, type, and organisation of what a consumer actually has stored in memory associated with a product (also named 'objective knowledge') (e.g. Olson and Muderrisoglu 1979; Marks and Olson 1981; Kanwar et al. 1981; Russo and Johnson 1980; Staelin 1978; Brucks 1985; Jacoby et al. 1977; Sujan 1985). The third category combines the aforementioned scales and measures consumers' experience and objective knowledge (e.g. Rao and Monroe 1988), consumers' experience and self-assessed

knowledge (Park et al. 1994; Laroche et al. 2003), consumers’ self-assessed knowledge and objective knowledge (e.g. Rao and Monroe 1988) and consumers’ experience, self-assessed knowledge and also objective knowledge (Mitchell and Dacin 1996).

Table 5.6 Comparison of three consumer involvement measures (adapted based on Brisoux and Chéron 1990, p. 104)

Articles Content	Laurent & Kapferer (1985)	Zaichkowsky (1985)	McQuarrie and Munson (1992)
Prominent concept	Involvement profile	Personal involvement inventory	Revised personal involvement inventory
Number of product categories	14	14	12
Sample size	207	Varying from 43 to 68	249
Respondents	Housewives	Psychology students, MBA students, administrative staff members	Students and non-students
Type of scale	5-point Likert scale	7-point semantic differential scale	7 - point semantic differential scale
Number of sub-constructs	4	1	2 (importance and interest)
Number of items	3 to 5 for each of the 4 dimensions (total = 17)	20	10
Internal consistency (Cronbach Alpha level)	Between 0.72 and 0.90	Between 0.97 and 0.99	Above 0.80
Validity testing:			
Concurrent validity	No	No	Yes
Trait validity	Yes	No	Yes
Discriminant validity	Yes	Yes	Yes
Content validity	No	Yes	Yes
Construct validity	No	Yes	Yes
Convergent validity	No	No	No

The debate regarding which measures are more appropriate mainly concerns choosing the best means from measuring experience, subjective knowledge, objective knowledge and the combination of subjective and objective knowledge. The ‘nuts and bolts’ are discussed as follows.

The use of consumers’ experience scale to measure consumer product knowledge is criticised by various studies (e.g. Brucks 1985; Rao and Monroe 1988). It is claimed that an individual subject’s actual prior product knowledge is neither measured nor controlled (Rao and Monroe 1988), and different individual consumers can learn different things from similar experiences, therefore their knowledge level can be different, which will lead to their behaviour probably being different (Brucks 1985). This research further argues that product knowledge (both self-assessed and objective knowledge) of an individual may be influenced differently by different experience. For example, individual product knowledge of a consumer with a better educational background may appear to be influenced more by formal training than purchase experience. Product-related experiences can be defined at the most inclusive level (Alba and Hutchinson 1987). Unless all possible influential factors are measured, a



biased result is unavoidable. Therefore, in line with Rao and Monroe (1988), this research recommends that the experience scale should be used with caution, as the use of experience scales makes it hard to ensure that an individual subject's actual product knowledge is measured and controlled properly (Rao and Monroe 1988).

In response to Brucks (1985), who suggests that a measure of knowledge/familiarity should include eight dimensions that help in discriminating between peoples' knowledge structures, Rao and Monroe (1988) developed a scale to measure consumer knowledge of womens' blazers. This scale comprises 13 objective and subjective knowledge-based questions with an attempt to combine objective and subjective measures together. However, these authors fail to report reliability and validity of this scale in their work. It seems that the background idea of this combined measure is that both subjective knowledge and objective knowledge have their own advantages and shortcomings, hence, a combined measure which covers a wider range of consumers' knowledge structures will balance the shortcomings of each individual scale.

The current study argues that it is not necessary to say that a combined measure will serve better than any individual measures in all cases. For example, if marketers or researchers want to know consumers' true knowledge about a certain brand, the objective measure should be utilised. In contrast, if they want to investigate how consumers' knowledge influences their information searching and purchase behaviour, subjective knowledge should be measured, because only subjective knowledge drives the information search and has a direct influence on behaviour (Bettman and Park 1988; Park and Lessig 1981). Our argument is supported by Meeds (2004), who finds that self-assessed knowledge is a better predictor of participants' cognitive responses and general attitudinal evaluation, whereas objective knowledge is a better predictor of ratings for specific product attributes. Practically, to measure both objective and subjective knowledge puts extra pressure on both researcher and respondents; this is particularly true if the research instrument is already very lengthy. Moreover, previous research reveals that subjective knowledge and objective knowledge are highly correlated empirically (Rao and Monroe 1988; Park et al. 1994), and subjective knowledge depends on the level of objective knowledge (Rao and Monroe 1988). If this claim holds, one can safely say that objective knowledge is the antecedent of

subjective knowledge. It then does not make any statistical sense to calculate the average of subjective knowledge and objective knowledge.

Measures of objective knowledge are conceptually and operationally distinct from measures of subjective knowledge (Brucks 1985). Objective knowledge to a great extent reflects consumers' true product knowledge, it ignores the impact of consumers' confidence levels on the selection of information search strategies (Brucks 1985), and consumers' receptivity to new information (Park et al. 1988). Compared with objective knowledge, subjective knowledge may not reflect true consumer product knowledge (Brucks 1985). However, it provides a better understanding of decision-makers' systematic biases and heuristics (Park and Lessig 1981). Another advantage of using measures of subjective knowledge is that this can bring in the self-confidence dimension, as well as consumer perceived knowledge (Brucks 1985). Perceived self-confidence may affect decision strategies and tactics (Park and Lessig 1981). Moreover, it tends to drive information search and the type of decision heuristics consumers use (Bettman and Park 1980; Park and Lessig 1981), both of which are central to the theory underlying many of the research hypotheses and fit in with the theoretical conceptual model of the current research.

Along the same lines as certain previous research (e.g. Chang 2004; Smith and Park 1992; Li et al. 2002; and Park et al. 1994), this research uses a "self-assessed knowledge" scale rather than an "objective knowledge" scale. Likert scales (e.g. Smith and Park 1992) and semantic differential scales (Brucks 1985) are utilised in the previous studies. In this study the measures are taken from Smith and Park (1992) with slight adaptation. The reason for choosing this scale is because these measures have been commonly adopted and also have a satisfactory reliability (e.g. Li et al. 2002; Biocca et al. 2001). Smith and Park (1992) report that Cronbach's Alpha is satisfied at .80. In the current research, respondents are asked to indicate on a 5-point scale (strongly agree/strongly disagree) the extent to which they agree with four statements about their knowledge of the studied product class (see Appendix 4).

#### 5.5.1.4.3 Measure of Brand Image

As noted earlier (see Chapter 4), the brand image consists of three sub-constructs. They are brand personality, purchase benefits/consequences and product attributes (Plummer



2000). By its nature, brand image is brand/product specific. Therefore, it is likely that there is no universally applicable measure. This section will discuss the measures of the three sub-constructs of the brand image in detail.

#### 5.5.1.4.3.1 Measure of Brand Personality

Before Aaker's (1997) brand personality scale, two types of brand personality scales were used in marketing research. First, idiographic brand personality measures were often used (e.g. Helgeson and Supphellen 2004; Birdwell 1968). These measures are still more common than other scales (Helgeson and Supphellen 2004), since they ensure that only salient and relevant personality characteristics are included. Idiographic scales are based on qualitative pre-study in which relevant personality traits for the brand are elected. These measures are useful, but it appears that they were often developed for the purpose of a specific research study, and the traits were chosen arbitrarily. Therefore, very frequently these scales cannot be applied to other studies, and their validity and reliability are also questionable (Aaker 1997; Helgeson and Supphellen 2004). The second type of scales are those that are based on human personality scales (e.g. Bellenger et al. 1976; Dolich 1969). However, the validity of such scales in the context of brands has not been validated (Aaker 1997; Helgeson and Supphellen 2004; Sirgy 1982; Kassarian 1971). Furthermore, a direct adoption of human personality scales to study of brand personality should be problematic, since the factors used to describe human personalities have been proved to be inappropriate for describing brands (Caprara et al. 2001).

Recognising the handicaps of all previous scales of brand personality and realising the need for further empirical research, Aaker (1997) developed a scale which attempted to achieve a generalisability, validity and reliability across diverse categories. Following the scale development process suggested by Malhotra (1981), Aaker generated a pool of traits related to brand on the basis of three sources: personality scales from psychology, personality scales used by marketers, and original qualitative research of personality traits associated with 37 different brands. After sorting a number of descriptors of brand personality by using exploratory and confirmatory factors analysis, as well as replicability analysis, five major personality dimensions appeared. The final scale contained 5 dimensions, 15 facets and 42 personality traits.

Aaker's (1997) brand personality scale has been examined across various cultural contexts, product categories and also across profit and non-profit organisations (e.g. Aaker 2000; Aaker et al. 2001; Ferrandi et al. 2000). These studies have established that there are consistencies in brand personality dimensions in different contexts, concurring with Aaker (1997), who claimed that the brand personality scale is reliable, valid and can be generalised. In other studies, Aaker's (1997) brand personality scale appears problematic. Venable et al. (2003) reported that a five-factor structure of non-profit brand personality emerged that included four of the five dimensions identified by Aaker (1997) when they tested Aaker's (1997) brand personality scale on non-profit organizations. Koebel and Ladwein (1999) found that it was difficult to apply Aaker's (1997) scales to a French context. Davies and Roper (2001), when they applied Aaker's (1997) scales to the UK context, recognised that the items 'Western', 'Small town' and 'Feminine' accounted for many of the low reliability scores of their study; the item 'Western' caused confusion between subjects, and items are culturally specific. Furthermore, it is still debatable whether items like 'age' and 'gender' should be included in brand personality scales (Azoulay and Kapferer 2003). In contrast to Azoulay and Kapferer (2003), who suggested that brand personality should not include gender, age and social class related dimensions, Plummer's (2000) findings are in line with those of Aaker (1997), which noted that age did help to discriminate brands.

Aaker's (1997) scale was developed based on the measurement theory. After close study of the development of Aaker's (1997) scales, one can argue that idiographic measures can be regarded as the results of the first phase of this development. In other words, Aaker's (1997) scales are more advanced compared to idiographic measures, having been tested and supported as being valid and reliable. Despite some researchers claiming that idiographic measures are still more commonly used than other scales (Helgeson and Supphellen 2004), this research decided to adopt Aaker's (1997) scales as the foundation of the instrument to measure brand personality of studied brand(s), both genuine branded products and the related counterfeit versions.

It was necessary to conduct a preliminary study in this research. First of all, this research investigated brand personalities of different versions of a same brand. Although Aaker's (1997) scales were developed from a study of a wide range of brands, and it was suggested that they can be used to compare personalities of brands across



product categories (Austin et al. 2003; Aaker 1997), no research has proved that applying Aaker's (1997) scales to a specific brand will be problem free. In fact, researchers did appear to question whether same traits can be applied to all brands (e.g. Caprara et al. 2001). Secondly, Aaker's (1997) scales were developed in the U.S. context. To some extent, they appeared to be problematic when applied to the UK context (Davis and Roper 2001). Thirdly, the use of the original Aaker brand personality scale will give a very lengthy questionnaire, since it consists of 42 items. A simple calculation indicates that the total number of questions related to the brand personality only will be 336, as we are investigating 4 brands and 2 versions of each brand. That said, Aaker's (1997) scale is regarded as the foundation of a master list of traits to be tested in the preliminary study due to its proven high reliability and validity. More details are reported in the preliminary study chapter.

#### 5.5.1.4.3.2 Measure of Purchase Benefits/Consequences and Product Attributes

By their nature, purchase benefits and product attributes are product specific. Therefore, it is essential to identify the most salient and relevant benefits and product attributes before measuring them. The preliminary study is designed to achieve this goal. Details are reported in Chapter 6.

#### 5.5.1.4.4 Justification of Measures of the Consideration Set

The consideration set is a concept that is both intuitively appealing and practically useful, and it has attracted more and more research interest. One thing which must be addressed here is that few adoptable measures of the formation of a consideration set have been reported. Previous researchers conclude that the reason why more research has been done on the study of the size of the consideration set and even the descriptive characteristics of the consideration set is because the consideration set is a construct that is difficult to measure (Punj and Srinivasan 1989). Asking respondents to list what they would consider purchasing or choosing from a list of brands/products provided by researchers is commonly used by researchers to measure both memory-based consideration sets and stimulus-based consideration sets (e.g. Shapiro et al. 1997; Reilly and Parkinson 1985; Parkinson and Reilly 1979; Johnson and Lehmann 1997; Nedungadi 1990). In these studies, brands/products are treated as either 'considered' or 'not considered'.

Troye (1983) used a 5-item scale to measure the consideration set when investigating the impact of similarity of choice alternatives, number of available alternatives and purpose of information processing on this construct. However, the author did not report the scale reliability, or the scale validity. Troye's (1983) 5-item scale is adopted, as this is the only multi-item scale we could find. The scale reliability and validity are tested and the test results are reported in later chapter (Chapter 7).

#### 5.5.1.4.5 Justification of Measure of Consumer Purchase Intention

Previous researchers have used a variety of scales to measure consumer purchase intentions. For instance, a single-item scale (e.g. Whitlark et al. 1993; Cronin and Taylor 1992; Woodside et al. 1989), a 2-item scale (e.g. Boulding et al. 1993), 3-item scale (e.g. Mackenzie et al. 1986; Chang 2004), a 4-item scale (e.g. Prendergast and Hwa 2003; Li et al. 2002), a 6-item scale (e.g. Boulding et al. 1993), an 11-item scale (e.g. Martin and Bush 2000), and a 13-item scale with four categories (word-of-mouth communications, purchase intentions, price sensitivity, and complaining behaviour) (e.g. Zeithaml et al. 1996). Some researchers (e.g. Zeithaml et al. 1996) argue that previous research has not captured the full range of potential consumer behaviour by using scales such as single-item, 2-item, and even 6-item scales. However, research findings suggest that the single-item scale is not necessarily unusable. Using a single-item Likert scale, Whitlark et al. (1993) found that 75 percent of those who stated a purchase intention did purchase within 3 months, with a slightly higher percentage purchasing within 6 months. These findings apply over a range of products with different levels of involvement, including printers, milk, and meals.

Apart from the above noted single- or multi-item scales, some other methods are also used to measure purchase intention. For instance, binary question is used to assess this construct (e.g. Daneshvary and Keith 2000); counting future purchase times in the next ten purchase occasions is also utilised by researchers (e.g. Laroche et al. 1996; Juster 1966; Howard and Ostlund 1973). It seems that just about every study measuring this construct has utilised a different set of items. Given this, anyone who wishes to measure these constructs is faced with a bewildering array of choices.

Spears and Singh (2004) further note that despite the reported support in relation to the reliability of the measures, none of the previous research examines the psychometrical



validity of the measure of purchase intention and there is no standard scale available. Moreover, it seems that practically every study measuring this construct has utilised a different set of items. Responding to the call for better measures (e.g. Bagozzi 1992; Churchill 1979), on the basis of measures reported in prior research, Spears and Singh (2004) developed measures of purchase intention and further replicated and validated it using another empirical study. This five-item scale which includes never/definitely purchase intention, definitely do not intend to buy/definitely intend, very low/high purchase interest, definitely not buy it/definitely buy it, probably not/probably buy it is recommended (Spears and Singh 2004). The Spears and Singh (2004) scale is adopted for this research due to its tested reliability and validity. Necessary verifications are conducted according to the studied brands and format of the current research instrument. Thus, an established five-item, five-point Likert scale is used to measure the likelihood that participants would purchase the evaluated CBP and BP.

#### 5.5.1.4.6 Methods Adopted to Increase Response Rate

Contents of the questionnaire and possible methods related to the research instrument that can help to increase response rate are considered at this stage. Previous researchers (e.g. Oppenheim 2000) have suggested a number of methods to increase response rate. This research utilises the following approaches in order to improve response rate.

Explanation of selection: The preliminary study indicates that some ordinary consumers will think that they are not qualified to participate in this study because they have never consumed or bought CBP. As reported earlier, about a quarter of ordinary consumers are not aware of the existence of CBP. Therefore, it is more likely that these people will refuse to take part in this research if no sound explanation is given. As a result, the response rate is reduced by one quarter before even the research starts. Moreover, it brings in bias to this study, given that these consumers might possess different perceptions of CBP and BP to other consumers. To overcome this potential problem, a thorough explanation is given in relation to the method of sampling used in this research, how the respondent comes to be chosen in the cover letter, and who is eligible for participation (see Appendix 5).

Use of egoistic appeal: It is suggested that use of egoistic appeal can improve the response rate (Burns and Bush 2000). In this research, the egoistic appeal used is: “Your participation is crucial in completing this research.”

Use of counter-biasing statements: A statement indicating that consumers do knowingly purchase CBP is illustrated in both the cover letter and at the very beginning of the questionnaire. It is believed that the use of this technique can make it easier for the respondent to admit potentially embarrassing behaviour (Churchill 1999), for example, purchase intention of the CBP in this study.

Confidentiality: The respondents are promised that all data they provide are treated as confidential. More specifically, only the researcher will have access to them. The following statement appears both in the cover letter and on the front page of the questionnaire with the core words highlighted: Any information you provide will be kept **absolutely confidential**. Information identifying the respondent will not be disclosed under any circumstances.

Definition of CBP: The definition statement of CBP is placed at the very beginning of the questionnaire. Considering people may have different understandings with regard to the terminology of counterfeiting (Phau et al. 2001; Hoe et al. 2003), this manner is regarded important to ensure that all respondents will achieve a common understanding of what we mean by CBP in the current research.

Appearance: There have been many experiments with general layout, type face, colour and quality of paper etc. It is best to aim at a relatively 'conservative' but pleasant appearance. A relatively 'conservative' appearance is adopted in this study, because it is considered as more professional (Oppenheim 2000).

Length: The complexity of this research determines the lengthy nature of the research instrument. Being fully aware of the impact of the length of a questionnaire on the response rate, the researcher tried all possible approaches in order to keep the questionnaire as short as possible, while trying to ensure at the same time no important information is missed. For example, a suitable format of questionnaire was developed which combined the advantages of the Likert scale and the repertory-grid technique. This new technique saves the respondents from reading a statement several times in different locations. Rather, the respondents only read the statement once but consider it several times against different brands before locating their answers. This approach



makes the questionnaire look much shorter than it would be using the conventional Likert scale, while at the same time ensuring no loss of information. For more details, please refer to section 5.5.1.8.

Sequence of questions: The questionnaire starts with easy questions. This helps to establish a rapport and builds the confidence of the respondent in his or her ability to answer (Kahn and Cannell 1957). The questionnaire follows the logic of the consumer decision-making process, which is also in line with the research conceptual model. The classification questions in relation to personal details tend to be very off-putting to respondents (Oppenheim 2000), therefore, they are put right at the end of the questionnaire, by which time we hope to have convinced the respondent that the inquiry is genuine and this is a piece of serious academic work.

Introductory phase: Whenever a new topic is introduced, a transition statement is provided to tell the respondent what information is requested in this part of the questionnaire. In addition, precise instructions are provided to guide the respondent to provide standard answers.

#### 5.5.1.5 Step 4: Response to Questions

##### 5.5.1.5.1 Exclusion of 'Don't know', 'No opinion' and 'Not applicable'

Whether response categories of a questionnaire should include 'Don't know', 'No opinion' and 'Not applicable' still remains debatable (e.g. Oppenheim 2000; Churchill 1999). This research would argue that the inclusion or exclusion of these categories should be decided by the nature of the questions and the likelihood of these answers being provided by respondents. It was decided that the respondents would not be provided with these response categories in this research. This is mainly because the research is testing consumers' own evaluation of their knowledge, involvement of studied product classes, consumers' evaluation of their perceptions of CBP and BP, the likelihood of their consideration and their purchase intention. 'Don't know', 'Not applicable' and 'No opinion' do not apply to the questions related to self-assessment, simply because that there are no reasons why respondents do not know the answer or believe the questions do not apply to them. In the preliminary data analysis stage the items for which the participants claimed "Don't know" or "Irrelevant" are excluded

from the questionnaire. Therefore, there is no sense in including these statements in the response categories in relation to consumers' perceptions.

This research suggests that 'No opinion' is different from 'Neutral'. 'No opinion' could be an indication that the respondent does not understand or the respondent is reluctant to give any answer. 'Neutral' means that the respondent has an opinion. His/her opinion represents the midpoint of a scale. Thus, 'Neutral' is included in the response categories. Furthermore, this research assumes that all respondents are fully aware of their own stage of life cycle as well as their demographically related situation.

#### 5.5.1.5.2 Number of Categories

Although the number of categories can range from a 2-point scale all the way to a 100-point scale, as a general rule, the range of opinion on most issues can best be captured with five or seven categories (Aaker et al. 1997). Despite the fact that seven categories might generate more precise results, this research utilises a five-point Likert scale to measure the majority of constructs involved in this research. This is because it is typical of a Likert scale that each scale item has five response categories, ranging from "strongly disagree" to "strongly agree" (Malhotra 1996). More complex scoring methods have been shown to possess no advantage (Oppenheim 2000). In addition, compared with a seven-point scale, a five-point scale is more manageable and less off-putting to respondents. In the case where a semantic differential scale was used when the reference measures were developed, the semantic differential scale was adapted to the Likert scale, with the positive polar chosen as the content of the individual question. The reason for choosing a positive polar is to avoid double negative wording. Numbers are assigned to the response categories, since the researcher believes the respondents' judgments can be treated as interval data. This is consistent with the referenced previous research. The numbers used are 1, 2, 3, 4, and 5. A low score on the scale means an unfavourable attitude. More specifically, unfavourable statements are scored 1 for 'strongly disagree', up to 5 for 'strongly agree'.

#### 5.5.1.6 Step 5: Wording

Question wording is considered as the most critical and difficult task in developing a questionnaire (Malhotra 1996; Churchill 1999). It involves translating the desired question content and structure into words that respondents can clearly and easily



understand (Malhotra 1996). The two main problems caused by poor wording are known as 'item non-response' and 'response error' (Malhotra 1996). More specifically, poor phrasing of a question can cause respondents to refuse to answer or to answer incorrectly, either because of misunderstanding or on purpose (Churchill 1999), either of which can lead to biased results (Fred 1990).

Given that the importance and difficulties related to question wording is well recognised, a number of works provide suggestions as to how to develop good phrasing of questions (e.g. Malhotra 1996; Churchill 1999; Oppenheim 2000; Aaker et al. 1997). Based on previous works, this research generated a list of rules-of-thumb that can be applied to the current research. This list serves as a checklist of wording. Each question appearing in the draft of questionnaire is checked against this list by the researcher. The researcher is fully aware that the 'rule-of-thumb' is easier to state than to practice. Therefore, it is decided that two pre-tests are needed in order to ensure a high level of wording accuracy. The list of rules-of-thumb includes: avoid double-barrelled questions; avoid double negatives; use simple words; avoid acronyms, abbreviations, jargon and technical terms; beware the dangers of alternative usage; beware 'leading' questions; beware loaded words, and avoid overlapping categories.

One of the valuable contributions of the preliminary study to this part of the research is to help to understand the impact of contexts on respondents' interpretation of phases. For example, 'western' and 'sentimental' could be interpreted differently in different contexts. For further details, please refer to Chapter 6. This finding suggests that to ensure data collected from two contexts are comparable, different interpretations of one phase should be measured.

Apart from the aforementioned contribution, the preliminary study plays a very important role in helping to achieve a better question wording in relation to examination of the participants' perception of brand image. This assistance includes its being the source of the plain language used by consumers and providing the indication of potential loaded words. For example, the focus group discussion revealed that in general the participants use 'style' to refer to the product 'design' and their answers are affected by the emotionally coloured word 'legitimate', which suggests an automatic

feeling of approval and disapproval. Therefore, 'design' and 'legitimate' are replaced by 'style' and 'original'.

#### 5.5.1.7 Step 6, 7, and 8: Physical Characteristics of Questionnaire and Revisions

The physical appearance of the questionnaire can affect the accuracy of the replies that are obtained (Mayer and Piper 1982; Sanchez 1992), as well as how respondents react to it and the ease with which the replies can be processed (Churchill 1999; Aaker et al. 1997). The questionnaire package includes a cover letter and the questionnaire. The cover letter was printed on the University letterhead, and the University logo and the title of the project appear on the first page of the questionnaire, which should lend credibility to the study (Churchill 1999). Good quality A3 paper was used in this research. All questionnaires are printed, but not photocopied, in order to achieve clarity of reproduction. The questionnaire was intended to be made into a booklet. The questions are numbered, with particular attention being paid to ensuring that the questionnaire does not look crowded. All the efforts made here were aimed at influencing respondents' cooperation, increasing the accuracy of the data obtained, and facilitating handling and control. The questionnaire was re-edited carefully, followed by an overall re-examination of Step 1 to 7. Necessary revisions were implemented before conducting the pre-test.

#### 5.5.1.8 Newly Developed Technique to Reduce the Length of the Questionnaire

Following the conventional Likert scale technique, the research questionnaire is more than 14 pages long. There is no doubt that the lengthy nature of the research instrument will put potential respondents off. Moreover, due to this research examining two versions of four brands from two product categories, the majority of the questions are repeated two or even eight times. Repetition of a question will make respondents feel bored (McLauchlan 1987). In order to solve the problem, a new technique is developed based on the repertory-grid technique and the Likert scale.

Kelly (1955) proposed the repertory-grid technique. The most important aspects of the repertory-grid technique are the constructs (attributes) and the objects. It can be used to study which things are seen as similar, to find out how the meaning of different constructs hang together, and to study the individual's 'construct map' (Oppenheim 2000). This technique allows studies at the personal level as well as at the group level.



It has been used in conjunction with the development of a set of semantic differential scales (Fransella and Bannister 1977). There is no report of the repertory-grid technique being used in conjunction with the Likert scale.

The Likert scale was first proposed by Rensis Likert. The Likert method of summated ratings overcomes previous criticisms about scoring and allows an expression of intensity of feeling (Likert 1932). A Likert scale usually consists of two parts, the item part and the evaluative part. The item part is essentially a statement about a certain product, event, or attitude. The evaluative part is a list of response categories ranging from “strongly agree” to “strongly disagree.” Subjects are asked to indicate their degree of agreement or disagreement with each and every statement in a series by checking the appropriate response.

This research is the first to use a Likert scale in conjunction with the repertory-grid technique. The combination of two techniques consists of three parts, the item part remaining unchanged, with the evaluative part (response categories) being replaced by objects. The evaluative part becomes a component of the introductory phase. The subjects are asked to indicate their degree of agreement or disagreement with every statement in relation to each object by filling in the appropriate number that reflects their level of agreement or disagreement. This newly developed technique retains all advantages of the repertory-grid technique and the Likert scales. More importantly, the length of the questionnaire is reduced remarkably through the application of this technique and avoids repetition of questions (See Table 5.7 for an example). Beckwith and Lehmann (1975) suggested that respondents tend to “halo” their responses toward brands by rating the brands they like high on all attributes. Application of the newly-developed technique helps the respondent to avoid only thinking of the alternative and not about the attributes by making the attributes the focus of attention. The applicability of this technique is to be tested in the process of piloting.

Table 5.7    Example of the newly developed technique (part of the research questionnaire)

Watches		Original Gucci					Counterfeit Gucci				
		Strongly disagree				Strongly agree	Strongly disagree				Strongly agree
1	I can get the size I want.	1	2	3	4	5	1	2	3	4	5
2	It is expensive.	1	2	3	4	5	1	2	3	4	5
3	The materials are good.	1	2	3	4	5	1	2	3	4	5
4	They have the style I like.	1	2	3	4	5	1	2	3	4	5
5	The product is practical.	1	2	3	4	5	1	2	3	4	5



### 5.5.2 Step 9: Piloting Questionnaire and Verification

It is widely accepted that pre-testing a questionnaire is an integral part of the questionnaire development process (Reynolds and Diamantopoulos 1998; Churchill 1999). Pre-testing a questionnaire is the stage in questionnaire design that occurs after the research has completed the initial questionnaire, before the questionnaire is used for the main survey. Given that neither professional judgement nor intellectual exercise are perfect substitutes for pre-testing (Backstrom and Hursch 1963) and non-sampling error (i.e., response and non-response error) is the major contributor to total survey error (Assael and Keon 1982), pre-testing a questionnaire is regarded as vital to the survey design process (Bolton 1991). Churchill (1999) suggested that data collection should never begin without an adequate pre-test of the instrument.

#### 5.5.2.1 Two-stage Pre-test and the Respondent's Profile

The measures for most constructs in the study (i.e. brand personality, product knowledge, product involvement, consideration set and purchase intention) are drawn from previous research with necessary amendments. Following advice from the methodological literature (Diamantopoulos et al. 1994), the questionnaire is subject to two separate pre-tests. First, three academic researchers not involved directly with the design of the questionnaire, but who are familiar with questionnaire design principles and have knowledge of the subjects are interviewed by the researcher with the aim of detecting technical errors. To use “experts” as pre-test respondents is suggested by a number of previous researchers (e.g. Hague 1987; Green et al. 1988), and is tested by Diamantopoulos et al. (1994). Diamantopoulos et al. (1994) report that knowledge of the subjects appears to be particularly useful for detection of problems not contained in the questions themselves. The expert respondents are briefed on the topic of this survey as well as samples and population of the principal research.

The “expert” test is followed by a second pre-test comprised of forty “ordinary” consumers. There is no set answer to the question about how many respondents should be used (Tull and Hawkins 1987). The sample size can range anywhere from half a dozen to one hundred cases or even more (Tull and Hawkind 1987). It is recommended that the pre-test sample size be small, varying from fifteen to thirty respondents for the initial testing, but the sample size can increase substantially if the pre-testing involves



several stages (Malhotra 1996; Kinnear and Taylor 1996). Therefore, forty respondents is considered an acceptable pre-test sample size in this research. Following the general agreement that the pre-test sample should be as similar as possible to the target population (Churchill 1999; Oppenheim 2000; Malhotra 1996), the sample for the second stage pre-test is drawn from the population. The debriefing method (discussing questions and associated problems after the entire questionnaire has been completed with respondents) is utilised at this stage. The aims of the second test are to provide the real test of the mode of administration, individual questions and their sequences (Hunt et al. 1982; Bolton et al. 1990). Figure 5.4 demonstrates the details of the examined areas in the two pre-tests.

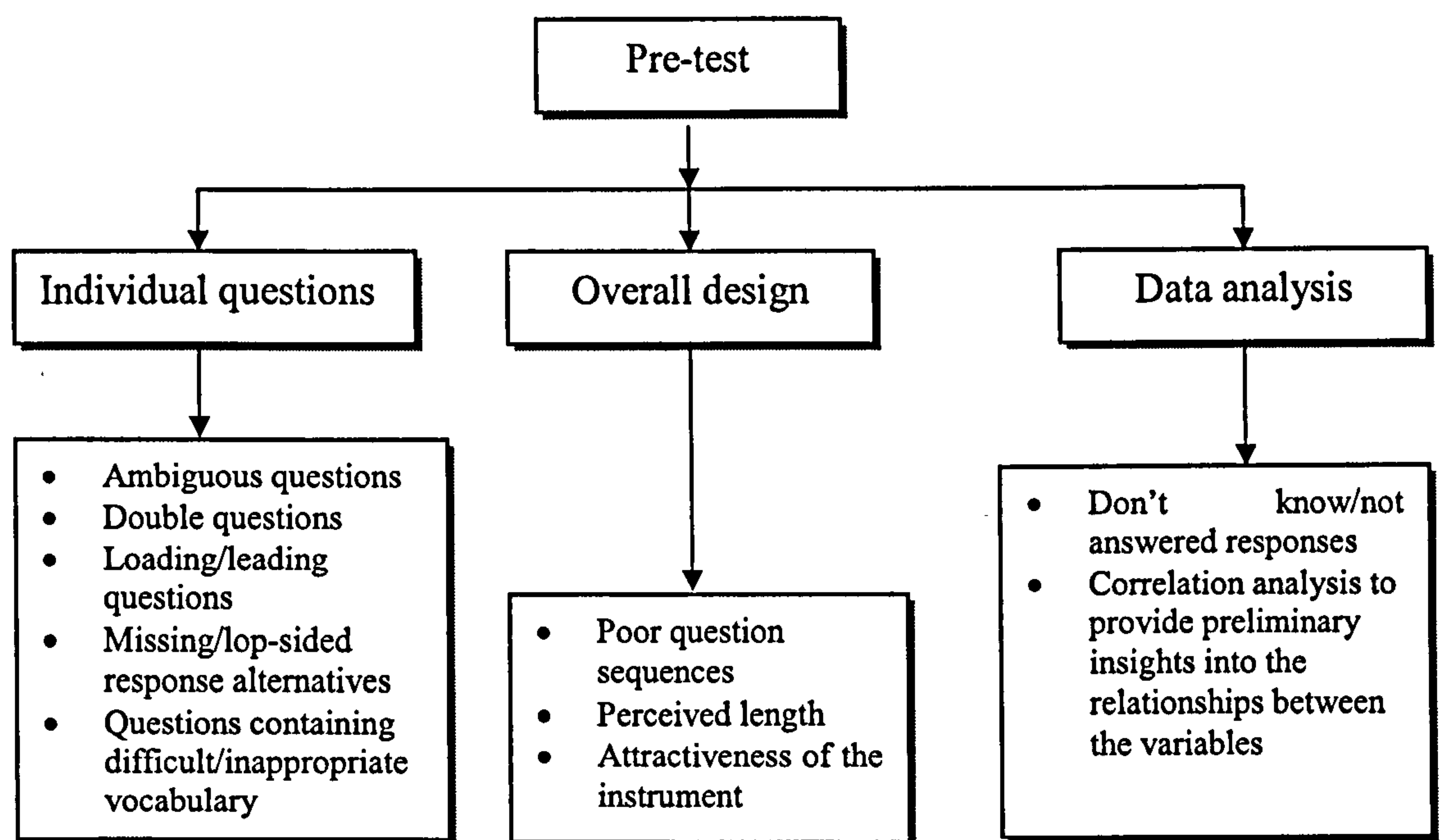


Figure 5.4 Pre-test scope (generated from Diamantopoulos, Reynolds and Schlegelmilch 1994)

It is still debatable who should be the person to conduct the pre-test. Some researchers call for the use of typical interviewers (Churchill 1999), others believe that only experienced interviewers should be used in pre-testing (e.g. Boyd et al. 1989; Kinnear and Taylor 1996). This research follows the second idea. The researcher conducted the pre-test. Nevertheless, the field workers participated as observers in this part of the research. In doing so, the selected fieldworkers also obtained a good feel of potential problems and the nature of the expected data. Moreover, their views and suggestion related to fieldwork administration are taken into account. One may argue that the adoption of the experienced interviewer in the questionnaire pre-testing might lead to criticism that the typical fieldwork interviewers are unfamiliar with the mode of the

fieldwork administration and unclear about the potential problems they might confront. Consequently, the quality of the data could be affected. The researcher is fully aware of the drawbacks of using an experienced interviewer, more specifically the researcher herself in this research. In order to overcome the potential problem, necessary means are utilised, in addition to placing the typical interviewers at the piloting sites to be the observers. Please refer to the Fieldwork Administration (section 5.6) for further details.

#### 5.5.2.2 Shortcomings Identified by the Three Experts and Solutions

The first pre-test revealed some minor problems with the individual questions, and some shortcomings of the overall design. The almost satisfactory results related to individual questions should devote its success to the focus group discussion. The shortcomings identified by the three experts and suggestions from them are classified into three categories and are discussed below in detail.

a. Length of the questionnaire: The first draft of the questionnaire is perceived as too long. The experts suggested the following:

1. Change the title statement of each section into question (for example: “Product involvement” is replaced by “How interested are you in watches and handbags?”). These changes make the task of each section is more obvious to the respondents; they also help to shorten the introductory part of each section, which makes the questionnaire much shorter than the first draft.
2. The introductory part of section F appears too long. Responding to this suggestion, unnecessary information is cut out.
3. Should make the most use of the cover page, therefore, definitions, the appealing statement and background information are moved to the cover page.

b. Shortcomings and suggestions concerning language:

1. “Watches/handbags are very neat products” appeared problematic, and should change to “I like watches/handbags”. This is because that Glasgow people do not use “neat” to refer to “preference”. “Neat” is perceived as “clean” and “tidy” in Glasgow. This is different to America, where, when people say something is neat, they express a kind of “preference” or “liking”.



2. “Watches/handbags are of my concern” is problematic grammatically, and should be replaced by “I care about watches/handbags”.
3. “Brand personality” and “product attribute” are considered to be more academic, and difficult for ordinary consumers to understand, and therefore should be changed to “characteristics of brands” and “design feature” which are regarded as plain language.
4. Item “leader” (tested personality trait) is not an adjective, and is replaced by “for leaders”.
5. Item “relevant” used to measure product involvement appears ambiguous, therefore the statement “Watches/handbags are relevant to me” is replaced by “I get bored when people talk to me about watches/handbags”. This measure is used by Beatty and Talpade (1994) and Glynn et al. (1996).

c. Suggestions concerning technical problems:

1. Change “tick” to “circle” (instruction statement of section B, C, D, E, F, G, H), which helps to avoid confusion caused in the case that the respondent did not place the “tick” in the appropriate place. For example, a “tick” placed in the middle of two numbers might be confusing.
2. Apart from the instruction of each section, an example should be given to illustrate how to answer the questions.
3. In each sub-section, in addition to the product class, a picture of the related product class is also used. The use of pictures makes the questionnaire more user-friendly, and is expected to help reduce errors of misunderstanding.
4. It is suggested that the categories in relation to age and income should be cut down in order to simplify and shorten the questionnaire.

5. The cover letter should be cut shorter than in the first draft. It is not necessary that information appearing in the questionnaire appear in the covering letter, too. More stress is put on asking for assistance in the completion of this research and the importance of the respondents' help in this project.

All of the above comments from the three experts are considered valuable in terms of assisting in the improvement of the questionnaire. Necessary action was taken in response to the observations and suggestions from the experts before the questionnaire was tested on the ordinary consumers. Compared with the first draft, the verified version (second draft) is two pages shorter, and is more user-friendly.

#### 5.5.2.3 Comments from the Ordinary Consumers (Second stage piloting) and Actions Taken by the Researcher

1. The questionnaire is still regarded as very long. It is recommended that the questionnaire should be split into two and two separate studies conducted. This suggestion was not taken because it did not fit in well with the overall research design.
2. The use of '-' and '+' to replace 'Strongly disagree' and 'Strongly agree' on page 4 caused confusion in some respondents. In order to solve this issue, "strongly disagree and strongly agree" as well as '-' and '+' are used in order to provide a clear indication at the beginning of page 4.
3. The statement "This product may do not last long." appeared grammatically problematic and should be changed to "This product may not last long." This suggestion was taken.

#### 5.5.2.4 The Researcher's Observations and Solutions

1. The booklet format of the questionnaire is not user-friendly in this research. The respondents had to turn the questionnaire over and fold it when they came to even pages. This really caused inconvenience to the respondents and appeared to be time-consuming. Even though they were provided with seats and a desk, most of them had to put the clipboard on their knees when they were filling out the questionnaires, since they only had very limited space in which to fill out the



questionnaires at the entrance of the supermarkets. Therefore, it is decided that the normal notebook format should replace the booklet format in this research, with the research questions printed on one side rather than both sides of the paper. Doing so simplifies the administration process for the respondents. One might argue that the booklet format might look more formal than the notebook format. The researcher believes that the use of the badge with the university logo on, as well as the cooperation from the supermarkets (providing chairs and tables inside the supermarkets) is enough to convince the respondents of the seriousness of this research. The most important thing is to simplify administration of the questionnaire for the respondents.

2. Sequences of questions in section A did not follow any logic. Question 2 and question 3 were reversed. The respondents are asked whether they have bought any counterfeit goods or not first, followed by “what are they?” rather than the other way round.
3. The mode of the administration in relation to intercepting the following person after rejection by an individual approached by the fieldworker appeared problematic. This is changed to approach the 5<sup>th</sup> person after a rejection. Please refer to section 5.4.3.2.

#### 5.5.2.5 The Final Version of the Questionnaire

The research instrument went through two drafts and two separate pilotings before reaching the final version (Appendix 4). This final version of the questionnaire is seven full A4 pages long (excluding the cover page and the contact information page) with 354 questions in total (including the warming-up questions). To put 354 questions into a 7-page research instrument is no easy task. This is achieved by applying the newly developed scale technique, which is a combination of the Likert scale and the repertory-grid technique. This technique also helps to avoid repetition of questions two or even four times. The final version of the research instrument is user-friendly and uses plain language. The researcher is aware that the length of the questionnaire might still be a shortcoming of this research. However, it is determined by the nature of this research. As can be clearly seen, great effort has been put into reducing the length of the research

instrument. In fact, there is not much else the researcher can do but proceed at this stage.

In addition to the main body of the questionnaire, the research instrument also includes an extra page which requests the respondents to provide contact information (Appendix 4). The contact information page was designed for monitoring the process of data collection and securing the accuracy of the data collected. This is required for the use of fieldwork monitoring, as trained fieldworkers are used for collecting data. This device also proved to be useful in terms of increasing the rate of useable questionnaires, and hence lowering the total cost of data collection. For example, some questionnaires disqualified for inclusion in the data set became usable after missing information was provided by the respondents when the researcher contacted them using the correspondence number or addresses they provided.

## 5.6 Fieldwork Administration

This study is conducted in the City of Glasgow. As noted previously, due to the time limitation for the completion of this study, field workers are employed to collect data with the aim of speeding up the progress. Despite the recommendations of previous research which suggests that the typical interviewer is a married woman aged 35-54 (Barker 1987), the field workers employed in this research are honours and masters students aged between 20-30 years old. This research is a piece of academic work under the banner of the University of Glasgow; therefore, the use of students is more convincing to respondents in relation to its seriousness and non-commercial purpose. Moreover, students are easy to recruit. The researcher knows them personally, which enables her to select the right people for this research.

Eight fieldworkers are recruited, four men and four women. Following Collins and Butcher's (1983) recommendations, all fieldworkers are Glasgow residents, native English speakers, healthy, outgoing, communicative, with a pleasant appearance, and well-educated. The fieldworkers are paid an hourly rate rather than on a per completed questionnaire basis, to avoid their falsifying part of or even the entire questionnaire.

Previous researchers suggest that in some circumstances, the interviewer will usually struggle to comply with the researcher's wishes, or may fail to do so to some degree or



another (e.g. Burns and Bush 2000). In order to avoid any biases resulting from the fieldworkers' manner, appearance, different levels of understanding of the current research and so forth, as well as to ensure that all interviewers administer the questionnaire in the same manner so that the data can be collected uniformly, proper training is provided to all recruited interviewers. Training covers an introduction to the survey and questionnaire administration requirements, making the initial contact, handling objections and refusals, reading out the questions for respondents (if necessary), answering questions from the respondents, and terminating the interview. Following the training session, interviewers engage in role-play as a means of becoming familiar with the questionnaire's administration requirements. They play the roles both of interviewers and respondents. In addition, as reported earlier, they also participate as observers in the second stage research questionnaire piloting test.

To make sure that the interviewers are comfortable with and fully follow the pre-set up procedures and techniques in which they are trained, the researcher accompanies each individual in the field until she is satisfied with the interviewer's work. This manner secures the consistency of the mode of administration across all fieldworkers. The interviewers are told that fieldwork validation will be conducted on a daily basis. More specifically, a certain percentage of respondents will be contacted using the correspondence addresses they provided at the end of the questionnaire. It is expected that all these effort will help to minimize interviewer cheating and improve the quality of the fieldwork (Tull and Richards 1980; Burns and Bush 2000).

The researcher received all data she needed for this piece of research within a two week period. This remarkable result was due to the very good pre-fieldwork preparation, as well as full support from the supermarkets. First of all, the fieldworkers are provided fixed, pleasant places to work. Secondly, they are well looked after by the researcher. Besides the fixed pay the fieldworkers received from the researcher, costs related to food and drinks in the workplaces are also covered by the researcher. Whenever (in 2 out of 4 supermarkets) hot food and drinks are available, the fieldworkers are told to feel free avail themselves of them, with all costs involved reimbursed by the researcher. This became affordable because the fieldworkers were treated as members of the supermarket staff in one supermarket and had access to their staff dining room; the

researcher was given staff discount for buying chocolate from the supermarket. All this helped to bring down the total costs associated with the fieldwork.

The fieldwork validation was conducted on a daily basis. One hundred and fifty eight respondents out of 420 participants provided their correspondence address or contact number. Around 20 percent of respondents who provided a correspondence address or contact number were contacted by the researcher. The daily fieldwork validation did not show any sign of interviewer cheating. The respondents who did not provide correspondence addresses are not approachable. Therefore, it is impossible to validate fieldwork related to these respondents. However, it is assumed that the fixed, pleasant workplaces, and relatively easy administration could have helped to reduce the possibility of interviewer cheating.

## 5.7 Summary

This chapter is organised around seeking answers to the following questions: What is to be investigated in this research? How is this research to be conducted? What is the target population? How to ensure that the selected samples will present the targeted population? What is the logic of the determined sample size? How is the research instrument constructed?

It was decided that the present research is to investigate four brands from two product categories. The studied branded products are both original and counterfeit branded Rolex and Gucci watches, Burberry and Louis Vuitton handbags. The choice of these branded products went through several stages. The first stage involves an examination of literature in the study of counterfeiting. This review shows that the study of specific brands is valuable in terms of helping to achieve a better understanding of consumer behaviour in the context of non-deceptive counterfeiting. Nevertheless, research in the study of specific brands appears to be scarce, as previous research mainly examined product category in relation to counterfeits. As such, previous research findings based on investigation of the product category might not be applicable to individual brand(s), as consumer behaviour is to a great extent product as well as brand specific. This justifies the decision of study of the four specific brands in the current research. The choice of the four selected brands is driven by the reality that these four brands appear to be heavily counterfeited and widely available in the UK markets. In addition, the



counterfeit examples requested by the research design are available from the Trading Standards Glasgow.

By its nature, the current research is a combination of exploratory, descriptive and causal research approaches. The focus group is to be used to fulfil the exploratory part, to generate the vocabulary and traits consumers use to evaluate the selected brands. To investigate consumers' perceptions of CBP as opposed to BP requires the use of a descriptive approach, whereas modelling consumer choice processes demands the causal research design. The causal research design carries more weight than the other approaches due to its being required by the principal research of the current study. The survey method is considered as appropriate.

Taking into the consideration the fact that not every consumer has experience of counterfeits, it is decided that the stimulus-based approach will be adopted rather than the memory-based method. This method extends the pool of eligible potential respondents and ensures that the eligible respondent group is equivalent to the target population. Moreover, it also assists in increasing the response rate. As a result, it helps to minimize research bias.

The current research is to be conducted in Glasgow. Glasgow is chosen because Glasgow residents have access to the selected counterfeit branded products. In addition, the researcher is based in Glasgow, so to conduct the research in Glasgow will reduce costs. The target population for the current study is Glasgow residents aged 18 and over. The defined age group is restricted by the Approval of the Ethical Research Committee, but it is also held by the researcher that people under 18 might not have very strong purchasing power due to their being unlikely to be financially independent.

The use of a probability sampling method is mainly constrained by the costs involved and security issues concerning the fieldworkers. As such, a non-probability sampling method is adopted. More specifically, this research will use the multi-cluster two stage area sampling method. Twenty Glasgow supermarkets are randomly selected using Yellow Pages online services. Four out of twenty supermarkets kindly agree to support this research by providing space and facilities requested by the researcher. Data collection is conducted at the exit of each supermarket. One desk and two chairs are

allocated at the exit of the supermarkets, which to a great extent provides both fieldworkers and respondents with a pleasant working situation. It is believed that this somewhat unexpected support from the supermarkets improves the response rate and the quality of the data in general. Following this, the samples are selected using a systematic sample method. Every *n*th customer is approached by the fieldworker. In order to minimize sampling error a number of devices are used; these include a pre-paid incentive (to appeal to passive respondents to participate in the survey), a touch and gaze approach, an appealing expression, and the appearance of university logo on the cover letter, the front page of the research instrument and the badge the fieldworkers wear (to indicate the seriousness of this research).

The sample size requested for this research is 384, which is calculated using the percentage approach with a desired result of  $\pm 5$  percent accuracy. Obviously, the more accurate the collected data, the more desirable it is. Nevertheless, it is considered that 5 percent is acceptable, as this leaves little room for improvement. In addition, once again this is limited by the tight budget as well as the time constraint for this research. It is reported that an improvement in accuracy of one percent will result in an almost 75 percent increase in samples, which will lead to a demand for 75 percent more time and financial resources as a direct result. This is simply not achievable under current circumstances.

The development of the research instrument went through three processes – the qualitative study, first round questionnaire testing, and second round questionnaire testing. All the measures used in this research are adopted (with slight changes if necessary) from previous studies with the exception of brand image. Closed-ended questions are used in this study, as they are more suitable for a large survey like this, and they are easier and quicker to answer. The 5-point Likert scale is adopted all way through the questionnaire regardless of the fact that some previous researchers did use semantic differential scales. Considering that this research is principally testing consumers' perceptions towards publicly approachable branded products, 'Don't know', 'No opinion' and 'Not applicable' are not included in the response categories, as there is not much point if consumers claim that they are not sure about their opinions.

The questionnaire adopts a 'pleasant' and 'conservative' appearance. It is deemed that the front page of the questionnaire contains most of the relevant information about this



research (explanation of selection, appealing statement, counter-biasing statement and assurance of confidentiality) and leaves the main body of the questionnaire only focusing on the collection of the data required. The sequence of the questions follows the flow of the consumer choice processes, which it is also in line with the research conceptual model.

The main objectives of the qualitative study are to generate the criteria consumers utilised to evaluate the studied brands and to extract the plain language used by consumers (details about the qualitative study as well as results are reported in Chapter 6). The first stage piloting is to detect technical errors. Three experts who are familiar with questionnaire design are interviewed by the researcher. The second stage piloting aims to provide the real test of the mode of administration, individual questions and their sequences. Forty consumers are approached by the researcher in the supportive supermarkets. A number of problems are identified and necessary actions are taken. In fact, after the first round of testing and verifying according to the experts' suggestions, the questionnaire was improved dramatically. The second round testing did not show any serious problems apart from some minus errors. In total, the main body of the questionnaire is seven pages long, uses plain language and has a pleasant appearance.

This chapter finishes with a discussion of the fieldwork administration. Eight fieldworkers (postgraduate students) are recruited, four men and four women. They are all Glasgow residents, native English speakers, healthy, outgoing, communicative, and with a pleasant appearance. Proper training is provided by the researcher before the fieldworkers are sent out to the field to collect data. The researcher accompanied every fieldworker to collect data in the field until she felt that the fieldworkers were 100 percent capable of working on his/her own. This effort assists in ensuring that the data collection is administered in the same manner. Fieldwork validation was conducted on a daily basis. The fieldwork validation did not show any sign of fieldworkers cheating.

This chapter dealt with research methodology related issues. The great challenge this research faced was how to cut down the length of the research questionnaire. To achieve this, a new technique was developed based on the widely adopted Likert scale and the repertory-grid technique. Appliance of this technique avoids the repetition of the same statement when a trait is to be tested more than once on different brands or

different versions of one brand. Consequently, the research instrument is shortened without compromising the richness of data.

The qualitative research conducted should be included in this chapter. Nevertheless, considering its richness and critical role it played in relation to construction of the robust research instrument, this part of the research together with the research results, are reported in a separate chapter. This is what the Chapter 6 is concerned with.



# **Chapter 6   Preliminary Qualitative Study and Results**

## Chapter 6 Preliminary Qualitative Study and Results

### 6.1 Introduction

This chapter focuses on the preliminary study related issues. As noted in Chapter 5, the main purpose of this part of the research mainly serves the construction of the research instrument of the principal survey research – *define the criteria consumers used* (based on product attributes and brand personality and benefits/consequences) to evaluate the counterfeit branded products and the counterpart genuine branded version. In addition, it also aims to *establish the vocabulary and language* used by the target population.

The main body of this chapter consists of two main sections. This first section deals with issues concerning the preliminary study methodology, choice of an appropriate method, a series of decisions related to the focus groups (number of focus groups, length of focus groups, size of focus groups, participant recruitment, pre-focus group preparation, roles played by facilitator and observer), the whole process of data collection (protocol of focus group discussion and identified shortcomings and solutions, improved focus group discussions), data transcription and data analysis method. The second section reports the preliminary study results. The results are presented into two subsections, with the structured discussion results are reported first followed by the open discussion results. The final results are a combination of the structure discussion results and the open discussion results. This chapter ends with a brief summary.

### 6.2 The Preliminary Study Methodology

The focus group is considered an appropriate method to serve the research objectives of this part of the research. This section reports the issues related to focus group discussion. It starts with the rationale of the use of focus groups and ends with discussion of data analysis method adopted to analyse focus group data.

#### 6.2.1 Rationale for the Use of the Focus Group

The focus group is chosen in preference to an individual interview. Focus groups are considered to be appropriate for completion of the preliminary study, because of the following: focus groups are appropriate approaches for exploratory purposes prior to the



drafting of the survey instrument itself, they are superior to other methods for the study of group understandings (Bloor et al. 2001), using focus groups for preliminary exploration of certain topic areas is most useful in those fields where survey planning is most difficult because relatively little is known (Vaughn et al. 1996), focus groups can be used to access the everyday language of research subjects (Bloor et al. 2001; Fern 2001). Furthermore, they can help to elicit a more interacted response from the participants, who might feel lost for words during a one-to-one interview. The interaction between the participants might eliminate something unknown. All the noted advantages of focus group technique fit in well with the predefined objectives of the preliminary study.

### 6.2.2 Number of Focus Groups

There is no a clear-cut point regarding how many focus groups are sufficient for a piece of research (Bloor et al. 2001). The number of groups required may range anywhere from one to thirty or even more depending on the research purpose (Fern 2001). However, researchers argue that most focus group research requires somewhere between four and six groups (Fern 2001). Considering that here in this research, focus groups are only used for the completion of the preliminary study but not the principal study, as well as the time limitation and the very tight budget for this study, four focus groups are considered acceptable and can fulfil the pre-identified research objectives of the preliminary study. Each individual focus group is allocated different tasks. The main task of the first focus group is to discover criteria consumers use to examine the counterfeit and genuine Rolex watches. The second focus group aims to develop criteria consumers utilise to evaluate the counterfeit and genuine Burberry handbags. The third focus group serves to construct the criteria that consumers use to examine the counterfeit and genuine Gucci watches. The fourth focus group is used to generate the criteria consumers use to evaluate the counterfeit and genuine Louis Vuitton handbags. In addition to the above tasks, vocabulary used by ordinary consumers in relation to evaluation of the studied brands is generated during the focus group discussions. This effort will assist in ensuring a user-friendly research instrument.

### 6.2.3 Length of Each Focus Group

Bloor et al. (2001) suggest that the focus group facilitator should wind things up after 90 minutes in order to avoid the premature departure of some group members. This research follows this rule. Each focus group lasted between one and one-and-a-half



hours. This timeslot excludes the completion of the pre-group Consent Form and the post-group personal information form and debriefing.

#### 6.2.4 Recruiting Participants and Assigning Participants to Each Focus Group

The snow-balling technique is used to recruit focus group participants. More specifically, the researcher utilizes her existing social networks to recruit participants. The advantages of this manner are firstly, it greatly decreases the demand for labour input of the research, and secondly, it saves time. The shortcomings of this approach are loss of control of the researcher and the possibility that the intermediary may act as an unwanted 'screening device' selecting out certain members of the group from participation (Bloor et al. 2001). In order to overcome these pitfalls, the contact persons are asked to give each potential participant an information package pre-prepared by the researcher, with the aim of ensuring that every potential participant receives identical and accurate information about this study. This also enables them to contact the researcher with any queries or give notice in advance if their circumstances have changed and they become unable to attend the group. This information package includes an information letter (Appendix 6), two appointment cards (one is returned to the researcher, the other one is kept by the respondent for reference after the respondent has filled the required information in) and a contact card of the researcher (Appendix 7). More details of the information package are reported in a later section in this chapter.

Because one of the main objectives of this part of this study is to develop the survey instrument, according to Bloor et al. (2001), participants of the focus groups should reflect the respondents of the survey. In order to achieve this goal, the initial contact persons are restricted to residents of the city where the study is conducted, and are selected from the target population. As such, the initial contact persons are told that respondents they recruit should be residents of the city from which the sample of this research is drawn. It is assumed that there is a good chance that the respondents recruited by a specific contact person might have similar characteristics to the recruiter, because it is likely that the contact person would find that it is easier to recruit from the society that he/she belongs to, alternatively they simply choose friends and peers (Michell 1999). Therefore, particular attention is placed on achieving a sample which represents the research population. Balance of gender, age group, income, and social class are considered and taken into account. Here, as information about income and



social class are difficult to obtain, occupation and education are used as surrogates as suggested by Fern (2001).

The recruited participants are assigned by the researcher to four focus groups. In order to make sure that the participants of each focus group to a reasonable extent reflect the respondents of the survey, a great effort is placed on maximizing group differences within groups (heterogeneity) and minimizing differences across groups (heterogeneity). This is consistent with Fern (2001), who notes that if the researcher's interest is in generating potential items for a survey, within-group heterogeneity may be best. The focus groups comprise a mix of age, gender, education, and occupation. Participants recruited by the same contact person are allocated to different groups in order to achieve compatibility of the focus group and avoid cohesiveness. This is particularly important because cohesiveness may encourage participants to conform to reference group pressures and alter the reports of their individual notions to meet the expectations of others in the group (Fein 2001).

#### 6.2.5 Focus Group Size

The size of a focus group can range from three participants to fourteen (Pugsley 1996). However, it is argued that between six and eight participants is the optimum size for focus group discussion (Bloor et al. 2001). Accordingly, this research proposes to keep the size of the groups to between six to eight participants. English is not the facilitator's (researcher's) native language. As a doctoral researcher, the facilitator is not greatly experienced in terms of facilitating focus groups. In addition, there are two main tasks which must be achieved (see p. 167) at this stage of the research. All these are the restrictions which come from using a larger size of focus group. Balancing all the above, relatively small size is considered more appropriate for this research, since it helps the researcher to achieve a considerable control of the discussion. In addition, smaller groups increase participants' opportunity to fully express ideas without interruption (Morgan and Scannel 1998; Krueger 1994).

#### 6.2.6 Preparation for the Preliminary Study

The preparation of preliminary qualitative research consists of three phases. The first phase involves the development of a preliminary list of descriptive product attributes, brand personality and benefit/consequence statements of the counterfeit and original

versions of the selected brands. The list of product attributes and benefit/consequence related statements of both CBP and BP of the four studied brands are generated from a combination of sources, including previous research on study of counterfeiting and branded products, product packages, advertisings, and Consumer Reports. To operationalise brand personality, the Aaker (1997) personality scale is adopted to form the main part of the list of items for testing. In addition, the adjectival expressions in relation to personality, which are generated from product packages, advertising, as well as consumer reports, are also included in the list. During the second phase, an information letter, appointment cards, and the researcher's contact card are produced. The third phase involves designing a form for participants to complete to provide their social-demographic information and consulting local police and Trading Standards.

#### 6.2.6.1 The Information Letter and the Appointment Card

The content of the information letter covers an brief explanation of the research aims, the objectives of the focus groups, the contribution of this research, a call for participation, the site where the focus groups will be conducted, the time demanded for this task (one to one and a half hours), four suggested time scales [week day lunch time (12.30 to 2.30); week day evening (5.30 to 7.30); weekend afternoon (3.00 to 5.00); weekend evening (5.00 to 7.00)] in order to make sure that potential participants are not restricted by times given by the researcher, and the instructions as to how to complete the appointment card and the need for returning one back to the contact person, keeping one for their own reference. Great attention was placed on using neutral words in the information letter, in order to avoid leading participants' perception. The letter went through several drafts and was checked by two native English speakers and one English language expert before it was sent off to the researcher's contacts to recruit participants.

The appointment card and the researcher's contact card are identical in size but different colours. The appointment card is two-sided. The front displays all four suggested time scales; the back illustrates the site of the focus group, the respondent's correspondence information requested by the researcher and also the researcher's contact number. The contact card provides more correspondence information of the researcher, including full contact address, e-mail address, fax number as well as mobile number. This maximises the approachability of the researcher to all potential participants.



#### 6.2.6.2 Confirmation from Local Police and Full Support from Trading Standards

As originally planned, this research uses stimuli-based approach. More specifically, the counterfeit branded products are shown to focus group participants, as well as survey participants by the researcher or the research assistants. Hence, there is a possibility that some people might mistake them as the researcher or the research assistants are dealing with counterfeit products. This is a concern of the researcher particularly in the case of the market-place interview survey. According to the 2002 Act (see The Patent Office 2002), manufacturing and selling counterfeit products is regarded as criminal in the UK. In order to avoid unnecessary frustration, the researcher had been in touch with the local police and the Trading Standards. Both of these government clients confirmed that they did not see any problem with this piece of research. Particularly, the Trading Standards gave their full support to this research by providing all counterfeit examples from the goods they confiscated. They believe that this research will help them to achieve a better understanding about why consumers knowingly purchase counterfeit product and require a specific report assessing the residents' perceptions of the studied counterfeit branded products and the genuine branded products, as well as the implications at the end of the research project. It was suggested that a letter should be sent to the Divisional Commander of the local police before the principal survey starts. The contents of the letter should cover the nature of the research, where and when the research is going to take place, who is going to undertake the research, as well as what kind of ID the researcher/research assistants will carry with them. The local police also confirm that this requirement applies to any research conducted in public places.

#### 6.2.7 The Facilitator and the Observer

The doctoral researcher is the group leader, conducting the interview, facilitating discussion, and debriefing members at the conclusion of each session. An academic researcher, who is a native English speaker, and also familiar with the Glasgow accent, accompanies the researcher as the observer during the focus group discussions. It is considered to be necessary to have a native English speaker and who is also familiar with the local accent to be the observer, since English is not the native language of the researcher. Moreover, some of Glasgow people have very strong accent. It is commonly known that some native English speakers do have difficulties in understanding the Glasgow accent. The role the observer plays mainly is to observe the

group, take a reasonable amount of notes on the context and group dynamics, help to identify speakers, as well as being a language backup to the researcher. It is considered important to be able to identify individual voices from within the group for data analysis, because it allows changing points of view to be followed through the transcription (Bloor et al. 2001). An intensive discussion between the interviewer and the observer is conducted soon after each focus group, which allows the facilitator to recognise shortcomings of the techniques utilized and improve them in the following groups, and also allows a process of qualification and deepening of findings of earlier groups through the feedback of the observer.

#### 6.2.8 The Entire Process

The Principles of Ethical Research and the Consent Form are delivered to the participants before the discussion starts. The participants are informed that the discussion will be audio recorded in order to ensure less loss of richness of data, and are reminded of the voluntary nature of participation as well as confidentiality of the information gathered. Then, the participants are given time to read the Principles of Ethical Research and are asked to complete the standard departmental Consent Form and return the form to the researcher.

When the discussion starts, the researcher first introduces herself and the observer to the participants, then follows with a brief introduction to this research and the objectives of the focus group discussion. Thereafter, each member of the group is asked to tell their names and then to say a few sentences about themselves and to write down their name on a piece of cardboard paper prepared by the researcher and display it in front of them. Subjects are also told that there are no right or wrong answers and they should consider only their personal perception.

The researcher asks several general questions about shopping (e.g., Have you ever bought any counterfeit products before? If so, what were they? Where did you buy them? Were you happy with them? Why do you buy/do not buy counterfeit products? What is a counterfeit product?) This is with an aim to warming up the participants. This method ensures that the participants can ask questions about the current research and allows the researcher to explain what counterfeit branded products mean in this study. It is also believed that the general discussion helps participants to become familiar with



the research project, it helps release tension, and it also assists in generating initial research data.

The focus group sessions are built around two key questions: What are the criteria consumers used to evaluate CBP? What are the criteria consumers used to evaluate BP? These questions are intended to raise for discussion those matters alluded to in focus groups.

To establish broadly:

1. Product attributes consumer used when evaluating BP.
2. Product attributes consumer used when evaluating CBP.
3. Consumer perceived product benefit/consequence of BP.
4. Consumer perceived product benefit/consequence of CBP.
5. Consumer perceived brand personality of BP.
6. Consumer perceived brand personality of CBP.

Probes for each question are also developed before each focus group discussion.

The main body of the focus group discussions consisted of two stages. The first stage was the open discussion about both counterfeit and original versions of the studied brand. The participants were encouraged to speak out on their perceptions of examined brand (both counterfeit and original branded versions). At this stage, the researcher attempted to generate consumers' understanding about benefits and consequences of CBP and BP, and identify criteria consumers consider as important when they come to purchase. The questions were mostly open form, the participants were able to expand on any answers that needed clarification or qualification and allowed to give their rationalisation of their answer. The second stage aimed to test consumers' understanding and relevance of pre-generated items associated with the brand image of the studied four brands. This part of discussion was guided by the pre-generated items. For details as to how these items were derived, please refer to section 6.2.6. The respondents were given the item first, thereafter they were asked to say whether they had any difficulty in understanding it, whether it was relevant to the studied specific version of the brand. If the participants could not understand the item being tested, or did not think it was 'relevant', then the items were dropped and no further questions put forward. In the case where the answer was 'relevant' and the participants did not encounter any difficulties in terms of understanding, the respondents were asked to

identify the items which they considered as ‘important’ product attributes to them when they were facing purchase decisions, to give a ‘yes’ or ‘no’ answer to benefit/consequences and brand personality related questions. For example, the respondents were asked ‘Do you think the counterfeit Rolex watch has a “high failure rate”? ‘Do you think the personality of the counterfeit Rolex watch is “down to earth”? Moreover, the respondents were given time to explain why they thought the answer to the given question should be as it was. This method brought in very rich data.

Following this, a debriefing was conducted after the researcher closed the focus group discussion. Then, the participants were asked to complete the personal information form. The researcher expressed her thanks to all the participants for their contribution to this research and a summary of the focus group discussion would be sent to them for validation subject to their willingness for further participation.

#### 6.2.9 Lessons Learnt from the First Focus Group and the Necessary Improvements

Despite the time and effort the researcher spent on the focus group preparation, the outcome of the first focus group discussion does not satisfy the researcher’s expectation. The following problems are identified by the researcher during the discussion and further proved by some participants and the observer of this session.

##### 6.2.9.1 Problems Caused by Academic Jargon and Introduction of Alternative Dimensions of the Brand Personality and Proposed Solutions

The first problem is caused by academic jargon. This has been addressed in detail by a number of previous researchers. Nevertheless, the researcher who is completely new to focus group technique did not really understand the seriousness of the problem that academic jargon might bring to the research. The researcher automatically used some academic expressions in the discussion, given that she has been working in this particular area for quite a while. As a non-native English speaker, she is more familiar with the academic jargon than the plain language used by members of the public. This problem is obvious in relation to two constructs. They are “brand personality” and “product attribute”. Most participants to a great extent did not understand what do these terms mean. All participants showed good understanding of “product attribute” after the researcher’s explanation. However, the researcher’s explanation of “brand personality” did not achieve the same result. In contrast, the participants appeared to be more confused.



To communicate the brand personality concept to subjects better, Aaker's (1997) definition of brand personality is first introduced. The participants were then asked to think of the brand as a person, what human characteristics the person has. This approach is in line with the approach utilised by a few previous researchers (e.g. Aaker 1997; de Chernatony and McDonald 1998). The brand personalities generated are considered as associated with the indirect source of personality. In addition, the participants were also asked to think out loud about the human characteristics associated with a typical brand user and brand endorsers (if there are any). The second dimension originates from the 'direct' sources of brand personality noted by Aaker (1997). Aaker (1997) suggests that there are four direct sources of brand personality. These include typical brand users, brand endorsers, company employees and CEO of the company. Considering that consumers normally do not have direct contact with company employees and the CEO of the company, they were not recommended to the participants of this focus group. The introduction of the second dimension appeared to be problematic. This is the source of confusions caused to the participants. This is particularly obvious when the researcher threw brand personality traits on the master list one by one into discussion. The participants were instructed to indicate which of the adjectives they would use to describe the brand personality of the examined brand. The confusions are broadly categorized into the following two entities:

1) Some tested items are considered to be relevant to the examined branded product, but it is not necessary to say that they reflect both the true brand personality of the brand, as well as the personality of the typical brand purchaser or endorsers. These items only fitted in well with one dimension introduced by the researcher, but not the other, hence, the participants were unsure whether they should count them as descriptive of the "brand personality" or not. This kind of problem is illustrated by the following example statements:

Tested trait: leader (original Gucci watch)

*Yes, the brand could be a leader.*

*I don't see that. No, I think they (typical users) follow a trend.*

*OK, but the product (branded product) is leading everybody towards it.*

Tested trait: Upper class (Original Gucci watch)

*Yes, I would say the (original branded) product is upper class.*

*Celebrities (typical users) wear; it they're not upper class. I don't think it's traditional enough for upper class to wear it. I don't think it's upper class. My definition is they (upper class) have money, they don't have to demonstrate it as well.*

*What we're talking about here is like the brand everybody wants to follow for fashion, that's not an upper class thing.*

2) Participants shifted to personality of designers or producer of the product when “intelligent” is tested. Nevertheless, participant appears to have difficulty to link ‘intelligent’ directly to the tested branded product. This is evidenced by the following interchange.

*Intelligent, yes, like people who make it or design it would be. People buy it...see themselves as being intelligent. ... No what I mean its designers and producer, people who associate with the product, they (should be) perceived as intelligent.*

*But it is not necessary to say that the (branded) product is intelligent.*

In order to solve this problem, the research went back to the brand personality literature once again and to investigate how the brand personality scales were developed by previous research. This time the focus was on the scale development process rather than the scale itself. The scrupulous study reveals that few researchers resorted to the alternative sources (typical user, brand endorsers, company employees and the CEO) of brand personality noted by Aaker (1997). Interestingly, this includes Aaker herself. The commonly adopted approach in communicating the brand personality is to ask participants to think of the brand as a person and then think of human characteristics associated with investigated brand(s) (e.g. Aaker 1997; Helgeson and Supphellen 2004). This approach is also used to evaluate descriptiveness of brand personality traits (e.g. Siguaw et al. 1999; Aaker et al. 2001; Plummer 1985). This observation raises a question about the accuracy of Aaker's (1997) sources of brand personality claim. This



research would suggest that it might be more precise and make more sense if “typical user, brand endorsers, company employees and the CEO of the company” are labelled as influential factors to brand personality rather than the direct sources of brand personality. The real source of perceived brand personality should be the products under the brand. Consumers’ perceived brand personality can be influenced by “typical user, brand endorsers, company employees and the CEO”. Actually, this is similar to perceived human personality. The individual is the object of his/her personality. External factors might have great impact on an individual personality. Nevertheless, it is not legitimate to say that external factors are the source of the individual personality.

Having understood the above, it is clear that to introduce so-called “direct source of brand personality” (Aaker 1997) will not help the participants achieve a better understanding of brand personality at all. Therefore, the researcher decides to improve the process as follows:

- 1) The academic definition of brand personality, an example of a branded product and a selected representative of brand personalities are written on a board and displayed in front of the participants. Mercedes Benz is chosen, and the selected brand personalities are smart, successful, and prestigious.
- 2) The participants are asked to think of the examined branded product as if it was a person and to comment on all the human characteristics of the branded product that come to mind.
- 3) The predefined brand personality traits are thrown into the discussion one by one. The participants are asked to indicate which of the traits they would use to describe the brand.

#### 6.2.9.2 Problems Caused by Incorrect Probe Questions

The second problem is caused by the questions the researcher asked in relation to the product attributes. The participants were asked to think of product features associated with the investigated branded products. This question did not serve the research objectives of this part of this research. Actually, what the researcher attempted to work out is what product features (both intrinsic and extrinsic) consumers consider as important to them when they are considering buying a product from the studied branded products. (Gucci watches in this case). The answers from the participants did not reflect the true pictures of the features considered to be important. Therefore, they cannot be

used for further study. In order to overcome this problem, the questions were rephrased to ensure the researcher would obtain the answers what she was looking for. Furthermore, they were pre-tested with a non-academic colleague in advance.

#### 6.2.9.3 First Focus Group as a Lesson

In sum, the first focus group discussion is treated as a protocol focus group, due to its unsatisfying outcome. One more focus group is organised, which brings the total of focus groups up to five. Considering that some counterfeit related practices (e.g. manufacturing and selling) are regarded as unethical or even illegal, the research places great attention on avoiding any leading language during the focus group discussion. For example, “genuine branded product” is replaced by “ordinary branded product”.

#### 6.2.10 Number and the Profile of the Recruited Participants

In total, thirty-five ordinary consumers were generated by the researcher's contacts. Twenty-eight of them actually turned up for focus group discussions. Table 6.1 provides the age and gender information about the participants (excluding the protocol focus group). The size of the protocol focus group is five. The sizes of the focus groups used in data analysis are: 6, 6, 5, and 6. Despite two reminder phone calls the researchers made (one was made one week before each focus group discussion, and the other one was made the day before the focus group was held), the turn-out rate was not satisfactory. One focus group was smaller than the initially planned minimum six subjects. The Wimbledon semi-final and final are considered to be the reasons for the relatively low turn-out rate for groups held in the afternoons. The researcher also realised that some potential participants were reluctant to come to a new place they had never been to before (in this case, the site arranged by the researcher is a seminar room at the Business School). The low turn-out rate of the smallest focus group was caused by unpredictable incidents happening to two potential participants. These two people notified the researcher of their reasons for absence by phone on the date the focus group was held. It was too late for the researcher to find replacements. It is acknowledged that the smaller size of one focus group introduces some limitations to this part of the research. Nevertheless, the preliminary nature of the focus group discussion and actually the size is only one participant less than initially planned six subjects (e.g. some researchers used even smaller sizes) justify the acceptability of the relatively smaller group size. Furthermore, the disadvantages of the limited participation are counteracted



by the use of the master list of items that was generated from consumer reports, advertisings, and literature to extract specific criteria from consumers and to compare actual items consumers used to evaluate CBP as contrasted to BP with theoretical concepts.

The focus group discussions were held between late June and early July 2005 in Glasgow. There were 12 males (52.2%) and 11 females (47.8%) who took part in the focus group discussions. Participants also covered a very wide age group, from younger than 20 to older than 60 (Table 6.1). In comparison with the Census Report 2001 of this region, the sample achieves a reasonable representative of the population.

Table 6.1 The profiles of the participants of the four focus group used in data analysis

Age group	Frequency	Percent
<20	3	13.0
20-29	3	13.0
30-39	6	26.1
40-49	5	21.7
50-59	4	17.4
60+	2	8.7
Gender	Frequency	Percent
Male	12	52.2
Female	11	47.8
Total	23	100.0

#### 6.2.11 Transcribing Focus Group Data

The entire process of all four focus group discussions are tape-recorded in order to ensure the data collected is traceable and also create a consistency source of the qualitative information (Boyatzis 1998). Some researchers claim that it is not always necessary to do full transcription (e.g. Krueger 1994) and in some cases analysis can be carried out on the basis of listening to tapes, or on the notes or the memory of the facilitator. Other researchers are strongly against this view and argue that attempts at analysis without transcription will lead to loss of much of the richness of the data and will risk a selective and superficial analysis and it is not acceptable for academic research (e.g. Bloor et al. 2001; Hammersley and Atkinson 2004). In this research, full transcription of each focus group is carried out. A native English speaker is paid to transcribe all five focus group discussions. The researcher checked and revised the transcriptions twice against the original audio-records afterwards. Respondents' names and missing information were added in.

#### 6.2.12 Adopted Data Analysis Techniques

This part of the research is not trying to work out any causal relationship. The main objective of this part of the research is to generalise the criteria consumers used to evaluate CBP and BP. Therefore, the data collected need to be quantified. Content analysis technique is chosen for data analysis, because it is deemed best at giving objective, systematic, quantitative description of communications content (Kassarjian 1977; Berelson 1952), it can serve the predefined requirement of the quantified result.

The focus group discussion data was coded and analysed manually. The data collected in the warming up section was excluded from coding and analysing process, because they did not serve the research questions directly (the role played by phase one has been reported earlier). This rule was consistently applied across all four focus groups' data. The aim of the coding is to bring together all extracts of data that are pertinent to a particular theme and/or topic (Coffey and Atkinson 1996).

The categories were derived from Plummer (2000), which contained product attributes, benefits/consequences and brand personality. Plummer (2000) does not include security concepts. However, the security concern emerged as one stream of worries to the participant. One might argue that the security concern might be considered as a dimension of purchase consequences. Therefore, for the time being the 'security concern theme' is combined with the 'purchase consequence theme'. Nevertheless, due to this being something never reported before, the legality of inclusion of security concept in the benefit/consequences theme is to be tested in the principal study.

Only the elements in the content which fitted the analyst's themes, were selected in order to avoid partial or biased analysis. More specifically, elements irrelevant to the product attributes, the benefits/consequences and the brand personality were eliminated from analysis. The definitions of the categories emerged from previous research. The product attributes are physical elements related to a product (Plummer 2000). The benefits/consequences refer to what consumers think the product can do for them (Keller 1993). Brand personality is the set of human characteristics related to a brand (Aaker 1997).

To avoid the problems of bias by the researcher, the observer of the focus group discussions was selected and trained by the researcher to be the alternative coder of



double coding. The double coding means was adopted because it was regarded as the most commonly used technique and also which can produce sufficient reliability (Miles and Huberman 1984). The reasons for choosing the observer as the coder were first she was familiar with this research; secondly she had a similar background to the researcher. These criteria were considered important by previous researchers (e.g. Peter and Lauf 2002; Krippendorff 2004). The researcher and the recruited coder coded the data independently. Percentage of agreement was used to calculate intercoder reliability, because it was one of the commonly used measures (Perreault and Leigh 1989; Kassarian 1977). The overall reliability is 0.87, a level higher than that described for acceptance (0.85) (Kassarian 1977). Coding discrepancies were resolved through discussion before analysis continued. The criteria considered to be 'important product attributes' and 'yes' answers to benefit/consequence and brand personality related questions by participants when they evaluated the investigated brands (both counterfeit and original versions) were organised into four narrative summaries. The narrative summaries were sent to several participants of focus groups for validation and correction of any misconceptions.

### 6.3 Data Analysis Results of the Preliminary Study

The data collected from the open discussion and the structured discussion parts were analysed separately, with the research results were reported in the following two sections. The stage one and the stage two data are compensatory to each other. However, the structured discussion of the stage two represents the core part of each focus group discussion. Items generated from these two sections were cross-checked against each other and combined to form a list of items, which were used as input variables of the draft research instrument.

In order to save space, common results across groups were combined and reported synthetically and were presented mainly using tables. This is considered as feasible, because in most cases the emerged factors from the stage one data across all four groups, as well as the tested factors of the stage two were somewhat similar. This is particularly true for the structured discussion section. For example, mainly the personality traits suggested by Aaker (1997) were tested across all four focus groups in relation to brand personality. To report the research results synthetically also helped to reduce the chance of repetition and unnecessary effort involved in reporting similar

results repeatedly. All distinguishable results were reported individually with the source of the data marked clearly.

As reported earlier, the master list of items was generated with the aim of achieving maximum exhaustion. By doing so, to a great extent it established that few important items were left unexamined in the preliminary study. For methodological constraints (the length of the questionnaire could limit the number of respondents), this part of the research attempted to drop unimportant factors in relation to brand image, reduce the number of items to be tested at the principal research stage, and therefore identify the most important and appropriate items for inclusion in this study. Accordingly, the stage two data was analysed and reported first, thereafter the stage one results. The logic behind this is to work out what can be qualified to stay from the stage two data, then check the qualified items against the stage one results. Missed items were added in and repeated items were dropped off.

To reduce the number of variables to a manageable level at this stage is absolutely crucial to this research because this study examines two versions of four brands simultaneously, which makes the questionnaire unnecessarily long if this situation is not dealt with carefully. Thus, any effort that can reduce even one single item might have a multiple effect on the length of the questionnaire. For example, if one item can be removed without reducing the accuracy of measurement of the dimension, then effectively the length of the research instrument can be reduced at least by two statements. This is because each statement will be repeated twice for the reason that two versions of one brand are examined in this study. In some cases, due to three dimensions of one variable requiring (e.g. risk) separate tests, each statement will be repeated six times.

### 6.3.1 Results of the Structured Discussion

Given the complex and rich nature of this part of the data, fixed criteria are needed before setting out for each step of data reduction. These criteria should clearly indicate what items are qualified to be dropped off for further investigation. The pre-set up criteria are considered important because the researcher will have to resort to them in the process of reduction of unnecessary items in order to achieve accuracy. These criteria also assist to achieve a consistency across studied brands and product classes. The pre-set up criteria are reported in detail in the following sections.



### 6.3.1.1 Brand Personality

#### 6.3.1.1.1 Criteria in Relation to Personality Traits

- Personality traits the participants had difficulties to understand

None of the participants across all four focus groups admitted that he/she had difficulties in understanding the personality traits given by the researcher. Interestingly, they appeared to have difficulties in qualifying some of the personality traits when they were asked whether studied brands had these brand personalities or not, and failed to give a “yes” or “no” answer to the questions they were asked. These answers are categorised into “hard to say”, “too difficult to qualify”, “I am not sure” and “ask further explanation from the researcher”. These answers indicate that the participants did not understand the personality traits provided by the researcher or at least could not connect them with the studied brands. Nevertheless, they were reluctant to admit it in front of other people. This is consistent with Mitchell (1999) who addresses that lack of public disclosure of individuals might be a pitfall of focus group discussion. Thus, these personality traits are treated as hard to understand and formulate the first criterion that should be met by the items that are not qualified for further consideration. These items are presented in Table 6.2 marked with “NK”.

- Personality traits the participants considered as irrelevant

Not surprisingly, the participants stated that some of the personality traits could not be used to depict the brand personality of the studied brands. This responses to Aaker (1997) and Davies and Roper (2001), who suggest that brand personality was product/brand specific. These personality traits are dropped off for further test. So the second criterion is personality traits considered as irrelevant to the studied brands. They are reported in Table 6.2 marked with “I”.

- Personality traits the participants believed the studied brands did not have or might not have

The research revealed that although some personality traits were confirmed by the participants that they could be used to describe the brand personality of the studied brands, however it is not necessary to say that the participants would perceive that the brands had these personalities. Therefore, the personality traits were left out for further consideration in the case that neither the original BP (all the respondents) nor the CBP

Table 6.2 Tested personality traits and related data

Brands Traits	Rolex		Gucci		Burberry		Louis Vuitton	
	BP	CBP	BP	CBP	BP	CBP	BP	CBP
Down to earth	*N	*N	*N	*N	*N	*Y	*N	*N
Family oriented	*N	*N	*N	*N	*N,Y,	*N	*N	*N
Small town	*N	*N, IM, Y,NK	*N	*N	*N, Y, NK	*N	*N	*N
Honest	*N, NK, I	*N	*N	#N	*N	*N	*N	*N
Sincere	*I	*N	*N, Y	*N	*N, I	*N	*N	*N
Real	*N,Y,NK,I	*N	*N	*N	*N	*N	*N	*N
Wholesome	*N	*N	*N, I	*N, Y	*N	*N	*N	*N
Original	*N	*N	*Y, NK	*N	*Y	*N	*N	*N
Cheerful	*N	*Y, IM	*N	*N	*N,Y	*Y	*N	*N
Sentimental	*Y	*N	*N, I	*N, I	*N	*N	*N	*N
Friendly	*N, I	*N, Y, I	*N	*N	*N	*N	*N	*N
Daring	*N	*N	*N,Y,NK	*Y	*N	*N	*N	*N
Trendy	*N	*N	*Y	*N, Y	*N,Y	*N	*Y	*N,Y
Exciting	*N, Y	*N	*Y	*N, Y	*N	*N	*N	*N
Spirited	*N	*N, NK	*N	*N	*N	*N	*N	*N
Cool	*N	*N	*Y	*N	*N	*N	*N, Y	*Y
Young	*N	*Y	*N	*N, Y	*N,Y	*Y	*N	*N
Imaginative	*N	*N	*N,Y	*N, Y	*N	*N	*N	*N
Unique	*N, Y	*N	*N	*N	*Y	*N	*N, Y	*N
Up-to-date	*N	*N	*N, Y	*Y	*N	*N	*N,Y, NK	*N,Y
Independent	*Y	*N	*Y, I	*N,I	*I, IM, Y	*N	*Y,I	*N,Y
Contemporary	*N	*N	*Y	*Y	*Y	*Y	*Y	*Y
Reliable	*Y	*N, IM	*Y	*N	*Y	*N	*Y,NK	*N
Hard working	*Y	*IM	*N, Y	*N	*N	*N	*N	*N
Secure	*Y	*N	*Y	*N	*N	*N	*N,Y	*N
Intelligent	*N, I	*N	*N,Y, I	*N	*N	*N	*N	*N,Y
Technical	*Y,N	*N	*N, Y	*N, Y	*N	*N	*I	*N
Corporate	*Y, IM	*IM, NK,Y N	*Y	*N	*Y	*N	*Y, I	*N
Successful	*Y	*N	*Y	*N	*Y	*N, Y	*Y	*N,Y
Leader	*IM, Y,	*N	*N	*N	*N, Y	*N	*N	*N
Confident	*Y	*N, Y	*N	*N,Y	*Y	*Y, NK	*Y	*N,Y,NK
Upper class	*N,Y	*N	*N,Y, NK	*N	*N	*N	*Y	*N
Glamorous	*IM,Y	*N	*Y	*N,Y	*N	*N	*N,Y	*N,Y
Good looking	*N, I	*N	*Y	*N,Y	*N, Y	*N	*N,Y	*N,Y
Charming	*N	*N	*N,Y, NK	*N	*I, N	*Y	*N	*Y,I,N
Feminine	*N	*N	*N	*N	*Y	*Y	*Y	*Y
Smooth	*Y	*N, NK	*Y	*N,Y	*N, Y	*N	*Y	*N
Outdoorsy	*N	*N	*N	*N	*Y	*N	*N	*N
Masculine	*N	*N, IM, I	*N, NK	*N,Y	*N	*N	*N	*N
Western	*N, I	*N, NK	*NK	*N	*Y	*Y	*Y	*Y
Tough	*N, Y	*N	*N,	*N,Y, NK	*N	*N	*N	*N
Rugged	*N	*N	*N	*N, Y	*N	*N	*N	*N
Classic (not included in Aaker 1997)	*Y	*N	*Y	*N,Y	-----	-----	-----	-----
Beauty (not included in Aaker 1997)	*N	*N	*Y	*N,Y	-----	-----	-----	-----
Elegant (not included in Aaker 1997)	*IM,I	*N	*Y	*N,Y	-----	-----	-----	-----
Dynamic (not included in Aaker 1997)	-----	-----	*N, NK,	*N,NK, IM	-----	-----	-----	-----
* Adjectives the participants claimed they could understand								
I Adjectives considered irrelevant by the participants								
----- Adjectives which were not tested in the focus group discussion.								
N = No								
NK = Don't know								
Y = Yes								
IM = Neutral								

(some of the respondents) of one brand was considered to have the tested brand personality. However, if the original BP did not have one personality, but it was confirmed by all participants of the group that the CBP had this particular personality,



this personality trait was remained. The reason for this is that these results might be an indication that consumers might perceive brand personality of CBP different to BP. It will be interesting to see what new brand personalities the counterfeit version can bring in. Moreover, these perceived brand personalities of the CBP over the BP might have great influence on consumer decision making process and purchase choice. The third criterion is described as: personality traits which all the participants perceived that the BP did not have and at least some of the participants considered the CBP did not have. Finally, in the case that the participants could not reach an agreement in relation to whether the original BP had a tested personality or not, this personality trait was regarded as unqualified. This formulates the last criterion. Table 6.2 reports the tested personality traits across four brands and related data collected from focus group discussions.

6.3.1.1.2 Justification for the above Pre-set Criteria in Relation to Reducing Items

One might argue that the general criteria set up by the researcher in order to reduce items are very harsh and may lead to some limitation to this research. This research acknowledges this limitation. However, dropping unnecessary items is regarded as a better approach compared with ending up with a very lengthy research questionnaire, as a very length research instrument requires a very large sample size, will increase the possibility of a obtaining lower response rate, and leads to more missing data. Furthermore, considering the one of the main objectives of this research is to compare consumers' perceptions of the CBP as opposed to BP, thus only the very obvious brand personalities are considered important for this research and worth investigation. With regard to the rationale in relation to dropping off the items which the participants had difficulties to understand, this research would argue that if the subjects could not even understand what they were asked about, how can it be possible to ensure the answers elicited from them are not ambiguous? The researcher believes that people would agree that there is no sense to keep the items that are perceived as "irrelevant". Likewise, it is pointless to keep personality traits that the participants considered the likelihood of these being personalities of these studied brands as low or even none for both CBP and BP (justification for the third criteria). To drop all the items that the participants could not reach an agreement on the tested brand personality of the original BP is also because of the reason that this research only investigates the most obvious brand personality perceived by consumers due to the time limitation for this research

but not all possible personality possessed by an individual brand. This means also makes a more focused research. The above noted arguments justify the acceptability of the criteria pre-set up by the researcher. Table 6.3 presents the personality traits that went through the criteria and left for further investigation.

Table 6.3 Personality traits which satisfied the pre-set up criteria

Brands	Rolex			Gucci			Burberry			Luise Vuitton		
	BP	CBP		BP	CBP		BP	CBP		BP	CBP	
Down to earth							1	*N	*Y			
Original							2	*Y	*N			
Cheerful	1	*N	*Y, IM									
Sentimental		*#Y	*#N									
Trendy				1	*Y	*N, Y				1	*Y	*N, Y
Exciting				2	*Y	*N, Y						
Cool				3	*Y	*N						
Young	2	*N	*Y									
Unique							3	*Y	*N			
Independent	3	*Y	*N									
Contemporary				4	*Y	*Y	4	*Y	*Y	2	*Y	*Y
Reliable	4	*Y	*N, IM	5	*Y	*N	5	*Y	*N			
Hard working	5	*Y	*IM									
Secure	6	*Y	*N	6	*Y	*N						
Corporate				7	*Y	*N	6	*Y	*N			
Successful	7	*Y	*N	8	*Y	*N	7	*Y	*N, Y	3	*Y	*N, Y
Leader	8	*IM, Y,	*N									
Confident	9	*Y	*N, Y									
Upper class										4	*Y	*N
Glamorous	10	*IM, Y	*N	9	*Y	*N, Y						
Good looking				10	*Y	*N, Y						
Feminine							8	*Y	*Y	5	*Y	*Y
Smooth				11	*Y	*N, Y				6	*Y	*N
Outdoorsy							9	*Y	*N			
Western								*#Y	*#Y		*#Y	*#Y
Classic (not included in Aaker 1997)	11	*Y	*N	12	*Y	*N, Y		-----	-----		-----	-----
Beauty (not included in Aaker 1997)		-----	-----	13	*Y	*N, Y		-----	-----		-----	-----
Elegant (not included in Aaker 1997)		-----	-----	14	*Y	*N, Y		-----	-----		-----	-----
* Adjectives the participants claimed could understand. # Adjectives are considered irrelevant and inappropriate after discussion. ----- Adjectives which were not tested in the focus group discussion. N = No Y = Yes IM = Neutral												

6.3.1.1.3 Personality Traits Results

Responding to our earlier argument which suggests that brand endorsers, company’s employees or CEO might be regarded to have direct impact on consumer perceived brand personalities, personality traits associated to these characteristics are considered as acceptable in order to achieve an exhaustive list. The rationale for keeping these personality traits is because that it is clear that the consumer perceived brand personalities are in line with their perceptions of these related characteristics. We would argue that in the case that consumers’ perceived brand personalities do not fit in well with their perceived human personality of the influential parties, the perceived human personalities should not be considered as presenting brand personality.



The participants of the Gucci group and the Rolex group expressed that original Gucci and Rolex watches were “sentimental”. More specifically, the original Rolex and Gucci watches were considered as “sentimental” if they were received as presents. Due to the “usage situation” not being considered as an antecedent of brand personality by Aaker (1997), “sentimental” is dropped for further consideration from Rolex and Gucci. By so doing, this research is not suggesting that previous research is flawless and one should not challenge them, but because to introduce more dimensions will end up with more variables to be tested later on. Moreover, the research focus is not on redefining dimensions of brand personality. Whereas, the time scale of this research does not allow fulfilling this task either. Therefore, it is decided that no further effort to be put into justifying the legitimacy of the newly discovered dimension. However this research acknowledges that this discovery might have shed some light on a new research area for later researchers.

Two focus groups’ (Burberry and Louis Vuitton) participants believed that both Burberry and Louis Vuitton handbags had “western” brand personality, because only western people wore these brands and both of these brands were western brands as opposite to Asian brands. Aaker (1997) did not give detailed interpretations to each individual item she included in the brand personality dimensions. There is a great chance that the participants’ understanding of “western” brand personality in this research is different to Aaker’s (1997). Aaker’s (1997) dimensions were developed in the context of American culture, in which “western” is more likely connected to life in the western part of the US in the times of the wars with the American Indians, or one with cowboys, rustlers, and sheriffs. If this holds true, the participants’ interpretation of “western” of this research differs to the original meaning of “western” recommended by Aaker (1997). Given that “western” appeared difficult to understand (Rolex and Gucci groups) and were more likely to be misinterpreted (Burberry and Louis Vuitton), it was decided that this personality trait is eliminated, despite they were qualified to remain in to groups according to the pre-set up criteria. This is consistent with Diamantopoulos et al. (2004) and Davies and Roper (2001) who also report that ‘western’ is highly ambiguous in the UK context. Table 6.4 reports all items associated to brand personality that finally qualified for inclusion in this study.

Table 6.4 Personality traits qualified to stay at this stage

Brands Traits	Rolex			Gucci			Burberry			Louis Vuitton		
		BP	CBP		BP	CBP		BP	CBP		BP	CBP
Down to earth		-----	-----		----	-----	1	*N	*Y		-----	-----
Original		-----	-----		----	-----	2	*Y	*N		-----	-----
Cheerful	1	*N	*Y, IM		----	-----		-----	-----		-----	-----
Trendy		-----	-----	1	*Y	*N, Y		-----	-----	1	*Y	*N, Y
Exciting		-----	-----	2	*Y	*N, Y		-----	-----		-----	-----
Cool		-----	-----	3	*Y	*N		-----	-----		-----	-----
Young	2	*N	*Y		----	-----		-----	-----		-----	-----
Unique		-----	-----		----	-----	3	*Y	*N		-----	-----
Independent	3	*Y	*N		----	-----		-----	-----		-----	-----
Contemporary		-----	-----	4	*Y	*Y	4	*Y	*Y	2	*Y	*Y
Reliable	4	*Y	*N, IM	5	*Y	*N	5	*Y	*N		-----	-----
Hard working	5	*Y	*IM		----	-----		-----	-----		-----	-----
Secure	6	*Y	*N	6	*Y	*N		-----	-----		-----	-----
Corporate		-----	-----	7	*Y	*N	6	*Y	*N		-----	-----
Successful	7	*Y	*N	8	*Y	*N	7	*Y	*N, Y	3	*Y	*N, Y
Leader	8	*IM, Y	*N		----	-----		-----	-----		-----	-----
Confident	9	*Y	*N, Y		----	-----		-----	-----		-----	-----
Upper class		-----	-----		----	-----		-----	-----	4	*Y	*N
Glamorous	10	*IM, Y	*N	9	*Y	*N, Y		-----	-----		-----	-----
Good looking		-----	-----	10	*Y	*N, Y		-----	-----		-----	-----
Feminine		-----	-----		----	-----	8	*Y	*Y	5	*Y	*Y
Smooth		-----	-----	11	*Y	*N, Y		-----	-----	6	*Y	*N
Outdoorsy		-----	-----		----	-----	9	*Y	*N		-----	-----
Classic (not included in Aaker 1997)	11	*Y	*N	12	*Y	*N, Y		-----	-----		-----	-----
Beauty (not included in Aaker 1997)		-----	-----	13	*Y	*N, Y		-----	-----		-----	-----
Elegant (not included in Aaker 1997)		-----	-----	14	*Y	*N, Y		-----	-----		-----	-----
* Adjectives the participants claimed could understand. ----- Adjectives which were not tested in the focus group discussion N = No Y = Yes IM = Neutral												

6.3.1.2 Product Attributes

6.3.1.2.1 Product Attributes Results

Style, price, logo, size, and material were considered as important factors for both CBP and BP across almost all four studied brands, with the exception of the respondents of the Rolex focus group all agreed that material of the counterfeit Rolex watches did not matter to them, and some of Louis Vuitton respondents claimed that the size of the counterfeit handbag was not an issue.

All the participants of the Rolex and Gucci groups confirmed that warranty was important to the original branded products. Some respondents of Burberry and Louis Vuitton claimed that warranty was important; some thought it was not an issue in relation to the original BP. None of the participants across all four focus groups considered warranty was a factor to them when faced with CBP. It appears that warranty is considered more important for functional brands than for fashionable brands. This might because consumers concern more performance risk when they buy



functional products then fashionable products. Thus “warranty” as a kind of back up to any failure performance appears to be critical.

Packaging was not considered as a matter at all to all respondents of all four focus groups under CBP circumstances. It was not regarded as important in relation to the original Gucci watches and Burberry handbags. All the participants of the Rolex group and some of the Louis Vuitton participants claimed that packaging was important to Rolex watches and Louis Vuitton, with some of Louis Vuitton respondents asserting that packaging never came to their mind. The reason for this result is not clear. Possible reasons the researcher can offer are, first Rolex watches and Louis Vuitton handbags are priced much higher than Gucci watches and Burberry handbags, therefore the participants would expect more personal treatment; secondly it is well known that Rolex watches and Louis Vuitton handbags normally come with very high quality packaging.

The participants of the Rolex group believed that country of origin was very important for the original Rolex watches. More specifically, the original Rolex watches had to be Swiss made. The other three focus groups respondents did not achieve an agreement with regard to the importance of the country of origin to the original BP. Some respondents thought it was important, some disagreed. These distinctions might have something to do with the fact that Switzerland is perceived as the origin of the best mechanical watch manufacturers. Thus, consumers would certainly expect Switzerland to be the country of origin of a watch brand like Rolex. A clear pattern appears in the case of CBP; all respondents across four focus groups did not think country of origin of CBP mattered to people.

Waterproof was considered as very important to the genuine Rolex watch, but not to the counterfeit version. Some participants believed that waterproof was important to both the original and counterfeit Gucci watches, some had opposite opinions. This can be explained by the fact that “waterproof” is one of the key functions of Rolex watches and serves special needs. For example, each Oyster Rolex watch is waterproof to minimum 100 meters. Therefore, it bound to be considered as vital to this brand. In comparison with Rolex, Gucci is more likely to be perceived as a fashionable brand. Considering the price they pay for a Gucci watch, consumers would expect that the

watch is waterproof to some extent. It appeared that some subjects did not fully understand what the ‘Red cherry equestrian’ and ‘Check’ attributes related to Burberry mean. These two terms are discarded. Table 6.5 presents the detailed data gathered in relation to product attributes.

Table 6.5 Product attributes examined in focus group discussion and results

Brands	Rolex		Gucci		Burberry		Louis Vuitton	
	BP	CBP	BP	CBP	BP	CBP	BP	CBP
Traits								
Size	Y	Y	Y	Y	Y	Y	Y	N,Y
Price	Y	Y	Y	Y	Y	Y	Y	Y
Packaging	Y	N	N	N	N	N	N,Y	N
Warranty	Y	N	Y	N	Y,N	N	N,Y	N
Waterproof	Y	N	N,Y	Y,N	-----	-----	-----	-----
Country of origin	Y	N	N,Y	N	N,Y	N	N,Y	N
Material	Y	N	Y	Y	Y	Y	Y	Y
Logo	Y	Y	Y	Y	Y	Y	Y	Y
Style	Y	Y	Y	Y	Y	Y	Y	Y
Red cherry equestrian	-----	-----	-----	-----	NK	Y, NK	-----	-----
Check	-----	-----	-----	-----	Y, NK	NK	-----	-----
----- Not relevant to studied branded products								
N = NO, For example: It does not bother me. I don't think it would be a big concern								
Y = YES, For example: I think you expect...,								
NK = NOT KNOW, For example: I don't know why they should think about that, what do you mean?								

6.3.1.2.2 Criteria in Relation to Product Attributes

This part of the research aimed to elicit the product attributes that the participants considered as important in relation to the studied brands. Any attributes the participants showed any difficulty in understanding, in addition to the attributes that either all or part of the group participants regarded as unimportant to the original BP were treated as inoperative for a study investigating the distinguishable consumers’ perceptions of BP and CBP. It is true that different consumers might perceive different product attributes as important according to their personal situation. However, this is not what this research sets out for. This research focuses on examining the product attributes that are perceived as important to consumers in general. The reasons are similar to the one given in personality traits section, the only difference is that this part of the research is looking at product attribute other than brand personality. The logic behind it is identical. This approach results the research focuses on the most important product attributes. Furthermore, consumers might have different perceptions of product attributes of the CBP and BP; however, due to these attributes not being considered as important, it was more likely that they did not have much exploratory power in the formation of consideration set and final choice. Therefore they are not kept for further consideration.

6.3.1.2.3 Dropping Warranty and Logo

As reported earlier in this section, all the participants of the Rolex and the Gucci groups confirmed that warranty is important to the original branded products, but not to the



counterfeit versions. According to the pre-set up criteria, “warranty” is qualified to stay. Nevertheless, given that CBP does not provide warranty in the context of non-deceptive counterfeiting is an obvious reality, there is no sense in testing it again. Furthermore, this was evidenced by the focus group data, which showed that none of participants across all four focus groups considered warranty was a factor to them when faced with CBP. Accordingly, “warranty” is dropped off. The idea of counterfeiting is to adopt the logo of the original branded. The counterfeit branded products have identical logos to the original branded products. There is no point in examining them. As such, ‘logo’ is discarded. Table 6.6 presents the products attributes left for cross-checking against open discussion stage results.

Table 6.6 Product attributes qualified for further investigation

Brands	Rolex		Gucci		Burberry		Louis Vuitton	
	BP	CBP	BP	CBP	BP	CBP	BP	CBP
Traits								
Size	Y	Y	Y	Y	Y	Y	Y	N,Y
Price	Y	Y	Y	Y	Y	Y	Y	Y
Packaging	Y	N	-----	-----	-----	-----	-----	-----
Waterproof	Y	N	-----	-----	-----	-----	-----	-----
Country of origin	Y	N	-----	-----	-----	-----	-----	-----
Material	Y	N	Y	Y	Y	Y	Y	Y
Logo	Y	Y	Y	Y	Y	Y	Y	Y
Style	Y	Y	Y	Y	Y	Y	Y	Y
----- Not qualified product attributes								
N = NO, For example: It does not bother me. I don't think it would be a big concern								
Y = YES, For example: I think you expect ...								

6.3.1.3 Benefits and Consequences

6.3.1.3.1 Criteria in Relation to Benefits and Consequences

The tested items are dropped if the participants considered them as “irrelevant” or claimed “do not understand” in either case of the original BP or the CBP. This is because for either of these, the data associated to BP and CBP would be ambiguous and incomparable. Furthermore, in the case that the participants could not reach an agreement in relation to the suggested benefit or consequence of the BP, the related item is treated as disqualified for further investigation. This research assumed that these items did not indicate very obvious benefits or consequences of the tested original BP compared with other items, which all the participants either determined “yes” or “no” to the given questions. We are aware that this means might cause some bias to this research, due to the size of the focus group being relatively small. However, a trade off has to be made between a possibility of reasonable level of bias and ending up with a very lengthy questionnaire. For the same reason which has been addressed in the “personality traits” section and the “product attribute section”, this research believes the

first choice is a better approach. This is because it will lead to a more focused research, rather than looking at everything possibly related. More specifically, this research will only examine the most important benefits and consequences of the studied brands. Table 6.7 presents the detailed research data in relation to purchase benefit and consequences.

Table 6.7 Detailed research data in relation to benefits/consequences

Brands	Rolex		Gucci		Burberry		Louis Vuitton	
	BP	CBP	BP	CBP	BP	CBP	BP	CBP
Traits								
Good Quality	Y	Y	Y	N	Y	N	Y	Y
Accuracy	Y	Y	Y	N,Y	-----	-----	-----	-----
Precision	Y	Y,N	Y	N,Y	-----	-----	-----	-----
Performance	Y	Y	Y	N,Y	-----	-----	-----	-----
Durability	Y	N	Y	N,Y	Y	N	Y	N,Y
Easy to care	Y	I	Y	N,Y,I	N,NK,I	I	N,Y,NK	I,Y
Fun,	N	Y	N,Y	N,Y	N	Y	N	Y
Value for money	N,	Y	N,	N,Y	N, Y	Y	Y	Y
Disposable	N	Y	N,	Y	N	Y	N	Y
Uniqueness	N,Y	N	N,Y	N	N,Y	N,Y	Y,N	Y,N,
Exclusivity,	Y	Y, N	Y	Y	Y	N	Y	Y
Fashionable	N, Y, I	Y	Y	Y	Y	Y	Y	Y
Attention-getting	Y	Y	Y	Y	Y	Y	Y	Y
Prestigious	Y	N, Y	Y	Y	Y,N	N	Y	Y
Comfortable	Y,I	N, I	N,Y	N	Y	N,Y,I	Y,N	N
Risk	N	N	N	Y	N	Y,N	Y	Y
High failure rate	N	Y	N	Y	N	Y,N	NK,N	Y
expensive promotions	N,Y,I	I	N,Y	N,I	Y,I	N	Y,I	N
advertising campaigns	N,Y	I	I	N	I	N	Y,NK	NK
----- Not relevant to studied product category								
N = NO, For example: It does not bother me. I don't think it would be a big concern								
Y = YES, For example: I think you expect...,								
I = Irrelevant, For example: I do not think it is relevant.								
NK = NOT KNOW, For example: I don't know why they should think about that, what do you mean?								

6.3.1.3.2 Product Benefits and Consequences Results

All the participants of three focus groups (Rolex, Burberry, and Louis Vuitton) could not perceive “fun” from the original brands. In contrast, they all believed that the counterfeit version was “fun”. The participants of the Gucci group did not achieve an agreement in relation to whether it was fun or not for both versions. All participants from three groups (Rolex, Burberry, and Louis Vuitton) believed that the counterfeit versions were “value for money”, with an exception of Gucci which some of the claimed it was “value for money” but some had opposed view. The Rolex and Gucci groups did not think the original Rolex and Gucci watches were value for money, whereas Louis Vuitton participants believed that the original Louis Vuitton was “value for money”, Burberry participants appeared difficult to achieve an agreement. To a great extent, these research findings do not support findings reported by previous researchers. For example, Nia and Zaichkowsky (2001) reported in their research that



the subjects found that luxury products are “fun” and “worth the price they paid for”, whether they were original or counterfeit. The reasons the researcher can offer here for the distinguishable results is might be something to do with the subjects elected for these two studies. Nia and Zaichkowsky’s (2001) subjects were people from a very rich area, the participants of this study were ordinary consumers of Glasgow, a city with average household income lower than national average household income (Wealth of the Nation 2006). People with different income levels are more likely to have different perceptions of luxury products. Furthermore, Nia and Zaichkowsky’s (2001) study was conducted in Canada, this work was undertaken in the UK.

Moving one step beyond Nia and Zaichkowsky (2001), this research revealed that “value for money” was interpreted in two distinguishable ways. It is more likely that the participants were concerned more about quality when judging whether CBP was “value for money” or not, some participants used quality as the only criterion in relation to judge of value of BP, some brought in alternative criterion, for example brand image. This was evidenced by the following:

*Yes (it is value for money). Because if you are buying it you might not for quality of the product, it isn't what you are putting across, so it may be value for money in that respect. People see you with that sort of brand; (they) talk to you because of what you wear, what you do. So it could be construed, maybe not actual physical material properties... The value you can see is something else. (Original Burberry)*

*You are not buying (original Burberry) for value for money.*

*Possibly (it is value for money), depending on the quality. (Counterfeit Louis Vuitton)*

The above statements indicate that “value for money” might be a two-dimensional construct in the context of non-deceptive counterfeiting. One dimension is derived from the connection of the perceived physical material properties and the price of the product. The second dimension can be obtained from the linkage of the price of the product and its intangible properties, for example statement of status. It is very important to be aware of the two-dimensional nature of this concept and it should be taken into account

in the principal study. This finding extends Bradburn and Sudman's (1991) statement who argue that 'language is basically ambiguous, words can have different meanings to the person who says them and to those who hear them (p.32)' by suggesting that words can have different meanings to different people, they also can mean different things to the same people in different contexts.

Given the above very interesting findings, both "fun" and "value for money" were considered as the most dominant dimensions of image (Grossman and Shapiro 1988a; Dubois and Paternault 1995; Nia and Zaichkowsky 2001), they remain for further consideration despite in some cases they satisfied the criteria for dropping off.

Choice of "high failure rate" or "risk"

The focus group data revealed that the participants differentiated risk and noted performance risk, financial risk and social risk (possibility of being found out by a third party if they buy CBP) in relation to CBP. These were evidenced by:

*If it lasts a year and costs £5, that is not much risk (counterfeit Rolex watch).*

*Well I mean you are taking a risk and you're paying money for something that's very shoddy (Counterfeit Louis Vuitton).*

*You are making a risk statement. Although I'm paying for this £10, can I afford to waste this £10 as opposed to £20 (Counterfeit Burberry)?*

*You're always calculating that risk. Because you're thinking this is a forgery, is it going to do its purpose (Counterfeit Burberry)?*

*(It's) a risk if you get found out (Counterfeit Louis Vuitton).*

*They will not feel very comfortable with G8 going on (Original Louis Vuitton).*

*There are some pubs do not allow people who wear Burberry products in (Burberry).*

On the contrary, none of respondent expressed any concern about performance and financial risk related to purchase of the BP. To explain the reason, a claim of one group might shed some light, if it is not sufficient:



*I don't think (to buy original Rolex watch) it's risky. Because it's under warranty.*

*I think you expect a warranty with whatever you buy. If it breaks you take it back, or claim on your credit card insurance or whatever (Burberry handbag).*

It is likely that “warranty” of BP might be the source of peace in mind for the participants. Although the financial risk was noted as a dimension of the risk in literature, there is no agreement reached between participants with regard to possibility of financial risk in relation to CBP. The data also revealed that both original brands and counterfeit versions might bring social risk to the participants. However the social risk is caused by different reasons. The participants believed that people might be concerned about being found out for using CBP, they might worry about being considered as anti-socialist in the case of consuming luxury brands (Original Louis Vuitton group) or being singled out by society (Original Burberry group). Surprisingly, the respondents of the Rolex group did not see much risk at all in relation to both the counterfeit version and original version. No sound interpretation can be provided at this stage. An assumption was made that the surprising finding might be caused by the small number of the participants, alternatively the complexity of the risk construct. Therefore, it is interesting to see whether this research finding will hold in the case of a larger sample size. In order to ensure the comparability of data across two version, it is rational to include all the antecedents of risk emerged from the focus group discussions. Therefore, financial risk, performance risk as well as social risk will be tested across all four brands in the principal research. Two dimensions of social risk are measured in relation to Burberry and Louis Vuitton handbags. Worries for being singled out or becoming a target of anti-capitalists is not tested in relation to Rolex and Gucci watches, because watches do not attract as much attention as handbags. Therefore, people who wear Rolex and Gucci are less likely to be targeted by the anti-capitalists.

Given that this research assumed that the “high failure rate” is identical to the performance risk of the overall risk, therefore, in order to avoid repeated measuring only one should remain. Considering the participants of one focus group showed difficulties in terms of understanding “high failure rate”, on the other hand performance

risk is a well established construct and it might be easier for participants to understand, consequently “high failure rate” is replaced by “performance risk”.

Table 6.8 presents the products attributes left for further consideration. “Risk” still appears in the table, but no data are presented, and will be replaced by performance risk, social risk and financial risk in the draft of the research instrument. The legitimacy of the use of “performance risk” as a replacement is to be tested in the pilot study.

Table 6.8 Benefits/consequences left for further consideration

Brands	Rolex		Gucci		Burberry		Louis Vuitton	
	BP	CBP	BP	CBP	BP	CBP	BP	CBP
Good Quality	Y	Y	Y	N	Y	N	Y	Y
Accuracy	Y	Y	Y	N,Y	-----	-----	-----	-----
Precision	Y	Y,N	Y	N,Y	-----	-----	-----	-----
Performance	Y	Y	Y	N,Y	-----	-----	-----	-----
Durability	Y	N	Y	N,Y	Y	N	Y	N,Y
Fun,	N	Y	N,Y	N,Y	N	Y	N	Y
Value for money	N,	Y	N,	N,Y	N, Y	Y	Y	Y
Disposable	N	Y	N,	Y	N	y	N	Y
Exclusivity,	Y	Y, N	Y	Y	Y	N	Y	Y
Fashionable	-----	-----	Y	Y	Y	Y	Y	Y
Attention-getting	Y	Y	Y	Y	Y	Y	Y	Y
Prestigious	Y	N, Y	Y	Y	-----	-----	Y	Y
Risk								
----- Not qualified as benefits and consequences								
N = No								
Y = Yes								

6.3.2 Open Discussion Results and Factors Finally Qualified to Remain

To identity the appropriate benefits/consequences and product attributes, the participants were asked to speak out on product attributes they considered as important and benefits/consequences they could connect to the studied original BP. It was originally designed to elicit factors in relation to product attributes and benefits/consequences of both the counterfeit and the original versions. However, the counterfeit version was decided not to be taken into consideration at this stage in order to avoid causing restiveness among the participants. Table 6.9 outlines the product attributes consider to be important by the participants. Table 6.10 presents the obvious benefits/consequences of the original BP.

“Statement of self image” “high standard quality” and “costly” were stable across all four brands the original luxury brands. “Statement of self image” was a new dimension of benefit and was not included in the stage two discussion, and should therefore be included for further study. A trade off was being made between “value for money” (Table 6.8) and “costly” with regard to preference to remain. Given that “value for



money” was considered as one of the most influential variables to consumer decision making (Zeithaml 1988), it was decided that “value for money” remained to stay, “costly” was excluded from the study. The exclusion of “costly” is considered legitimate and does not have great impact on the rigorous of this study. This is because “costly” has a very similar meaning to “very high price” which was regarded as a very important product attribute and was to be tested in this study.

Table 6.9 Product attributes considered as important by the participants

	Rolex	Gucci	Burberry	Louis Vuitton
Price	**	**	**	**
Waterproof	**			
Quality	*		*	*
Style	**	**	*	**
Material	#	**	**	**
Logo	#	#	**	**
Colour			**	*
Size	#	#	**	**
Quality mark				*
Practicality	*	*	*	*
* Product attributes considered as important at this stage				
# Product attributes considered as important in stage two, but were not mentioned at this stage				

Table 6.10 Benefits/consequences of the original BP

	Rolex	Gucci	Burberry	Louis Vuitton
High standard quality	**	**	**	**
Statement of self image	*	*	*	*
Good feeling			*	*
Social risk	*		*	*
Security	*			*
Costly	*	*	*	*
Attention getting	**	**	#	#
Exclusivity	#	#	#	**
Fashionable		#	#	**
* Benefits/consequences in relation to original BP				
----- Product attributes considered as important in stage two, but were not mentioned at this stage				

The participants of all four groups claimed that “high standard quality” was an obvious benefit of the original brands. Interestingly enough, few participants noted any precise quality benefit. It appeared that the participants utilised the general view about quality in preference over providing more precise judgement of quality based on product physical features under the stimulus situations. This might because it is difficult for consumers to give more precise quality evaluation before they actually have used the product (Lefkoff-Hagius and Mason 1993). Accordingly, “high standard quality” is kept, whereas other items (accuracy, performance, precision, and durability) related to more detailed quality that were qualified to remain in stage two (Table 6.8) were excluded from further investigation.

“Security concern” was another new dimension which emerged from the open discussion associated with consequences of the original BP. It appeared that it only linked to the Rolex watches and Louis Vuitton handbags, but not the other two original BPs. This can be explained by the differentiation of the market segments of these brands. All the respondents of these two groups believed that original Rolex watch and Louis Vuitton handbags might bring insecure consequences to the purchaser. This is evidenced by the following quotations.

*(Expensive) is one reason. Plus the fact I don't want to get held up one night going in the casino. Getting jumped in the middle of the road and getting my watch taken off me. And when you see the watch, they obviously think he has a load of money as well. Your wallet and all the rest of it, where do you stay, (as well as) your bank cards. (Rolex)*

*It is a liability. (Rolex)*

*Yeah, that's alright for David Beckham with security going... (Rolex)*

*As he was saying, you couldn't go down the pub with that watch on because you would be nervous all the time. (Rolex)*

*You become a bit of a target for muggers. (Louis Vuitton)*

One might argue that the above noted could be counted as a kind of financial risk. On a closer examination of literature in relation to risk reveals that they do not fit in well with the definition of the financial risk, which refers to when some products fail, the loss to the consumers of the money spent on the products, or the money it takes to make the product work properly, or replace it with a satisfactory product (Roselius 1971; Mitchell and Baustani 1993). Accordingly, “security concern” is included for Rolex and Louis Vuitton. The security concept is a well developed area. Nevertheless, there is no literature which has made any effort to clarify whether security concern should be included in the purchase consequences or not. For the time being, it is categorised under purchase benefit/consequence theme and will be tested in the principal research.

“Good feeling” was considered as a kind of benefit the original Burberry and Louis Vuitton handbags could bring to the participants. However, considering they were more



likely caused by feelings of “exclusivity” and being “fashionable”, “good feeling” was excluded in the study. Other factors related to benefits/consequences emerged in this part of the discussion had been covered in stage two and all qualified to remain. Table 6.11 reports the benefits/consequences finally qualified for further investigation.

Table 6.11 Benefits/consequences finally qualified to remain

	Rolex		Gucci		Burberry		Louis Vuitton	
High standard quality	*	1	*	1	*	1	*	1
Statement of self image	*	2	*	2	*	2	*	2
Security	*	3	-----		---		*	3
Fun	*	4	*	3	*	3	*	4
Value for money	*	5	*	4	*	4	*	5
Disposable	*	6	*	5	*	5	*	6
Exclusivity	*	7	*	6	*	6	*	7
Fashionable	-----	-----	*	7	*	7	*	8
Attention getting	*	8	*	8	*	8	*	9
Prestigious	*	9	*	9	---		*	10
Performance risk	*	10	*	10	*	9	*	11
Financial risk	*	11	*	11	*	10	*	12
Social risk	*	12	*	12	*	11 two dimensions	*	13 two dimensions
* Benefits/consequences qualified for remain in the study								
----- N/A								

“Price”, “style” and “practicality” appeared to be consistent across all four brands and believed to be the important product attributes. “Price” and “style” were qualified for inclusion in previous section, with “practicality” emerging as a new factor and considered as legitimate for further investigation. The participants of the Louis Vuitton group noted that “quality mark” was important feature needing to be checked in the process of purchase; moreover, the participants of the two handbag groups claimed that “colour” was important to the original branded handbags. Accordingly, “colour” was added in the study in relation to handbags. It was decided that “quality mark” was excluded in relation to Louis Vuitton, due to that being what counterfeit is about. Given that “quality” was chosen for inclusion in relation to benefits/consequence, it was excluded in this part in order to avoid repetition. The rest of product attributes which suggested as important by the participant at this stage were also qualified at the structured open discussion stage. At this stage, it was decided to exclude “logo”, although it was considered as an important product attribute by almost all participants across four focus groups. The reason lies in the nature of counterfeit products, as counterfeiting mainly directly copies the logo (Papadopoulos 2004). Therefore, logo as a symbol of a brand is dropped. Table 6.12 outlines the qualified product attributes in the study.

Numerous studies have proven that, when comparing products, the average consumer can evaluate a maximum of five to six features simultaneously, with four features being appropriate for the elderly (Kirvesoja et al. 1996). If there are more features, the respondents tend to concentrate on the features they find most important and ignore the others (Kirvesoja and Väyrynen 2000). The research results related to product features (number of considered features range from 5 to 8) to a great extent are consistent with previous research.

Table 6.12 Product attributes finally qualified for inclusion in the draft questionnaire

Traits	Brands		Rolex		Gucci		Burberry		Louis Vuitton	
Size	*		1	*		1	*		1	*
Price	*		2	*		2	*		2	*
Packaging	*		3	-----		-----		-----		-----
Waterproof	*		4	-----		-----		-----		-----
Country of origin	*		5	-----		-----		-----		-----
Material (from literature on study of counterfeiting)	*		6	*		3	*		3	*
Design changed to style	*		7	*		4	*		4	*
Colour		-----		-----			*		5	*
Practicality	*		8	*		5	*		6	*
----- Not qualified product attributes      * Product attributes qualified for inclusion										

6.4 Summary

The objectives of the preliminary study are to generate the criteria utilised by the ordinary consumers in relation to evaluation of the chosen branded products, as well as to establish the vocabulary and language used by the target respondents. In order to achieve these goals, focus groups are utilised to generated preliminary study data. The focus group is considered to be the appropriate approach mainly because it is superior to other methods for the study of group understandings and generation of the language used by the research subjects. These advantages of the focus group technique serve the objectives of this part of research perfectly well, which indicate that the use of focus groups is the best choice.

The snowballing technique is used to recruit participants. Particular attention is placed on achieving a sample which represents the defined research population. In total five focus group discussions are conducted with each focus group lasts between one and one and a half hour long. The size of the focus groups ranges between five and six, which is considered acceptable even though with one group the size is smaller than what was planned initially. The researcher acts as the group discussion facilitator. In addition, an observer accompanies the researcher during the whole discussion process with an aim to



providing language support to the researcher when it is necessary as well as taking some notes.

Given that the outcomes of the first focus group were not what the researcher expected, the researcher decided to regard it as the protocol discussion. Data collected from the first focus group as well as the involved administrative process were analysed by the researcher with the assistance of the observer. Shortcomings and problems which appeared in the first focus group discussion were identified and reported in detail. Following this, the proposed solutions are discussed.

The entire process of all five focus group discussions are tape recorded. A professional is employed to transcribe all collected data. The employment of the professional guarantees a high level of data transcription accuracy, meanwhile it also releases the researcher from the labour-intensive work at a very low cost.

Content analysis is use to analyse focus group data, due to this part of the research only searching for quantified information rather than seeking any causal relationships. The researcher and the observer double coded the focus group data. The intercoder reliability is relative high (87 percent), which is higher than the recommended acceptance level by Kassarian (1987). Coding discrepancies were resolved before the data analysis is conducted.

The data collected from the open discussion (stage one) and the structure discussion (stage two) parts were analysed separately, with the structured discussion being the core and analysed and reported before the open discussion part. Nevertheless, the stage one and stage two data are compensatory to each other. The most important criteria perceived by the respondents are picked out and remain for further investigation. Table 6.13 illustrates the number of items to be examined in the principal research. As one can see, the total number has been reduced to a manageable level. For example, the number of personality traits has been reduced by about three-quarters compared with Aaker's (1997) original brand personality scale.

To keep and examine the important criteria is considered as crucial for this research. First of all, it makes the research more focused on the most influential factors.

Secondly, it helps to reduce the number of factors, which decreases the length of the questionnaire, and allows the possibility of investigation of four brands across two product categories. Thirdly, the exclusion of irrelevant or less important criteria to a great extent simplifies data analysis.

Total 6.13 Number of items to be tested related to consumer perception toward studied brands

Brands	Rolex	Gucci	Burberry	Louis Vuitton
Image dimension				
Personality traits	11	14	9	6
Benefits/consequences	12	12	12	14
Product attributes	8	5	6	6
Total	31	31	26	25
Number of questions in total	113x2=226			

The language used by the target respondents is also reported as integrated with the detailed data analysis. Up to now, the two objectives of this part of the research are fully implemented. On top of these, the focus group data reveals that Aaker’s (1997) direct and indirect brand personality sources might be questionable. This research argues that it might be more accurate if the indirect brand personality sources are labelled as ‘influential factors’. Moreover, this research discovers that ‘usage situation’ appears to be influential on the consumers’ perceived brand personality. This discovery is not considered by Aaker (1997), which raises a question about the exhaustiveness of Aaker’s (1997) indirect brand personality sources notion.

In addition, the research findings of this part of the research provides further empirical evidence to previous researchers’ claims that Aaker’s (1997) brand personality scale can not be adopted universally, as brand personality by its nature is brand-specific and culture-specific. Aaker’s (1997) brand personality scale is too long to be adopted practically. Most of the personality traits included in this scale might not be perceived as relevant or important to a specific brand. Lastly, this research raises questions about whether the ‘security concern’ associated with purchase luxury brands should be considered as a dimension of perceived consequence related to branded products or not. Due to this not being what the current research is designed for, it is left to other researchers who might be interested.



## **Chapter 7 Data Preparation, Examination of the Samples and Factor Analysis Results**

## **Chapter 7**

# **Data Preparation, Examination of the Samples and Factor Analysis Results**

### **7.1 Introduction**

The discussion on the research methodology required to pursue this study was reported in Chapter 5. This was then followed by a thorough discussion about the development of the research instrument in the second half of Chapter 5 and all of Chapter 6. Chapter 6 serves a critical role in terms of the construction of a robust and practical research questionnaire. In this chapter, this study will proceed with an examination of the survey response. In total, 430 questionnaires were collected within two weeks in 2005.

In this chapter, the data collected is to be looked at first in terms of the usable response rate and the issues related to data preparation for analysis, as well as the response rate and evaluation of the incentive approach. Next, a detailed analysis of the characteristics of the samples is presented to justify the representative nature of the sample. The third section presents the descriptive statistics on data related to the two tested product classes. The fourth section of this chapter focuses on preliminary analysis. Reliability and validity of measures used in this study are evaluated at this point. Lastly, new variables are computed whenever necessary, the objective of which is to convert the original data into a more manageable form and to prepare for the multiple regression analysis. This chapter finishes with a summary of the tasks conducted at this stage of the research.

### **7.2 Survey Response**

A total of 430 questionnaires were collected from four supermarkets in Glasgow using the interview survey method over a period of two weeks. This included the 40 questionnaires collected for the second stage research instrument piloting. These data are considered to be acceptable for inclusion in the principal data set, due to there no major changes being made in relation to the content of the questionnaire after the second stage piloting (see Chapter 5). These questionnaires were collected from the same places where the principal survey was conducted, and the respondents were systematically selected from the same target population. Moreover, none of the changes



made to the questionnaire after the second stage piloting had a great impact on the respondents' understanding of the questions.

### 7.2.1 Usable Response Rate and Preparing the Data for Analysis

Out of the total number of questionnaires collected, 321 were considered to be usable after careful questionnaire checking, editing and data cleaning, resulting in a 74.7 percent usable questionnaire rate. Following Malhotra's (1996) suggestions, the questionnaire checking mainly detects incompleteness of questionnaires, misunderstanding of respondents, little variance of responses, and missing page(s); editing focuses on identifying incomplete, inconsistent, or ambiguous responses; data cleaning mainly handles missing responses. Despite the time demanded for the completion of these tasks, the questionnaire checking, editing and data cleaning were conducted by the researcher in order to ensure consistency of treatment.

In the case of inconsistent or ambiguous responses, missing values, missing pages concerning 'self-assessed product knowledge', 'product involvement' or 'demographic variables', the researcher contacted the respondents to improve the unsatisfactory responses wherever possible. At this stage the correspondence addresses or contact numbers provided by the respondents proved to be valuable in terms of assistance in upgrading the data. The respondents were not approached by the researcher if the inconsistent or ambiguous responses, missing values or missing page(s) related to the 'respondents' perceptions of CBP and BP', 'purchase consideration' and 'purchase intention' despite some of the respondents' correspondence addresses being available. This is because that the researcher was concerned that the data obtained the second time may be different from those obtained during the original survey. According to Malhotra (1996), these differences may be attributed to changes over time or differences in the mode of questionnaire administration. In this study, the changes would have been in the mode of questionnaire administration if the second survey conducted had included telephone or e-mail as opposed to a person-to-person interview survey, and the approach would have been memory-based rather than stimulus-based. In addition, the consideration set is dynamic (Hauser and Wernerfelt 1990; Punj and Srinivasan 1989; Ratneshwar and Shocker 1991; Nedungadi 1990), which indicates that components of the consideration set might change with time and consumption situation. The questionnaires showing little variance of response were considered as invalid data and



discarded, as it might be the case that the respondents were lacking in cooperation. Therefore, there was not a great deal of point in putting more effort into re-approaching these respondents. Eight questionnaires became usable after this effort.

Some male respondents regarded handbags as a female product and did not answer the questions related to handbags, claiming either that these products were irrelevant to them or that they lacked knowledge of handbags. Some male respondents ticked/circled the same responses in the list of questions associated with handbags. These questionnaires were treated as usable, as long as no other major problems were identified. However, although all questions relating to handbags in these questionnaires were thrown out, the balance of the questions were retained.

Similarly, some respondents bypassed the questions relating to income, but cooperated fully with the other questions. These questionnaires were considered as usable. No value is assigned to missing income in this research, although a neutral value can be substituted for the missing value (Malhotra 1996). The reasons are: first of all, a very limited number of questionnaires have the income value missing; secondly, the sample size is reasonably large; thirdly the logic of substituting a mean value is not a problem-free method (Malhotra 1996). In the parts of the analysis involving income and handbags, only those respondents who provided usable answers to these questions are included (list-wise deletion), but in the rest of the analysis all respondents are included.

One questionnaire was discarded as the respondent claimed to be “Intersexed”. This particular respondent not only ticked both boxes referring to male and female, but also wrote “Intersexed” in capitals right after the answers to the question provided in the questionnaire. This questionnaire was excluded from the data set because of its absolute uniqueness. This could give rise to a need for caution concerning how gender issues should be addressed in research instruments.

The inconsistent responses occurred more often when the reverse statements were used. The reverse statements used in the research instruments include ‘I get bored when people talk to me about watches/handbags (boredom)’; ‘You can throw it away after a while (disposability)’; ‘This product may not function well (functionality)’; and ‘This product may not last long (functionality)’. It was observed that some respondents



could not work their way around the reverse statements (e.g. boredom), some respondents provided inconsistent responses across brands and different versions of a brand (e.g. disposability, functionality). It was decided that no correction was to be made in relation to boredom, since there was no evidence to prove the misjudgement of the specific respondents apart from the researcher's instinct. On the other hand, necessary corrections were made in relation to functionality and disposability if there was clear evidence. For example, in the case of the respondent disagreeing that the original Rolex watch may not function well and agreeing that the counterfeit Rolex watch may not function well, but agreeing that the original Gucci watch may not function well while disagreeing that the counterfeit Gucci watch may not function well, the answers in relation to the questions about Gucci were corrected to the same direction of those about the Rolex watch. The corrections were made following the rules: 1 was replaced by 5, 2 replaced by 4, 3 remained unchanged, 4 was replaced by 2, and 5 was replaced by 1. The same rules applied to questions related to disposability, as well as handbags.

In addition to the questionnaire which was marked "intersexed", 108 questionnaires were discarded: 53 for being incomplete, 10 due to respondents' misunderstanding, 42 because of little variance of responses and 5 because of missing page(s), bringing the total number of discarded questionnaires to 109. Here, incomplete questionnaires refer to the questionnaires that contain untraceable missing values (7), missing sections (22), and questionnaires where more than one page at the back was not touched by the respondent (26). The incomplete questionnaires where the questions relating to the original branded products were completed but the questions associated with the counterfeit branded products not completed were categorised in the missing section. As one can see, that the number considered as missing sections are relatively high. The explanation the researcher can offer is that some respondents were not used to the idea of one question applying to two versions of one brand or even two brands. They planned to finish all the questions concerned with one version and come back to work on the other(s). However, in some cases they simply forgot. This is one of the shortcomings of the newly-developed technique, and there should be caution whenever it is applied. This research suggests that it might help to some extent to overcome this shortcoming if the interviewer explains the multiple uses of one statement to potential respondents before they start filling out the questionnaire. For example, a statement can



be made saying 'one statement should be treated as several questions according to the specific circumstances'. All the fieldworkers confirmed that the incomplete questionnaires containing more than one page at the back untouched by the respondents were caused by the unusual length of the questionnaire. Some of these respondents lost their patience, while some of them simply did not have time to complete it.

Ten questionnaires were considered unusable due to the respondents appearing to have misunderstood. The questionnaires classified in the misunderstanding category included those where the respondents did not appear to have understood the completion requirements, (for example, they had circled more than one answer to a question, or only provided one answer to the whole section), and also included the ones where respondents claimed that some questions were not relevant to them. Seven out of these ten respondents provided their full correspondence addresses, which is an indication of the seriousness of their participation. Eight of them were over 50 (accounting for 80 percent), with one aged 20-30, and the other one aged 31-40. The relatively high percentage of elderly respondents in this section certainly has some negative effect on the representativeness of people in this age group in the sample. The response quality of these respondents could have been improved if more care and patience had been shown by the fieldworkers in the field.

As suggested by previous works (e.g. Aaker et al. 1997; Malhatro 1996), this research regarded the questionnaires containing little variance of responses as an indication of a lack of respondents' cooperation. It is more likely neither the fieldworkers nor the researcher could have done more to improve the respondents' degree of cooperation. Despite the fact that the fieldworkers were trained to check the missing pages before they were sent out to the field, there were still five collected questionnaires containing missing page(s). Three out of five had one page missed out. Interestingly, the missing page in all three of these questionnaires is page 4, which is the middle page of the research instrument. The other two questionnaires each have two pages not filled out. As the questionnaires containing missing page (s) only account for about 1 percent of the total sample size, this is considered acceptable. The low missing page ratio also indicates that the fieldworkers fulfilled their responsibility reasonably well in this respect. Nevertheless, one is aware that this is still an area that could have been improved.



The decision to discard the 109 questionnaires was based on the consideration that the sample size was sufficiently large. It is obvious that the number of discarded questionnaires is relatively large. However, returning to the field was not feasible due to the nature of the research (stimulus-based approach), some of the respondents not being traceable because they had not given a correspondence address or contact number provided, and also because of the research budget constraint. Hence, the researcher has to accept the relatively high rate of unusable questionnaires (109/430). On careful examination, it is safe to say that more than half of the unusable questionnaires were due to the length of the questionnaire or to lack of cooperation on the part of the respondents, which the researcher could not possibly have done more to improve due to the nature of this research. Therefore, the relatively high unusable rate is considered acceptable. The researcher is aware that several disadvantages may be associated with this drawback. These include the reduction of the representativeness of the sample, and the possibility of losing important information. This is one of the major limitations of this research.

### 7.2.2 Data Cleaning and Reverse Items Recoding

After the data was transferred into SPSS, the frequency distribution was used to identify out-of-range values. Moreover, 70 selected cases (70/321, about 22 percent) were double checked against the original collected data for data entering errors. Most of the information was obtained using 5-point scales, so responses of 0, and figures above 5 were considered out of range. At this stage, the reverse items were recoded using SPSS to ensure that agreement was indicative of the same direction.

### 7.2.3 Response Rate

The nature of the supermarket survey determines that it is more likely that the research will not establish a clear target with regard to how many subjects they will approach. Even in some cases where the target is established, the fieldworkers will normally fail to fulfil the task of keeping an accurate record of how many potential respondents they intercepted, because the fieldwork itself is already difficult to handle. It was planned initially to keep an accurate report of the number of consumers approached, the number of ineligible respondents, the number of uncooperative respondents, the number of respondents willing to participate, the number of respondents who stopped half way

through, and the number of respondents who completed the questionnaire. The reality was that it was very difficult for the fieldworkers to fulfil this task. It would be unfair to say that this was because of lack of cooperation on the part of the fieldworkers. Working with the fieldworkers in the field all the way through the data collection process, the researcher observed the difficulties confronting them, and realised that it was unfeasible to keep a proper record of how many people they approached. This was particularly difficult during the peak shopping time, given the fast-moving shopper stream, as well as the extremely high rejection rate. The record keeping would have been improved by employing an extra fieldworker on each site. Nevertheless, this was not allowed by the very tight research budget.

Given that no concrete information as to the number of consumers approached was collected, the calculation of a precise response rate is not feasible. However, according to the report from the fieldworkers the average response rate of this research could lie between 25 to 40 percent. These figures vary across different supermarkets, across different time periods in a day, and across different days of the week. According to the fieldworkers, the response rate could be as high as 60 percent in the slow shopping periods, for example in the early morning and late in the evening, whereas the response rate could be as low as 10 percent during the peak shopping time (between 11.30am and 2.30pm) on week days. This is because a very high percentage of people shopping at lunch time tend to be taking a lunch break. Thus, they simply do not have time to participate in a survey which takes them at least 20 minutes to complete. This scenario appeared to be worst in the supermarket located in the Shopping Centre. The fieldworkers reported that they hardly stopped any people during lunch time. All the fieldworkers believed that if the questionnaire had been only a couple of pages long, the response rate could have been much higher. The high rate of incompleteness is evidence of this. Most of them finished fewer than four pages. This result is in line with Billesbach et al. (1991), Aaker et al. (1997) and Smith et al. (2003) who suggested that the perceived amount of work required in a survey has a negative impact on the response rate. The response rate appeared to be higher during the weekend. This is because people tend to be more relaxed during weekends than on weekdays.

Compared with shopping mall surveys, it seems that the non-response rate of this research is higher than those of previous research. For example, Gates and Solomon



(1982) reported a 56% response rate, with Hornik and Ellis (1988) showing a 76.4% response rate after using an incentive as well as touch and gaze techniques, and 53.4% without the touch technique. Although Hornik and Ellis (1988) did not report how the response rate was calculated, according to the figures provided in their research, it appears that they used the number of completed interviews divided by the total number of subjects approached. A close look at the 56% response rate reported by Gates and Solomon (1982) shows their relatively high percentage is a result of manipulated calculation. In fact, this figure shows that 44 percent of the eligible and initially willing respondents contacted refused to participate in the study (Table 7.1). Clearly, Gates and Solomon (1982) excluded the ineligible or uncooperative respondents from their calculation. If the ineligible or uncooperative respondents were taken into account, the Gates and Solomon (1982) response rate is only 12 percent, which is much lower than the response rate reported by the fieldworkers in the present research. This difference might be explained as a positive effect of the incentive (e.g. King and Vaughan 2004), and gaze and touch approach used in this research (e.g. Hornik and Ellis 1988).

Table 7.1 Response rate for mall intercept surveys (adopted from Gates and Solomon 1982, pp. 44)

Response Rate for Mall Intercept Surveys		
Disposition	Number	Percent
Ineligible or Uncooperative Respondents		
Refused to cooperate on initial contact	14,425	32
Not eligible for particular study	19,096	43
Terminated because quota filled	1,138	
	34,659	78
Eligible Respondents		
Completed interview	5,461	12
Refused after screening questions	4,280	10
Respondent terminated	66	-
	9,807	22
Total	44,466	100

In this current research, the response rate was calculated using same means utilised by Hornik and Ellis (1988). The difference between these two studies is that the number of subjects approached equals the number of the eligible responding individuals in Hornik and Ellis (1988), but it is larger than the number of eligible responding individuals in this research. This is because only Glasgow residents aged 18 and above were eligible for participation in this research. This difference certainly reduced the response rate of this research. More specifically, Hornik and Ellis (1988) used single-stage without eligibility requirement, while this research adopted a simple-stage sample with two eligibility requirements. Therefore, the low response rate reflects the effect of eligibility

requirements. Moreover, the relatively low response rate reported might also reflect the fact that British people are more reluctant to participate in survey research compared with those in the US.

#### 7.2.4 The Researcher's Observation

Working with the fieldworkers all the way through the data collection period in the field, the researcher observed that the high rejection rate during lunch time on weekdays had a great impact on the fieldworkers' mood, which decreased the response rate still further. Based on her own experience, the researcher believed that it might work better if a short break was allowed. The fieldworkers were told to take a 5 to 10 minutes break if they were constantly rejected. In general, all the fieldworkers reported that they felt more productive after a short break.

#### 7.2.5 Evaluation of the Incentive Approach

In total, 365 boxes of chocolate were distributed to the respondents. Sixty-five respondents (25 percent of the total number of collected questionnaires) did not take the incentive. These respondents claimed that they only wanted to be of some help to this research. The number of these respondents almost balanced off 60 percent of the unusable questionnaires. This outcome is not what was expected by the researcher, given that very few studies reported the possibility of respondents not taking the incentive.

As reported earlier, there are forty-two questionnaires with little variance of response and uncompleted pages. If it is rational to assume that the majority of these respondents lacked cooperation, and it might be safe to say that there is a good chance that some of these respondents were attracted purely by the incentive. Although many studies point out that incentives improve data quality in terms of greater response completeness, greater accuracy, reduced item non-response (Jame and Bolstein 1990; Brennan 1992; Willimack et al. 1995), and improving individual co-operation in providing information (Shettle and Mooney 1999), the result of this research indicates that previous findings should be viewed with caution. With all due respect to previous research findings, this researcher would argue that the effectiveness of an incentive is likely to depend on the type of incentive on offer, the target group and nature of the survey, and research instrument. In the case of the current study, if the questionnaire had been two to three pages long, the effectiveness of the incentive could have been much higher.



To combine the current research results with previous research findings, the summary that this research would offer is that the questionnaire respondents consist of three kinds of people. The first group are people who are willing to participate in research, known as research affiliation. Research affiliations are not affected by incentives. Whether there is any incentive on offer or not does not affect their intention to help. The second group are people who are neutral to the idea of participating in research. If they are pushed in a certain way, they can be very cooperative. The last group are people who think the research is of little relevance or interest to them, but are only attracted by the incentive. These people can be further classified according to whether the respondents attracted by the incentive are cooperative or uncooperative. As reported earlier, some people are more likely to lack cooperation. There is a strong chance of these respondents checking the same response in a long list of questions, or leaving the questionnaire incomplete. Great attention should be paid to the second group and to the first sub-group respondents of the third group, if the objective of using an incentive is to increase co-operation rates.

### 7.3 Descriptive Statistics

The purpose of descriptive analysis is to provide an initial examination of the data. Specifically, to provide preliminary insights as to the nature of the response obtained as reflected in the distribution of values of each variable of interest in this study. The descriptive analysis covers central tendency (mean) and measures of dispersion (standard deviation, range). The results are reported in two separate tables (see Appendix 8 and Appendix 9). Items related to the scales of involvement, knowledge, consideration set and intention are to be found in Appendix 8, while statistics of brand image items are demonstrated in Appendix 9. The descriptive analysis results concerning demographic variables are not presented here, as they are covered in later analysis.

As can be seen from the two tables, all values range from 1 (strongly disagree) to 5 (strongly agree), which correspond to the 5-point Likert scale adopted in this research, with the exception of one item testing consumers' perception of quality of the original Rolex watches ("In buying this version, you get a high standard of quality"). The values fall between 2 to 5. This is not a surprising result and can be explained by the

fact that consumers perceive Rolex watches as very high quality. In addition, all measures present reasonable variance.

#### 7.4 Characteristics of the Samples

Before going any further in analysing the data provided by the samples, it is important to analyse the demographic characteristics of the samples obtained from the survey. This assists in justifying the degree of representativeness of the samples to the target population. To obtain a representative sample is crucial, as it ensures that the findings of the research can be applied to the target population. The analysis looks at the distribution of the samples according to age, gender, total household income, and education. As the 2005 Glasgow Census is still not publicly accessible, demographic profiles (age and gender) of the sample are compared to the 2001 Glasgow Census statistics. Household income profiles are compared to the National Statistics 2005 Annual Abstract of Statistics, and educational attainment profiles are analysed against the Scottish Household Survey 2005.

##### 7.4.1 Age Group Analysis

The comparison of the age profile of the respondents with age groups of the Glasgow Census (2001) is presented in Table 7.2. The population covered in this study is all the people aged 18 years old or over in 2005. The age profile of the respondents is compared to the age profiles of the 2001 Glasgow Census age statistics. People aged over 80 are not counted in this research due to most of them lacking mobility or not being very active in terms of shopping. The total population aged between 18 and 79 is 423,871 in Glasgow.

The difference between the percentage of age profiles of the respondents in this study and the percentage of the 2001 Glasgow Census lies between -56.4 to 49.7. The Chi-square is 168.75, which is significant at 5% level of significance and with a degree of freedom of 6. According to the result, the age group of the population is not well represented by the samples used in this study. People aged under 20 are over-represented in general, with people aged 50 and over under-represented.

This result, although not what the researcher expected, is not surprising. It can be explained first of all by the fact that people aged over 50 are more reluctant to



participate in research, and most them have difficulties in reading without glasses. Secondly, people aged over 50 appear to have difficulties coping with multiple choice, which results in a high non-usable rate. Thirdly, the majority of people aged under 20 but over 18 are students. They are more familiar with the format of the research instrument and are less afraid to take part. Fourthly, they are aware that it is possible that they will face the same kind of fieldwork for their degree, and are therefore more cooperative. Although the results are not ideal, the percentages of the five age group categories range from 14.6 to 24.3, with none of the groups accounting for less than 10 percent of the sample. Therefore, it is considered acceptable.

Table 7.2 Age profile of the respondents and Glasgow Census data

Respondents age group				2001 Glasgow Census age group			Differences
Age	Frequency	Percentage	Expected N	Age	Frequency	Percentage	Residual
-20	68	21.2	18.3	-20	24232	5.7	49.7
20-29	78	24.3	69.3	21-30	91379	21.6	8.7
30-39	63	19.6	71.9	31-40	95106	22.4	-8.9
40-49	65	20.2	58.1	41-50	76569	18.1	6.9
50+	47	14.6	103.4	51+	136585	32.2	-56.4
Total	321	100.0		Total	423871	100.00	
Chi Square: 168.75							
df: 6							
Asymp. Sig.: .000							

7.4.2 Gender Analysis

The summary of the proportions of male and female respondents and the binomial test results are shown in Table 7.3. According to the 2001 Scotland Census, the proportion of males is 47.1 percent, with females at 52.9 percent in 2001 (those aged between 18 and 80). The proportion of females is slightly higher than that of males in the sample. The table shows that the female respondents, who comprise 56.4 percent of the total subjects, are 0.128 percent more than male respondents, at 43.6 percent. Nevertheless, the direction of difference remains the same. That is, the female population is greater than the male population.

The z-test for a proportion of one version of the binomial test is used to test the null hypothesis of the proportion of women respondents is 52.9 percent ( $\pi = 0.529$ ), and the alternative hypothesis  $\pi \neq 0.529$ . According to the results, the hypothesis of  $\pi = 0.529$  is supported, and the test statistic is not significant ( $p > 0.05$ ). In this context, the null hypothesis cannot be rejected, which indicates that the proportion of women is 52.9

percent. Therefore, the samples obtained in this study represent the true population gender distribution.

A one-sample chi-square test can be applied to compare the observed frequencies with the theoretical frequencies. The null hypothesis under the chi-square one-sample test is that no difference exists between observed (55.8 percent) and theoretical frequencies (52.9 percent). Given that the tested variable is a dichotomous variable, the natural interpretation as proportions, the binomial test is considered as being more appealing (Diamantopoulos and Schlegelmilch 2002).

Table 7.3 Gender profile of the respondents (Binomial Test)

		Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (1-tailed)
Gender of the respondent	Group 1	Female	181	.564	.529	.116(a)
	Group 2	Male	140	.436		
	Total		321	1.000		

a Based on Z Approximation.

7.4.3 Household Income Analysis

The Annual Abstract of Statistics 2005 Edition of National Statistics revealed the average household income in the UK to be £25,271. According to the university librarian, the latest household income statistics for Glasgow are not available. Therefore, the average household income for the UK is considered as being roughly the same as the average household income in Glasgow, although in fact Glasgow has a lower average household income (Wealth of the Nation 2006). The interval household income in the data set is mid-category coded. The newly coded household income categories are £4,000, £15,000, £27,500, £32,500, £37,500, £42,500, £47,500, £52,500, and £60,000. The one sample t-test used to test the sample mean is equivalent to the population mean. The results are presented in Table 7.4. The results show that the average household income of the sample is not significantly different to the UK average household income ( $p > 0.05$ ). Thus, the sample represents the population well with regard to the average household income.

Table 7.4 One-Sample statistics

Variable	n	Mean	SD	Std. Error Mean
Mid-category coded income	303	26161.72	18019.63	1035.20
UK average income		25271		
midcategory coded income	t .860	df 302	Sig. (2-tailed) .390	Mean difference 890.72



7.4.4 Education Analysis

The comparison of the educational attainments of the respondents with the educational breakdown of Scotland residents is presented in the Table 7.5. Glasgow residents' educational attainments should be utilised as references. Nevertheless, according to the university librarian, the educational attainment data for the city of Glasgow is not available. Therefore, the use of the educational data for Scotland (Scottish Household Survey 2005) is considered acceptable.

The difference between the percentages of educational attainments of the respondents in this study and the percentages of the Scottish Household Survey lies between -33.1 and 43.9. The Chi-square is 77.04, which is significant at 5% level of significance and with a degree of freedom of 3. According to the result, the educational attainment of the population is not well represented by the samples used in this study. People with 'High School' and 'Other' educational attainments are under-represented in general, while people with HND/HNC and BA/MA achievement are over-represented.

This result, although not as expected, is not surprising. First of all, it is because people with higher education are more likely to participate in research, whereas people with lower educational achievements are reluctant to take part in survey research, or even if they do participate, some of them might have difficulties in completing the questionnaire due to problems with reading or comprehension. In addition, people with high school education are under-represented as some of them are excluded from the targeted population for being under 18 years old. Although the results are not ideal, the percentages of the four educational attainment categories range from 16.3 to 32.8, with none of the groups accounting for less than 10 percent of the sample. Therefore, it is considered acceptable.

Table 7.5 Education analysis

		Sample		Scottish Household Survey 2005	difference
		Frequency	Percent	Percent	Residual
Valid	High School	105	32.8	40.5	-22.7
	HND/HNC	77	24.1	10.5	43.9
	BA/MA	86	26.9	23.5	11.9
	Others	52	16.3	25.5	-33.1
	Total	320	100.0	100.0	
Total		321	100.0	100.0	
Chi Square: 77.04					
df: 3					
Asymp. Sig.: .000					

## 7.5 Reliability and Validity

Before any research embarks on data analysis, perhaps one should first of all examine whether the measurement devices used in the research are robust, reliable and valid or not (Oppenheim 2000). The value a research obtains using a certain measurement is not the true value of the characteristic of interest but rather an observation of it (Malhotra 1996). The difference between the true value and the observed value is caused by measurement error. There are a variety of factors which can cause measurement error. Malhora (1996) presents the true score model as follows, which provides a framework for an understanding of the reliability and validity of measurement.

$$\chi_o = \chi_T + \chi_S + \chi_R$$

where

$\chi_o$  = the observed score or measurement

$\chi_T$  = the true score of the characteristic

$\chi_S$  = systematic error

$\chi_R$  = random error

Random error is not constant. It is the source of inconsistency and has a direct effect on reliability. Systematic error affects the measurement in a constant way. Therefore, sources of systematic error do not have an adverse impact on reliability. On the other hand, perfect validity demands that there be no systematic error, nor random error (Malhotra 1996). Reliability is necessary, but not a sufficient condition for validity (Churchill 1999). The focus of this section is on testing the reliability and validity of the measurements utilised in this research.

### 7.5.1 Validity

A measuring instrument is valid to the extent that differences in scores among objects reflect the objects' true differences on the characteristic that the instrument tries to measure (Churchill 1999). In simple words, the measure has validity if it measures what it is supposed to measure (Aaker et al. 1997). If this is the case, then differences in attitude scores will reflect differences among the objects or individuals on the characteristic being measured. The most common types of validity are content validity, construct validity and criteria validity (Lehmann et al. 1998).

Content validity, also called face validity, is a subjective but systematic evaluation of how well the content of a scale represents that measurement task at hand (Malhotra



1996). It requires the researcher to examine whether the scale items adequately cover the entire domain of the construct being measured. More often, the content validity is supported by little more than common sense (Aaker et al. 1997).

Criterion validity reflects whether a scale performs as expected in relation to other variables selected as meaningful criteria (Malhotra 1996); it is based on empirical evidence that the attitude measure correlates with other “criterion” variables (Aaker et al. 1997). Based on the time period involved, criterion validity can take two forms, concurrent validity and predictive validity. If the two variables are measured at the same time, concurrent validity is established; if the two variables are measured at different periods, then the predictive validity can be examined.

Construct validity addresses the question of what construct or characteristic the scale is, in fact, measuring. Thus, construct validity requires a sound theory of the nature of the construct being measured and how it relates to other constructs. Construct validity is the most sophisticated and difficult type of validity to establish. It includes convergent, discriminant, and nomological validity (Churchill 1999; Malhotra 1996). Convergent validity requires that a measure should be highly correlated with other measures which are used to measure the same construct (Churchill 1999). It is not necessary that all these measures be obtained by using conventional scaling techniques (Malhotra 1996). The two possible approaches are to employ different questionnaire research instruments or to use different methods (Bryman and Cramer 1999). Discriminant validity is the extent to which a measure does not correlate with other constructs from which it is supposed to differ. The investigation of discriminant validity implies that one should also search for low levels of correspondence between a measure and other measures which are supposed to represent other concepts (Bryman and Cramer 1999; Malhotra 1996; Aaker et al. 1997). Nomological validity is the extent to which the scale correlates in theoretically predicted ways with measures of different but related constructs (Malhotra 1996). Little construct validation is attempted in marketing, as there is a lack of well-established measures that can be used in a variety of circumstances (Aaker et al. 1997).

### 7.5.2 Reliability

The reliability of a measure means its consistency. More specifically, it refers to the extent to which a scale produces consistent results if repeated measurements are made



(William et al. 1989). In other words, a reliable measure will yield the same finding on repeated occasions if the phenomenon has not changed (Burns and Harrison 1979). This notion is often taken to entail two separate aspects – external and internal reliability (Bryman and Cramer 1999).

External reliability refers to the degree of consistency of a measure over time. The test-retest reliability is one of the main approaches to checking external reliability. The problems with test-retest reliability are that intervening events between the test and the retest may lead to a discrepancy between the two sets of results, or if the test and retest are too close in time, participants may provide earlier answers, so that an artificial consistency between the two tests is created. Other researchers have suggested an alternative-forms reliability test (e.g. Andrews 1984; Jaffe and Nebenzahl 1984), which means that two equivalent forms of the scale are constructed. The same respondents are measured at two different times. The scores from the administrations of the alternative scale forms are correlated to assess reliability. Similar to the test and pre-test reliability, this method is time-consuming, more costly, and it is difficult to construct two equivalent forms of a scale (Malhotra 1996). In this research, the external reliability is not tested, as the time constraint does not allow this to be done.

Internal consistency is used to assess the reliability of a summated scale where several items are summed to form a total score (Malhotra 1996). It answers the question of whether each scale is measuring a single idea, and hence whether the items which make up the scale are internally consistent (Bryman and Cramer 1999). The split-half reliability and Cronbach's Alpha are the two most commonly-used procedures for estimating internal reliability (Bryman and Cramer 1999; Aaker et al. 1997). The problem with the split-half reliability is that the results will depend on how the scale items are split (Malhotra 1996). Luckily, Cronbach's Alpha can be used to overcome this problem, as Cronbach's Alpha, currently widely-used, essentially calculates the average of all possible split-half reliability coefficients (Bryman and Cramer 1999; Aaker et al. 1997). Therefore, Cronbach's Alpha is used to examine the internal consistency of the multiple-item scales – product involvement, product knowledge, brand image, consideration set, and purchase intention. The rule of thumb is that the correlation coefficient should be 0.8 or above (Bryman and Cramer 1999), a less restrictive rule has an acceptable level of at least 0.70 (Hinkin 1995). The rule of



thumb is applied to product knowledge scale, product involvement scale, consideration set scale, and purchase intention scale. The less restrictive 0.70 level is applied to the testing of internal reliability of brand image factors. In the case of the correlation coefficient being lower than 0.8, it is suggested that the items that reduce the reliability be deleted from the scale (Kaplan and Saccuzzo 1997). This dropping item means is used in order to improve scale reliability. The same rule is adopted when the Cronbach Alpha falls below 0.70 in relation to brand image factors. Prior to conducting the reliability analysis, the scores of the negative statements are reversed to make sure that all scores are absolute values of those items. This is because 'failing to reverse-score items that have been phrased oppositely to other items on the scale will mess up your reliability analysis' (Field 2005, p. 674). In addition, the item-total correlations or the inter-correlations (Pearson's correlation) of the items are also reported. Items are deleted if the item-total correlation is below .50 according to the recommendation of Bearden and Netemeyer (1999).

### 7.5.3 Applied Techniques to Validate Scales Validity and Reliability

Being aware of the importance of validity and reliability, this study uses Factor Analysis, Pearson Correlation Analysis, Item-Total Correlation and Cronbach's Coefficient Alpha to validate adopted scales. Before these techniques are applied, a detailed assessment of the suitability of the data for factor analysis, the difference between PCA (Principal Component Analysis) and PFA (Principal Factor Analysis), as well as objectives expected to be achieved are reported, followed by reports of validity and reliability of the brand image construct. This section ends with evaluation of scale reliability and validity of product involvement, product knowledge, consideration set and purchase involvement.

#### 7.5.3.1 Factor Analysis

##### 7.5.3.1.1 Assessment of the Suitability of the Data for Factor Analysis

Much has been written about the necessary sample size for factor analysis. Despite Hulin et al. (2001) calling for 15:1 ratio of respondents to number of items, some researchers recommend much lower ratio and more specific sample size -300 samples. For example, Kass & Tinsley (1979) suggest having between 5 and 10 subjects per variable up to a total of 300 (beyond which test parameters tend to be stable regardless of the subject to variable ratio). This claim is further supported by Tabachnick & Fidell

(2001) and Comrey & Lee (1992), who agree that 5 cases for each item is adequate in most cases, 300 is a good sample size, 100 is poor and 1000 is excellent. More recently, some empirical research has been done to study the impact of the sample size on factor solutions. Arrindell and van der Ende (1985) demonstrate that changes in the ratio of respondents to items made little difference to the stability of factor solutions. Some empirical research findings (e.g. Guadagnoli & Velicer 1988; MacCallum et al. 1999) back up the 300 rule. Accordingly, the sample size of this research (321) is sufficient to perform factor analysis.

In addition, the Kaiser-Meyer-Olkin (KMO) (Kaiser 1970) measure of sampling adequacy was applied. The KMO can be calculated for individual and multiple variables and represents the ratio of the squared correlation between variables to the squared partial correlation between variables. The KMO values are reported in Table 7.6. All KMO values with the exception of the KMO value of watches knowledge (0.71) are greater than .8, which are classed as “great” (Kaiser 1974). The KMO value of watches knowledge is classed as “Good”. The high KMO values indicate that the items will form specific factors (Hutcheson and Sofroniou 1999) and the data sets are appropriate for the application of factor analysis.

Table 7.6 KMO

Version of brands	KMO
Original Rolex watches brand image	0.88
Counterfeit Rolex watches brand image	0.89
Original Gucci watches brand image	0.89
Counterfeit Gucci watches brand image	0.91
Original Burberry handbags brand image	0.85
Counterfeit Burberry handbags brand image	0.83
Original Louis Vuitton handbags brand image	0.89
Counterfeit Louis Vuitton handbags brand image	0.88
Watches involvement	0.90
Handbags involvement	0.95
Watches knowledge	0.71
Handbags knowledge	0.81
Consideration set (Original Rolex)	0.85
Consideration set (Counterfeit Rolex)	0.86
Consideration set (Original Gucci)	0.88
Consideration set (Counterfeit Gucci )	0.86
Consideration set (Original Burberry)	0.89
Consideration set (Counterfeit Burberry)	0.85
Consideration set (Original Louis Vuitton)	0.89
Consideration set (Counterfeit Louis Vuitton)	0.88
Purchase intention (Original Rolex)	0.84
Purchase intention (Counterfeit Rolex)	0.89
Purchase intention (Original Gucci)	0.86
Purchase intention (Counterfeit Gucci)	0.87
Purchase intention (Original Burberry)	0.88
Purchase intention (counterfeit Burberry)	0.89
Purchase intention (Original Louis Vuitton)	0.89
Purchase intention (Counterfeit Louis Vuitton)	0.91



#### 7.5.3.1.2 Objectives for Using Factor Analysis

The use of factor analysis attempts to achieve two objectives. Firstly, to condense the information obtained in relation to brand personality, product attribute and benefit/consequence into a small set of new composite dimensions which makes the data more manageable. Secondly, to examine whether the measures used to measure the constructs across two versions of the four tested brands and the two product classes fall into the same factor(s). If scale items load on the same factor(s), and they have similar factor loading (s), then content validity can be assumed (Bryman and Cramer 1999). This method has been widely used in previous cross-cultural research to test if groups of items comprising a dimension in one culture also load in similar fashion on the same construct in another (e.g. Veloutsou et al. 2005; Poortinga 1989; Singh 1995). In this research factor analysis is used to test if items comprising a dimension of the construct of the original brand also load similarly on the same construct of the counterfeit brand.

#### 7.5.3.1.3 Principal Components Analysis vs. Principal Factor Analysis

The method used to achieve the first objective is principal components analysis (PCA). PCA is used is because we are only interested in data reduction, and it is often preferred as a method for data reduction over PFA (Preacher and MacCallum 2003). Despite the fact that there are no strong grounds to believe that the underlying factors should be unrelated (Field 2005), the factor solution in this research was rotated using the Varimax method, as the orthogonal rotation algorithm Varimax is the one most frequently reported in the management literature for scale construction (Hinkin 1995). Moreover, due to the objective of this part of analysis being to utilize the factor results in regression models, the orthogonal rotation procedure is appropriate (Hair et al. 1987)

Principal Factor Analysis (PFA) is used to achieve the second objective. PFA is appropriate here because this research is only interested in identifying factors that account for correlations among the multiple items (Preacher and MacCallum 2003) used to measure the constructs in our research model. In addition, PCA is often preferred as a method for data reduction, while PFA is often preferred when the goal of the analysis is to detect structure (Cliff and Caruso 1998). Varimax rotation is used and reported if more than one factor is extracted.

#### 7.5.3.1.4 Factor Extraction and Loadings

Following Kaiser's (1960) recommendation, all factors with eigenvalues greater than 1.0 are reported. The eigenvalues represent the amount of variation explained by a factor. The Kaiser (1960) criterion, although commonly used, has met with criticism. Jolliffe (1973, 1986) reports that Kaiser's criterion is too strict and suggests retaining all factors with eigenvalues more than .70. Later research advises to use a scree plot provided the sample size is greater than 200 (Stevens 1992). Preacher and MacCallum (2003) recommend the use of the Kaiser criterion in conjunction with other means. Accordingly, both scree plot and eigenvalues are considered in this research in relation to factor extraction, but with only the eigenvalues reported. In addition, the reasons for doing factor analysis are also taken into account. For example, in order to overcome multicollinearity problems in regression, it is intended to retain more factors. In contrast, in relation to scale validity testing, there is no need to keep as many factors as possible, therefore Kaiser's (1960) criterion is principally considered.

Items with a factor loading of at least .40, and which are not split loaded on another factor above .40 were perceived as components of one factor. This is in line with Stevens' (1992) recommendation to interpret only factor loadings with an absolute value greater than .40. Items split loaded on two factors with more than one factor loading being above .40 are to be dropped.

#### 7.5.3.2 Brand Image Results

##### 7.5.3.2.1 Original Rolex and Counterfeit Rolex

All the factors with eigenvalues greater than 1.0 are extracted (Table 7.7). For the both original Rolex and counterfeit Rolex data, 7 factors are extracted. To a great extent, the contents of the extracted factors are similar across these two versions. Both product attribute related items and brand personality items of two versions of this brand group into two factors. It appears that the product benefit/consequence related items load on three factors for both versions. For the original Rolex, "This product can bring you fun (fun)" cross load on two factors. Due to the factor loading on both factors are higher than .40, this item is discarded. Therefore, it is likely that the subjects do not perceive Rolex watches are related to "fun". In contrast, the item "fun" nicely grouped in one factor with the other benefit related two items in the context of counterfeit Rolex. This indicates that the subjects do consider "fun" as a kind of benefit the counterfeit Rolex



Table 7.7 Comparison of original Rolex personality factors and counterfeit Rolex personality factors

No	Items	Original Rolex							Counterfeit Rolex						
		1	2	3	4	5	6	7	1	2	3	4	5	6	7
1	I can get the size I want. CR		.543												
2	It is expensive. CR		.730							.625					.690
3	The packing is good. CR		.731							.652					
4	The watch is waterproof. CR		.697							.776					
5	It is Swiss-made. CR		.669							.807					
6	The materials are good. CR		.714							.672					
7	They have the style I like. CR					.727							.716		
8	The product is practical. CR					.799							.720		
9	The product is a statement of your self-image.			.514							.476				
10	This product can bring you fun											.604			
11	The quality of the product merits the price.											.690			
12	In buying this product, you get value for money for the status it brings you.			.595								.673			
13	You can throw it away after a while.						.725								.845
14	This product brings you exclusivity.			.764							.581				
15	This product can make you attract other people's attention.			.834							.762				
16	This product can bring you prestige.			.806							.815				
17	This product may not function well.						.750							.781	
18	Cheerful				.852									.868	
19	Young				.805									.402	
20	Independent				.613				.572						
21	Reliable	.667							.789						
22	Hardworking	.732							.800						
23	Secure	.730							.808						
24	Successful	.770							.847						
25	For leader	.723							.811						
26	Confident	.773							.709						
27	Glamorous	.560							.603						
28	Classic	.723							.794						
KMO					0.87							0.89			
Cumulated variance explained %					64.33							64.71			
Eigenvalue		7.35	2.68	2.40	1.74	1.12	1.09	1.00	8.16	2.70	2.38	1.49	1.24	1.13	1.03
% of variance		27.23	9.92	8.88	6.43	4.16	4.02	3.68	29.12	9.63	8.50	5.33	4.41	4.05	3.66
Cronbach Alpha		0.89	0.81	0.83	0.72	0.60*	0.25*	n/a	0.92	0.79	0.75	0.66	0.70	0.57*	0.31*
% of non-redundant residuals with absolute values greater than 0.05.		26							23						

\* Pearson Correlation is significant at the 0.01 level (2-tailed)

can bring. This finding is contradictory to Nia and Zaikowsky's (2001) finding, which suggest that both luxury original brands and counterfeit luxury brands bring people "fun". However, the finding is not supervising considering the extremely high price of the original Rolex watches, and the original Rolex is not projected as "fun" product to consumers. The item "The quality of the product merits the price" does not group with any other items for the original Rolex; rather it stands out as a factor on its own. Interestingly, this item combines with the items "This product can bring you fun" and "You get value for money for the status it brings you" for counterfeit Rolex. Comparison of this result with results of other brands shows that this unique result may be due to the nature of the Rolex watches. People are more likely to associate the price of Rolex watches with their extremely high quality. As such, even though there is only one item in this factor, it is considered important and retained for further analysis. The item "independent" combined well with the items "young" and "cheerful" for original Rolex, whereas, it cross loads on both extracted brand personality factors for counterfeit Rolex. As it has one factor loading of almost 0.60, and another one just above 0.40 the threshold level, this item is remained in the heavily related factor, but is excluded from the less related factor. The cross loading of the "independent" item for counterfeit Rolex can be explained in that the respondents might have difficulties in associating "independent" with the counterfeit Rolex brand personality. The extracted factors account for 64.33 percent of the overall variance for the original Rolex, with 64.71 percent for the counterfeit Rolex.

Due to the personality items being mostly generated from the Aaker's (1997) personality scale, Aaker (1997)'s interpretations are closely consulted in relation to the extracted personality factors. One factor is strongly related to items such as 'reliable', 'hardworking', 'secure', 'successful', 'for leader', 'confident', 'glamorous', and 'classic'. Most of these items load in Aaker's (1997) 'competence' factor. Therefore, this factor is described as 'competence'. The other personality related factor is strongly related to variables, 'cheerful', 'young' and 'independent (the original Rolex only)', which suggests an 'excitement' factor. The factor which is strongly related to 'expensive', 'package', 'waterproof', 'country of origin', 'material' is interpreted as 'general product attribute', while the factor related to 'style' and 'practicality' is explained as 'functional attribute'. The item 'product size' is grouped under the 'general product attributes factor' for the original Rolex, but included in the 'functional



Table 7.8 Original Rolex scale validation

Original Rolex (n=321)		Pearson correlation								
Image benefit	1	2	3	4				Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Statement of self-image										
Brings status	.41							.83		.49
Brings exclusivity.	.36	.44						.81		.56
Attract attention.	.40	.45	.57					.79		.64
Brings prestige.	.40	.47	.63	.73				.77		.70
								.76		.73
Excitement										
Cheerful	1	2	3					Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Young	.58							.72	.53	.61
Independent	.44	.36							.61	.55
									.73	.45
General product										
Attribute	1	2	3	4	5			Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Size								.81	.80	.49
Price	.26								.79	.48
Packaging	.43	.47							.76	.64
Waterproof	.38	.32	.48						.77	.59
Country of origin	.37	.36	.42	.40					.77	.57
Material	.37	.39	.51	.56	.53				.76	.66
Competence										
Reliable	1	2	3	4	5	6	7	Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Hardworking	.59							.89	.88	.59
Secure	.53	.59							.87	.67
Successful	.40	.54	.64						.87	.68
For leader	.43	.43	.50	.57					.86	.71
Confident	.43	.49	.52	.62	.64				.87	.67
Glamorous	.29	.42	.35	.42	.40	.51			.86	.73
Classic	.42	.46	.46	.50	.53	.58	.47		.88	.53
									.87	.65
Functional attribute										
They have the style I like.	Pearson correlation 0.60*							Mean	Std. Deviation	N
The product is practical.								2.58	1.11	321
								2.61	1.11	321
Functional benefit										
You can throw it away after a while.	Pearson correlation 0.25*							Mean	Std. Deviation	N
This product may not function well.								1.30	.625	321
								1.55	.728	321

\* Pearson Correlation is significant at the 0.01 level (2-tailed)

Table 7.9 Counterfeit Rolex scale validation

Counterfeit Rolex n=321)		Pearson correlation										
Competence	1	2	3	4	5	6	7	8	Cronbach a	0.92	Cronbach a if items deleted	Item-to-total correlation
Independent											.92	.62
Reliable	.51										.91	.73
Hardworking	.53	.73									.91	.76
Secure	.53	.70	.73								.91	.76
Successful	.49	.64	.70	.69							.91	.79
For leader	.48	.59	.64	.66	.69						.91	.78
Confident	.53	.54	.53	.52	.63	.61					.91	.72
Glamorous	.43	.39	.42	.40	.49	.53	.56				.92	.60
Classic	.47	.53	.54	.56	.62	.68	.63	.60			.91	.73
General product	1	2	3	4					Cronbach a	0.79	Cronbach a if item deleted	Item-to-total correlation
Attribute											.80	.41
It is expensive.	.31										.76	.56
The packing is good.	.34	.53									.72	.68
The watch is waterproof.	.37	.41	.59								.73	.63
It is Swiss-made.	.28	.45	.55	.53							.75	.60
The materials are good.												
Satisfactory benefit	1	2	3						Cronbach a	0.66	Cronbach a if items deleted	Item-to-total correlation
Fun											.58	.45
Quality merits price	.38										.54	.48
Value for money (status)	.47	.41									.55	.47
Image benefit	1	2	3						Cronbach a	0.75	Cronbach a if items deleted	Item-to-total correlation
Statement of self-image											.75	.43
Brings exclusivity	.26										.71	.49
Attention attracting	.38	.39									.66	.59
Brings prestige	.40	.53	.60								.61	.68
Functional attribute	1	2	3						Cronbach a	0.70	Cronbach a if items deleted	Item-to-total correlation
Size											.63	.50
Style	.47										.55	.56
Practicality	.38	.47									.64	.49
Excitement	Pearson correlation = .57*											
Cheerful.									Mean	Std. Deviation	N	
Young									2.51	1.12	321	
									2.55	1.19	321	
Functional benefit									Mean <th>Std. Deviation<th>N<th></th></th></th>	Std. Deviation <th>N<th></th></th>	N <th></th>	
You can throw it away after a while.									4.19	1.01	321	
This product may not function well.									4.22	.96	321	
* Pearson Correlation is significant at the 0.01 level (2-tailed)												



attribute' in the case of counterfeit Rolex. The factor related to 'disposability' and 'functionality' suggests a relation to product life cycle and performance and is therefore named as a 'functional benefit'. The rest of the product benefit related items gathered under one factor for the original Rolex is labelled 'image benefit'. The single item factor is named as 'value for money (quality and price)' for the original Rolex. In the context of the counterfeit Rolex, the factor related to 'fun', 'quality and price' and 'status and value' suggest the 'satisfactory benefit', while the factor associated with 'attention attracting', 'prestige' and 'exclusivity' can be interpreted as 'image benefit'.

For both the original Rolex and the counterfeit Rolex, the extracted factors are considered to be reliable and adequately capture single construct, since they all have a Cronbach Alpha above 0.70 or Pearson correlation higher than 0.25 which is significant at the 0.01 level, with the exception of the satisfactory factor which has a Cronbach Alpha of 0.66. However, the lower value of the Alpha might be caused by the small number of items involved (3 items). Therefore, it is considered as acceptable. The item-total correlation for all items is very close or higher than the suggested 0.50 benchmark (Bearden and Netemeyer 1999) for both versions of this brand (Table 7.8, 7.9). Therefore, the results suggest that the scale adopted to measure Rolex brand image is both valid and reliable for both versions of Rolex.

#### 7.5.3.2.2 Original Gucci and Counterfeit Gucci

All the factors with eigenvalues greater than 1.0 are extracted for both original and counterfeit Gucci (Table 7.10). Four factors are extracted from the original Gucci data, with 6 components from the counterfeit Gucci data. Unlike the Rolex, all product attribute items fell into one factor for both original Gucci and counterfeit Gucci, and brand benefit/consequence items load on two factors in each case. The content of these factors have no difference across the two versions. For the original Gucci data, the majority of brand personality items load on one factor, with the exception of 'corporate' and 'reliable' are singled out. 'Reliable' and 'corporate' are discarded as they split load on two factors and with both factor loadings higher than 0.40. Different to factor extractions of the original Gucci data, the personality items of the counterfeit Gucci load nicely on three factors, with each factor consisting of 4 or more than 4 items. The 'trendy', 'exciting', 'cool' and 'successful' items split load on two factors. However, due to all of them having the factor loadings on one factor as high as around 0.70, and

Table 7.10 Comparison of original Gucci image factors and counterfeit Gucci image factors

No	Items	Original Gucci				Counterfeit Gucci					
		1	2	3	4	1	2	3	4	5	6
1	I can get the size I want.			.681						.630	
2	It is expensive.			.762						.640	
3	The materials are good.			.789						.746	
4	They have the style I like.			.775						.718	
5	The product is practical.			.721						.699	
6	The product is a statement of your self-image.		.610				.676				
7	This product can bring you fun.		.617				.639				
8	The quality of the product merits the price.		.605				.597				
9	In buying this product, you get value for money for the status it brings you.		.745				.648				
10	You can throw it away after a while.				.705						.825
11	This product brings you exclusivity.		.704				.606				
12	This product can make you attract other people's attention.		.746				.800				
13	This product can bring you prestige.		.769				.754				
14	This product may not function well.				.701						.679
15	This product gives people impression that what you wear is fashionable.		.645				.684				
16	Trendy	.730				.429			.702		
17	Exciting	.685				.415			.680		
18	Cool	.744				.428			.688		
19	Contemporary	.694							.649		
20	Reliable							.764			
21	Secure	.699						.753			
22	Corporate							.759			
23	Successful	.743				.410		.699			
24	Glamorous	.761				.700					
25	Good looking	.797				.733					
26	Smooth	.813				.752					
27	Classic	.680				.671					
28	Beautiful	.800				.836					
29	Elegant	.780				.805					
KMO				0.91					0.92		
Cumulated variance explained %			59.88					65.53			
Eigenvalue		9.85	2.72	2.22	1.39	9.79	3.21	2.17	1.44	1.26	1.14
% of variance		36.46	10.06	8.21	5.15	37.25	11.06	7.48	4.67	4.34	3.93
Cronbach Alpha		0.94	0.87	0.84	0.34*	0.92	0.86	0.88	0.87	0.77	0.36*
% of non-redundant residuals with absolute values greater than 0.05.		31%				23.0%					
* Pearson correlation is reported, and significant at 0.01 (2-tails)											



just above 0.40 on the other factor, which is only slightly higher than the pre-set up 0.40 criteria, these items remain in the heavily related factor, but are excluded from the less related factor. The extracted factors explain 59.88 percent of the overall variance for the original Gucci and 65.53 percent for the counterfeit version. The results are presented in Table 7.10.

The factor strongly related to items such as 'trendy', 'exciting', 'cool', 'contemporary', 'secure', 'successful', 'glamorous', 'good looking', 'smooth', 'classic', 'beautiful' and 'elegant', as most of these items were adopted from Aaker's (1997) personality scale; this factor is named as 'personality factor' for the original Gucci. In the case of the counterfeit Gucci, the three brand personality related factors are described as 'sophistication factor', 'competence factor' and 'excitement factor' since most of the items gathered under these factors are either exactly the same as the items loaded on these factors in Aaker's (1997) study, or similar in principle. It is worth highlighting that 'classic', 'beautiful' and 'elegant' were not included in Aaker's (1997) work. However, they all fitted in well with the other items of the 'sophistication factor'. These results in further challenge to the universal applicability of Aaker's personality scale.

For both original Gucci and counterfeit Gucci, the factor which is strongly related to 'size', 'expensive', 'material', 'style' and 'practicality' is interpreted as 'general product attribute factor'. It differs from Rolex; 'style' and 'practicality' group well with other product attribute related items in one factor. It is beyond the researcher's capability to offer any solid explanation to this demonstrated difference. That said, one assumption which could be made is that this might be an indication that different product attributes might weigh differently across different brands. The factor related to 'disposability' and 'functionality' suggests a relation to product life cycle and performance, and therefore is named 'functional benefit factor'. The rest of the product benefit related items ('self-image', 'fun', 'quality and price', 'status', 'exclusivity', 'attention attracting', 'prestige' and 'fashionability') gathered under one factor. Since they are all associated with purchase image gain, this is labelled 'image benefit factor'.

Whenever the Cronbach Alpha applied, for all the extracted factors across both versions, the Cronbach Alpha coefficients are higher than 0.80 with only one exception,

Table 7.11 Original Gucci brand image scale validation

Original Gucci n=321		Pearson correlation										Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Personality	1	2	3	4	5	6	7	8	9	10	11	0.94		
Trendy													.94	.71
Exciting	.65												.94	.70
Cool	.68	.64											.93	.73
Contemporary	.55	.56	.65										.94	.68
Secure	.51	.52	.48	.53									.94	.69
Successful	.55	.50	.58	.51	.68								.93	.75
Glamorous	.62	.53	.59	.50	.53	.69							.93	.75
Good looking	.55	.53	.55	.50	.51	.57	.69						.93	.76
Smooth	.55	.51	.61	.53	.57	.62	.62	.76					.93	.78
Classic	.43	.48	.44	.51	.53	.57	.47	.50	.55				.94	.66
Beautiful	.53	.55	.54	.52	.55	.54	.61	.71	.67	.60			.93	.77
Elegant	.53	.56	.50	.47	.58	.59	.56	.60	.61	.62	.76		.93	.75
												Cronbach a 0.87	Cronbach a if items deleted	Item-to-total correlation
Image benefit	1	2	3	4	5	6	7	8						
Self-image													.86	.58
Brings fun	.49												.86	.54
Quality and price	.32	.38											.86	.54
Value (status) for money	.38	.48	.64										.84	.68
Exclusivity	.37	.35	.37	.52									.85	.63
Attract attention.	.49	.34	.34	.48	.54								.85	.68
Brings you prestige.	.44	.44	.39	.52	.59	.66							.84	.71
Fashionableness	.50	.33	.36	.42	.46	.58	.54						.85	.62
												Cronbach a 0.84	Cronbach a if items deleted	Item-to-total correlation
General product attribute	1	2	3	4										
Size													.82	.57
Price	.43												.82	.58
Material	.54	.64											.78	.72
Style	.49	.47	.59										.77	.73
Practicality	.40	.38	.50	.69									.81	.62
												Mean	Std. deviation	N
Functional benefit												1.49	.779	321
You can throw it away after a while.														
This product may not function well.												1.77	.990	321

\* Pearson correlation is reported, and significant at 0.01 (2-tails)



Table 7.12 Counterfeit Gucci brand image scale validation

Counterfeit Gucci n=321		Pearson correlation							Cronbach a	Cronbach a if items deleted	Item-to-total correlation
		1	2	3	4	5	6	7			
Sophistication									0.92		
Glamorous										.91	.77
Good looking	.72									.91	.79
Smooth	.63	.70								.91	.78
Classic	.61	.60	.66							.92	.73
Beautiful	.68	.70	.69	.65						.90	.82
Elegant	.66	.66	.66	.65	.78					.91	.80
Image benefit									Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Self-image.	1	2	3	4	5	6	7		0.86		
Bring fun	.44									.84	.59
Quality and price	.33	.48								.84	.58
Value (status)	.36	.37	.43							.85	.51
Bring exclusivity.	.30	.29	.25	.46						.84	.58
Attract attention.	.56	.49	.41	.47	.40					.82	.71
Bring prestige.	.47	.40	.30	.51	.57	.55				.83	.67
Fashionable	.47	.42	.35	.33	.37	.55	.54			.83	.61
Product attribute									Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Size	1	2	3	4					0.76		
Price	.20									.73	.51
Material	.34	.49								.79	.36
Style	.53	.23	.45							.71	.59
Practicality	.43	.22	.47	.59						.68	.64
										.70	.59
Competence									Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Reliable	1	2	3						0.88		
Secure	.70									.86	.72
Corporate	.63	.67								.84	.77
Successful	.59	.65	.68							.85	.76
										.86	.73
Excitement									Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Trendy	1	2	3						0.89		
Exciting	.69									.86	.73
Cool	.66	.73								.84	.78
Contemporary	.59	.63	.66							.84	.79
										.87	.70
Functional benefit									Mean	Std. Deviation	N
You can throw it away after a while.									4.16	1.051	321
This product may not function well.									4.13	1.044	321
* Pearson correlation is reported, and significant at 0.01 (2-tails)											

that of the 'product attribute factor' of the counterfeit Gucci (Table 7.11 and Table 7.12). The Cronbach Alpha coefficient is 0.76 which is classified as acceptable (Stevens 1992). Moreover, due to the Cronbach Alpha, the coefficient will increase as the number of the items on a factor increases (Hair et al. 2004), and the factor in this study only consists of 4 items, it can be argued that there is a sign of internal consistency. The Pearson correlations are reported when the Cronbach Alpha is not applicable. The Pearson correlation of the 'functional benefit factor' is 0.34 for the original Gucci and 0.36 for the counterfeit Gucci, which are both significant at the 0.01 level.

The reliability of the scale is further confirmed by the Pearson inter-correlation of the items included in this scale, which are all significant at the 0.01 level. In principle, the item-total correlation for all items is higher than the suggested 0.50 level (Bearden and Netemeyer 1999), with the exception of the 'price' item of the 'product attribute factor' of the counterfeit Gucci (Table 7.12). Therefore, to some extent it is safe to say that the scales adopted for measuring consumers' perceptions of brand image of Gucci watches is both reliable and valid.

#### 7.5.3.2.3 Original Burberry and Counterfeit Burberry

For both the original Burberry and the counterfeit Burberry data, five factors are extracted. The eigenvalues of all the factors are greater than 1.0. In principal, the structures of the factors across two versions of Burberry are similar, with the brand personality items group in one factor, product attribute items load on two factors, and brand benefit/consequence items gathered under two factors. Moreover, the content of the factors are not very different. The slight differences are: the 'price' item represents one factor on its own for the original Burberry, and constructs one factor together with the item 'material' for the counterfeit Gucci; both 'high quality' items and the 'exclusivity' item loaded on one brand benefit related factor nicely with some other items for the original Burberry, but do not appear to group with any other brand benefit/consequence items in the counterfeit Burberry data. The extracted factors account for 61.84 percent of the total variance for the original Gucci data, and 59.43 percent for the counterfeit Gucci data (Table 7.13).

The factor related to brand personality items is labelled simply as 'personality factor', as the adjectives used are all adjectives used to describe human personality. The factor



Table 7.13 Comparison of original Burberry image factors and counterfeit Burberry image factors

No	Items	Original Burberry					Counterfeit Burberry				
		1	2	3	4	5	1	2	3	4	5
1	I can get the size I want.			.735				.708			
2	It is expensive.				.687					.869	
3	The materials are good.			.720						.695	
4	They have the style I like.			.822				.810			
5	They have the colour I like.			.846				.847			
6	The product is practical.			.805				.750			
7	In buying this version, you get a high standard of quality.		.568								
8	The product is a statement of your self-image.		.750						.740		
9	This product can bring you fun.		.689						.637		
10	The quality of the product merits the price.		.719						.727		
11	In buying this product, you get value for money for the status it brings you.		.747						.659		
12	You can throw it away after a while.					.724					.738
13	This product brings you exclusivity.		.727								
14	This product can make you attract other people's attention.		.646						.717		
15	This product might not last long.					.788					.799
18	Down to earth	.586					.474				
19	Original	.783					.774				
20	Unique	.777					.779				
21	Contemporary	.761					.699				
22	Reliable	.767					.711				
23	Corporate	.716					.743				
24	Successful	.741					.714				
25	Feminine	.683					.695				
26	Outdoorsy	.466					.569				
KMO				0.87					0.85		
Cumulated variance explained %											
Eigenvalue				61.84					59.43		
% of variance		6.92	3.28	2.14	1.33	1.18	6.00	2.72	1.82	1.45	1.08
Cronbach Alpha		28.83	13.67	8.93	5.52	4.89	27.27	12.35	8.29	6.60	4.92
% of non-redundant residuals with absolute values greater than 0.05.		0.88	0.85	0.88	n/a	0.29*	0.87	0.83	0.77	0.51*	0.38*
34											
30											
* Pearson correlation is reported, and significant at 0.01 (2-tails)											

related to items such as 'size', 'material' (not included in counterfeit Burberry), 'style', 'colour' and 'practicality' is interpreted as 'general product attribute factor', while the factor related to 'price' and 'material' (only in counterfeit Burberry) is named as 'price factor' due to 'price' either represents a factor on itself or it contributes more than the 'material' item in terms of formation of this factor. The factor strongly related to 'high quality (original Burberry only)', 'self-image statement', 'fun' 'quality and price', 'value (status) for money' 'exclusivity (original Burberry only)' and 'attention attracting' are all associated with a kind of purchase benefit related to image, therefore it is interpreted as 'image benefit factor'. Following the same rule applied to Rolex and Gucci, the factor related to 'disposability' and 'functionality' is named as the 'functional benefit factor'.

Whenever the Cronbach Alpha is applicable, for all the extracted factors across both versions, the Cronbach Alpha coefficients are higher than 0.80 with only one exception of the 'image benefit factor' of the counterfeit Burberry (Table 7.14). The Cronbach Alpha coefficient is 0.77, which is classified as acceptable (Stevens 1992). Moreover, due to the fact that the Cronbach Alpha coefficient will increase as the number of the items on a factor increases (Hair et al. 1998), and the factor in this study consists of only four items, it can be argued that this is a sign of internal consistency. The Pearson correlations are reported when the Cronbach Alpha is not applicable. The Pearson correlation of the 'function benefit factor' is 0.29 for the original Burberry, 0.38 for the counterfeit Burberry, and 0.51 for the 'price and material factor' of the counterfeit Burberry, which are all significant at the 0.01 level.

The reliability of the scale is further confirmed by the Pearson inter-correlation of the items included in this scale, which are all significant at the 0.01 level. The item-total correlation for all items is higher than the suggested 0.50 level (Bearden and Netemeyer 1999), with an exception of 'outdoorsy' of the original Burberry (0.40) and 'down to earth' of the counterfeit Burberry (0.37). Therefore, to some extent it is safe to say that the scales adopted for measuring consumers' perceptions of brand image of Gucci watches are both reliable and valid. Results are presented in Table 7.14 and Table 7.15.

It should be highlighted here that the 'high quality' item does not group well with other items in any cases other than that of the original Burberry. Therefore, as can be



Table 7.14 Original Burberry brand image scale validation

Original Burberry (n=277)		Pearson correlation									
Product attribute	1	2	3	4	5	6	7	8	Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Size										.87	.66
Material	.56									.87	.66
Style	.51	.52								.85	.75
Colour	.57	.56	.75							.85	.75
Practicality	.58	.58	.67	.64							
Image benefit	1	2	3	4	5	6	7	8	Cronbach a	Cronbach a if items deleted	Item-to-total correlation
High quality									0.88	.84	.57
Self-image statement	.56									.83	.65
Fun	.35	.52								.84	.56
Quality merits price	.45	.38	.44							.83	.64
Value (status) for money	.39	.46	.44	.62						.82	.66
Brings exclusivity	.40	.49	.42	.49	.55					.82	.65
Attention attracting	.40	.49	.30	.43	.39	.50				.84	.56
Personality	1	2	3	4	5	6	7	8	Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Down to earth										.88	.52
Original	.47									.86	.71
Unique	.48	.74								.86	.72
Contemporary	.36	.57	.61							.86	.66
Reliable	.33	.58	.53	.51						.86	.68
Corporate	.38	.45	.44	.50	.51					.87	.62
Successful	.32	.48	.45	.49	.64	.60				.86	.69
Feminine	.38	.42	.50	.48	.48	.45	.62			.87	.63
Outdoorsy	.30	.30	.31	.26	.29	.27	.36	.27		.89	.40
Functional benefit	Pearson correlation = .29*										
You can throw it away after a while.									Mean 1.87	Std. Deviation 0.94	N 277
This product may not function well.									1.62	1.00	277

\* Pearson correlation is reported, and significant at 0.01 (2-tails)

7.15 Counterfeit Burberry brand image scale validation

Table Original											
Burberry (n=277)											
Pearson correlation											
Product attribute	1	2	3	4	5	6	7	8	Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Size									0.83	.82	.59
Style	.50									.77	.70
Colour	.49	.71								.77	.71
Practicality	.53	.54	.57							.79	.65
Image benefit	1	2	3	4	5	6	7	8	Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Self-image statement									0.77	.71	.59
Fun	.43									.74	.51
Quality merits price	.41	.39								.72	.55
Value (status) for money	.39	.36	.43							.74	.52
Attention attracting	.50	.33	.40	.36	.31					.73	.54
Personality	1	2	3	4	5	6	7	8	Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Down to earth									.87	.87	.37
Original	.32									.84	.68
Unique	.25	.70								.84	.68
Contemporary	.33	.45	.50							.85	.62
Reliable	.17	.57	.56	.40						.85	.65
Corporate	.35	.51	.48	.52	.53					.84	.69
Successful	.26	.52	.56	.37	.53	.55				.85	.64
Feminine	.33	.38	.42	.49	.47	.52	.42			.85	.60
Outdoorsy	.17	.36	.37	.40	.44	.37	.42	.39		.86	.51
Functional benefit	Pearson correlation = .38*								Mean	Std. Deviation	N
You can throw it away after a while.									4.22	0.99	277
This product may not function well.									4.24	0.94	277
Price and material	Pearson correlation = 0.51*								Mean	Std. Deviation	N
It is expensive.									1.97	0.92	277
The materials are good.									2.06	0.93	277
* Pearson correlation is reported, and significant at 0.01 (2-tails)											



observed, it did not appear in any factors in other brands. This result seems contradictory to what the focus group data suggested. One possible explanation could be that all the other tested items are very much specified, whereas the 'high quality' item is too general. Therefore, it is more likely that it is significantly correlated to most of the items. Consequently, this item shares very low common variance with other factors in most cases. If this is the case, then why does 'high quality' load well with other items in one factor for the original Burberry? The researcher is obliged to admit that it is beyond her capability to provide a sound explanation. One assumption might be that it is something to do with the nature of Burberry brand itself. For example, due to the brand image of Burberry being heavily contaminated, consumers do not perceive much emotional benefit associated with Burberry. At the same time, they do not perceive Burberry as possessing high quality. The perceived benefit perceptions might achieve a high level of consistency. As such, these items load nicely together. Another explanation this research can provide is that the unexpected result might be caused by some kind of limitation of the research.

#### 7.5.3.2.4 Original Louis Vuitton and Counterfeit Louis Vuitton

Following extraction and Varimax rotation, four factors of the original Louis Vuitton and five factors of the counterfeit Louis Vuitton with eigenvalues greater than 1 emerge from analysis of the brand image and accumulatively account for 62.71 percent of the total variance for the original Louis Vuitton and 64.14 percent for the counterfeit version. Factor loadings of individual brand image items in relation to the factor solution are shown in Table 7.16. All personality related items gather in one group for both versions, and brand benefit items load on two factors. Product attribute items group in one factor for the original Louis Vuitton, with 'price' splits from other items and 'material' item cross loads on two factors for the counterfeit Louis Vuitton. The 'material' item is discarded from both factors of the counterfeit version. Therefore, for the counterfeit Louis Vuitton, the fifth factor is comprised of one item – 'price'. The fifth one-item factor is kept due to its high factor loading (0.87) and price is also considered to be an important influential variable in consumer decision-making. It is interesting to see how it influences consumer likelihood of consideration and purchase intention of counterfeit branded product. The 'exclusivity' item is also dropped, as it does not seem to fit in well with any factor for the counterfeit Louis Vuitton.

Table 7.16 Comparison of original LV brand image factors and counterfeit LV brand image factors

No	Items	Original LV				Counterfeit LV				
		1	2	3	4	1	2	3	4	5
1	I can get the size I want.			.774				.640		
2	It is expensive.			.643						.868
3	The materials are good.			.797				.433		.599
4	They have the style I like.			.770				.876		
5	I can get the colour I want.			.777				.880		
6	The product is practical.			.743				.785		
8	The product is a statement of your self-image.	.675				.654				
9	This product can bring you fun.	.627				.644				
10	The quality of the product merits the price.	.647				.604				
11	In buying this product, you get value for money for the status it brings you.	.751				.711				
12	You can throw it away after a while.				.798				.808	
13	This product brings you exclusivity.	.764								
14	This product can make you attract other people's attention.	.732				.787				
15	This product can bring you prestige.	.744				.654				
16	This product might not last long.				.736				.782	
17	This product gives people impression that what you wear is fashionable.	.731				.725				
18	Trendy		.807				.688			
19	Contemporary		.798				.689			
20	Successful		.790				.753			
21	Upper class		.755				.745			
22	Feminine		.786				.772			
23	Smooth		.779				.795			
KMO			0.90					.87		
Cumulated variance explained %			62.71					64.14		
Eigenvalue		7.75	2.44	2.26	1.35	6.79	2.29	2.08	1.28	1.04
% of variance		35.20	11.11	10.28	6.13	32.31	10.91	9.88	6.10	4.94
Cronbach Alpha		0.88	0.91	0.87	0.35*	0.85	0.87	0.86	0.39*	0.41*
% of non-redundant residuals with absolute values greater than 0.05.			26					26		
* Pearson correlation is reported, and significant at 0.01 (2-tails)										



As the contents of extracted factors across two versions are very similar, it is possible to interpret the rotated factors simultaneously. The first factor is strongly related to the variables 'statement of self-image', 'fun', 'quality and price', 'value (status) for money', 'exclusivity' (original Louis Vuitton only), 'attention attracting', 'prestige' and 'fashionability' and could be described as indicating 'purchase image benefit'. The second factor is strongly related to the variables, 'size', 'price (original Louis Vuitton only)', 'material (original Louis Vuitton only)', 'colour', 'style' and 'practicality', which suggest a 'general product attribute factor'. Factor 3 is strongly related to 'trendy', 'contemporary', 'sucessful', 'upper class', 'feminine', and 'smooth' and can be interpreted as 'personality factor'. Factor 5 is strongly related to 'disposability' and 'long lasting', which indicate 'functional benefit factor'. For the counterfeit Louis Vuitton, 'price' represents one factor with a relatively high factor loading (0.72). This factor is labelled 'price factor'.

For all the first three emerged factors of both versions of Louis Vuitton, the Cronbach Alpha coefficients are higher than 0.80 with the highest one reaching 0.91. The Pearson correlation coefficients of the 'product life factor' are 0.35 for the original Louis Vuitton and 0.39 for the counterfeit version, which are both highly significant with a level of 0.01. In addition, the Pearson item-total correlations are all above the 0.50 benchmark suggested by Bearden and Netemeyer (1999), with the exception of 0.49 for 'price' of the original Louis Vuitton. As 0.49 is only slightly less than the suggested 0.50, it is decided that this is acceptable at this stage. Based on these findings it can be argued that the scale used to measure Louis Vuitton brand image is valid and reliable. See Tables 7.17, 7.18 for details.

The exclusion of 'material' item in the extracted factors for counterfeit Louis Vuitton is theoretically interesting, as one would immediately assume that material is such important factor of 'product attribute'. Two assumptions are offered here. First, this might have something to do with the nature of the counterfeit branded product. Secondly, it might be caused by the way the material attribute was addressed. More specifically, it is too general compared with the way other product attributes were expressed.

Table 7.17 Original LV brand image scale validation

Original LV n=277		Pearson correlation								
Image benefit	1	2	3	4	5	6	7	Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Self-image.										
Brings fun	.48								.87	.62
Quality and price	.37	.42							.87	.60
Value (status) for money	.47	.45	.57					0.88	.87	.59
Brings exclusivity.	.52	.43	.46	.53					.86	.64
Attracts attention.	.47	.44	.45	.47	.55				.87	.70
Brings prestige.	.45	.50	.43	.46	.61	.54			.86	.67
Fashionable	.52	.48	.44	.41	.56	.56	.60		.86	.69
										.68
Product attribute	1	2	3	4	5			Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Size								0.87	.85	.70
Price	.44								.88	.49
Material	.60	.60							.85	.73
Style	.55	.33	.57						.84	.73
Colour	.62	.36	.58	.72					.84	.74
Practicality	.56	.33	.54	.65	.59				.85	.68
Personality	1	2	3	4	5			Cronbach a	Cronbach a if items deleted	Item-to-total correlation
Trendy								0.91	.89	.72
Contemporary	.74								.89	.74
Successful	.60	.62							.88	.79
Upper class	.54	.55	.73						.89	.73
Feminine	.60	.58	.65	.65					.89	.75
Smooth	.57	.59	.64	.59	.65				.89	.73
Functional benefit	Pearson correlation = .35*							Mean	Std. Deviation	N
You can throw it away after a while.								1.50	.79	277
This product may not function well.								1.70	.85	277

\* Pearson correlation is reported, and significant at 0.01 (2-tails)

\* Pearson correlation is reported, and significant at 0.01 (2-tails)



Table 7.18 Counterfeit LV brand image scale validation

Counterfeit LV n=277		Pearson correlation						Cronbach a 0.85	Cronbach a if items deleted	Item-to-total correlation
		1	2	3	4	5	6			
Image benefit Self-image. Brings fun Quality and price Value (status) for money Attracts attention. Brings prestige. Fashionable										
			.41					.82	.59	
			.42	.40				.83	.58	
			.45	.45	.45			.84	.52	
			.53	.41	.41	.48		.82	.62	
			.34	.39	.29	.46	.65	.81	.67	
			.43	.50	.35	.42	.41	.83	.57	
							.58	.82	.64	
Product attribute Size Style Colour Practicality		1	2	3				Cronbach a 0.86	Cronbach a if items deleted	Item-to-total correlation
									.87	.60
		.53							.79	.78
		.56	.79						.79	.78
		.51	.66	.63					.83	.69
Personality Trendy Contemporary Successful Upper class Feminine Smooth		1	2	3	4	5		Cronbach a .87	Cronbach a if items deleted	Item-to-total correlation
									.85	.68
		.75							.85	.69
		.52	.50						.85	.68
		.39	.40	.65					.86	.61
		.54	.58	.51	.48				.85	.71
		.49	.47	.54	.56	.68			.85	.69
Functional benefit You can throw it away after a while. This product may not function well.		Pearson correlation = .39*						Mean 4.20	Std. Deviation 1.02	N 277
								4.16	.99	277

\* Pearson correlation is reported, and significant at 0.01 (2-tails)

7.5.3.2.5 Key Findings Related to Brand Image

The brand image items were generated from a variety of sources and further tested using focus group discussion (for details please refer to Chapter 5), in order to minimize the number of items included in the questionnaire and ensure their relevancy. It appeared that the previous effort (qualitative study) worked out extremely well. Apart from one 'high quality' item that did not appear to fit in well with other items in most of the cases, in principle the behaviour of all other items corresponded to what was revealed by the focus group data. This result further cross-validated the scales adopted in this research.

Other items such as 'social risk related items', 'financial risk' and 'security item' were not included in PCA. These items were excluded from the analysis due to the inclusion of these items appearing to interfere with extraction of factors. Detailed results are not presented here due to the constraint of space. A close look revealed that the exclusion of these items from the PCA does make theoretical sense. Social risk and financial risk and security concern might correlate to other dimensions of brand image (e.g. image benefit and functional benefit), but theoretically they are well-defined constructs and differ from items gathered under brand image construct. Moreover, in most cases they appeared as a single item in the data, therefore they did not group together well with other items to form a factor. These items are screened out for further consideration in the regression analysis. These results confirm that risk and security concerns might be different components of the benefit/consequence dimension to both image and functional related benefits/consequences of the brand image.

All in all, the brand image scales developed from focus group discussions proved to a great extent to be valid and reliable. The research results further demonstrated that consumer perception of risk and security are constructs theoretically distinguishable from image and functional benefits/consequences. However, the subjects did not appear to distinguish them in the focus group discussions. In addition, the fact that almost all included items were well loaded on extracted factors in most of cases indicates that the focus group discussions were very effective in assisting in constructing a robust research instrument for this research and the developed research. The self-administered instrument achieved a high level of validity and reliability.



Finally, as reported earlier, there are several items with an item-total correlation lower than the 0.50 rule of thumb, even though their factor loadings are all above 0.40, and their belonging factors all have Cronbach Alphas above 0.70. It is decided to keep these items in the factor due to their high factor loadings. However, this research suggests that it might be safe for later researchers not to include them in their study as they do not appear to correlate very well with other items gathered in the same factor.

### 7.5.3.3 Reliability and Validity Analysis Results of Product Involvement, Product Knowledge, Consideration and Purchase Intention Scales

#### 7.5.3.3.1 Evaluation Results Using Cronbach's Alpha, Pearson Inter-correlation, and Item-total Correlation

The output for Cronbach's Alpha suggests that the scales adopted to measure the product involvement construct, the product knowledge construct, the consideration construct, and the intention construct are in fact internally reliable since the coefficients are above 0.80 across two product classes and two versions of four brands (Table 7.19), with an exception of the product knowledge scale when used to measure watches. The coefficient is 0.773, which is just short of the 0.8 criterion. The Pearson inter-correlations of the items included in all scales are all significant at 0.01 level (2-tails) (Appendix 10). In addition, the item-total correlations of items are all higher than the suggested 0.50 (Bearden and Netemeyer 1999), with the exception of the 'boredom' item of the product involvement scale. Details are presented in Appendix 10 together with the Pearson inter-correlation results.

Table 7.19 Reliability analysis

	No of items	No of cases	Cronbach's Alpha after reversed coded "boredom" accounted
Product involvement (watches)	10	321	0.902
Product involvement (handbags)	10	277	0.957
Product knowledge (watches)	4	321	0.773
Product knowledge (handbags)	4	277	0.893
Consideration set (original Rolex)	5	321	0.884
Consideration set (counterfeit Rolex)	5	321	0.891
Consideration set (original Gucci)	5	321	0.903
Consideration set (counterfeit Gucci)	5	321	0.900
Consideration set (original Burberry)	5	277	0.925
Consideration set (counterfeit Burberry)	5	277	0.901
Consideration set (original Louis Vuitton)	5	277	0.921
Consideration set (counterfeit Louis Vuitton)	5	277	0.916
Purchase intention (original Rolex)	5	321	0.939
Purchase intention (counterfeit Rolex)	5	321	0.950
Purchase intention (original Gucci)	5	321	0.942
Purchase intention (counterfeit Gucci)	5	321	0.942
Purchase intention (original Burberry)	5	277	0.963
Purchase intention (counterfeit Burberry)	5	277	0.963
Purchase intention (original Louis Vuitton)	5	277	0.963
Purchase intention (counterfeit Louis Vuitton)	5	277	0.968

The dropping item means was used and it appeared that the reliability could be boosted by only 0.034. The reliability coefficient increased from 0.773 to 0.807 (Table 7.20) after dropping “I only need to gather a little information in order to make a wise decision”. It is recognized that the Cronbach Alpha coefficient will increase as the number of the items on a scale increases (Hair et al. 1998). Thus, there might be a chance that the slightly lower coefficient alpha is associated with the small number of items included in the knowledge measure (four items). Moreover, despite Bryman and Cramer’s (1998) call for a Cronbach Alpha coefficient of 0.8 and above, various researchers (e.g. Hinkin 1995) have claimed that 0.70 can be an acceptable level. Therefore, it is decided that the scales used to measure product knowledge of watches are internally reliable.

Table 7.20 Reliability analysis of knowledge

Watches	Cronbach Alpha	Cronbach Alpha if item deleted
I feel very knowledgeable about watches.	0.773	.673
I can give advice about different brands of watches.		.694
I only need to gather a very little information in order to make a wise decision.		.807
I feel very confident about my ability to tell the difference in quality between different brands of watches.		.694
Total	321	

The Cronbach Alpha coefficients of the scale used to measure product involvement of watches and handbags are both greater than .80. Nevertheless, Table 7.21 shows that the item-total correlations (boredom) are .34 (watches) and 0.27 (handbags), lower than .50 suggested by previous researchers (e.g. Bearden and Netemeyer 1999). Therefore “boredom” is deleted from the scale used to measure involvement, although the overall Cronbach Alpha is greater than the criterion .80. This problem does not exist in relation to other measurements, thus item-total correlations are not presented with an aim to save space. Please refer to Appendix 8 for detailed results.

Table 7.22 presents the Cronbach Alpha coefficients of product involvement after dropping “boredom”. The Cronbach Alpha increases 0.09 for watches and 0.16 for handbags. The item-total correlations are all above .50. One thing worth mentioning here is that to delete the reverse item “I get bored when people talk to me about watches/handbags” (hereafter “boredom”) is not necessarily to say that the scale (RP11) developed by McQuarrie and Munson (1992) is not reliable. The low item-total



correlation might caused by the nature of the reverse items. Despite the significant correlations between “boredom” and other items, it is observed that some respondents did not recognise the reverse direction of this item and followed a certain pattern. Due to lack of practical evidence with regard to how correction should be carried out, any action to verify the values will be groundless. Therefore, it is better to leave it as it was. This certainly raises the possibility that it might intervene in the overall scale reliability. This is evidenced by low item-total correlation. The reliability increased by 0.09 (watches) and 0.14 (handbags) after deleting “boredom”. The Cronbach Alpha coefficients did not improve dramatically, as they did not have much room to improve. One point which needs to be addressed is that some respondents did have problems in identifying reverse items and this might contribute to the low reliability of this scale. A researcher should examine the reasons for low reliability of a scale in conjunction with level of identification of reverse items of subjects before coming to the conclusion that a scale is unreliable.

Table 7.21 Involvement reliability test results (including boredom)

Pearson Correlation										Cronb ach α	Cronbach α if item deleted	Item-total correlation
Watches	1	2	3	4	5	6	7	8	9	0.90		
1 Importance											.890	.64
2 Boredom	.22*										.911	.34
3 Means a lot	.62*	.25*									.886	.70
4 Excitement	.42*	.27*	.64*								.889	.66
5 Liking	.55*	.26*	.47*	.49*							.888	.69
6 Matters	.58*	.24*	.65*	.54*	.60*						.883	.75
7 Interesting	.47*	.32*	.49*	.52*	.57*	.57*					.884	.74
8 Fun	.35*	.21*	.43*	.48*	.38*	.54*	.68*				.891	.62
9 Appealing	.49*	.31*	.50*	.49*	.60*	.62*	.69*	.66*			.883	.75
10 Careful	.51*	.25*	.52*	.48*	.61*	.54*	.52*	.41*	.57*		.888	.67
* Correlation is significant at 0.01 level (2 tailed) No of cases = 321												
Handbags	1	2	3	4	5	6	7	8	9	0.96		
1 Importance											.95	.87
2 Boredom	.28*										.97	.27
3 Means a lot	.81*	.20*									.95	.84
4 Excitement	.75*	.25*	.75*								.95	.84
5 Likeness	.84*	.25*	.79*	.80*							.95	.91
6 Matters	.84*	.24*	.84*	.79*	0.88*						.95	.92
7 Interesting	.76*	.27*	.75*	.80*	0.80*	.86*					.95	.88
8 Fun	.69*	.21*	.72*	.76*	0.75*	.78*	.83*				.95	.81
9 Appealing	.84*	.25*	.77*	.79*	0.90*	.88*	.82*	.76*			.95	.91
10 Careful	.83*	.24*	.78*	.74*	0.88*	.84*	.80*	.74*	.87*		.95	.87
* Correlation is significant at 0.01 level (2 tailed) No of cases = 277												

Clearly the Cronbach’s Alpha coefficients for the consideration set and the purchase intention (Table 7.19) are very high, and this is particularly true in relation to purchase intention. Apart from the explanation that that measures adopted in this research are reliable, the researcher would like to offer two possibilities that might have led to such

high, desired coefficient values. First of all, in relation to purchase intention, this might be something to do with the almost identical statements of the measure. For further details, please refer to the purchase intention section of the Research Instrument (Appendix 4). Secondly, the high coefficient values associated with consideration set and purchase intention to some extent might connect with the nature of the studied brands. The brands this research is examining are well-known luxury brands. Therefore, a large number of people will not consider buying nor have any intention of buying them for various reasons. As reported earlier, only about one third of consumers will knowingly purchase CBP (e.g. Tom et al. 1998; Wee et al. 1995). This figure represents consumers' purchase intention of counterfeit products in general. When it comes to a more specific brand, these figures could decline sharply, as consumers' perceptions/attitude of the specific brand together with other factors could have an impact on consideration of purchase and purchase intention. Therefore, it is expected that the subjects' responses to these questions would more skewed to the negative side of the scale. In turn, it has an impact on the Cronbach Alpha coefficients.

Table 7.22 Involvement reliability test results (after dropping boredom)

Pearson Correlation									Cronbach h α	Cronbach α if item deleted	Item-total correlation
Watches	1	2	3	4	5	6	7	8	0.912		
1 Importance										.904	.65
2 Means a lot	.62*									.900	.71
3 Excitement	.42*	.64*								.903	.66
4 Liking	.55*	.47*	.49*							.901	.69
5 Matters	.58*	.64*	.53*	.60*						.895	.76
6 Interesting	.47*	.49*	.52*	.57*	.57*					.898	.73
7 Fun	.35*	.43*	.48*	.38*	.54*	.68*				.905	.63
8 Appealing	.49*	.50*	.49*	.60*	.62*	.69*	.66*			.896	.75
9 Careful	.51*	.52*	.48*	.61*	.54*	.52*	.41*	.57*		.902	.67
* Correlation is significant at 0.01 level (2 tailed) No of cases = 321											
Handbags	1	2	3	4	5	6	7	8	0.973		
1 Importance										.970	.87
2 Means a lot	.81*									.971	.85
3 Excitement	.75*	.75*								.971	.85
4 Liking	.84*	.79*	.80*							.968	.92
5 Matters	.84*	.84*	.79*	.88*						.968	.93
6 Interesting	.76*	.75*	.80*	.80*	.86*					.969	.88
7 Fun	.69*	.72*	.76*	.75*	.78*	.83*				.972	.82
8 Appealing	.84*	.77*	.79*	.90*	.86*	.82*	.76*			.968	.91
9 Careful	.83*	.78*	.74*	.88*	.84*	.80*	.74*	.87*		.969	.89
* Correlation is significant at 0.01 level (2 tailed) No of cases = 277											

In sum, the high value of Cronbach Alpha item-total correlations of each scales, as well as the consistent significant Pearson inter-correlation values, all give evidence that the measures adopted from or verified based on previous research not only achieved internal reliability to measure specific product class and specific brand, but also



consistent reliability across two product classes, four brands and two versions of brands. This result justified the rationale of adoption of these scales.

#### 7.5.3.3.2 Evaluation Results Using PFA

The principal-axis factoring in SPSS (11.5 version) is used to conduct this task. The factor analysis solutions of product involvement and product knowledge are reported in Table 7.23; solutions of the consideration set and the purchase intention across brands are presented in Table 7.24.

Table 7.23 shows that a one-factor solution is appropriate based on a minimum eigenvalue of one for both product involvement and product knowledge measures across two product classes. The item factor loadings for product involvement fall between 0.67 and 0.80 for watches, and from 0.86 to 0.94 for handbags. Factor loadings for product knowledge range from 0.43 to 0.82 for watches, and from 0.73 to 0.88 for handbags. To some extent, all items included in these two scales load nicely on the extract factor across both the product involvement and the product knowledge construct. The variances explained by the one factor are 58.73 percent for the product involvement of watches, and 82.24 percent for handbags. The one factor accounts for 60.30 percent (watches) and 75.78 percent (handbags) of the total variance for the product knowledge construct. It is quite clear that the extracted factors of both the product knowledge scale and the product involvement scale explained more variance for handbags than for watches. This might be explained by the higher level of subject similarity of one product (handbag) than the other (watch). As reported earlier, some men did not complete the handbag section of the questionnaire, leading to women being over-represented in the handbag data.

Clearly, all items comprising the involvement scale share a common factor; all the items comprising the knowledge scale load on one factor. This applies to both watches and handbags. Therefore, both the scales are mono-dimensional. This provides some evidence of content validity for the scales used to measure product involvement and product knowledge construct across two product classes.

Table 7.24 shows that the items comprising the consideration set scale converge into one dimension. This applies to all eight cases (four brands x two versions of each

brand). It is evident from the one factor solution based on the minimum eigenvalue of one. The factor loadings range from 0.68 and 0.82 (original Rolex), 0.68 to 0.84 (counterfeit Rolex), 0.70 to 0.85 (original Gucci), 0.70 to 0.87 (counterfeit Gucci), 0.76 to 0.91 (original Burberry), 0.60 to 0.90 (counterfeit Burberry), 0.70 to 0.89 (original Louis Vuitton), and 0.72 to 0.90 (counterfeit Louis Vuitton). The extracted factors account for from 68.5 percent to 76.2 percent of the total variances across eight cases.

### 7.23 Factor solutions of product involvement and product knowledge across product class

Product involvement	Factor loading	% of Variance explained	KMO
Watches are important to me.	.68	58.73	0.90
Watches mean a lot to me.	.73		
I perceive watches as exciting products.	.69		
I like watches.	.73		
Watches matter to me.	.80		
Watches are interesting products.	.78		
Watches are great fun.	.67		
Watches are appealing to me.	.80		
I care about the watches I buy.	.71		
<b>Extraction Method: Principal Axis Factoring. 1 factor extracted. 4 iterations required.</b>			
Handbags are important to me.	.89	82.24	0.95
Handbags mean a lot to me.	.87		
I perceive handbags as exciting products.	.86		
I like handbags.	.93		
Handbags matter to me.	.94		
Handbags are interesting products.	.90		
Handbags are great fun.	.83		
Handbags are appealing to me.	.93		
I care about the handbags I buy.	.91		
<b>Extraction Method: Principal Axis Factoring. 1 factor extracted. 3 iterations required.</b>			
Product knowledge	Factor loading	% of Variance explained	KMO
I feel very knowledgeable about watches.	.82	60.30	0.71
I can give advice about different brands of watches.	.78		
I only need to gather very little information in order to make a wise decision.	.43		
I feel very confident about my ability to tell the difference in quality between different brands of watches.	.71		
<b>Extraction Method: Principal Axis Factoring. 1 factor extracted. 8 iterations required.</b>			
I feel very knowledgeable about handbags.	.87	75.78	0.81
I can give advice about different brands of handbags.	.88		
I only need to gather very little information in order to make a wise decision.	.73		
I feel very confident about my ability to tell the difference in quality between different brands of handbags.	.80		
<b>Extraction Method: Principal Axis Factoring. 1 factor extracted. 5 iterations required.</b>			

Similarly, one factor emerges from analysis based on a minimum eigenvalue of one for purchase intention scale across eight cases, and accounts for a range from 80.3 and 88.8. The factor loadings fall between 0.81 and 0.93 (original Rolex), 0.85 and 0.92 (counterfeit Rolex), 0.81 and 0.91 (original Gucci), 0.81 and 0.94 (counterfeit Gucci), 0.88 and 0.95 (original Burberry), 0.89 and 0.94 (counterfeit Burberry), 0.87 and 0.96 (original Louis Vuitton), 0.91 and 0.97 (counterfeit Louis Vuitton). See Table 6.12 for details.



7.24 Factor solutions of consideration set and purchase intention

Consideration set (watches)	Factor loading			% of Variance explained					KMO		
	OR	CR	OG	CLV	OB	CB	OLV	CLV	OB	CR	OG
I would consider buying these watches.	.82	.84	.82	.85	68.5	69.8	72.2	71.5	.85	.86	.86
I would recommend these watches.	.81	.79	.85	.75							
These watches are attractive to me.	.81	.82	.85	.87							
These watches are acceptable to purchase.	.77	.81	.83	.83							
These watches are acceptable within the price range I am willing to pay.	.68	.68	.70	.70							
Extraction Method: Principal Axis Factoring. a 1 factors extracted.											
Consideration set (handbags)	Factor loading			% of Variance explained					KMO		
	OB	CB	OLV	CLV	OB	CB	OLV	CLV	OB	CB	OLV
I would consider buying one these handbags.	.89	.90	.88	.86	77.1	72.1	76.2	75.0	.89	.85	.88
I would recommend these handbags.	.91	.85	.89	.85							
These handbags are attractive to me.	.86	.90	.89	.90							
These handbags are acceptable of purchase.	.81	.77	.83	.81							
These handbags are acceptable within the price range I am willing to pay.	.76	.60	.70	.72							
Extraction Method: Principal Axis Factoring. a 1 factors extracted.											
Purchase intention (watches)	Factor loading			% of Variance explained					KMO		
	OR	CR	OG	CLV	OB	CR	OG	CLV	OB	CR	OG
I have the intention of buying these watches.	.86	.87	.87	.81	80.3	83.4	81.2	81.4	.84	.89	.86
I intend to buy these watches.	.93	.92	.91	.91							
I have high purchase interest in these watches.	.84	.92	.91	.94							
I buy these watches.	.81	.85	.81	.85							
I would probably buy these watches.	.90	.89	.87	.87							
Extraction Method: Principal Axis Factoring. a 1 factors extracted.											
Purchase intention (handbags)	Factor loading			% of Variance explained					KMO		
	OB	CB	OLV	CLV	OB	CB	OLV	CLV	OB	CB	OLV
I have the intention of buying these handbags.	.89	.90	.90	.91	87.2	87.2	87.0	88.8	.88	.89	.91
I intend to buy these handbags.	.95	.92	.94	.97							
I have high purchase interest in these handbags.	.94	.94	.96	.93							
I buy these handbags.	.88	.89	.87	.91							
I would probably buy these handbags.	.92	.92	.90	.93							
Extraction Method: Principal Axis Factoring. a 1 factors extracted.											
Note: OR= original Rolex, CR= counterfeit Rolex, OG= original Gucci, CG= counterfeit Gucci, OB= original Burberry, CB= counterfeit Burberry, OLV=original Louis Vuitton, CLV= counterfeit Louis Vuitton											

Accordingly, all the items comprising the consideration set scale grouped under a common factor, all the items of the purchase intention scale load on one factor. This applies to all eight cases across two versions of four brands. Therefore, both the scales are mono-dimensional. This provides some evidence of content validity for the scales used to measure the consideration set and purchase intention constructs across four brands and two versions of each brand.

In sum, the items used to measure the same constructs across two versions of each brands did measure the same concept. Therefore, it can be said that the scales used to measure involvement, knowledge, consideration set and purchase intention have the evidence of construct validity. This is based on the claim of Kaplan and Saccuzo (1997), that evidence of construct validity shows that measures of the same construct ‘converge’ on the same construct, which is intended to be measured.

When more than two items loaded on one factor, the internal consistency of these items was tested using Cronbach Alpha and correlation coefficient. Pessmeier and Bruno (1971) noted that if a set of items is really measuring some underlying trait or attitude, then the underlying trait causes the covariation among the items. That is, the higher the correlation, the better the items are for measuring the same underlying construct. Churchill (1999) claimed that internal consistency of the items is also the essence of content validity. Although internal consistency is not a sufficient condition for construct validity and content validity, it is a necessary condition (Churchill 1999). Based on this, high internal consistency of items used to measure a construct might be an indication of possibility of construct validity and content validity. This is the notion for the use of assessing correlation among the items of the measures adopted in this research to analyse the construct validity and the content validity of the scales. All in all, the overall satisfactory output of Cronbach Alpha coefficients, correlations coefficients and factor analysis results demonstrate that the scales adopted in this research have a high level of validity and reliability.

#### 7.6 Final Stage of Data Preparation for the Main Modelling Approach

After the thorough evaluation of the scales validity and reliability, this stage of the research focuses on computing new variables for the use of at the modelling stage. More specifically, factor scores are calculated using SPSS factor score function.



Multiple item scales are transformed into one new variable. This is achieved by adding all the score of the items and then dividing by the number of items. The factor scores and newly computed variables are saved. Following Hutcheson and Sofroniou (1999) suggestion, outliers are screened and possibility of multicollinearity is examined before input them directly into a model. As the extreme cases are part of the population from which the sample was intended to be taken, these cases should not be deleted. Typically, researchers give the case a new score so that it is one raw score more or less than the next extreme value on a particular variable (Hutcheson and Sofroniou 1999). In this research, the outliers are identified and replaced by new scores following this common practice before the factors are included into regression of the likelihood of consideration of the original Rolex, Gucci, Burberry and Louis Vuitton, but are treated as part of non-normal regression in relation to likelihood of consideration of the counterfeit brands, as well as likelihood of purchase intention of both original and counterfeit brands. This is because, to some extent, the likelihood of consideration of original Rolex is normally distributed. In contrast, in all other cases the respondent variables appear non-normally distributed (see Chapter 8 for details).

VIF and tolerance statistics are used to assess the assumption of no multicollinearity. VIF is a technique for measuring multicollinearity among the explanatory variables. It is referred to as a variance-inflation factor (VIF). It can be calculated by using the Equation  $VIF = 1/1 - R^2$ .  $R$  is the multiple correlation coefficient that regresses the *ith* independent variable,  $x$ , on the remaining independent variables (Field 2000). In respect to the formula, VIF tends to be larger when the *ith* independent variable has a strong relation with the other independent variables. The denominator of equation,  $1 - R^2$  is defined as the tolerance of variable. There are no hard and fast rules about what value of the VIF and tolerance value should be. Myers (1990) suggests that a value of 10 is a good value at which to be concerned. Bowerman and O'Connell (1990) suggest that if the average VIF is substantially greater than 1, then multicollinearity may be biasing the regression model. Therefore, tolerance values below 0.1 indicate serious problems. Nevertheless, Menard (1995) suggests that values below 0.2 are worthy of concern. This research considers a VIF value above 5 and tolerance value below 0.2 as problems. These rules are commonly accepted by researchers (e.g. Field 2000, Hutcheson and Sofroniou 1999, Bryman and Cramer 1999).

The VIF and tolerance levels are reported in Table 7.25. The tolerance values (ranging between 0.450 and 0.989) are all higher than 0.20, the benchmark level (Hutcheson and Sofroniou 1999), and VIF values (range between 1.011 and 2.260) are all lower than 5. Thus, the levels of multicollinearity between the extracted factors, risk related variables, security variables, involvement and knowledge are all within acceptable limits. Bivariate correlations between the extracted factors and social risk, security, and financial risk are examined and the results are presented in Appendix 11. It is obvious some of the extracted factors are significantly correlated with other variables which were not included in the factor analysis. In some cases, the variables which were not included in factors are also significantly correlated with each other. However, due to the VIF and tolerance values all lying in the acceptable range, the latent variables, risk related variables, security variable, involvement variable and knowledge are theoretically distinct, and it is considered that the extractors together with the other variables can be put into a model and will be less likely to cause multicollinearity problem.

## 7.7 Summary

Prior to their submission for analysis, the responses are subjected to an extensive series of checks to identify possible biases, which could be controlled for during the analysis stage (for details, see Punj and Staelin 1983). The checks conducted in this research involve examination of the raw data, the distribution of values of each variable, the data representativeness, adopted scales of reliability and validity and possibility of multicollinearity problem.

In total, 430 questionnaires were collected, with 321 of them being usable after careful checking, editing and data cleaning, which resulted in a 74.7 percent usable rate. It is clear that the unusable questionnaire rate is relatively high. Detailed analysis of the unusable questionnaires is provided. It is revealed that some respondents' lack of cooperation and the lengthy nature of the research instrument were the main reasons for the cause of high unusable questionnaire rate. The length of the questionnaire was determined by the complex nature of this research. A great deal of effort has been put into improving respondents' level of cooperation (e.g. use of incentive, use of gaze and touch method, use of pleasant greeting statement). As a result, there was very little the researcher could have improved on, rather than accept the reality.



Table 7.25 Test of Multicollinearity

Original Rolex	Collinearity Statistics		Counterfeit Rolex	Collinearity Statistics	
	Tolerance	VIF		Tolerance	VIF
Factor 1	.895	1.118	Factor 1	.936	1.068
Factor 2	.870	1.150	Factor 2	.959	1.042
Factor 3	.932	1.073	Factor 3	.779	1.283
Factor 4	.972	1.029	Factor 4	.919	1.088
Factor 5	.938	1.066	Factor 5	.965	1.037
Factor 6	.917	1.090	Factor 6	.970	1.031
Become a target for muggers.	.985	1.015	Factor 7	.937	1.068
Concerned about being found out	.756	1.323	Become a target for muggers.	.748	1.337
Financial loss.	.876	1.142	Concerned about being found out	.846	1.182
Involvement	.879	1.138	Financial loss.	.839	1.192
Knowledge	.707	1.415	Involvement	.729	1.372
			Knowledge	.725	1.379
Original Gucci	Collinearity Statistics		Counterfeit Gucci	Collinearity Statistics	
	Tolerance	VIF		Tolerance	VIF
Factor 1	.960	1.041	Factor 1	.984	1.017
Factor 2	.936	1.068	Factor 2	.923	1.083
Factor 3	.990	1.010	Factor 3	.970	1.031
Factor 4	.931	1.075	Factor 4	.989	1.011
Social risk	.879	1.137	Factor 5	.987	1.013
Financial risk	.930	1.075	Factor 6	.905	1.105
Involvement	.719	1.390	Social risk	.854	1.171
Knowledge	.729	1.372	Financial risk	.881	1.135
			Involvement	.722	1.385
			Knowledge	.719	1.391
Original Burberry	Collinearity Statistics		Counterfeit Burberry	Collinearity Statistics	
	Tolerance	VIF		Tolerance	VIF
Factor 1	.962	1.040	Factor 1	.977	1.023
Factor 2	.961	1.041	Factor 2	.961	1.041
Factor 3	.934	1.070	Factor 3	.964	1.037
Factor 4	.963	1.039	Factor 4	.991	1.009
Factor 5	.963	1.038	Factor 5	.936	1.069
Social risk	.615	1.625	Social risk	.544	1.838
Singled out	.569	1.759	Singled out	.502	1.991
Financial risk	.868	1.152	Financial risk	.913	1.096
Involvement	.452	2.214	Involvement	.450	2.220
knowledge	.442	2.261	Knowledge	.456	2.194
Original LV	Collinearity Statistics		Counterfeit LV	Collinearity Statistics	
	Tolerance	VIF		Tolerance	VIF
Factor 1	.823	1.215	Factor 1	.648	1.544
Factor 2	.962	1.040	Factor 2	.895	1.118
Factor 3	.919	1.089	Factor 3	.964	1.037
Factor 4	.901	1.110	Factor 4	.898	1.114
Security	.731	1.369	Factor 5	.972	1.029
Social risk	.742	1.348	Security	.550	1.819
Target of anti-social behaviour	.769	1.300	Social risk	.796	1.256
Financial risk	.805	1.242	Target of anti-social behaviour	.711	1.407
Involvement	.456	2.191	Financial risk	.855	1.169
Knowledge	.449	2.225	Involvement	.457	2.189
			Knowledge	.465	2.152

The SPSS frequency statistics were adopted to fulfil data cleaning task. More specifically, they were used to identify out-of-range values. It is at this stage that the reverse items were recoded to ensure the agreement was indicative of the same direction.

The response rate was examined against the response rate of previous survey research which was conducted in shopping mall. The examination revealed that there was no fixed definition of response rate concept. Different researchers appeared to have

different understandings. Consequently, in most cases the reported response rates in different research are not comparable unless the researchers demonstrated how the response rate was calculated in their research. It was concluded that the reported response rate by the fieldworkers of the present research is considered acceptable and even slightly higher than that of Gate and Solomon (1982), who used the same response rate calculation method in their shopping mall survey.

The reasonable response rate achieved in the current research benefited from the appropriate use of the incentive approach as well as customized fieldwork administration. In addition to the advantages reported earlier (Chapter 5) relating to the comfortable workplace provided by the cooperative supermarkets, the researcher also realised that constant rejections from potential respondents did have great impact on fieldworkers' efficiency. In order to overcome this problem, all fieldworkers were told to take a short break if they were constantly rejected. This means was reported as working well in terms of improving overall response rate. Meanwhile, the use of chocolate as the incentive did appear to assist in achieving a higher response rate. Nevertheless, this research reports that an incentive does not necessarily work on everybody. To simplify, this study categorises the research respondents into three broad groups – research affiliation (they are not attracted by the incentive), people with a neutral attitude to research (they can be attracted not only by the incentive), and incentive-driven people (people who are only attracted by the incentive). The last group of people can be further grouped into two subgroups – incentive-driven and cooperative people, and incentive driven and uncooperative people. It is suggested that the incentive can work well with the people with a neutral attitude to research and those who are both incentive-driven and cooperative.

Descriptive statistics were used to investigate the distribution of values of each variable. It is reported that all measures represent reasonable variance. Following this, the characteristics of the samples were examined against publicly available statistics. In general, it appears that the samples represent the target population well in terms of age, household income, gender and education. Therefore, it justifies the generalisability of the research findings based on the current sample.

This research provides extensive discussion and investigation of the measurement reliability and validity. Given the time constraint for this research, the research only



focuses on examination of measurements of internal consistency. The techniques used to conduct evaluations of reliability and validity include Cronbach's Alpha, Pearson's Correlation Analysis, item-total correlation and factor analysis. Both exploratory factor analysis and confirmatory factor analysis were adopted for different purposes. The exploratory factor analysis was used to extract the factors of the brand image construct across four brands and each version of a brand. Confirmatory factor analysis was used to test measurement validity. The research results demonstrate that all the scales adopted in this research achieved a high level of reliability and validity across brands and different versions of a brand.

Before bringing this chapter to a close, the final stage of data preparation was conducted. It is at this stage the factor scores were calculated and saved, multiple item scales were transformed into one new variable and the variable value was computed using a summing up method. The outliers were dealt with according to Hutcheson and Sofroniou's (1999) suggestion. The VIF, tolerance level and bivariate correlations between the extracted factors and other variables which were not included when the factor analysis conducted were investigated. The results show that the VIF and tolerance levels are all within the acceptable level. Although some significant relationships appeared between variables, considering they are distinctive concepts theoretically, as well as the reasonable VIF and tolerance levels, it is believed that there was less chance that they would cause a multicollinearity problem.

So far, it has been demonstrated that the samples represent the target population very well, the data collected are valid with limited level of bias, and the scales used in this research are highly reliable and valid. Moreover, the data preparation for the main modelling stage is complete. It has been proved that there is little chance of having a multicollinearity problem. All the main tasks set up for this part of the research have been implemented successfully, and it is ready to run the regressions.

Another thing worth mentioning is that this research has discovered that it is more likely that risk concerns and security concerns shall not be regarded as a sub-dimension of the benefit/consequence concept. This finding challenges the exhaustiveness of Plummer's (1985, 2000) brand image dimension concept. As there is little empirical work in the literature studying detailed brand image dimensions, this research might have opened a door to future research.

## **Chapter 8   GLM Analysis and Results**





## Chapter 8 GLM Analysis and Results

### 8.1 Introduction

This chapter provides the data analysis results. Separate multiple regressions are run for each dependent variable and for each version of four selected brands. Two commonly used statistical software programmes are used to analyse the data. SPSS is used to analyse the likelihood of consideration of original brands, R-commander is applied to purchase intention of original brands and likelihood of consideration and purchase intention of counterfeit brands. The use of R-commander is required due to the uncommon nature (severely skewed) of the data. Compared with SPSS, R-commander appears to be more powerful in terms of data transformation. Box-Cox and Box-Tidwell techniques are employed to implement transformation of response variables and transformation of explanatory variables.

This chapter starts with a discussion of the analysed variables, with the aim of providing brief information on all involved variables. Thereafter, the choice of statistical data analysis techniques is discussed in detail to provide the theoretical back-up for choice of the software and the analytical methods. Data analysis results are presented in two sections – SPSS Results and R-commander Results. This chapter ends with a brief summary.

### 8.2 Information about the Analysed Variables

This section provides detailed information about all examined variables. The discussion focuses on how they are measured, the nature of the variables, as well as how they are categorised and the rationale behind the categorisations in the case of the variables being categorical variables.

#### 8.2.1 Categories of Demographic Variables

The demographic variables examined in this study include age, gender, education and household income. Consumers are categorised into five levels of age subgroups. They are groups of those aged up to 20, 21 to 30 years old, 31 to 40 years old, 41 to 50 years old, and 51 years old and over. The guidelines used in determining the categories are firstly, that the number of cases in each category is reasonably large. Secondly, the

research results are comparable to previous research finding using the same age subgroups (e.g. Tom et al. 1998).

The original questionnaire provides five levels of education (Appendix 4). At one stage, it was considered to combine the Masters Degree with the Degree/MA. Therefore, four levels of education, Primary School, High School, HNC/HND, University Degree could be used in analysis, which is in line with previous work (e.g. Wee et al. 1995; Phau et al. 2001; Prendergast et al. 2002). However, considering that a combination of these two groups would end up with more than 40 percent of the subjects being grouped in this category, the decision was made to keep these two groups separate. Because the subjects holding Masters Degrees are well represented (14.4 percent for watches and 12.7 percent for handbags in the data set), it allows this research to examine influence of the educational background in a broader range than previous research.

Household income is grouped into four categories. They are groups of household income below £10,000, between £10,000 to £24,999, between £25,000 to £39,000, and £45,000 and above. According to the National Statistics Annual Abstract of Statistics 2005 Edition, the average household income in the UK is £25,271. Thus, two groups of subjects have an average household income lower than the national average, while another two are higher. The percentage breakdown of the tested demographic characteristics is reported in Table. 8.1.

Table 8.1 Percentage breakdown of demographic variables

Demographic variables	Watches (n = 321)	Percentage	Handbags (n = 277)	Percentage
Age				
-20	68	21.2	64	23.1
21-30	78	24.3	64	23.1
31-40	63	19.6	56	20.2
41-50	65	20.2	57	20.6
51+	47	14.6	36	13.0
Education				
	Missing value 1		Missing value 1	
Primary School	6	1.9	3	1.1
High School	105	32.8	92	33.3
HND/HNC	77	24.1	70	25.4
BA/MA	86	26.9	76	27.5
Masters	46	14.4	35	12.7
Income				
	Missing value 18		Missing value 17	
-9,999	63	20.8	56	21.5
10-24,999	90	29.7	79	30.4
25-39,999	74	24.4	58	22.3
40+	76	25.1	67	25.8
Gender				
Male	140	43.6	96	34.7
Female	181	56.4	181	65.3



### 8.2.2 Interaction between Product Knowledge and Product Involvement

A review of product knowledge and product involvement literature shows that a number of researchers have suggested that product involvement and product knowledge are correlated (Batra and Ray 1986; Celsi and Olson 1988; Sujan 1985). More specifically, product involvement and subjective product knowledge is highly interacted (Batra and Ray 1986). Interpretation of these results in previous research is that the higher a consumer's involvement, the more the consumer will try to obtain more product knowledge (Andrews 1988; Batra and Ray 1986; Petty et al. 1981). In addition, Lutz et al. (1983) reported that consumers who have greater knowledge of a specific product are more likely to perceive the product as important than consumers who have less knowledge. The previous empirical results imply that product involvement and subjective product knowledge interact with each other. Therefore, it is necessary to check interactions of these two constructs across models and include in the model those which are significant, as significant interactions affect the parameters which are calculated for the other terms in the model (Hutcheson and Sofroniou 1999).

### 8.2.3 Other Variables Involved

Apart from the demographic variables and the newly created interaction variable of product knowledge and product involvement (KxI), the rest of the explanatory variables are self-assessed product knowledge, product involvement, extracted factors related to brand image, likelihood of consideration and purchase intention. There are two response variables in the conceptual model. They are consideration set and purchase intention. As reported in Chapter 6, these variables are all measured using multi-item five-point Likert scales. However, they can all be regarded as continuous variables, including the response variables. The detailed reasons are provided in the following section.

## 8.3 Choice of Statistical Analysis Technique

This section provides the detailed justification of the choices of the statistical analysis techniques used for data analysis in this study. The considerations of ordinary least square (OLS), logistic regression, loglinear regression are reported in detail. Moreover, the rationale for the use of second statistical analysis software - R commander - is discussed.

### 8.3.1 Consideration of OLS

OLS regression is used to analyse part of the data. OLS requires that variables being modelled must be continuous scale or be recorded on at least an interval scale (Hutcheson and Sofroniou 1999). Though explanatory variables are also required to be continuous, multi-category ordered and unordered categorical data can legitimately be used in an OLS model subject to their being appropriately coded into a number of dichotomous 'dummy' categories (Fox 1997). The explanatory variables and the response variables were measured using a multi-item five-point Likert scale (1= strongly disagree, 5= strongly agree) in this study, with the exception of the demographic variable. Two explanatory demographic variables, 'gender' and 'education', are either dichotomous data or ordered categorical data, with 'age' and 'income' measured using interval scales. The four demographic variables can all be dummy coded. The values of the variables (excluding the demographic variables) were obtained by adding up all Likert scores of items involved, then dividing by the number of the items. In other words, the average values of all qualified items are used in data analysis. Since the final scores take on a wide range of discrete values, it is acceptable to treat them as continuous variables (Hutcheson and Sofroniou 1999). In the case of the extracted factors of the brand image construct, as the factors scores are to be used in modelling, these extracted factors are considered as continuous by nature. Therefore, OLS is considered as an appropriate means to model the response variables.

OLS regression is a powerful technique for modelling continuous data, particularly when it is used in conjunction with dummy variable coding and data transformation; it can be used to both identify significant relationships (explanation) and predict values of the response variable (prediction) (Hutcheson and Sofroniou 1999). In this research, the OLS regression explanatory function is explored.

The OLS regression assumes that each variable and all linear combinations of the variables are normally distributed, the variance of one variable is about the same at each level of a second variable, the relationship between the response variable and the explanatory variable(s) appears linear and the observations are not linked or dependent (Field 2005; Hutcheson and Sofroniou 1999). To meet the assumption of normality is important, since statistical inference or exploratory power is weakened when departures occur from normality (Cohen et al. 2003; Hutcheson and Sofroniou 1999). There are a



number of means one can use to examine normality, for example, skewness and kurtosis, histogram, and quantile-quantile (Q-Q) plots. Most of these approaches can only be used to examine normality of an individual variable. In contrast, the residual test can identify departures which are the result of combinations of explanatory variables (Hutcheson and Sofroniou 1999). In this study, frequency histograms for the response variables and histograms of the residuals are used to examine the normality of the response variables. The choice for using the graphic method over statistical tests such as skewness and kurtosis is because the graphic method is visible and might also indicate how one might transform the variable to become normal. Figures 8.1 to 8.16 present the results of tests of normality of the response variables. Figures 8.17 to 8.32 demonstrate histogram graphs of the residuals. One should be aware that the histograms of the residuals are generated based on provisional models rather than on the final models with the aim of illustrating violation of OLS normality assumption.

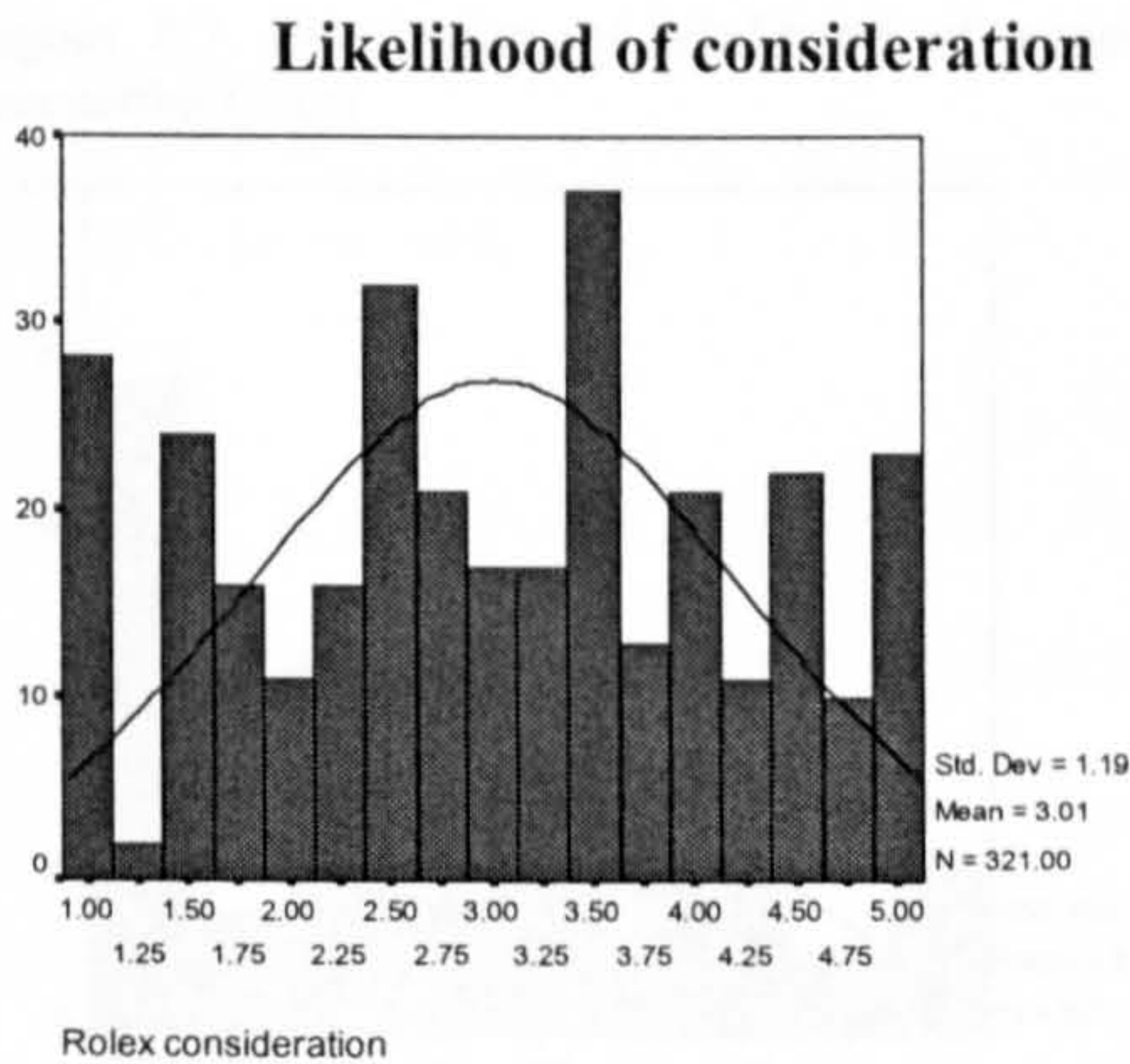


Figure 8.1 Distribution of likelihood of consideration of original Rolex

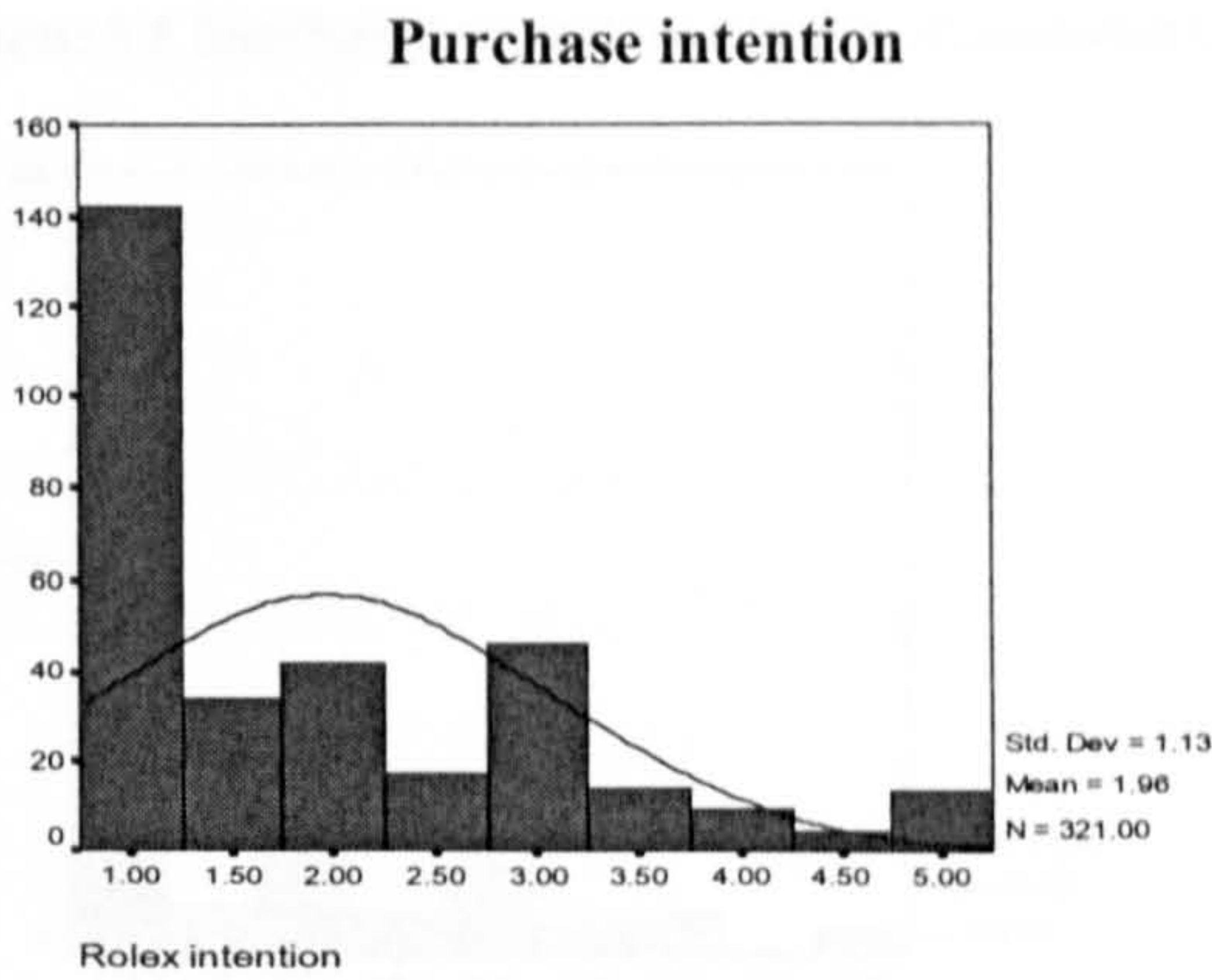


Figure 8.2 Distribution of purchase intention of original Rolex

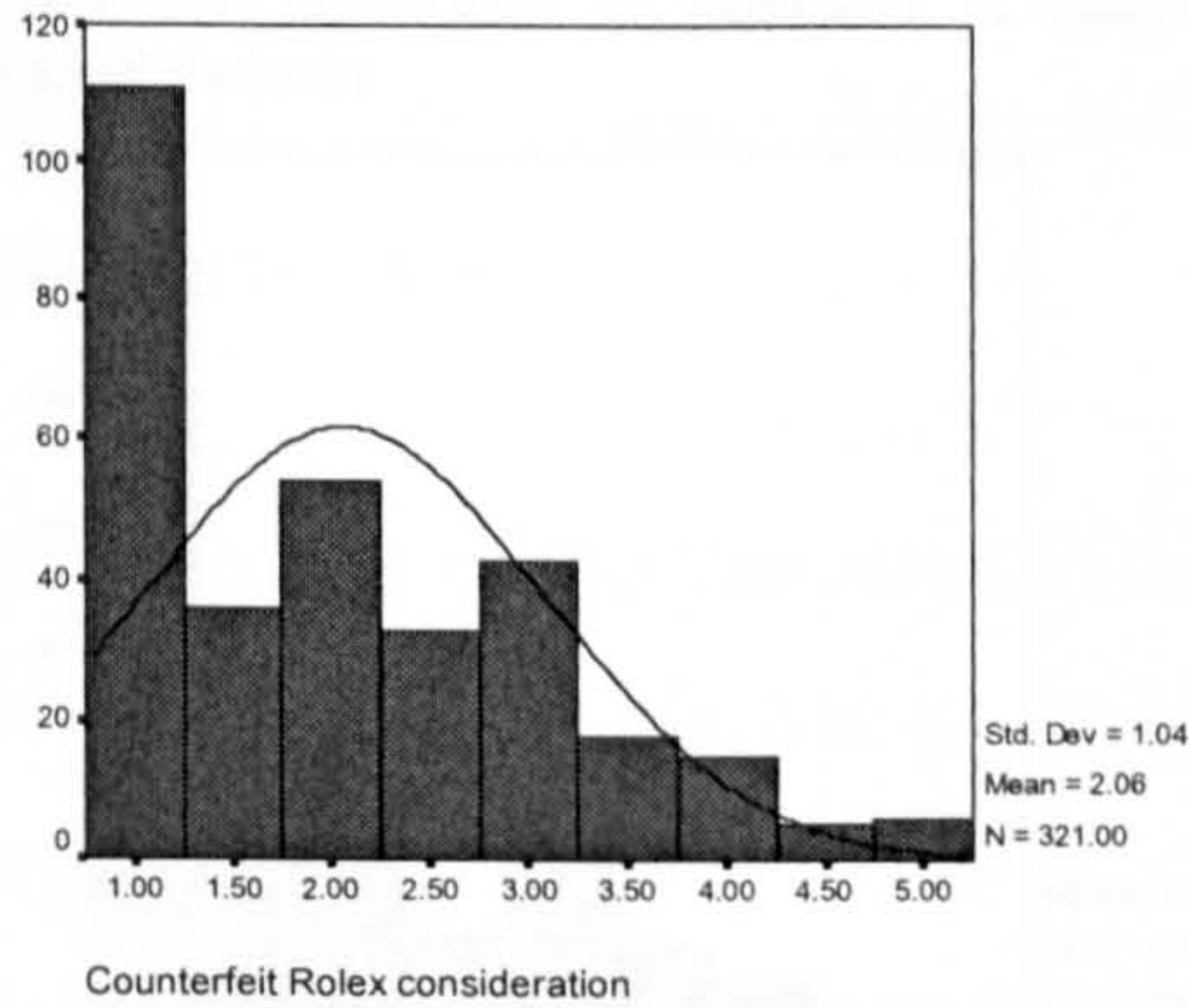


Figure 8.3 Distribution of likelihood of consideration of counterfeit Rolex

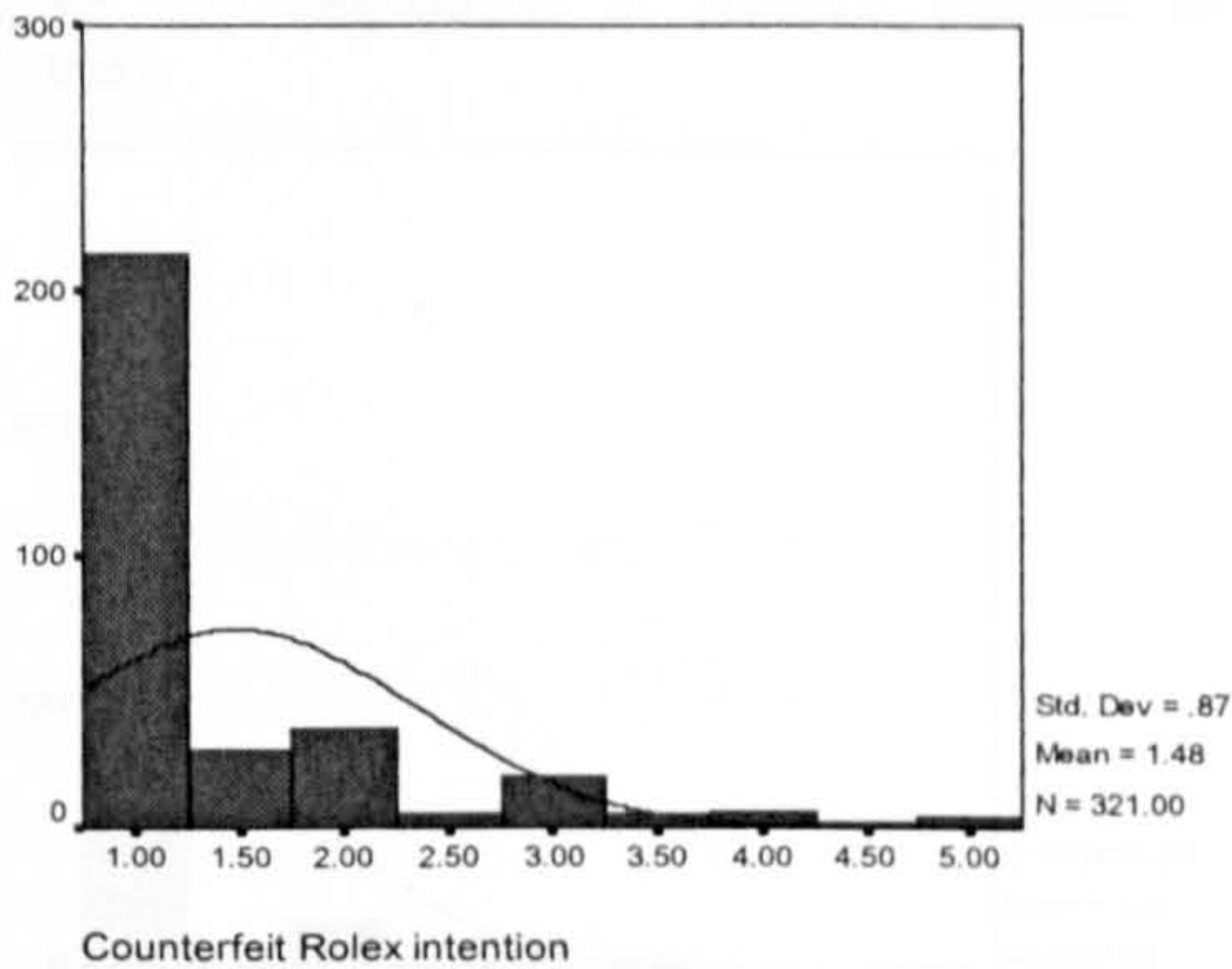


Figure 8.4 Distribution of purchase intention of counterfeit Rolex



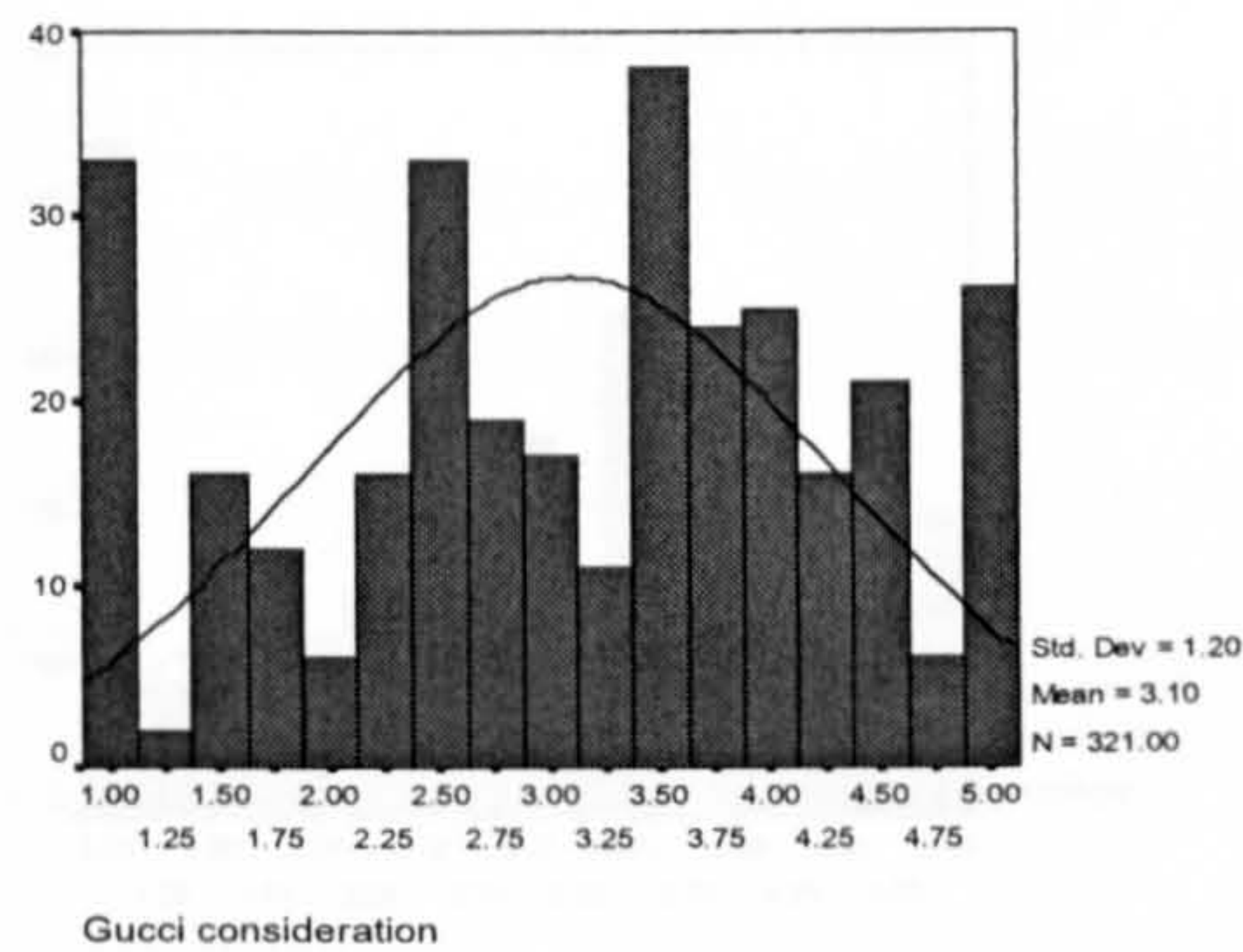


Figure 8.5 Distribution of likelihood of consideration of original Gucci

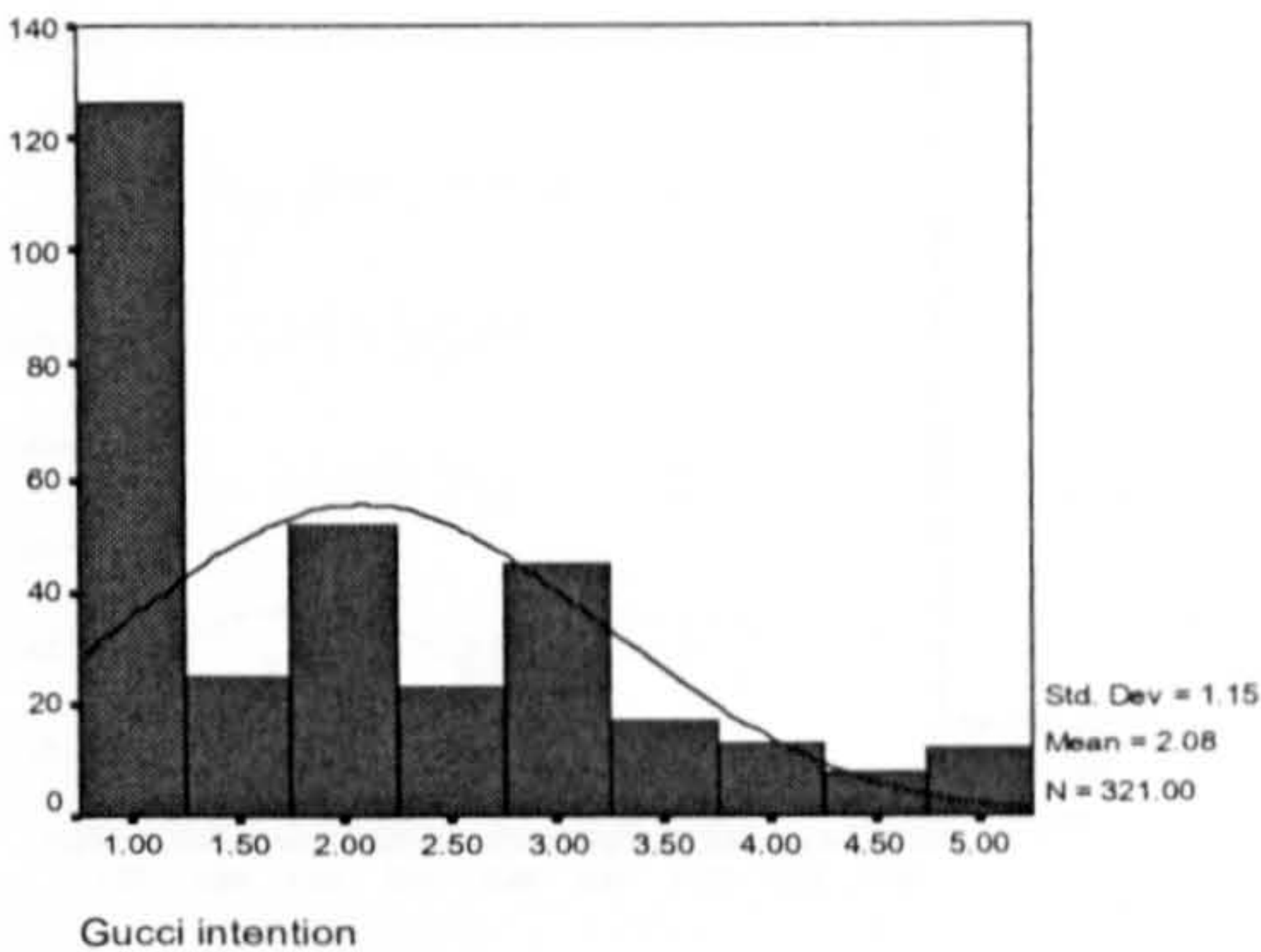


Figure 8.6 Distribution of purchase intention of original Gucci

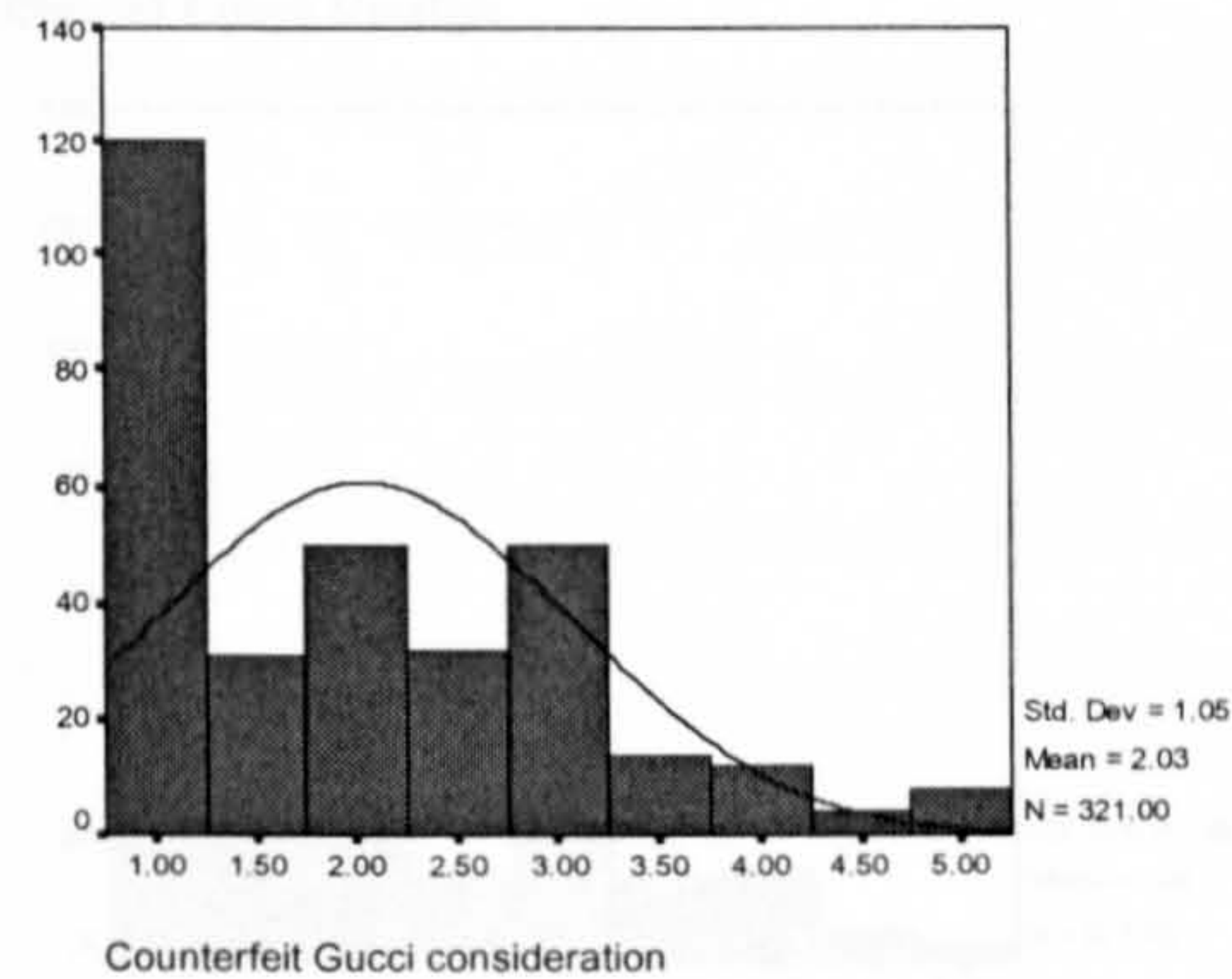


Figure 8.7 Distribution of likelihood of consideration of counterfeit Gucci

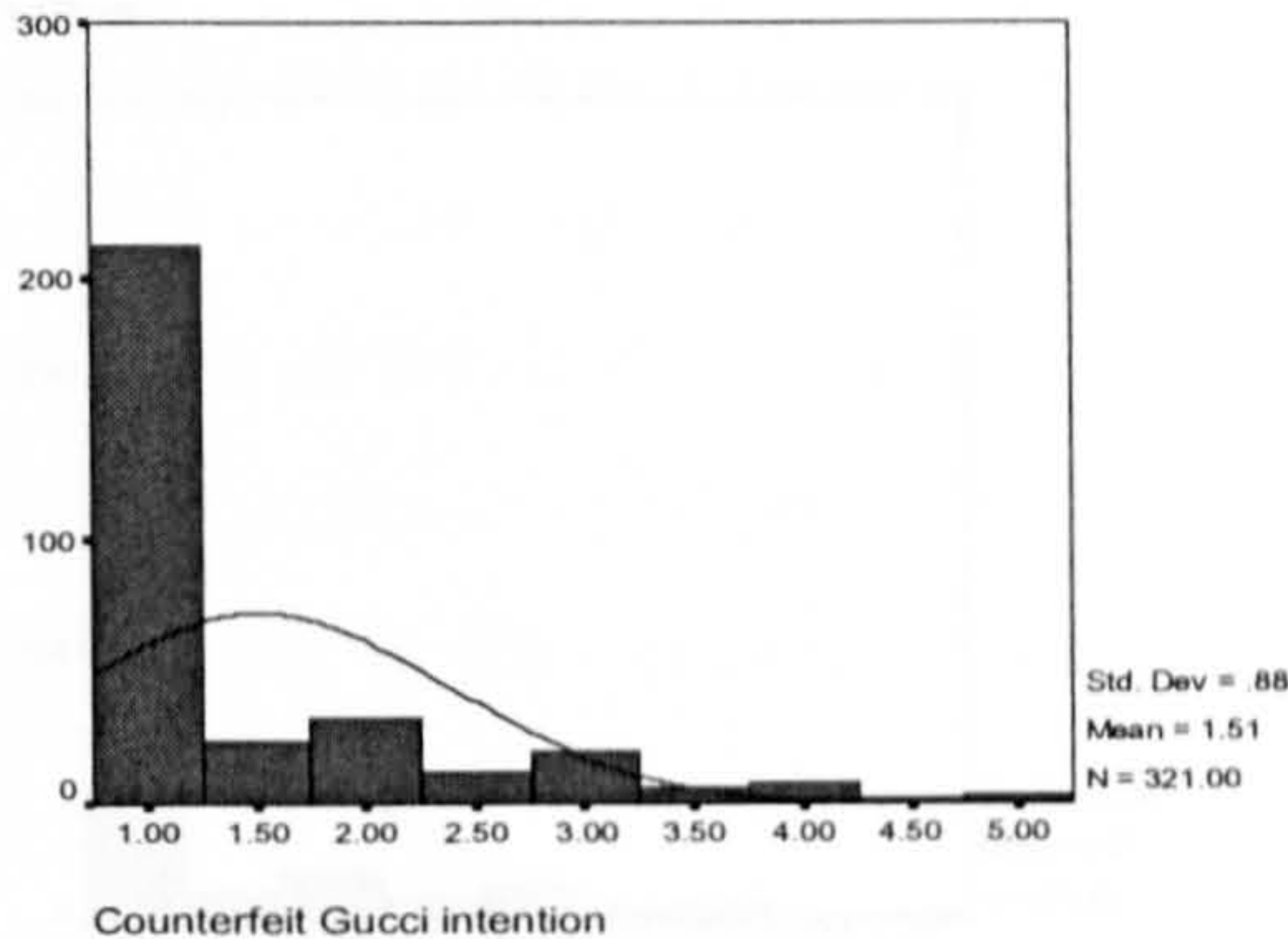


Figure 8.8 Distribution of purchase intention of counterfeit Gucci

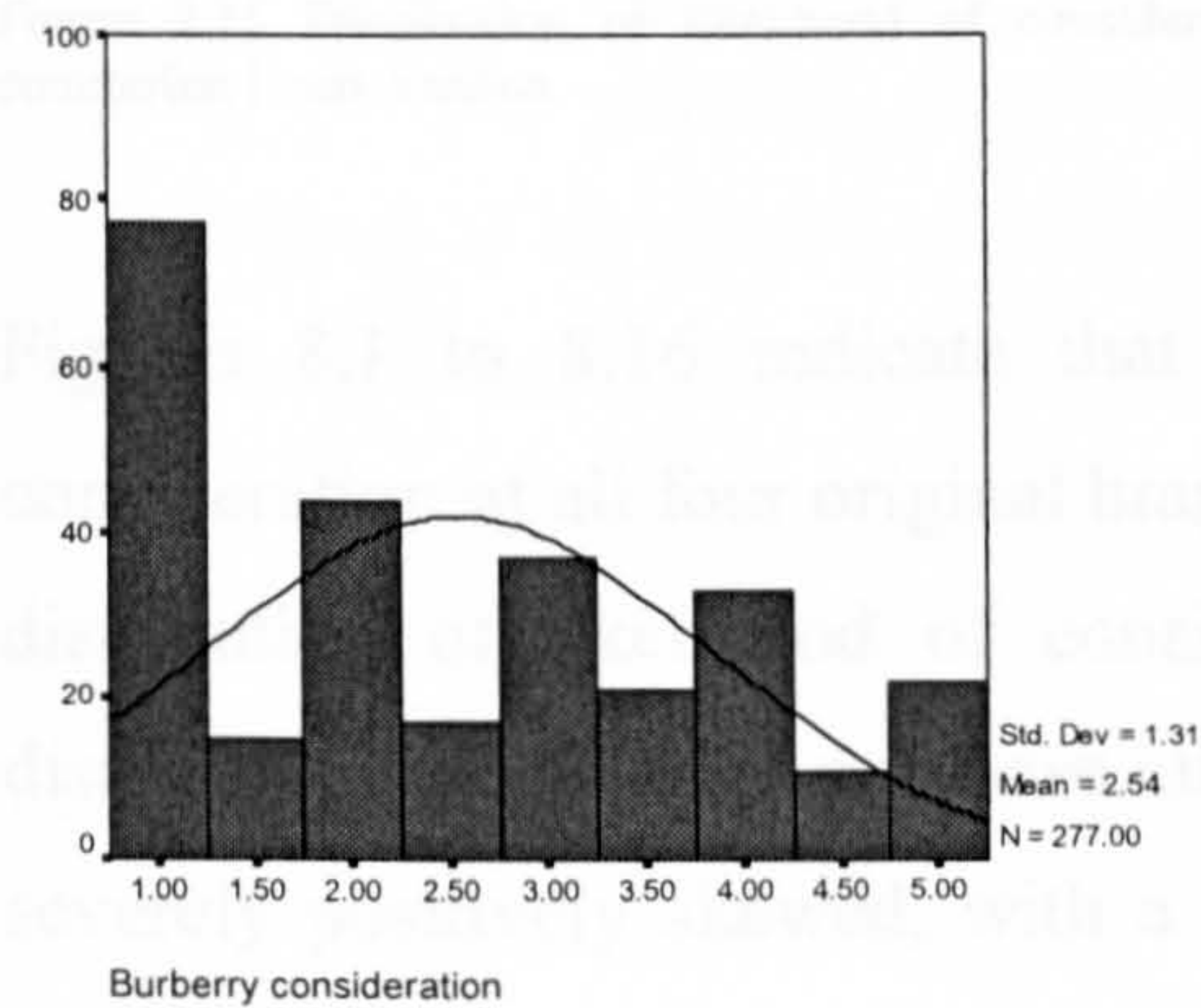


Figure 8.9 Distribution of likelihood of consideration of original Burberry

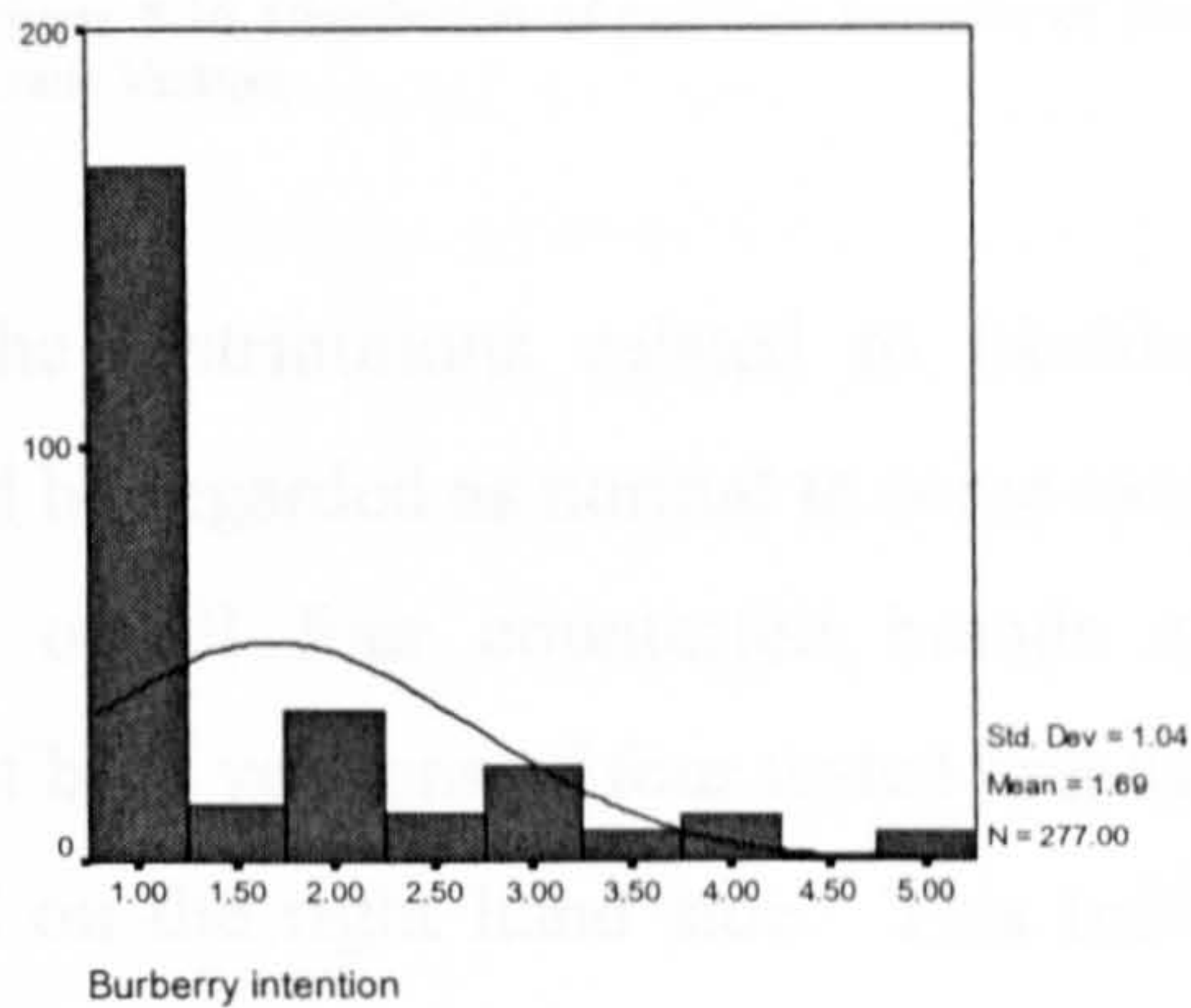


Figure 8.10 Distribution of purchase intention of original Burberry

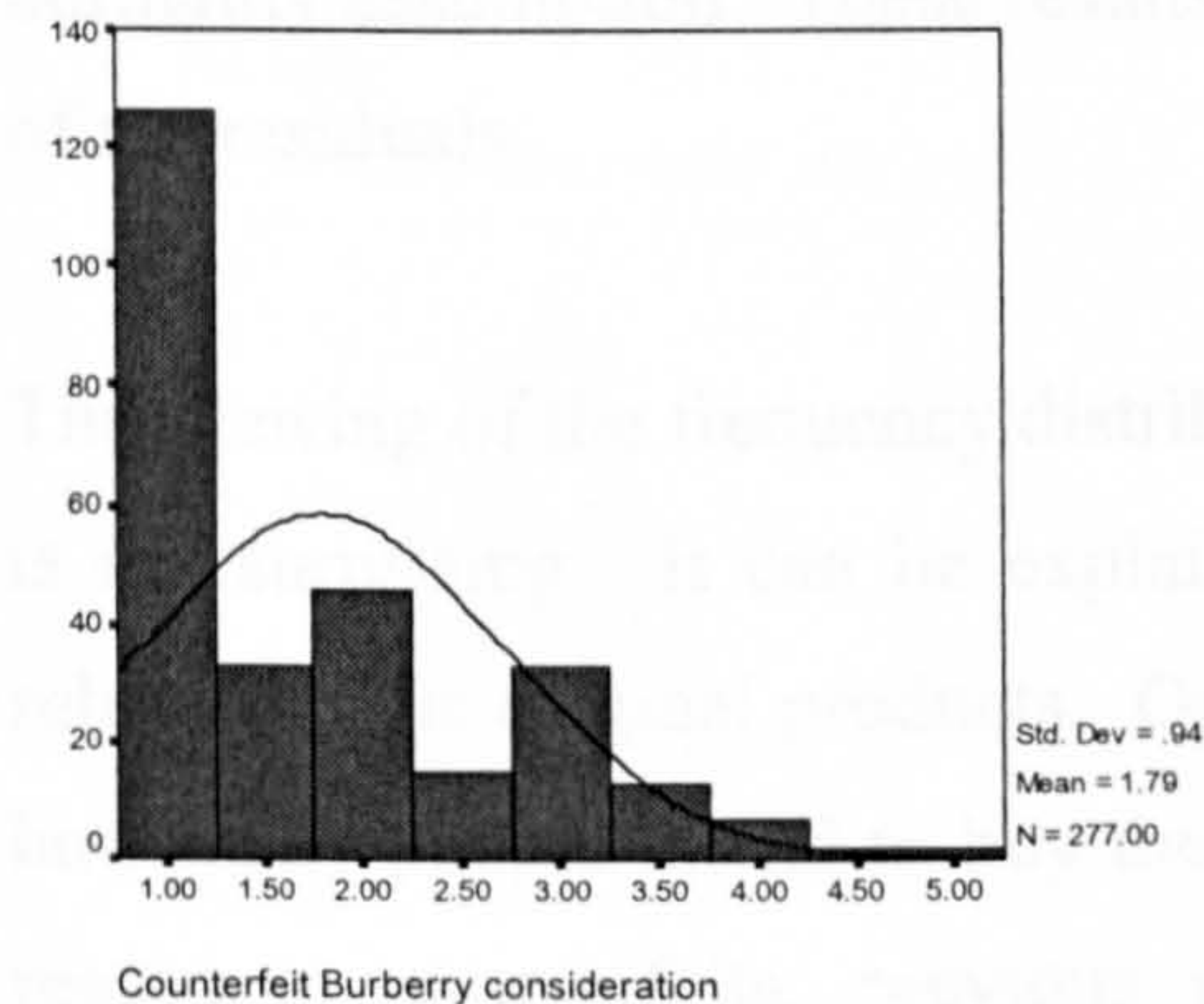


Figure 8.11 Distribution of likelihood of consideration of counterfeit Burberry

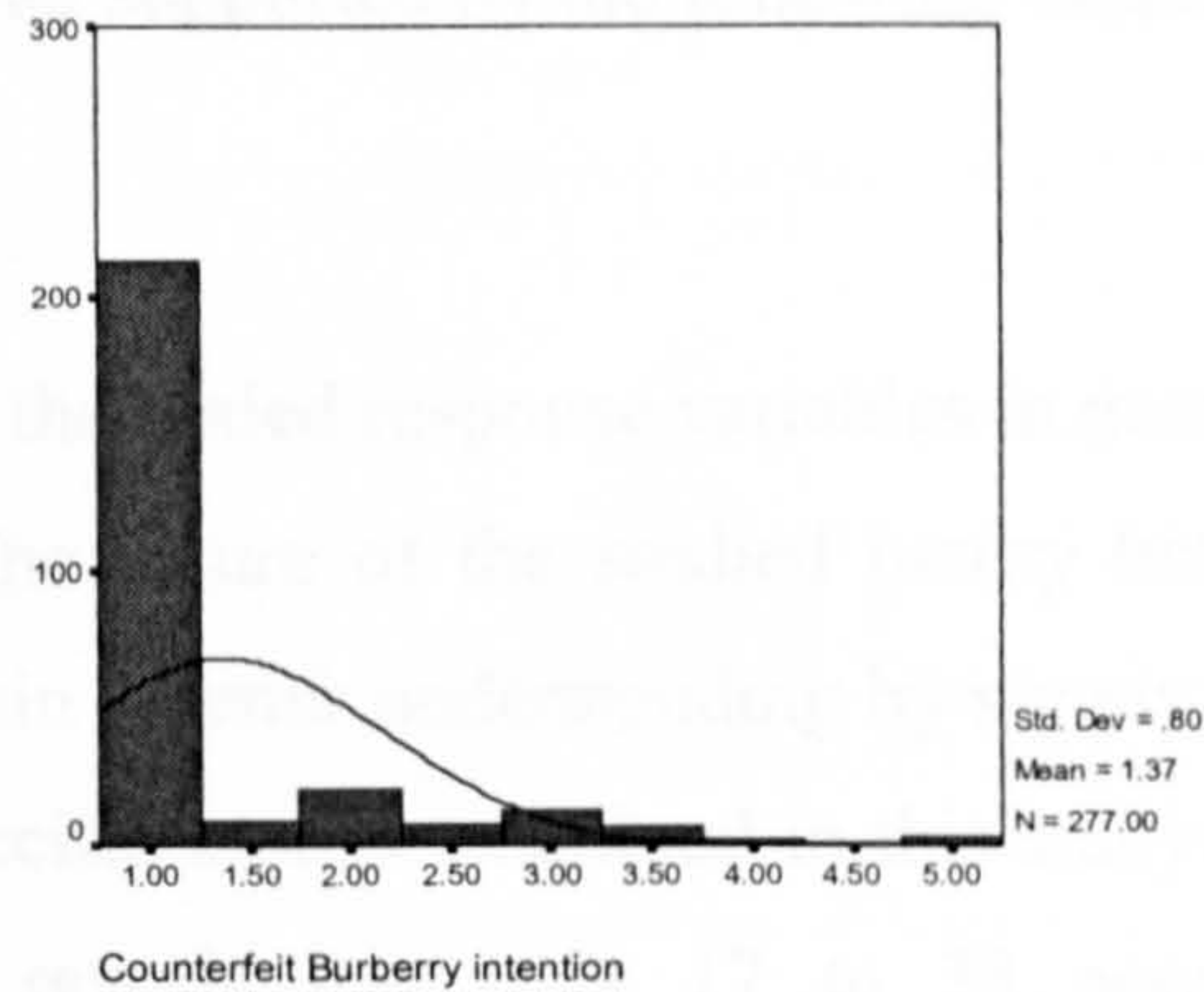


Figure 8.12 Distribution of purchase intention of counterfeit Burberry



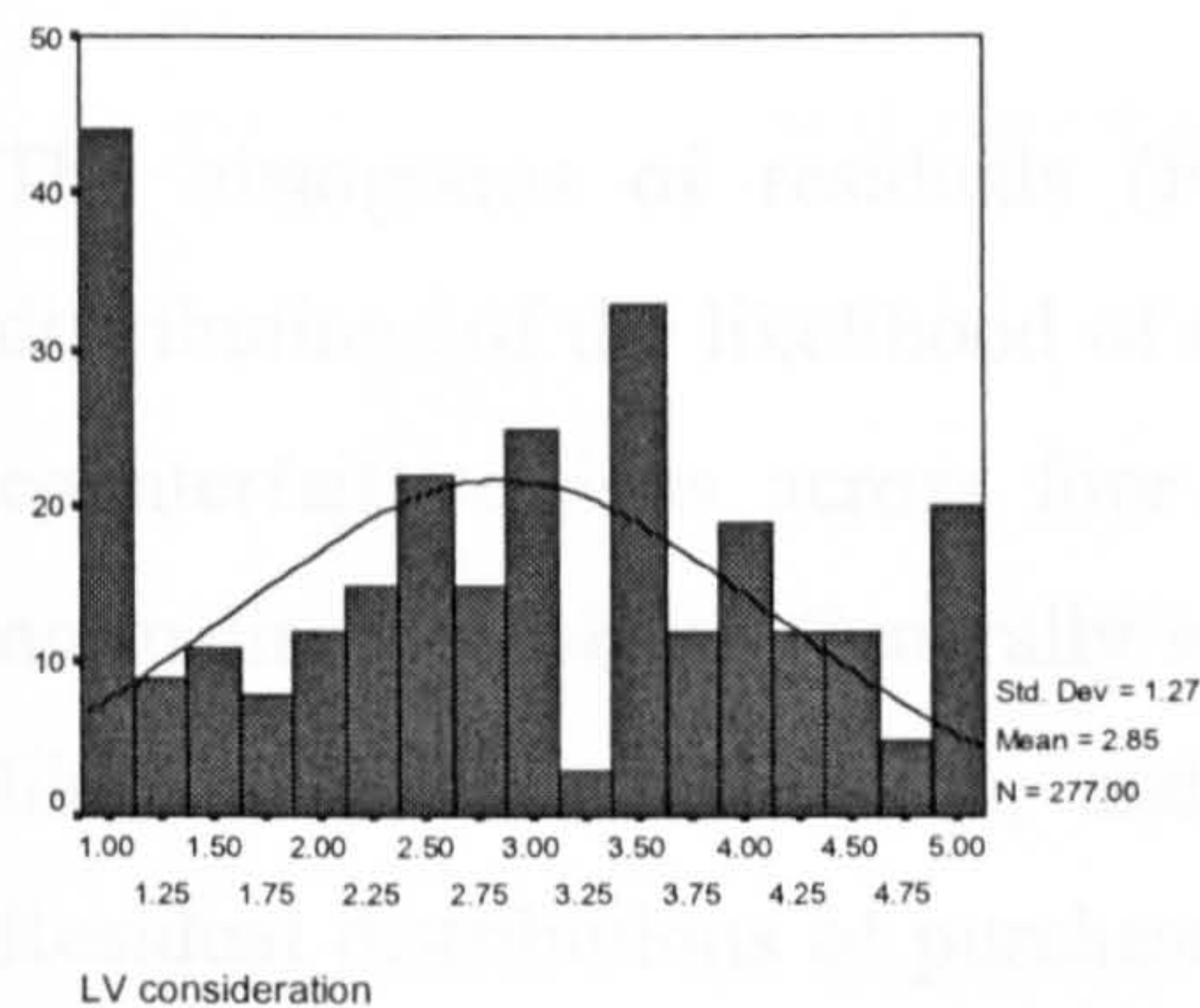


Figure 8.13 Distribution of likelihood of consideration of original Louis Vuitton

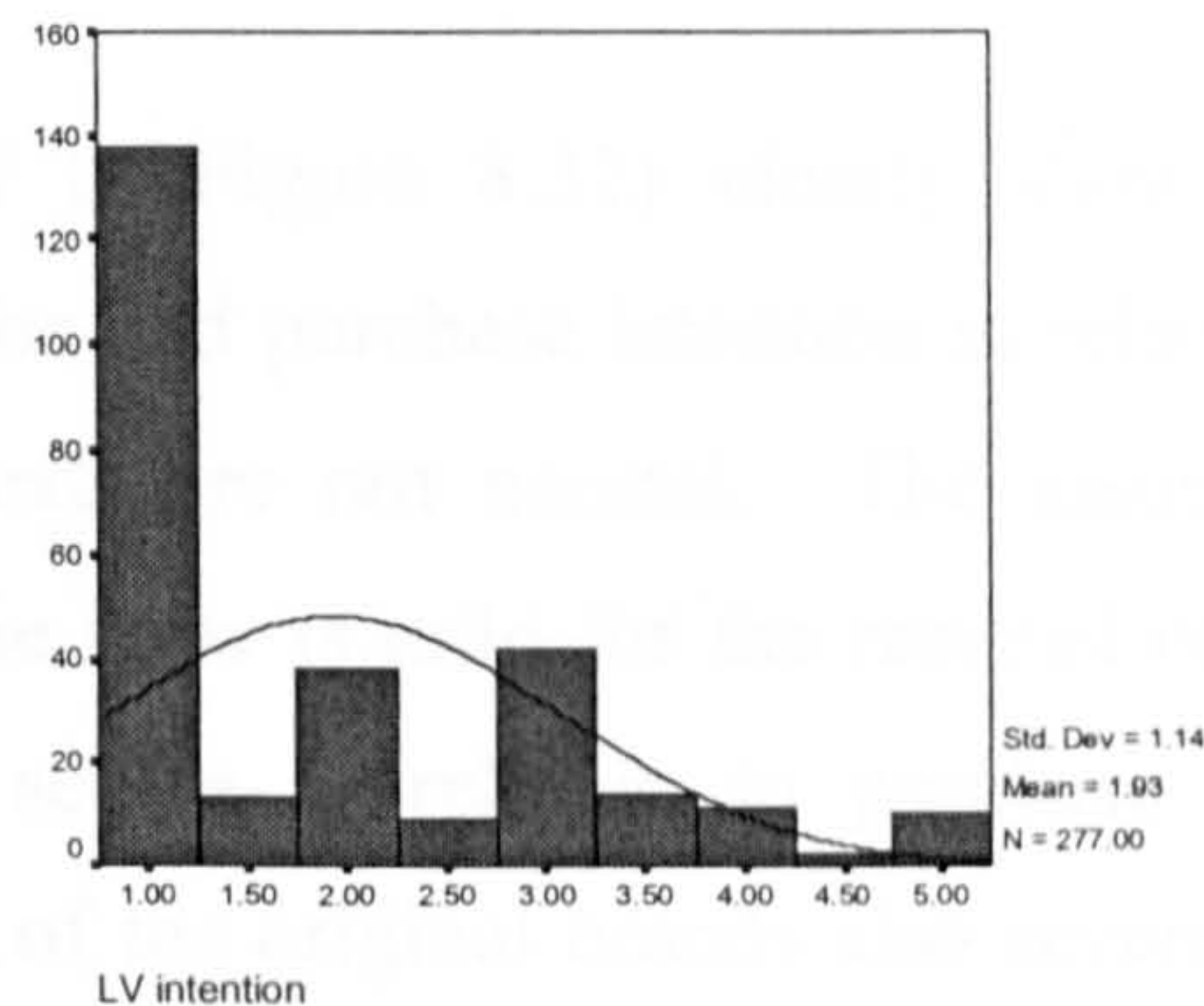


Figure 8.14 Distribution of purchase intention of original Louis Vuitton

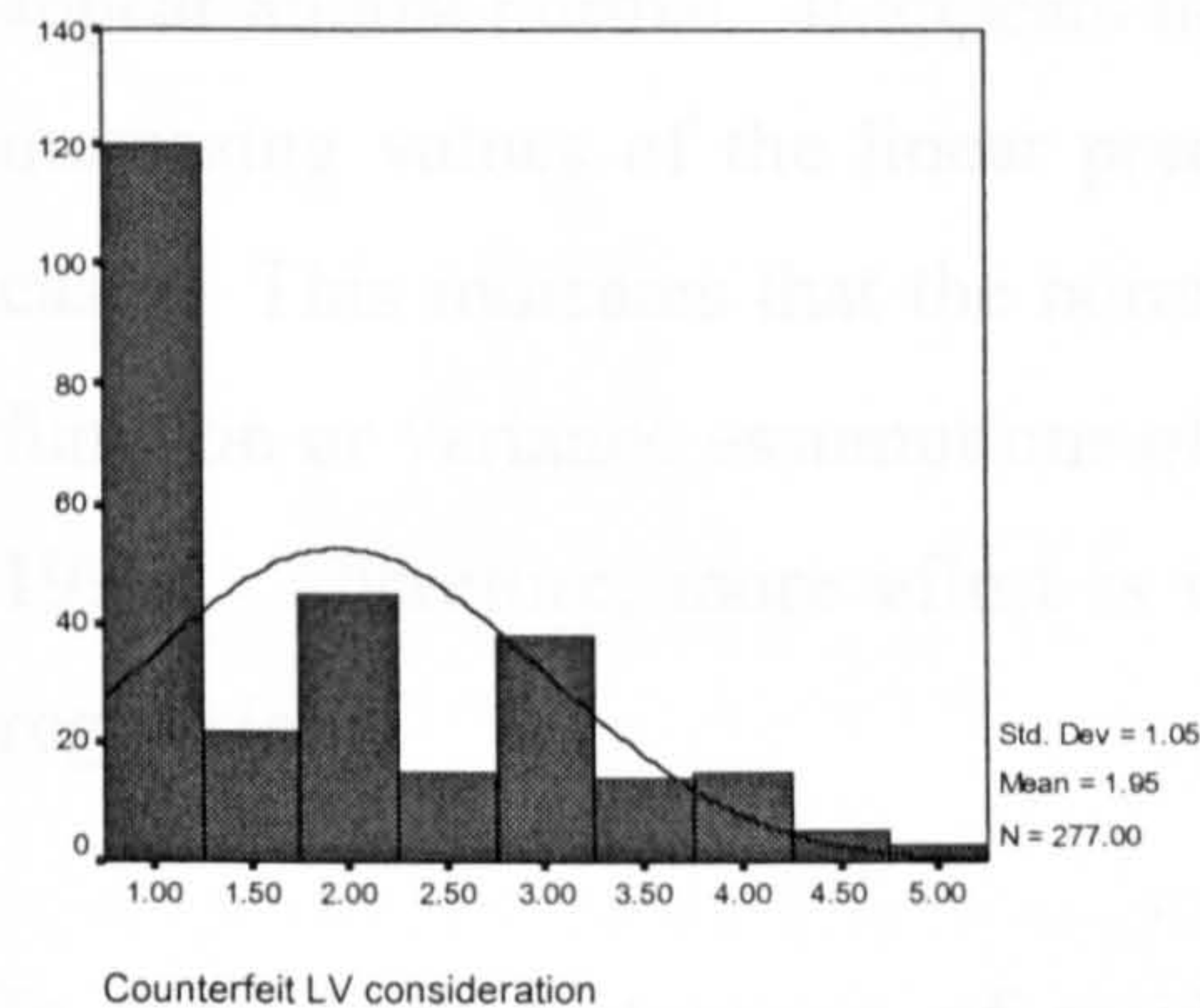


Figure 8.15 Distribution of likelihood of consideration of counterfeit Louis Vuitton

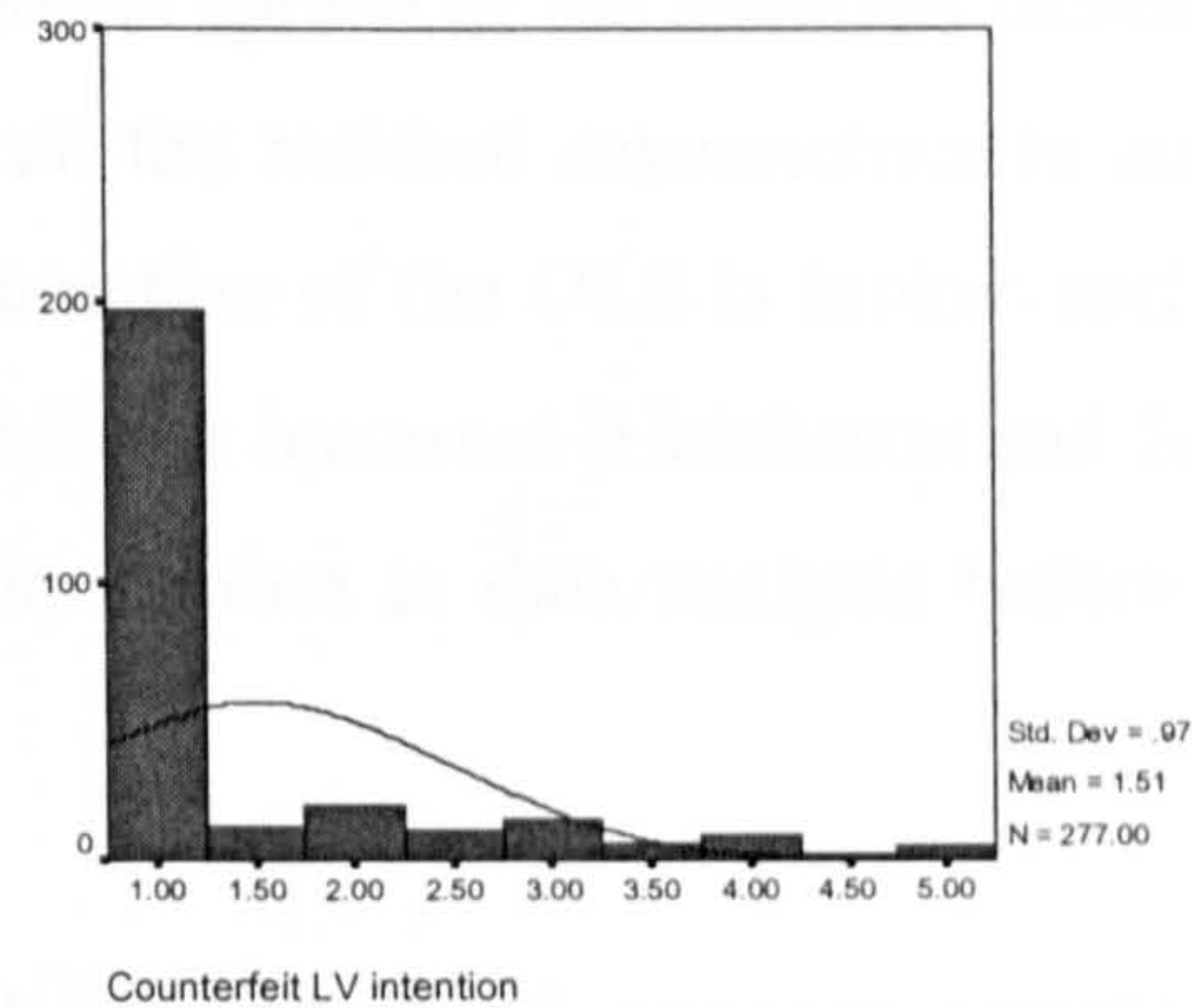


Figure 8.16 Distribution of purchase intention of counterfeiting Louis Vuitton

Figures 8.1 to 8.16 indicate that while the distributions related to likelihood of consideration of all four original brands could be regarded as normal to some extent, the distribution of likelihood of consideration of all four counterfeit brands and the distributions concerning purchase intention of both versions of four tested brands are all severely positively skewed, with a long tail on the right hand side. This indicates a negativity of likelihood of consideration and purchase intention rating and violation of normality assumption. These results are further supported by the following examination of the residuals.

The skewing of the frequency distribution of the scaled response variables in most cases is not surprising. It can be explained by the nature of the studied luxury brands in relation to the original products. One can gain a better understanding by simply asking how many people intend to buy the four specific brands examined in this study. With regard to counterfeits, previous research reveals that only 17 to 38 percent of respondents claimed to purchase counterfeit products knowingly (Bloch et al. 1993; Wee et al. 1995; Tom et al. 1998; Phau et al. 2001), which provides empirical backup to the positively skewed distribution in respect to the studied counterfeit products.



The histograms of residuals (Figure 8.17 to Figure 8.32) clearly show that the distributions of the likelihood of consideration and purchase intention in relation to the counterfeit versions across four tested brands are not normal. The assumption of normality is broken. Generally speaking, the skew is mild for the residual concerning likelihood of consideration, and is more severe in relation to purchase intention. Residual distributions of purchase intention of the original brands also severely depart from normality, but residual distributions related to likelihood of consideration of BP appear almost normal. It appears that the vertical spread of the residuals increases with increasing values of the linear predictor in all the residual asymmetrically distributed cases. This indicates that the normality assumption of the OLS is broken and the link function or variance assumptions of the models are incorrect (Hutcheson and Sofroniou 1999). Therefore, more effort is required in relation to data analysis before running regressions.

In sum, both histograms of residuals and histograms of response variables show evidence of the violation of normality in all cases related to purchase intention, and cases related to likelihood of consideration in the context of counterfeit versions. This indicates that the traditional OLS regression is not an appropriate technique to be used for data analysis in these cases unless necessary effort is adopted to decrease the skew. Based on the above, the OLS regression is used to analyse the likelihood of consideration of the original brands only in this study. The OLS regression results and related examinations are reported.

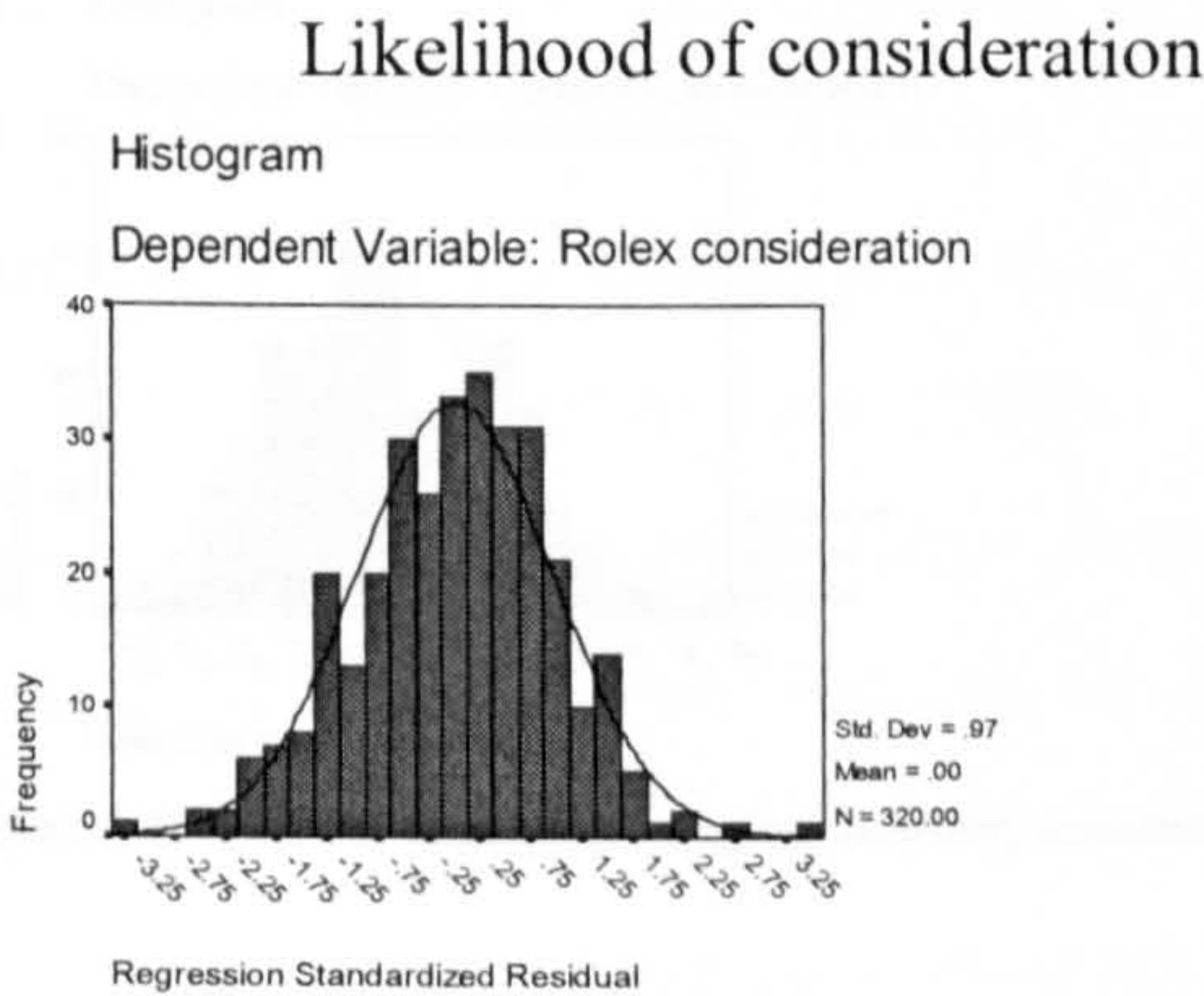


Figure 8.17 Residual histogram (original Rolex consideration)

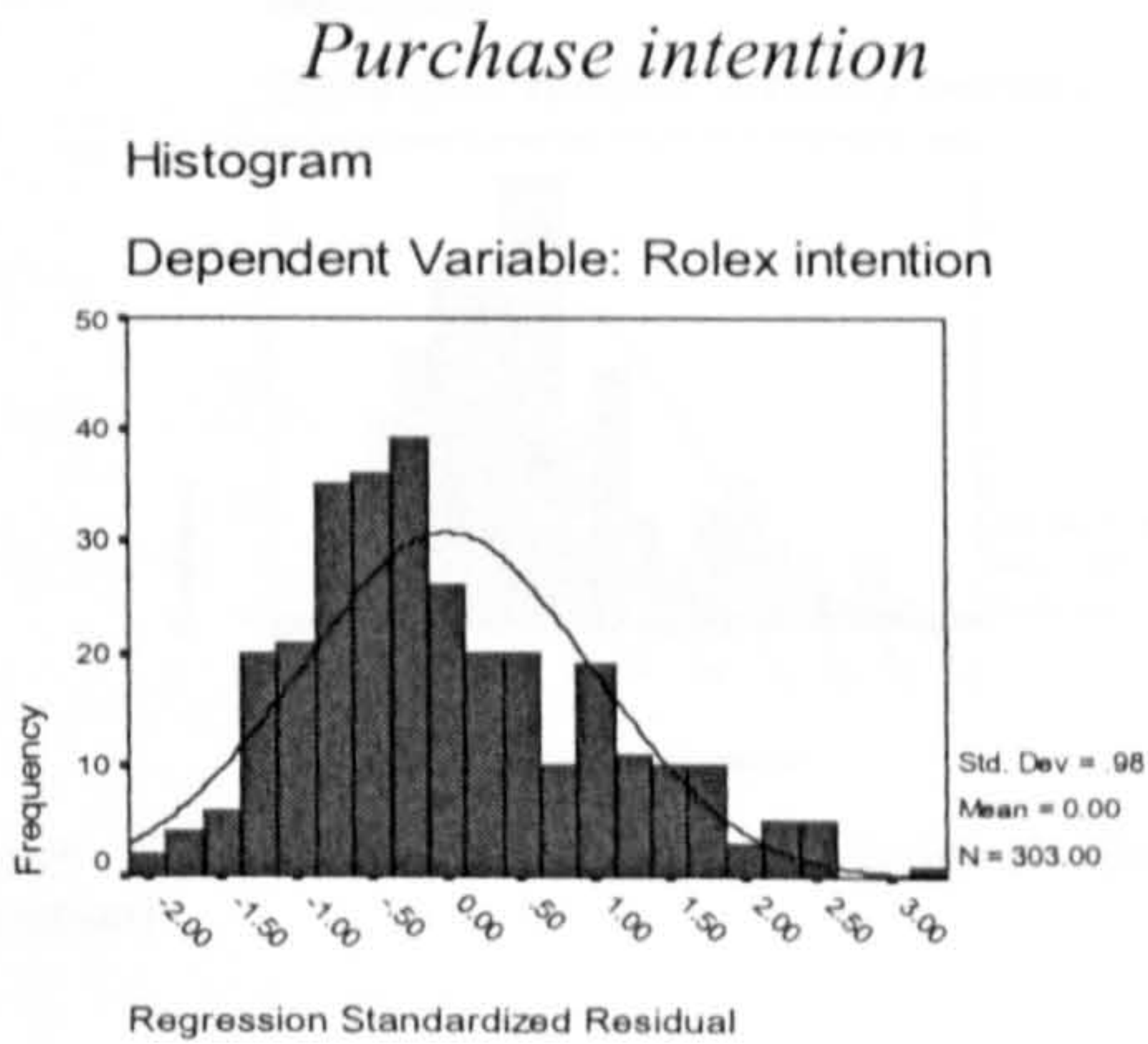


Figure 8.18 Residual histogram (original Rolex intention)



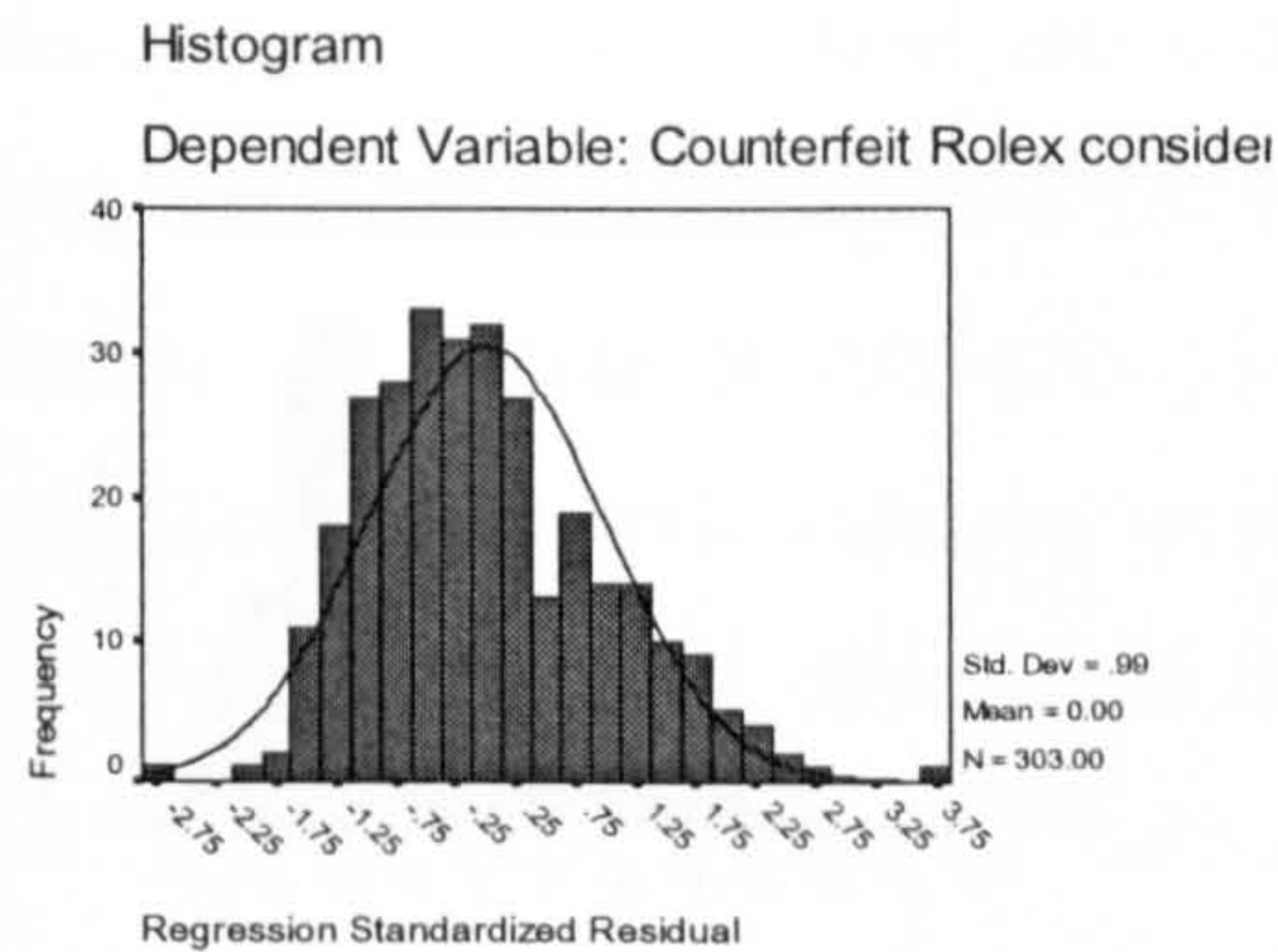


Figure 8.19 Residual histogram (counterfeit Rolex consideration)

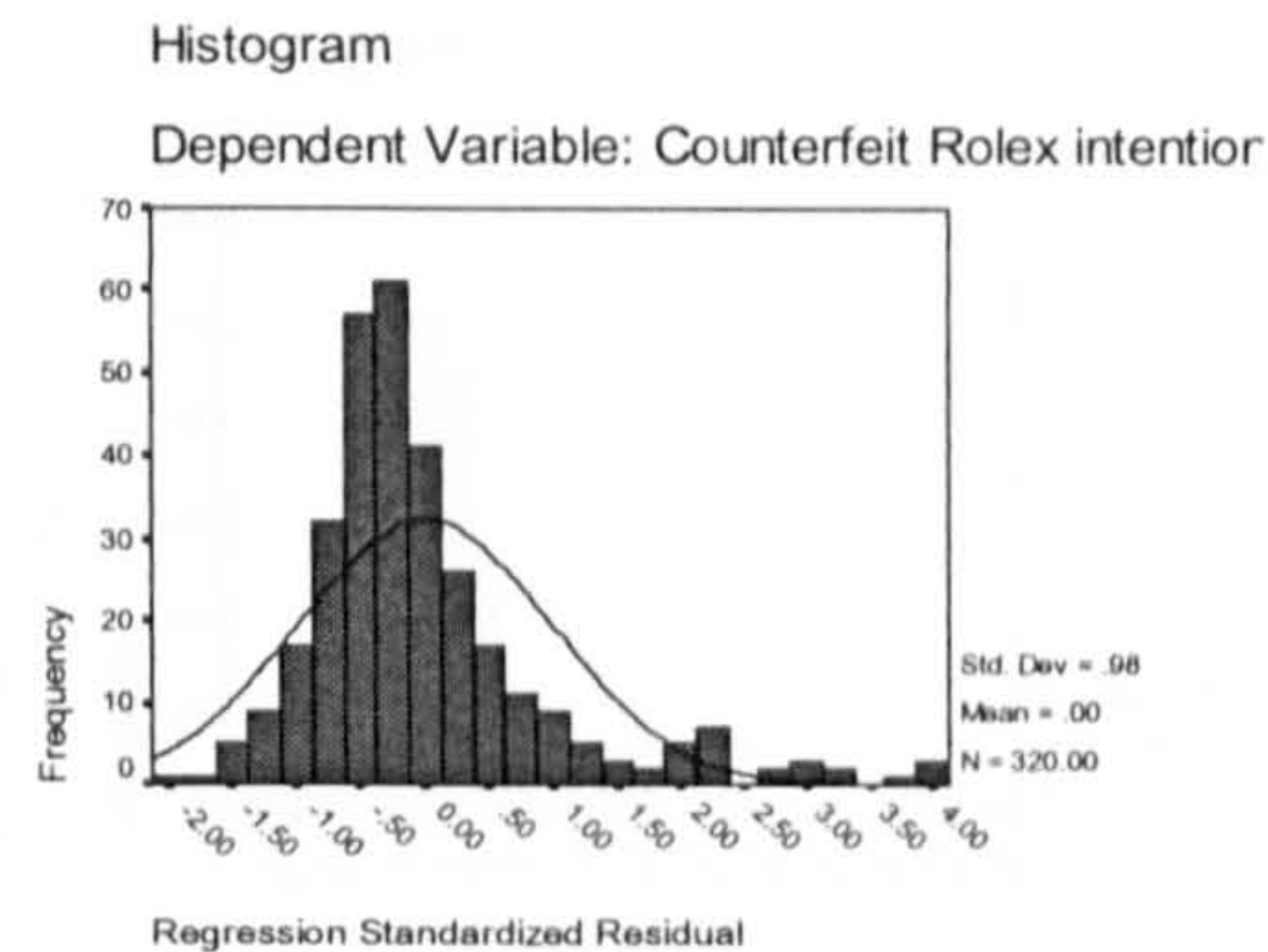


Figure 8.20 Residual histogram (counterfeit Rolex intention)

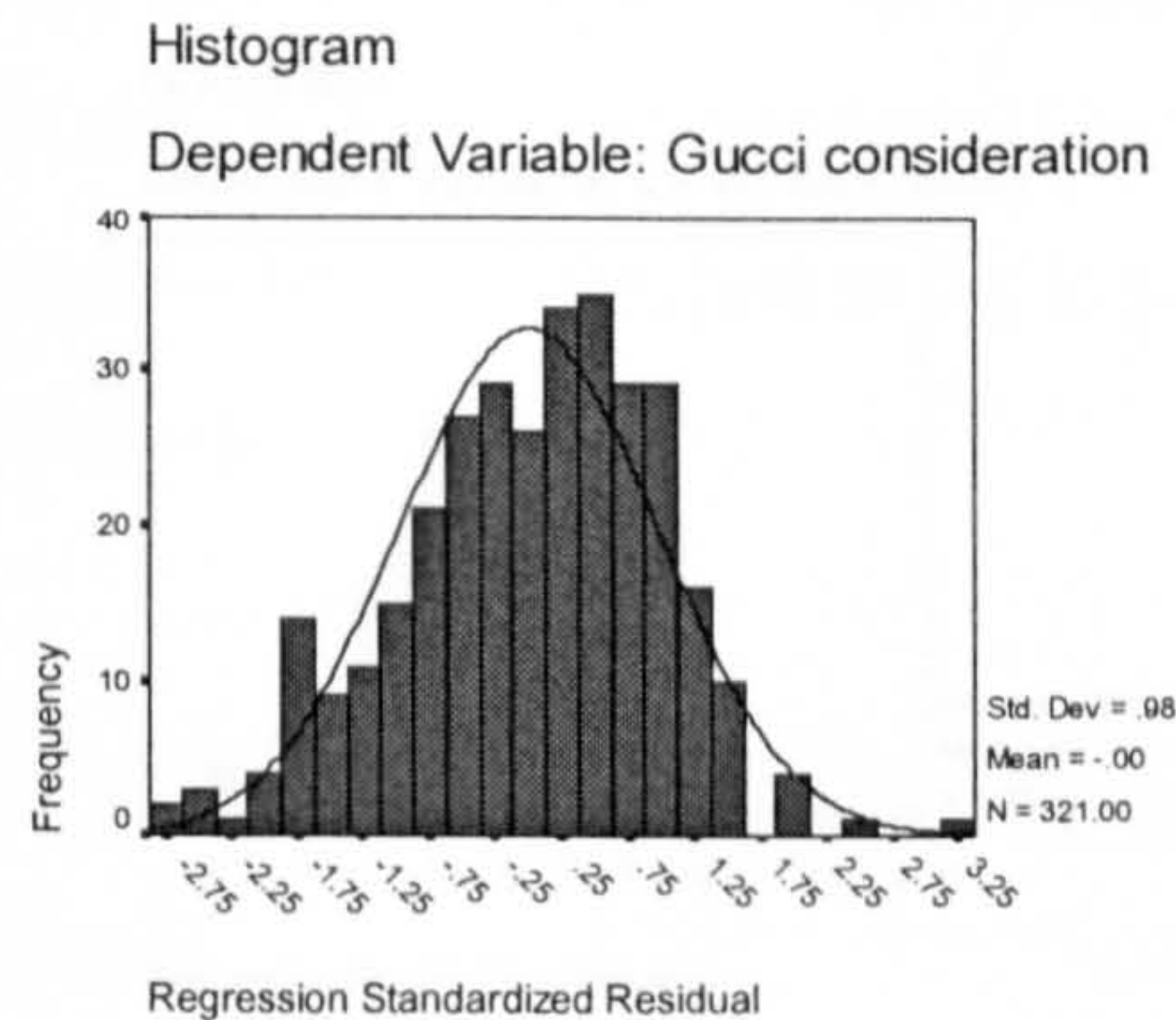


Figure 8.21 Residual histogram (original Gucci consideration)

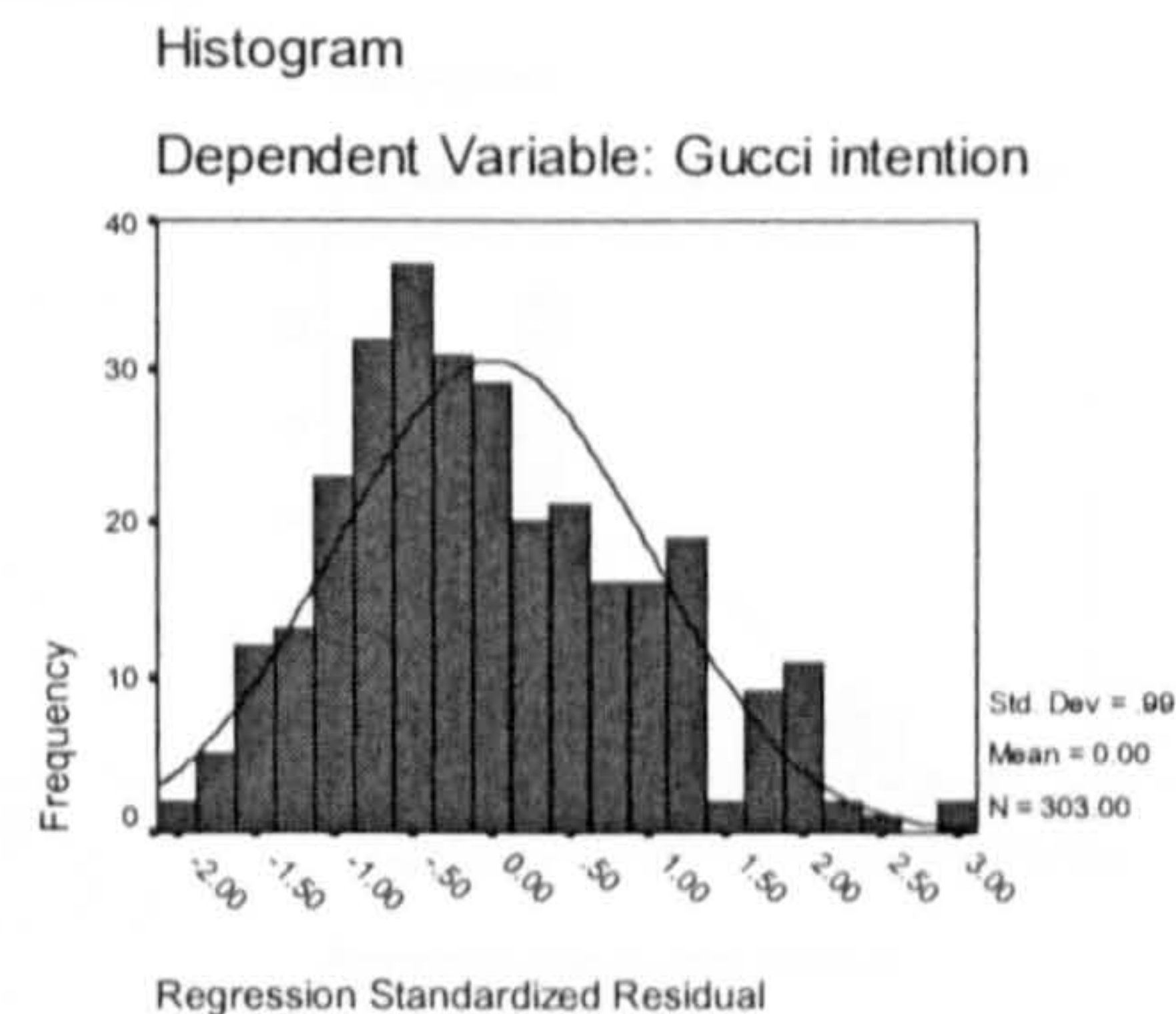


Figure 8.22 Residual histogram (original Gucci intention)

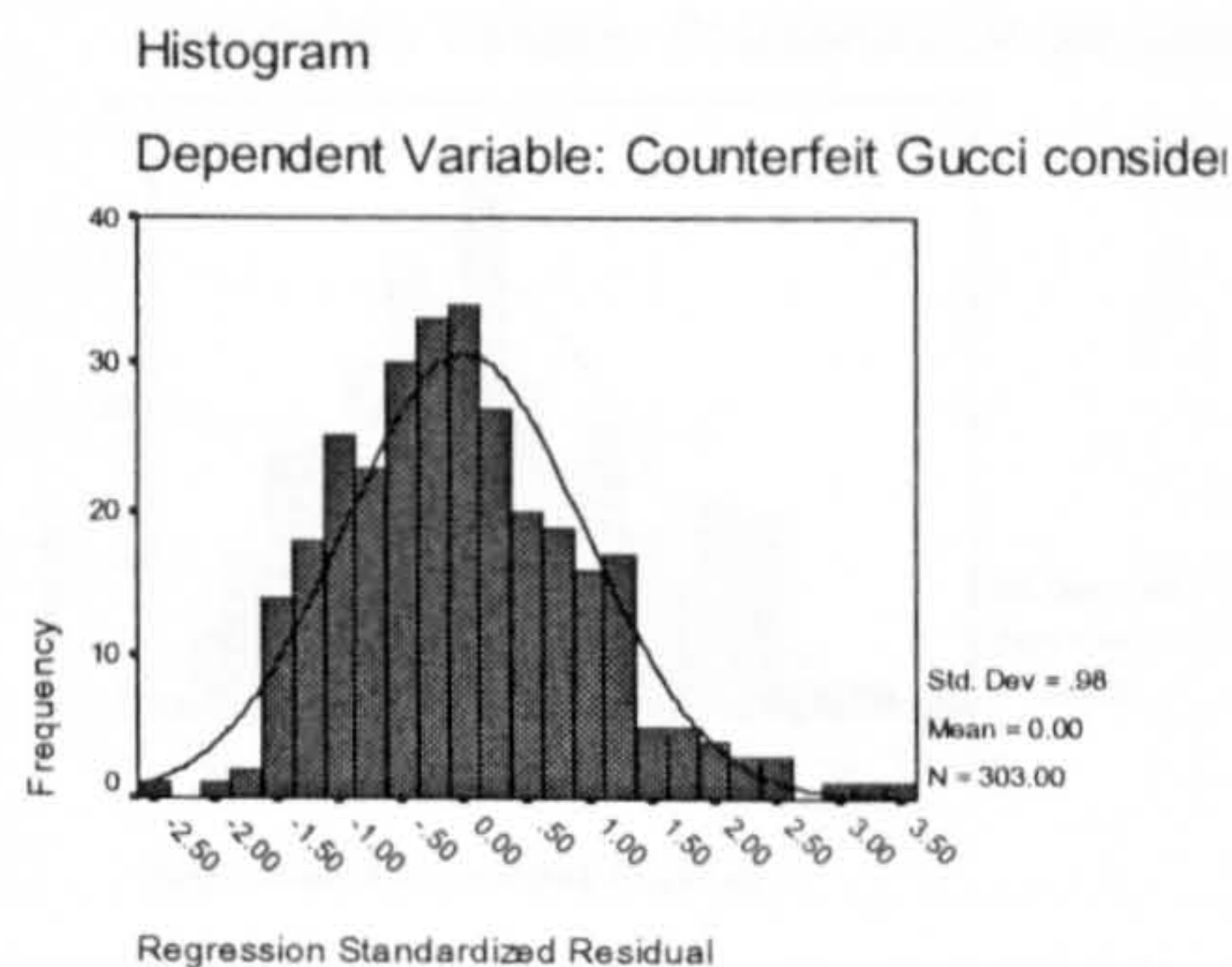


Figure 8.23 Residual histogram (counterfeit Gucci consideration)

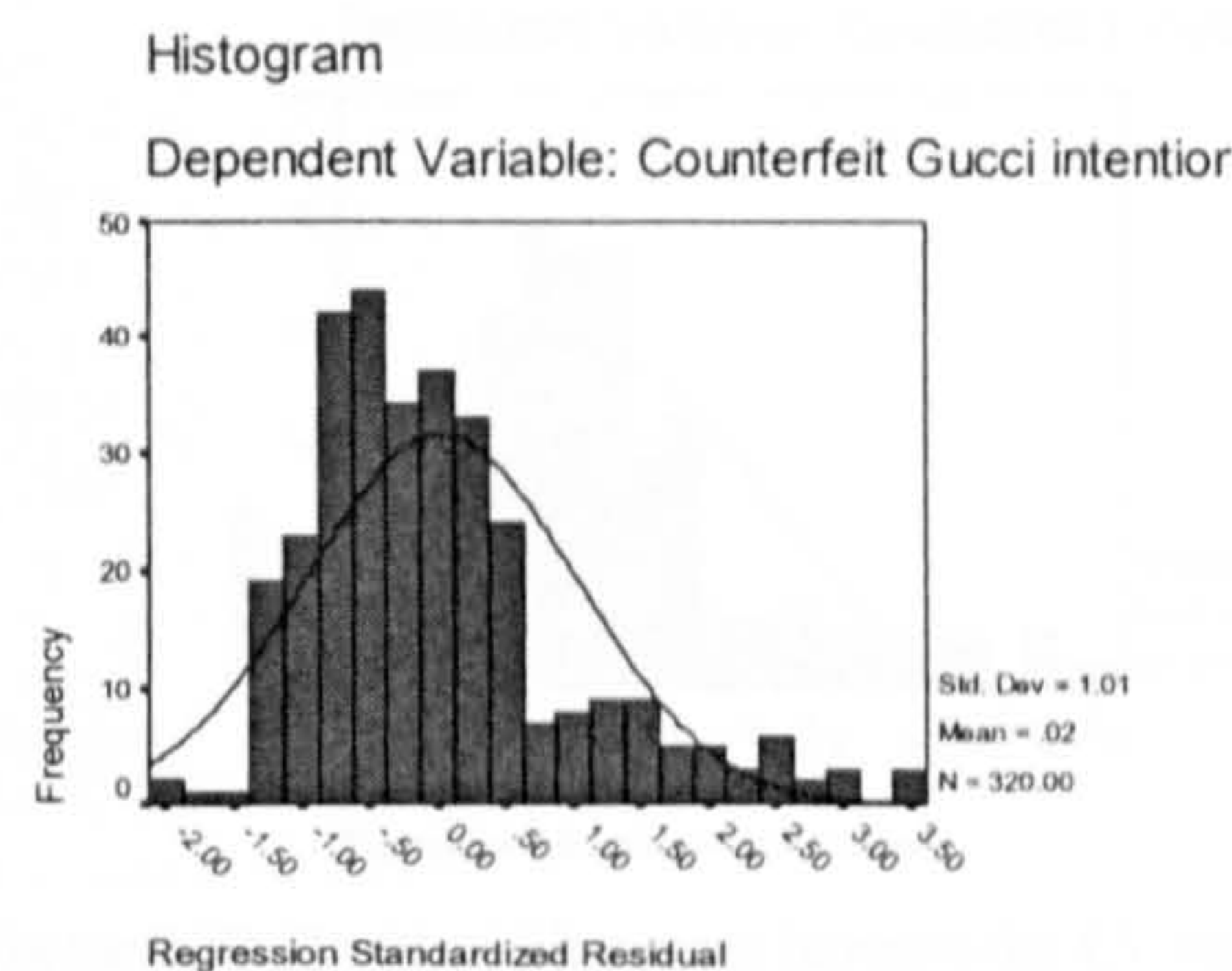


Figure 8.24 Residual histogram (counterfeit Gucci intention)

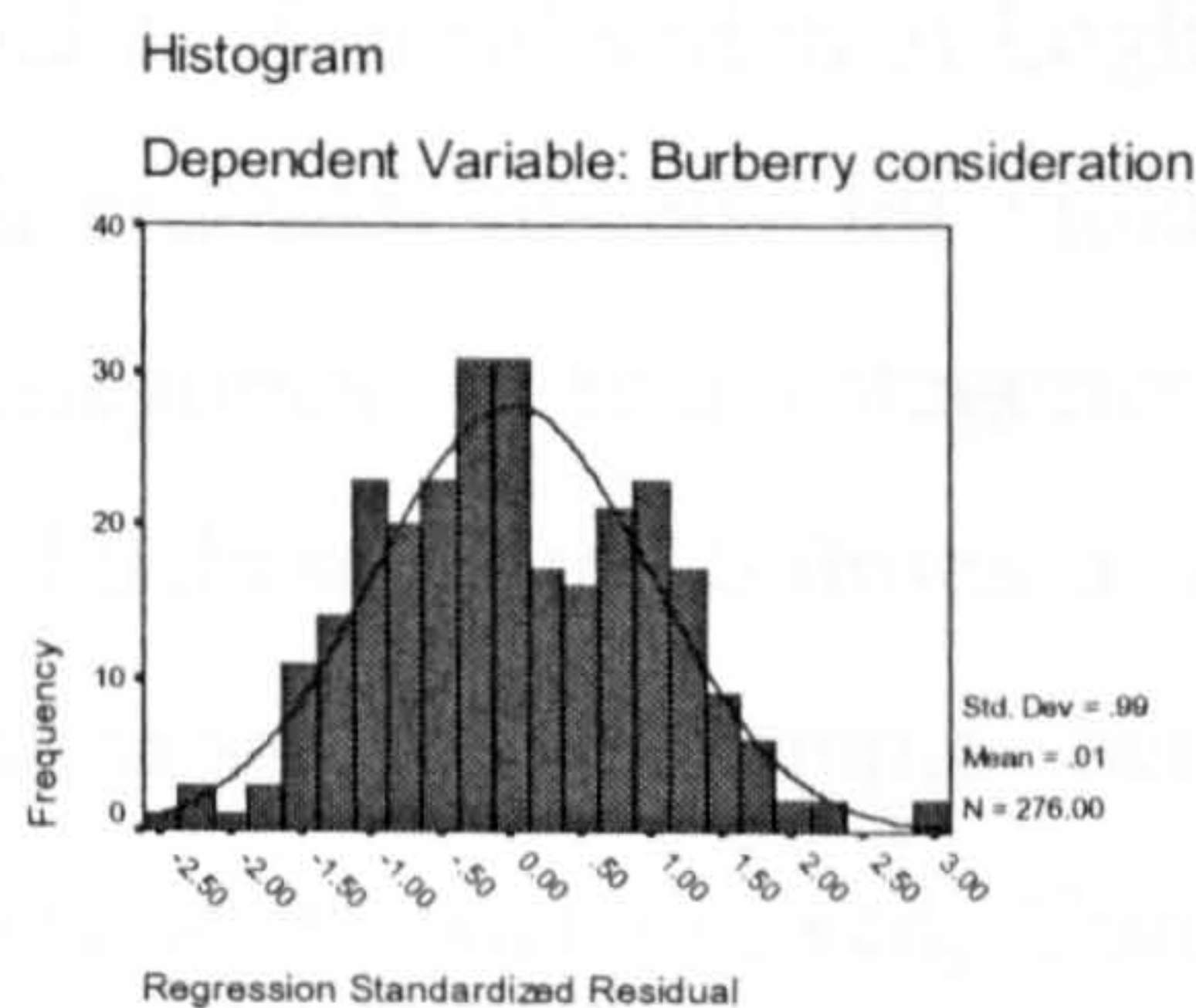


Figure 8.5 Residual histogram (original Burberry consideration)

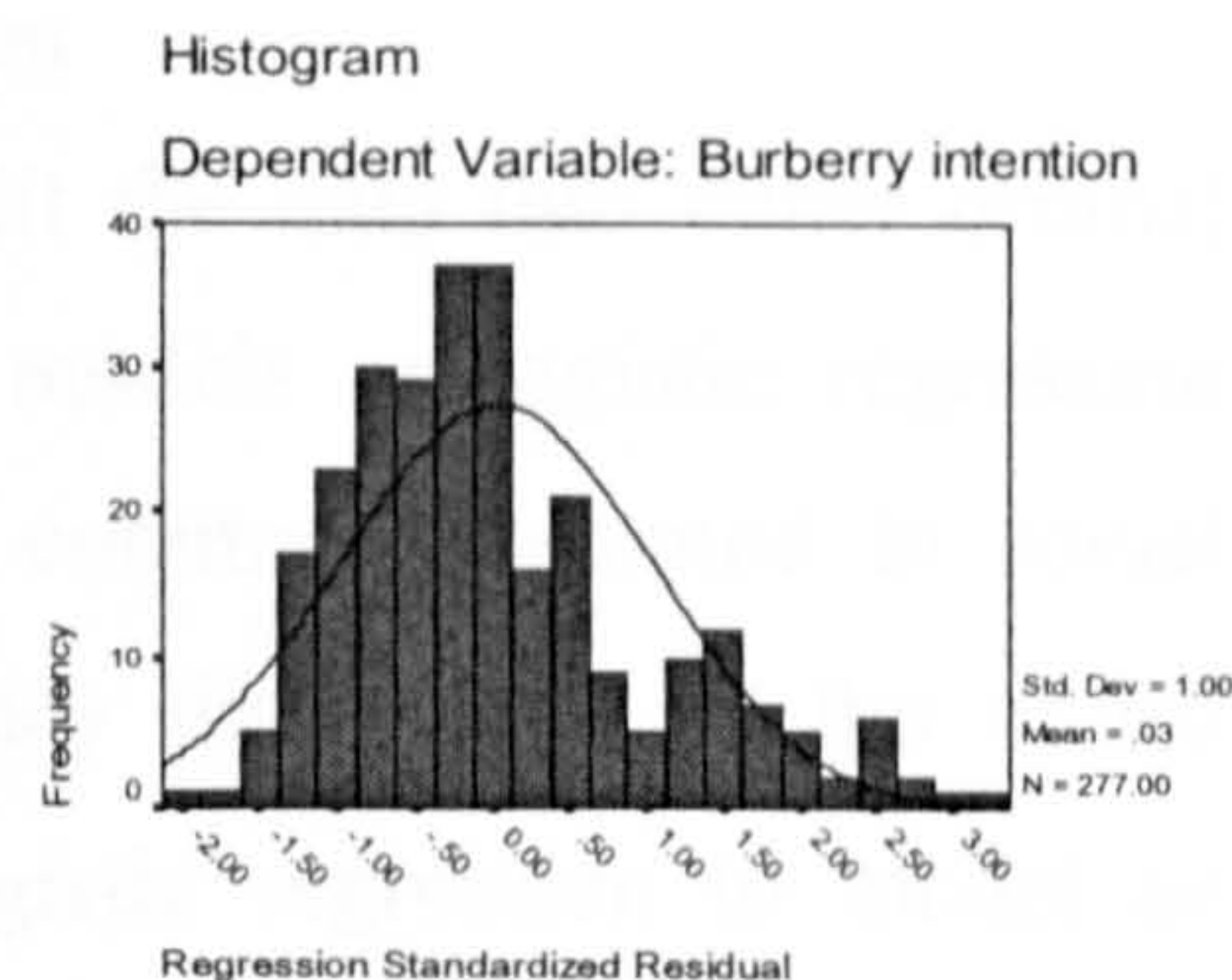


Figure 8.26 Residual histogram (original Burberry intention)



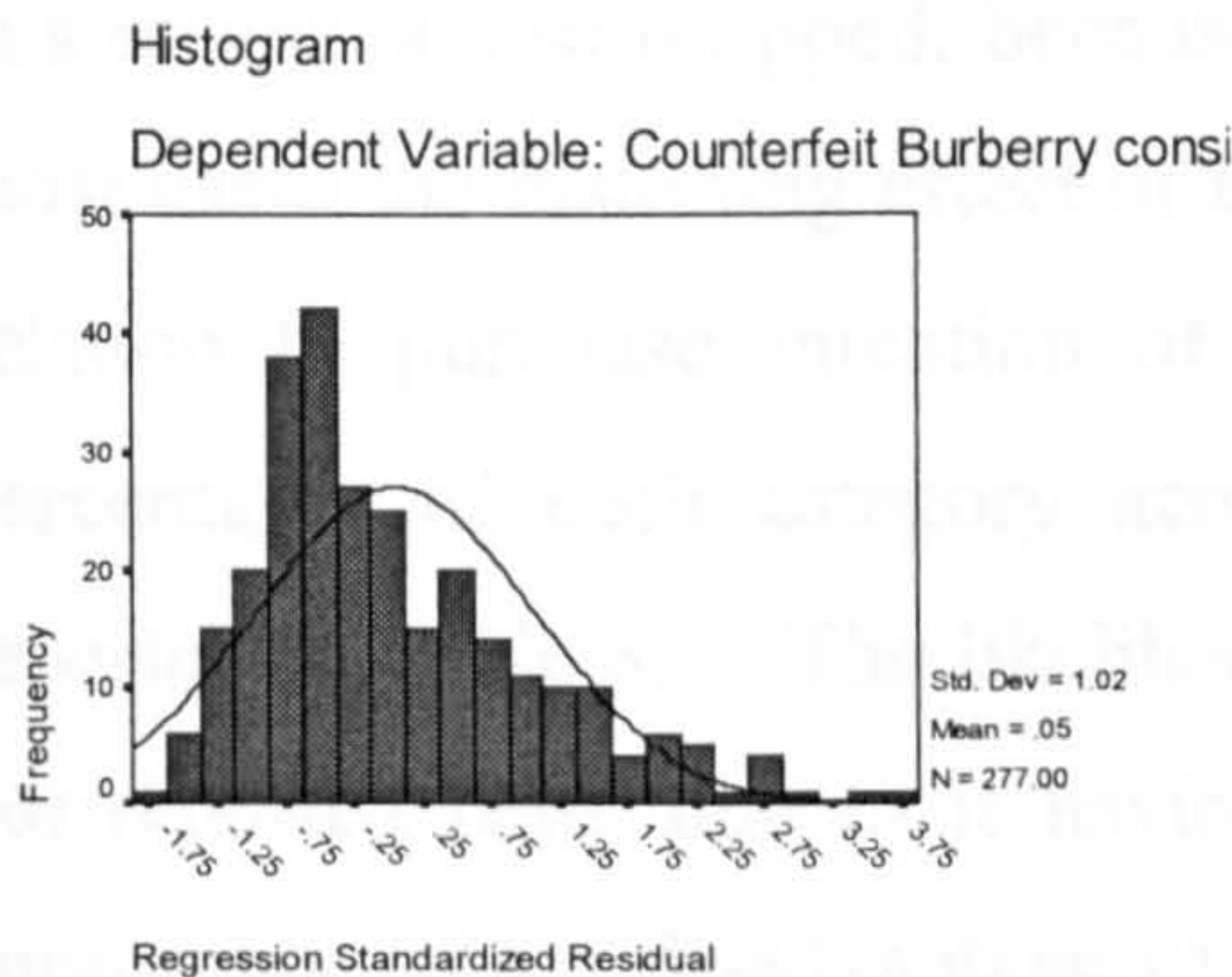


Figure 8.27 Residual histogram (counterfeit Burberry consideration)

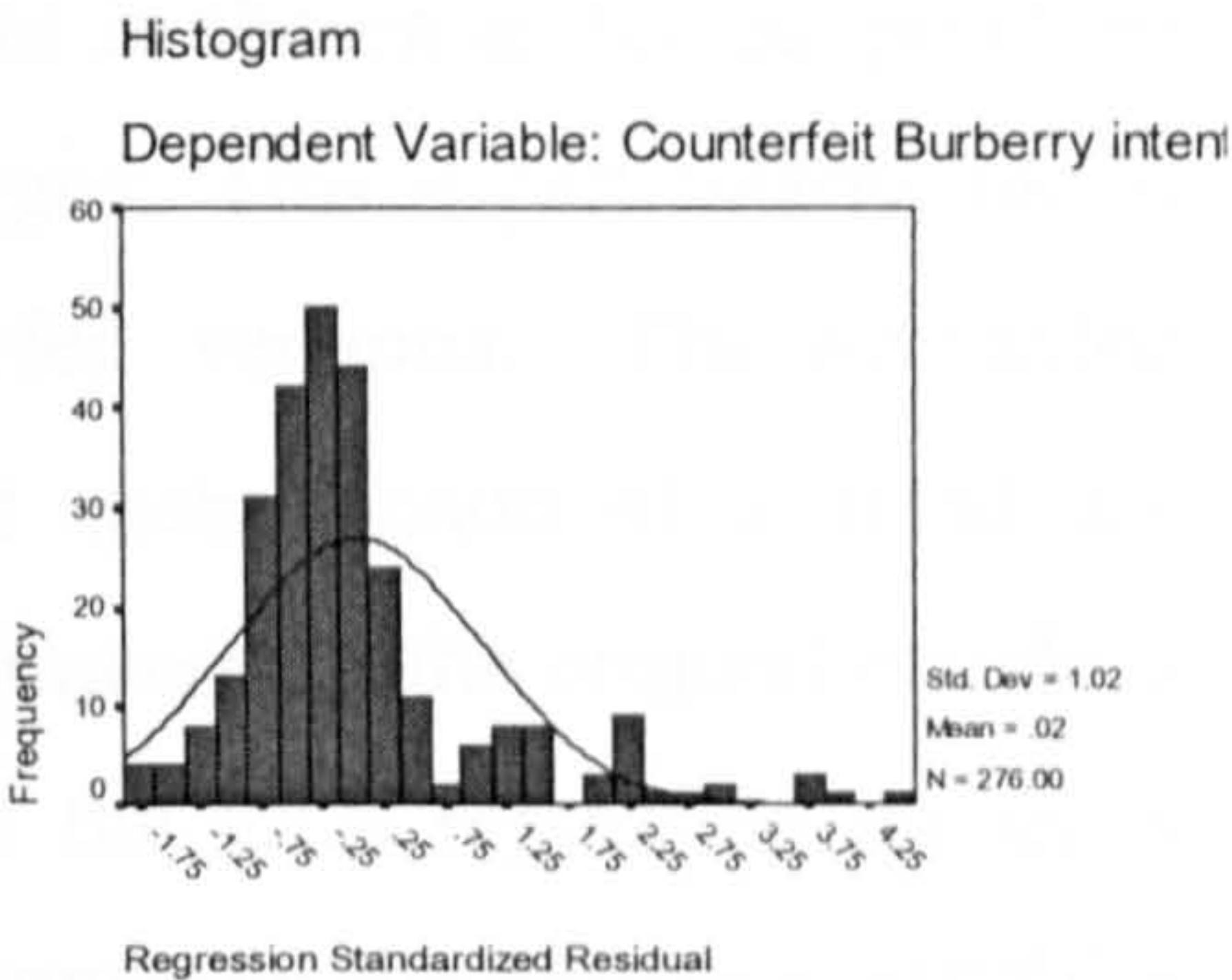


Figure 8.28 Residual histogram (counterfeit Burberry intention)

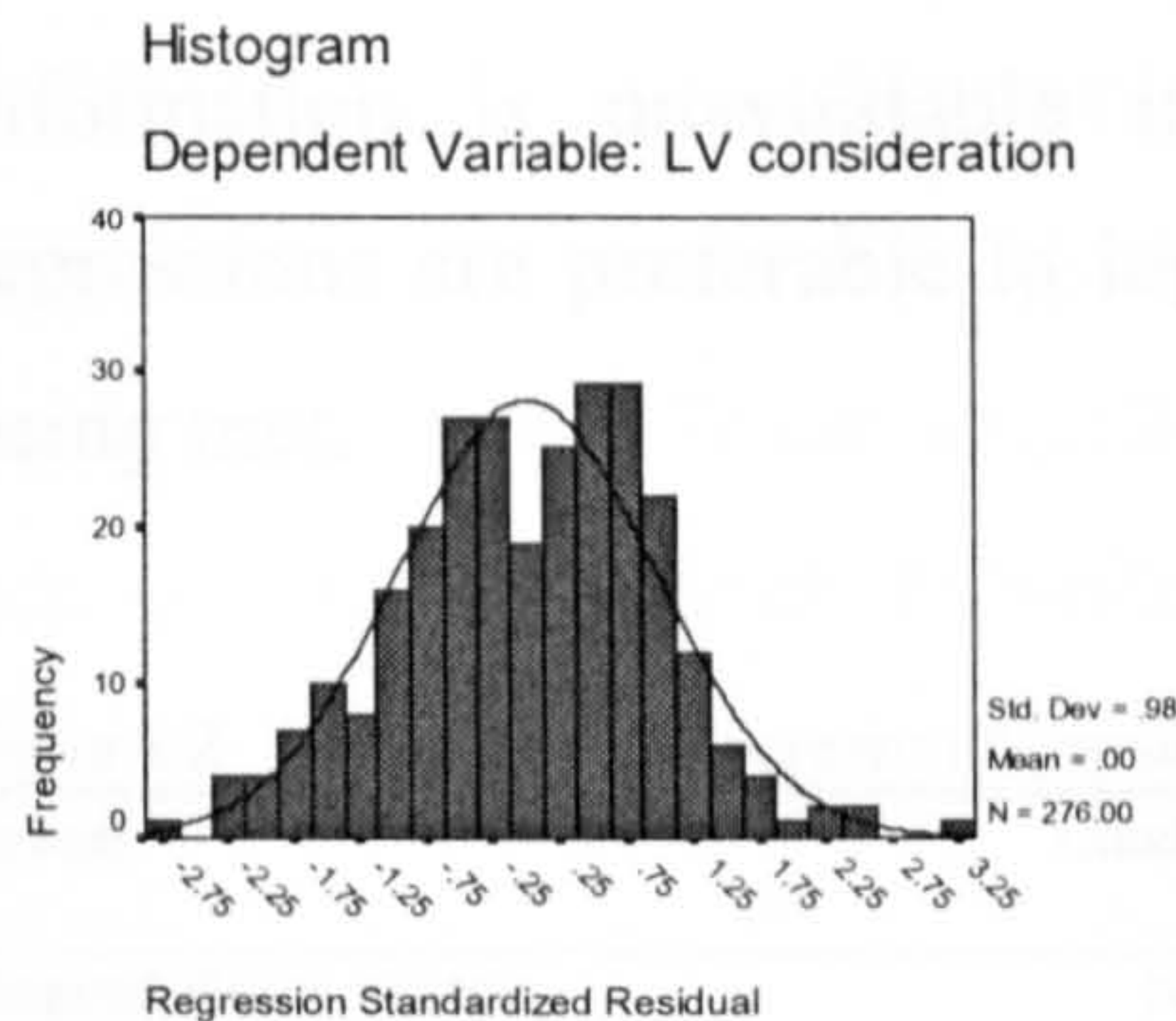


Figure 8.29 Residual histogram (original LV consideration)

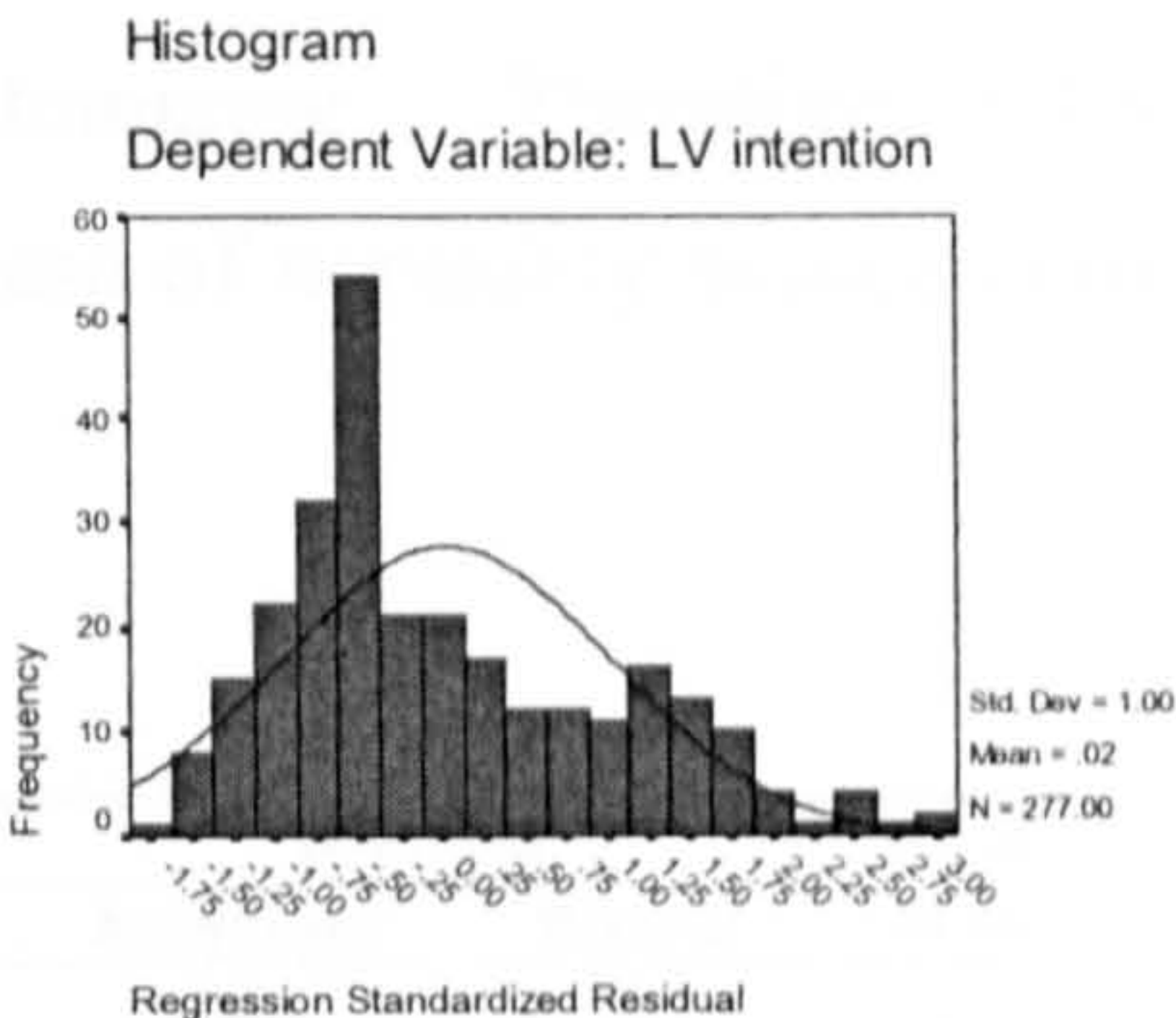


Figure 8.30 Residual histogram (original LV intention)

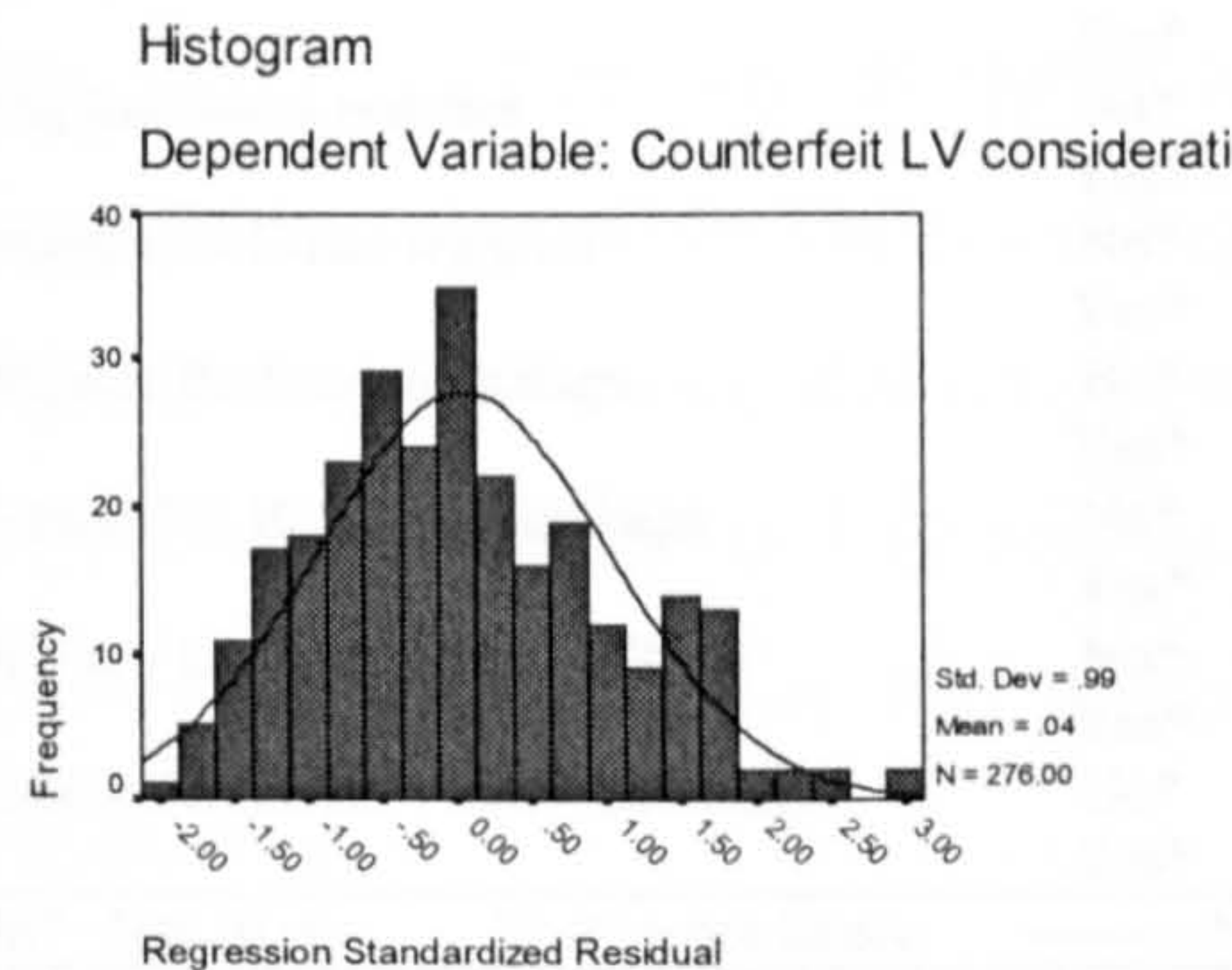


Figure 8.31 Residual histogram (counterfeit LV consideration)

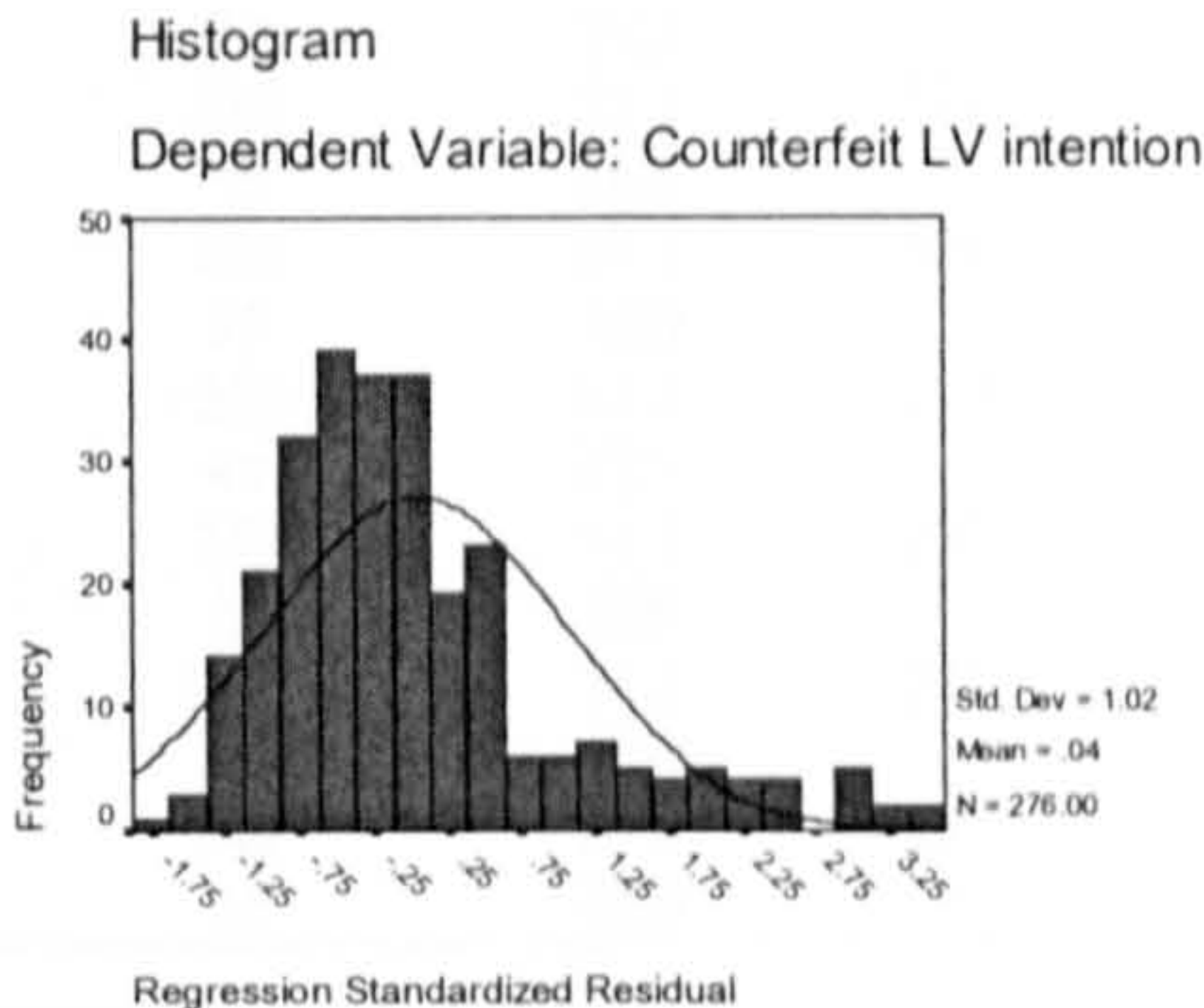


Figure 8.32 Residual histogram (counterfeit LV intention)

8.3.2 Consideration of Loglinear and Logistic Regression

A practical remedy for violation of normality is to split the data into either ordinal categories or two categories, then to apply loglinear models or logistic regression (Hutcheson and Sofroniou 1999). These means are commonly adopted in social sciences. For example, being aware that the frequency distribution of the scaled responses was skewed, Cordell et al. (1996) used logistic regression to model an individual's expected utility in their study of consumers' counterfeit purchase intentions. Some of the exploratory variables are extracted factors in this research. Therefore, it is very troublesome to split factor scores into ordinal categories. As a consequence, loglinear models are not suitable. According to the nature of explanatory variables, logistic models can be used subject to dichotomizing the response variables. However,



this means is also dropped, because if the ‘neutral’ point is chosen as the cut-point, in most cases the distorting effect of the uneven split emerges. This is particularly true in relation to purchase intention of the studied counterfeit versions. The accounted percentages of each category across every brand and each version of a brand are reported in Table 8.2. The likelihood of consideration concerning the original brands is not reported here, due to it having been justified that the OLS regression model is appropriate. One disadvantage of the means of dichotomizing the response variables then running logistic regression in comparison to OLS regression is that loss of information is unavoidable in the process of dichotomizing. Therefore, OLS regressions are preferable to logistic regressions in the case of normality assumptions being met.

Table 8.2 Frequency and percent of consideration and intention

Brand	Likelihood	Consideration		Intention		No of cases
		Frequency	Percent	Frequency	Percent	
Original Rolex watches	No*	150	-----	243	75.7	321
	Yes*	171	-----	78	24.3	
Counterfeit Rolex watches	No*	253	78.8	289	90.0	321
	Yes*	68	21.2	32	10.0	
Original Gucci watches	No*	137	-----	235	73.2	321
	Yes*	184	-----	86	26.8	
Counterfeit Gucci watches	No*	249	77.6	286	89.1	321
	Yes*	72	22.4	35	10.9	
Original Burberry handbags	No*	170	-----	228	82.3	277
	Yes*	107	-----	49	17.7	
Counterfeit Burberry handbags	No*	230	83.0	254	91.7	277
	Yes*	47	17.0	23	8.3	
Original Louis Vuitton handbags	No*	136	-----	205	74.0	277
	Yes*	141	-----	72	26.0	
Counterfeit Louis Vuitton handbags	No*	215	77.6	242	87.4	277
	Yes*	62	22.4	35	12.6	
No* : less likely		Yes*: more likely		-----: N/A		

As noted earlier, ‘neutral’ is the choice of the cut-point for splitting the response variables. The decision is based on subjects rated lower than 3 being considered as less likely to consider or intend to purchase a certain version of a brand, and the subjects who rated higher than 3 (including 3) being more likely to consider or intend to purchase. The two categories are labelled ‘No’ ( $1 \leq \text{No} < 3$ ) and ‘Yes’ ( $3 \leq \text{Yes} \leq 5$ ). The ‘neutral’ point is artificially included in the ‘Yes’ category with the aim of enlarging the percentage accounted for by this group.

Table 8.2 shows that subjects who are more likely to consider purchasing the studied counterfeit branded watches or handbags account for between 17 percent (counterfeit Burberry handbags) to 22.4 percent (counterfeit Gucci watches), the percentage of the subjects who intend to buy the studied original branded watches or handbags ranges

between 17.7 (original Burberry handbags) and 26.8 (original Gucci watches), the percentage of the subjects who admit to having the intention of purchasing the studied counterfeit branded versions lies between 8.3 (counterfeit Burberry handbags) and 12.6 (counterfeit Louis Vuitton handbags). The uneven split, or even 90-10% split in some cases, suggests that logistic regression cannot be used for data analysis (Hutcheson and Sofroniou 1999).

### 8.3.3 Justification of Transformation of Data and Use of R-commander

Traditionally, the transformation of variables by a mathematical function is used to remedy violation of normality, linearity and constant variance. However, this can result in some complex linear models. Moreover, Hutcheson and Sofroniou (1999) suggest that the transformation of variables may lead to optimizing one aspect, but may also have side-effects on another. McCullagh and Nelder (1989) emphasize changing the link function of a model. In their review of the consumer satisfaction rating literature, Peterson and Wilson (1992) suggest departure from traditional approaches when scaled response variables are skewed, and recommend data transformation methods. The advantage involved in transforming data over the transformation of variables is that data transformation leaves the observed scale of measurement untouched, which is more desirable (Moutinho and Hutcheson 2007). The R statistical analysis software is used to implement this task, as the SPSS does not have as powerful a data transformation function as R.

R is an integrated suite of software facilities for data manipulation, calculation and graphical display. It can be regarded as an implementation of the S language which was developed at Bell Laboratories by Rick Becker, John Chambers and Allan Wilks. R was initially written by Ross Ihaka and Robert Gentleman at the Department of Statistics of the University of Auckland, New Zealand. This is also partially the reason why it is named R. R works on multiple computing platforms and can be downloaded free of charge (Dalgaard 2002). Some people use R as a statistical system, while others prefer to think of R as an environment within which many classical and modern statistical techniques have been implemented (Venables and Smith 2005). There are about twenty-five standard and recommended packages supplied with R, and many more are available through the CRAN family of internet sites.



R-commander (Rcmdr) is one of the packages of R software. The R-Commander graphic user's (GUI) interface is designed by John Fox. The object of John Fox in designing and implementing this GUI was to cover the content of a basis-statistics course. The R Commander implements the basis practices of statistics (e.g. data transformation) plus some additional statistics (e.g. linear and generalized linear models). In the current study, the R-Commander data transformation function and the GLM statistics are utilized. Specifically, The Box-Cox (Box and Cox 1964) and Box-Tidwell (Box and Tidwell 1962) techniques are applied to identify transformations needed in relation to the response variables and the explanatory variables.

#### 8.4 OLS Regression Using SPSS

Despite its being criticised for taking many input and methodological decisions out of the hands of the researcher (Field 2000), the regression procedure used is stepwise regression. This is because the stepwise method is considered appropriate for exploratory model building (Wright 1997), which fits in well with the exploratory nature of this study. Once again, the OLS is only utilised to regress the likelihood of consideration concerning the tested original branded products. For economy's sake, only the results obtained for the final stage of the stepwise regression procedure are reported.

As the multicollinearity tests were reported in Chapter 7, here the focus is on assessing the assumption of constant variance and identifying outliers. The constant variance assumption is investigated by examining the residuals of the fitted models. The outliers are removed if it is necessary. The extreme cases are identified using the SPSS residual statistics function. Cook's distance and leverage values of individual cases are further examined. Cases with Cook's distance greater than 1 (Cook and Weisberg 1982) or leverage value greater than three times  $k/n$  ( $k$  is the number of model parameters including the intercept, and  $n$  is the number of cases) are considered problematic (Steven 1992) and discarded for their undue influence on the model.

This section first reports the examination of constant variance and results then follows with casewise diagnostics and solutions. The initial OLS regression and final regression results are reported and compared. Based on the comparison, a decision is made with



regard to which model is more appropriate. Detailed interpretation and discussion of the model which is perceived as more appropriate are presented.

8.4.1 Constant Variance Test

Figure 8.33 to Figure 8.36 are plots of the residuals versus the fitted values. According to the plots the residuals versus the fitted values of every consideration model of the original brands to a great percent lie in a horizontal band, no severe fan out appears. Therefore, the conclusion is drawn that the model is a good approximation and the variance is constant.

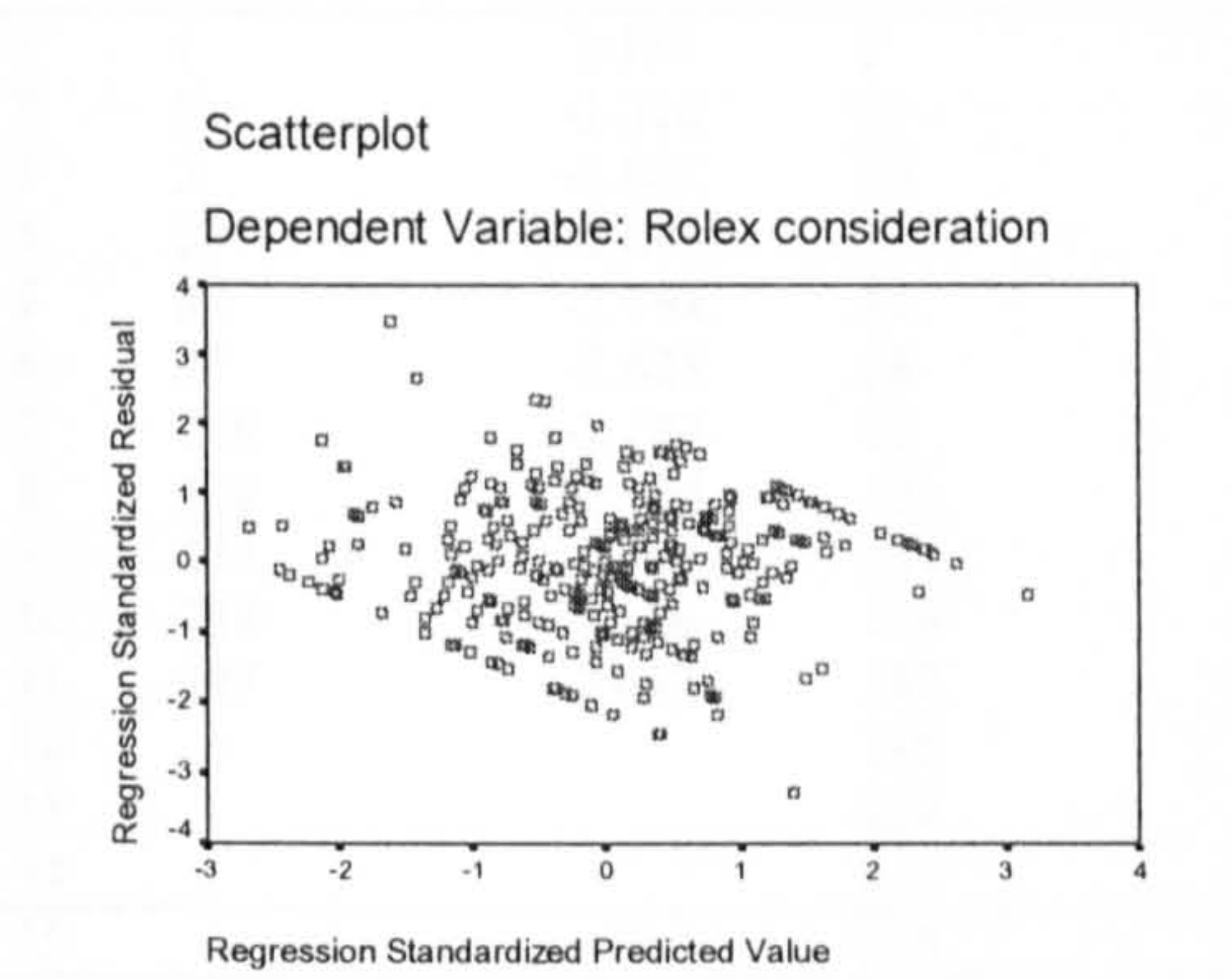


Figure 8.33 Residual versus fitted value (original Rolex)

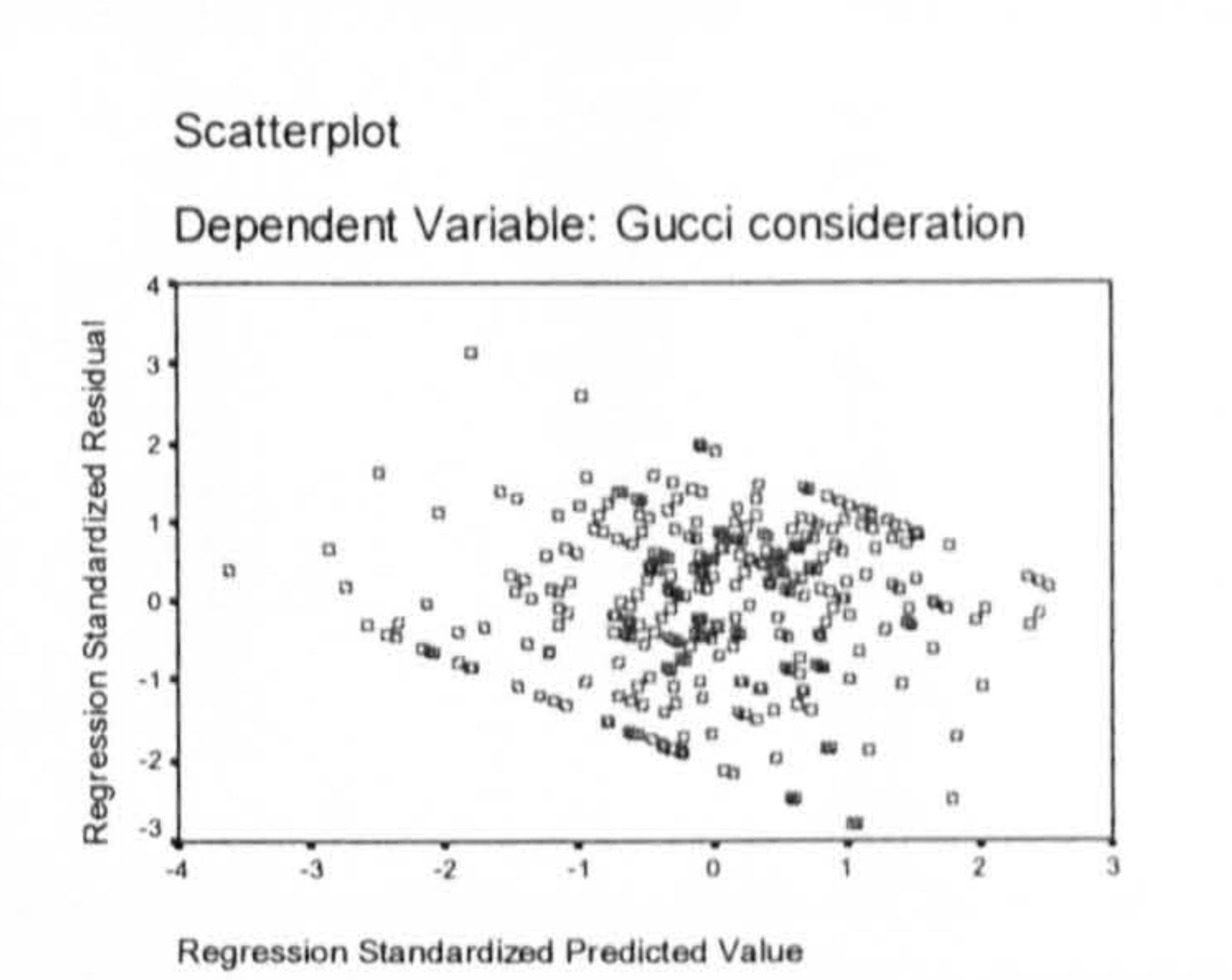


Figure 8.34 Residual versus fitted value (original Gucci)

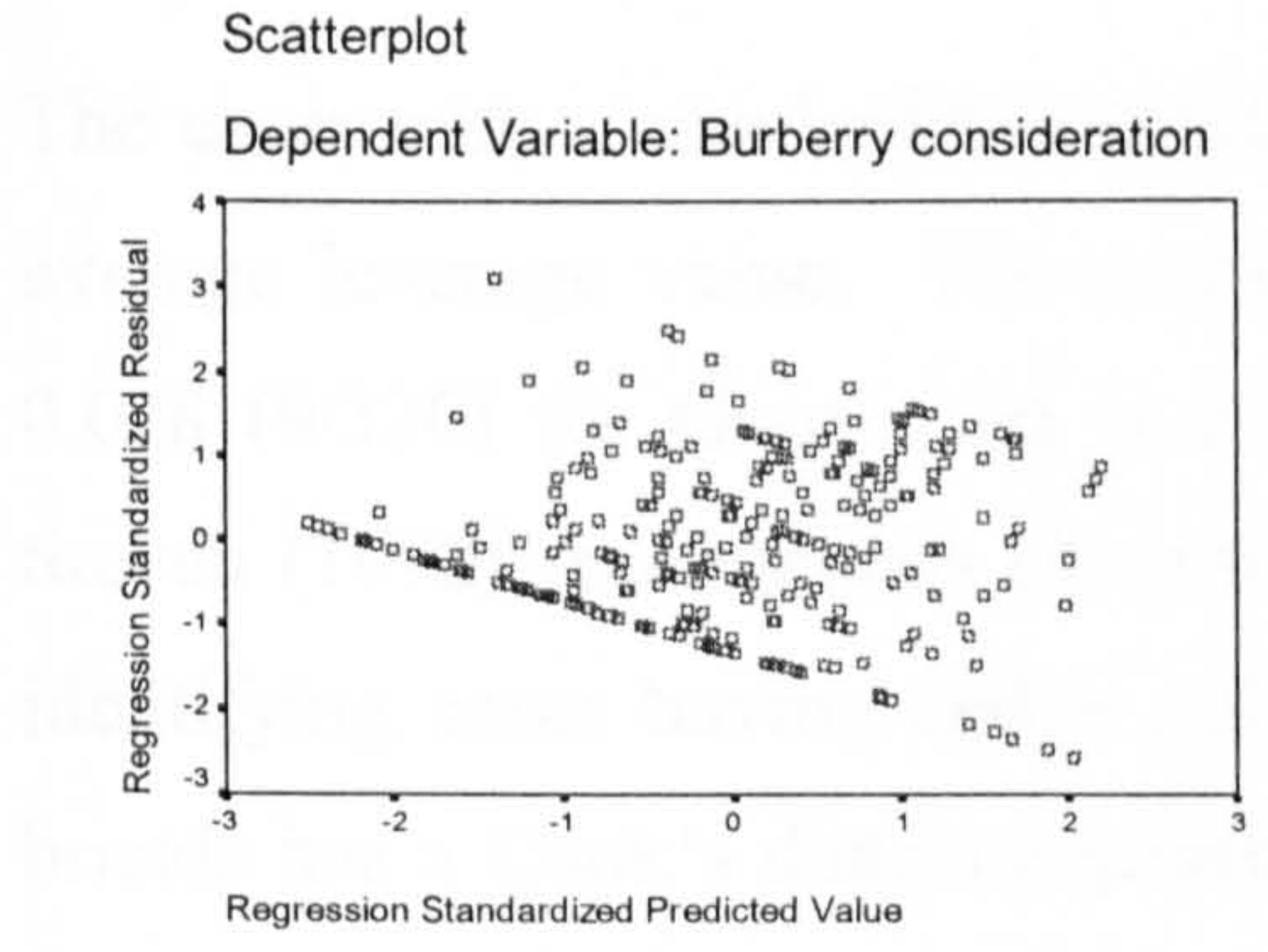


Figure 8.35 Residual versus fitted value (original Burberry)

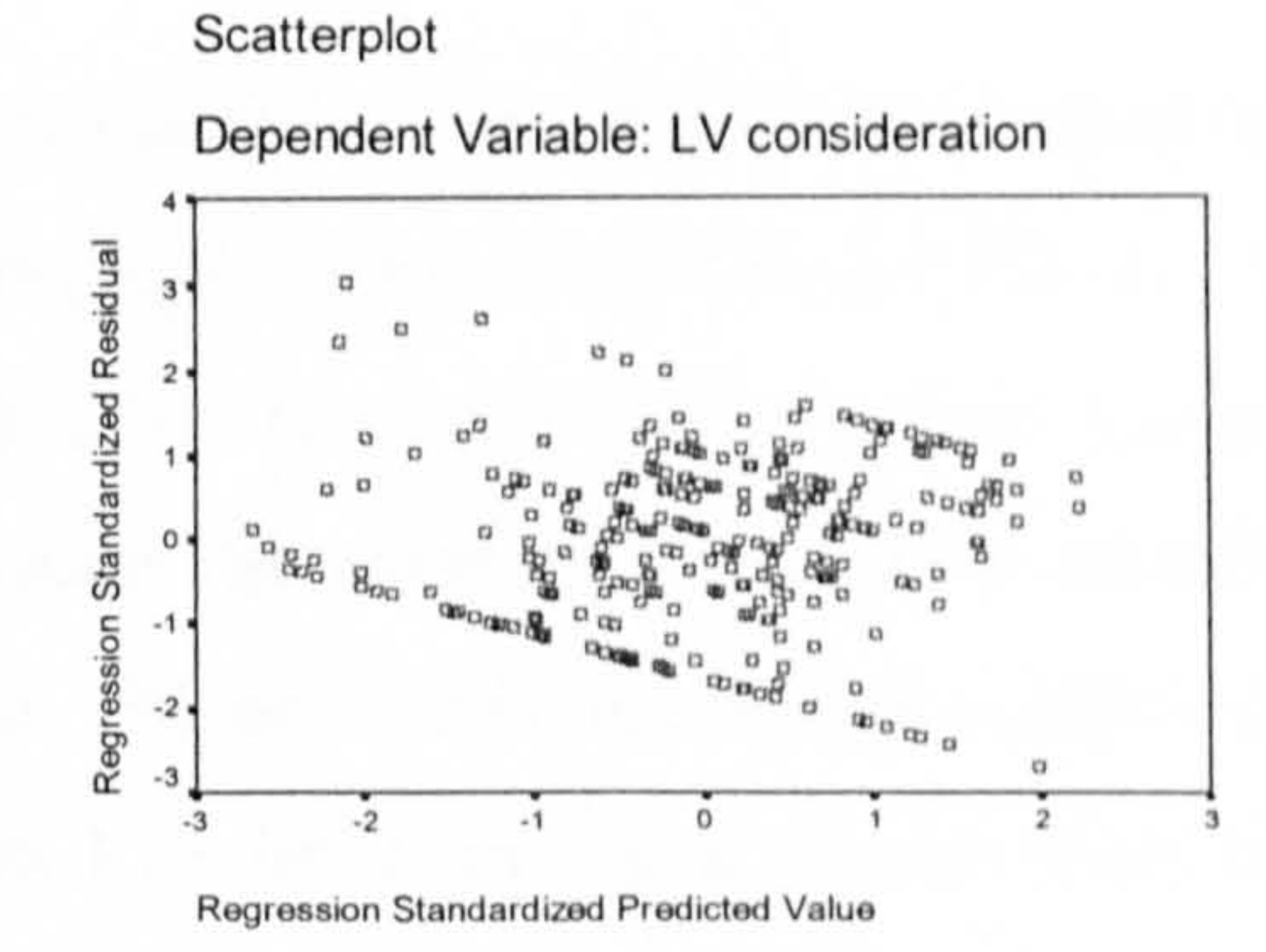


Figure 8.36 Residual versus fitted value (original Louis Vuitton)

8.4.2 Casewise Diagnostics

As noted earlier, outliers are detected by looking for extreme standardized residuals. In an average, normally distributed sample, the standardised residual should have some useful characteristics. For instance, 95% of the standard residuals of all cases should lie within  $\pm 2.0$  (Field 2000). So we would expect only 5% of cases to lie outside of these limits. Table 8.3 shows that 11 cases related to Rolex, 15 cases related to Gucci, 11 cases related to Burberry, 14 cases related to Louis Vuitton lie outside of the limits. The sample size is 320 for watches, and 276 for handbags, therefore the number of



outliers only accounts for 3.4% of the sample of Rolex, 4.6% of the sample of Gucci, 4.0% of the sample for Burberry, and 5.1 % of the sample for Louis Vuitton, which are all lower than 5% with an exception of Louis Vuitton with a 0.1% higher than the threshold level. Only two cases of Rolex (case 3 and case 234), one case of Burberry (case 222), and one case of Louis Vuitton (case 267) have the standardized residual greater than 3, which is worth further investigation. This is further evidence that the models are fairly accurate.

Table 8.3 Identified outliers

Original Rolex (n = 320)			Original Gucci (n = 320)		Original Burberry (n = 276)		Original LV (n = 276)	
No	Case No	Std. Residual	Case No	Std. Residual	Case No	Std. Residual	Case No	Std. Residual
1	1	2.437	3	-2.031	3	-2.215	3	-2.510
2	2	-2.316	12	-2.146	12	-2.278	12	-2.636
3	3	-3.062	30	-2.034	19	-2.429	17	-2.073
4	21	-2.095	36	2.102	119	2.350	19	-2.173
5	85	-2.194	42	-2.609	134	2.084	46	-2.067
6	97	-2.425	58	-2.022	135	-2.184	49	-2.211
7	116	-2.183	62	-2.189	165	2.073	75	2.209
8	216	-2.004	131	-2.363	200	-2.155	119	2.405
9	234	3.344	154	-2.153	206	2.855	135	-2.230
10	284	2.566	159	-2.598	222	3.106	145	2.219
11	297	2.632	182	-2.538	254	2.362	181	-2.052
12			185	2.037			206	2.369
13			234	2.888			254	2.040
14			239	-2.140			267	3.134
15			318	-2.015				

The cases with a standardized residual greater than 3 are further examined against the average leverage value. The average leverage value is 0.025 (8/320) for Rolex and 0.028 (9/320) for Gucci, and is 0.022 (6/276) for both Burberry and Louis Vuitton. Steven (1992) recommends using three times the average (3k/n) as a cut-off point for identifying cases having undue influence. None of the identified outliers of all four brands has a Cook’s distance greater than 1 or leverage value greater than three times the average value, including the cases (3, 234 of Rolex, and 267 of Louis Vuitton) which have a standardized residual greater than 3, with the exception of case 222 of Burberry which has a leverage value greater than the rule of thumb. It is more likely that apart from the case 222 of Burberry, other outliers should not have a great impact on the parameters of the regression model. It is decided to leave them as they are. In the case of Burberry, the case 222 not only has a residual greater than 3, but its leverage value is also greater than 3 times the average leverage value. This case is considered as having undue influence on the model. Therefore, the case 222 of Burberry is omitted from the sample.

The investigation of leverage value reveals that there are 6 cases of Rolex, 4 cases of Gucci, 6 cases of Burberry and 5 cases of Louis Vuitton with greater than 3 times the average leverage value. Table 8.4 reports the case summary results of the cases with leverage value greater than 3 times the average leverage value. Despite the commonly accepted recommendation that leverage value greater than two or three times the average leverage value might cause concern (Hoaglin and Welsch 1978, Steven 1992), Field (2000) claims that cases with large leverage values will not necessarily have a large influence on the regression coefficients because they are measured on the outcome variables rather than the predictor. Due to the debatable view on the effect of the leverage values, it is decided to run the regression with the suspicious cases excluded. The decision is made based on comparison of two models. The model which is considered more appropriate is interpreted and discussed in further detail.

Table 8.4 Cases with undue influence

Original Rolex (n = 320)				Original Gucci (n = 320)				Original Burberry (n = 276)		Original LV (n = 276)	
No	Case No	lev_2 3*0.025	>=	Case No	lev_2 3*0.025	>=	Case No	lev_2 3*0.022	>=	Case No	lev_2 >= 3*0.022
1	4	Selected		9	Selected		9	Selected		9	Selected
2	11	Selected		12	Selected		16	Selected		16	Selected
3	30	Selected		93	Selected		25	Selected		25	Selected
4	68	Selected		142	Selected		59	Selected		59	Selected
5	100	Selected					94	Selected		95	Selected
6	313	Selected					222	Selected			

8.4.3 OLS Regression Results

The summarized OLS regression initial results for the four original brands are shown in Table 8.5 (Rolex and Gucci) and Table 8.6 (Burberry and Louis Vuitton), while the OLS regression results when unduly influential cases are excluded are presented in Table 8.7 (Rolex and Gucci) and Table 8.8 (Burberry and Louis Vuitton). Table 8.9 (Rolex), Table 8.10 (Gucci), Table 8.11 (Burberry) and 8.12 (Louis Vuitton) report the difference in the parameters of the regression models with unduly influential cases included and excluded.

8.4.3.1 Choice of Appropriate Models

Primary school education is found to be negative and significant in three (Rolex, Burberry and Louis Vuitton) out of four initial regression models (Table 8.5 and Table 8.6). An investigation of the subjects with primary school education shows that none of these cases is categorised as outliers (Table 8.3). In contrast, all cases with primary school education background across all three models appear to have leverage value



greater than three times the average leverage value (Table 8.13). The cases with primary school education account for between 50 percent and 100 percent of the total number of cases that have leverage value higher than 3 times of the average value (Table 8.13). As a consequence, exclusion of cases with undue influence on the models results in exclusion of cases with primary education attainment in the sample. In fact, due to the cases having primary school education background only accounting for a very low percentage of the samples (1.9 percent for watches and 1.1 percent for handbags), it is rational to exclude them from the model. Therefore, cases of all original brands that have leverage values greater than 3 times the average leverage value are omitted. Based on this, the models, excluding cases of undue influence, (Table 8.7 and Table 8.8) should be interpreted and discussed.

Table 8.5 Multiple regression analysis of likelihood of consideration of original branded watches

Original Rolex Likelihood of consideration						
OLS stepwise regression						
Step	Variables entered	T to enter	Significance	R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F
1	KXI #	4.643	.000	.139	.136	48.59
2	Practical attributes	5.723	.000	.201	.196	37.82
3	Sincerity	5.699	.000	.261	.253	38.13
4	Quality and price	5.898	.000	.319	.310	34.88
5	Competence	5.124	.000	.372	.362	35.22
6	Image benefit	2.938	.004	.388	.375	31.24
7	Primary school	-2.364	.019	.399	.385	27.99
Regression equation						
	Variable entered	B	SE B	β	T	Significant
	KXI #	.060	.013	.221	4.643	.000
	Practical attributes	.318	.056	.266	5.723	.000
	Sincerity	.309	.054	.259	5.699	.000
	Quality and price	.324	.055	.270	5.898	.000
	Competence	.287	.056	.233	5.124	.000
	Image benefit	.160	.054	.135	2.938	.004
	Primary school	-.938	.397	-.109	-2.364	.019
	Constant	2.534	.119		21.270	.000
Original Gucci Likelihood of consideration						
OLS stepwise regression						
Step	Variables entered	T to enter	Significance	R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F
1	Personality	6.263	.000	.136	.133	47.20
2	Image benefit	4.364	.000	.191	.186	35.42
3	General attributes	3.296	.001	.230	.222	29.70
4	KXI #	3.750	.000	.250	.240	24.80
5	Male	-3.034	.003	.267	.255	21.68
6	Social risk	-3.112	.002	.284	.269	19.53
7	Functional benefit	2.762	.006	.300	.284	18.08
8	Age 41 to 50	-2.416	.016	.314	.295	16.81
Regression equation						
	Variable entered	B	SE B	β	T	Significant
	Personality	.372	.059	.310	6.263	.000
	Image benefit	.262	.060	.219	4.364	.000
	General attributes	.196	.059	.163	3.296	.001
	KXI #	.052	.014	.194	3.750	.000
	Male	-.369	.122	-.152	-3.034	.003
	Functional benefit	-.154	.050	-.156	-3.112	.002
	Product life	.168	.061	.138	2.762	.006
	Age 41 to 50	-.349	.145	-.118	-2.416	.016
	Constant	3.257	.176		18.479	.000

\* The overall F<sub>s</sub> are significant at 0.000 level

# Interaction of product knowledge and product involvement

Table 8.6 Multiple regression analysis of likelihood of consideration of original branded handbags

Original Burberry Likelihood of consideration						
OLS stepwise regression						
Step	Variables entered	T to enter	Significance	R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*
1	Personality 1	6.564	.000	.127	.124	35.57
2	General attributes 3	4.057	.000	.171	.165	26.60
3	Benefit 2	3.842	.000	.213	.204	23.10
4	Price	-2.412	.017	.228	.216	18.84
5	Primary school	-2.235	.026	.243	.228	16.31
Regression equation						
	Variable entered	B	SE B	β	T	Significant
	Personality 1	.463	.071	.358	6.564	.000
	General attributes 3	.286	.071	.223	4.057	.000
	Benefit 2	.273	.071	.210	3.842	.000
	Price	-.171	.071	-.132	-2.412	.017
	Primary school	-1.508	.675	-.123	-2.235	.026
	Constant	2.536	.072		35.276	.000
Original Louis Vuitton Likelihood of consideration						
OLS stepwise regression						
Step	Variables entered	T to enter	Significance	R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*
1	Personality 2	4.848	.000	.091	.088	25.96
2	KXI #	2.922	.004	.145	.139	21.87
3	Benefit 1	3.798	.000	.183	.174	19.17
4	General attributes 3	3.455	.001	.216	.204	17.59
5	Primary school	-2.113	.036	.230	.215	15.16
Regression equation						
	Variable entered	B	SE B	β	T	Significant
	Personality 2	.344	.071	.272	4.848	.000
	KXI #	.035	.012	.169	2.922	.004
	Benefit 1	.265	.070	.211	3.798	.000
	General attributes 3	.244	.071	.195	3.455	.001
	Primary school	-1.393	.659	-.117	-2.113	.036
	Constant	2.571	.120		21.431	.000
* The overall Fs are significant at 0.000 level						
# Interaction of product knowledge and product involvement						

That said, one thing which is quite clear according to the results is that subjects with primary school education are less likely to consider buying original Rolex, Gucci and Louis Vuitton in comparison with people who have a Masters educational level. Nevertheless, one should view this finding with caution, due to there being only a small number of subjects with primary school education in this particular sample.

Tables 8.9 to 8.13 demonstrate the influence of large leverage values on the models. More specifically, these tables present the influence of cases with large leverage values on the explanatory power of variables and differences between parameters before and after these cases are excluded. According to the results, the large leverage values not only have influence on the regression coefficients (changes range from .001 to absolute value of .047) but could also have significant influence on the explanatory power of a certain variable. For example, Table 8.10 shows that when the cases with large leverage values are included, the ‘Price’ factor is negative and significant in the Burberry model.



However, when the cases with large leverage values are excluded, the ‘Price’ factor is no longer significant in the model. Based on this empirical result, it might be safer if one excluded the cases with large leverage values rather than misinterpret Field’s (2000) claim that ‘cases with large leverage value will not necessary have a large influence on the regression coefficients because they are measured on the outcome variable rather than the predictor’ as an indication of legality for not examining unduly influential cases. This further supports the earlier decision that models with unduly influential cases excluded are interpreted and discussed for all four brands.

Table 8.9 The difference in the parameters of the regression model when unduly influential cases are excluded (Rolex)

Parameter ( $\beta$ )	Suspicious cases included	Suspicious cases excluded	Difference
Constant (intercept)	2.534	2.543	-.009
KXI #	.221	.219	.002
Practical attributes	.266	.267	-.001
Excitement	.259	.253	.006
Quality and price	.270	.271	-.001
Competence	.233	.238	-.005
Image benefit	.135	.140	-.005
Primary school	-.109	-----	-.109
# Interaction of product knowledge and product involvement			
----- N/A			

Table 8.10 The difference in the parameters of the regression model when unduly influential cases are excluded (Gucci)

Parameter ( $\beta$ )	Suspicious cases included	Suspicious cases excluded	Difference
Constant (intercept)	3.257	3.279	.022
Personality	.310	.297	.013
Image benefit	.219	.218	.001
General attributes	.163	.189	-.026
KXI #	.194	.189	.005
Male	-.152	-.158	.006
Social risk	-.156	-.158	.002
Product life	.138	.161	-.023
Age 41 to 50	-.118	-.104	-.014
# Interaction of product knowledge and product involvement			

Table 8.11 The difference in the parameters of the regression model when undue influential cases are excluded (Burberry)

Parameter ( $\beta$ )	Suspicious cases included	Suspicious cases excluded	Difference
Constant (intercept)	2.536	2.501	0.035
Personality	.358	0.378	-.020
General attributes	.223	0.270	-.047
Image benefit	.210	.203	.007
Price	-.132	-----	-.132
Primary school	-.123	-----	-.123
# Interaction of product knowledge and product involvement			
----- N/A			

Table 8.12 The difference in the parameters of the regression model when unduly influential cases are excluded (4 factor)

Parameter ( $\beta$ )	Suspicious cases included	Suspicious cases excluded	Difference
Constant (intercept)	2.571	2.574	-.003
Personality	.272	.286	-.014
KXI <sup>#</sup>	.169	.167	.002
Image benefit	.211	.186	.035
General attribute	.195	.227	-.032
Primary school	-.117	-----	-.117
# Interaction of product knowledge and product involvement			
----- N/A			

Table 8.13 Subjects with primary school education and cases with leverage value greater than three times of average value

Original Rolex (n = 320)			Original Burberry (n = 276)			
No	Primary school cases	lev_2 >= 3*0.025	Primary school cases	lev_2 >= 3*0.022	Primary school cases	lev_2 >= 3*0.022
1	4	4	9	9	9	9
2	11	11	25	16	25	16
3	30	30	59	25	59	25
4	68	68		59		59
5	100	100		94		95
6	313	313		222		

8.4.3.2 Overall Results of Consideration of the Original Brands

All four consideration related models of the original brands show relatively high explanatory powers, in that the adjusted  $R^2$  ranges from 0.224 (original Louis Vuitton) to 0.384 (original Rolex). The variables which appear in all of the models are perceived brand personality related factors and perceived image benefit related factors. The stronger the perceived brand personality and image benefit the more chance there is of the brands being in the consideration set. These results support the contention that consumer perceived brand personality and perceived benefit play an important role in the formation of the consideration set in the context of genuine luxury brands. The brand personality variables act as the dominating variables in all consideration models related to the original brands, with the exception of the original Rolex consideration model. In the Rolex consideration model, perceived relationship between quality and price (value-quality for money) appears to be the leading drive of likelihood of consideration. Rolex watches are projected to the consumers as extremely high-quality products. They are not only perceived as time-telling instruments, but in some cases they are regarded as personal property with high value (quality and price) which can be passed on to younger generations. Due to its extremely high price, the subjects are certainly concerned about whether or not they are getting the expected quality for the money they paid or are going to pay.



In other cases where the brand personality takes the dominant role in the models, this can be interpreted as being associated with the fashionable nature (Gucci watch) of the studied brands as well as advanced technology in watch and handbag manufacturing. The achievement in technology has caused quality to be taken for granted. Although the functionality of a Gucci watch is still an important factor which people evaluate before any purchase, image-sensitive consumers are nevertheless more concerned about whether the brand personality matches the consumers' self-image or not. In other words, image-sensitive consumers are more likely to seek an association between the brand they buy and their self-image. As a direct result, the perceived brand personality becomes the core influential factor in consumer purchase consideration.

Regardless of the commonly accepted notion which claims that benefits are what consumers want to buy (e.g. Kotler 1999), the research results show that the consumer perceived brand benefits (both image benefit and functional benefit) do not have a very strong influence on the likelihood of consideration of the examined original brands, with the Gucci model as an exception. It appears that perceived brand image benefit factors are either the least or the second least influential variables (behind perceived brand personality and product attributes) in the Rolex, Burberry and Louis Vuitton models. It is only in the Gucci model that this variable holds the second most powerful exploratory position, which is again behind the perceived brand personality factor. The functional benefit only appears to be significantly influential on the Gucci consideration model, but not on other models. Again, it is listed in fourth place in terms of explanatory power to the model, which is behind brand personality, image benefit, and general product attributes. This research believes that when quality is no longer consumers' main concern due to technological achievements, quality related benefits (for example long product life) will certainly slip down from the top priority of the consumer, which provides the brand personality or even some other factors with the chance to take the leading role of concern. This also explains why the functional benefit does not appear to be significantly influential in three out of four models.

Then why did image benefit appear to be on the bottom half of the list of the influential variables of the consideration of the examined original brands? The explanations this research can attempt to offer are as follows. Firstly, to some extent the respondents might be reluctant to admit that image benefits are the main drive of their purchase

consideration, which results in compromised data. Secondly, according to human cognitive processes, product attributes and brand personalities are what come to consumers' minds first, whereas perceived benefits are the results of the perceived product attributes and brand personalities, which come at the second stage of cognition. Some information might have been lost during the transaction, which may affect the explanatory power of this variable. All these provide reasons for why the image benefit factor has less explanatory power on purchase consideration than the brand personality factor and the product attribute factor in three out of four cases. With regard to the second dominant role played by the image benefit in the Gucci model, this research believes that this is a unique case and could have something to do with the clear-cut, trendy, cool and contemporary campaign of the original Gucci watches.

For three out of four brands, the interaction variable between product knowledge and product involvement is found to be positive and significant in three consideration models (Rolex, Gucci, and Louis Vuitton). For Burberry, the interaction variable does not have significant explanatory power on the model, neither do the original individual product knowledge and the product involvement variables. This indicates that self-assessed product knowledge and perceived product involvement of handbags do not influence likelihood of consideration of Burberry handbags. The Burberry brand image has been contaminated heavily. This is particularly true in the UK. Focus group data reveals that some people consider people who wear Burberry as 'chavs', who are even banned from entering some public places. Therefore, the subjects who consider handbags as important may or may not consider purchasing Burberry. People who buy Burberry handbags may or may not regard this branded product as important to them. Meanwhile, handbags are fashionable products rather than functional products. It is not necessary to obtain abundant knowledge in order to make the right choice. This explains why product knowledge does not appear to be significantly influential on the likelihood of consideration of original Burberry.

In the three cases in which KxI appears significant influential, the beta values range from 0.035 to 0.059. These beta values are very small, which indicates that with other parameters holding unchanged, a one unit increase of KxI only leads to a maximum 0.059 increase of likelihood of consideration. Thus, the effect of KxI on the product entry of consideration set is very limited, even if it appears to be important.



The general product attribute factor appears in the models related to branded handbags and the Gucci model. On the other hand, the general product attribute factor is not found to be significant in the Rolex model. Interestingly, the practical attribute factor is found to be positive and significant in the Rolex model. This result can be explained by the distinguishing waterproof function and product design of Rolex, the nature of handbags and Gucci watches. For example, handbags are more exposed to the public view than watches. Therefore, in general, product attributes (size, material, style, colour and practicality) can be more important to buyers. Gucci watches are fashionable products, therefore the perceived general product attributes (e.g. size, material and so on) are important to entry into the consideration set.

Gender appears to be significantly influential only in the Gucci model, but not in the other three brands. This implies that generally, Gucci watches have more chance of being considered by females than males. Even though handbags can be considered as more feminine products, due to subjects who claimed to have no interest in handbags or never consider buying handbags being excluded from the sample, as a result the male subjects left in the sample are most likely familiar with handbags. Consequently, gender difference does not show significant influence on the formation of the consideration set related to handbags. The Rolex watch is projected as a gender neutral product. This provides justification for the exclusion of gender in the Rolex consideration model.

Contrary to expectation, education and household income are not included in any of the regression models. This might be explained by the fact that at the formation of consideration stage, consumers are not treating financial cost as seriously as at purchase intention stage and final purchase decision stage. One more explanation this research can offer is that this unexpected result might be caused by the stimulus method used in this research. When the stimulus method is used, consumers are exposed to both the original and counterfeit luxury brands which might lead them to have more a positive view of the original brands in comparison with the counterfeit versions. According to the result, education and household income cannot be used as segmentation variables for likelihood of purchase consideration of the studied original branded products. That said, one should not forget that all the models are generated with all respondents

holding primary school attainment excluded. Therefore, the education variable refers to high school, HND/HNC, BA/MA and postgraduate degrees.

In the case of Rolex watches, value for money related to quality appears to be a unique factor that significantly influences Rolex consideration. In other cases, the 'quality merits price' item is included in the benefit factor, and therefore, the influence of this particular item is not explicitly observable. Due to the extremely unique function and high quality of Rolex watches, 'quality merits price' stands out as a separate factor to other benefit related items. The positive and significant influence of this factor indicates that people who consider buying original Rolex are attracted by its high quality. In addition to gender, social risk, product life and age also significantly influence likelihood of consideration of Gucci watches. All these variables appear only in the Gucci model. Therefore, social risk, age and functional factors do not seem to explain the subjects' likelihood of consideration of the other studied original brands. As such, the results indicate that the determinant of the formation of consideration is product and brand specific. Therefore, the results for each of the four brands are to be discussed individually in the following with the aim of providing more detailed information.

#### 8.4.3.3 Original Rolex Consideration Model

For the original Rolex, six explanatory variables account for an adjusted  $R^2$  of 0.384 of the likelihood of consideration of the original Rolex watches (Table 8.7). The model suggests that the likelihood of consideration of original Rolex is a function of quality and price ( $\beta = 0.326$ ,  $p < 0.000$ ), practical attribute ( $\beta = 0.320$ ,  $p < 0.000$ ), excitement (personality) ( $\beta = 0.301$ ,  $p < 0.000$ ), competence ( $\beta = 0.294$ ,  $p < 0.000$ ), image benefit ( $\beta = 0.167$ ,  $p < 0.05$ ), and interaction between knowledge and involvement ( $\beta = 0.06$ ,  $p < 0.000$ ). The subjects' perceived quality and price relationship has the greatest impact on the model, judging by the beta value. The positive beta value indicates that the more the subjects believe that the quality of Rolex watches merits their price, the more likely they will consider buying the original Rolex. The interaction between knowledge and involvement has the least impact on the model, even though it appears significant.

The likelihood of consideration of the original Rolex watches increases with the increase of perceived positive practical attribute. As expected, the brand personality



related variables (excitement and competence) are found to be positive and significantly explain the response variable. Thus, the more the subjects perceive the original Rolex to have these personalities, the higher the chance they will consider purchasing these watches.

The results show that the image benefit variable has a positive and significant effect on the original Rolex consideration model. The explanation has been provided in the overall results section. The subjects purchase consideration of the original Rolex watches is positively related to the perceived image benefit. Consumer decision-making is influenced by perceived benefits (Jobber 2004; Cho et al. 2002; Bove and Johnson 2000). Consumers not only pursue functional benefit but also image benefit. This is particular true in the case of luxury branded products.

#### 8.4.3.4 Original Gucci Consideration Model

For the original Gucci, the consideration likelihood is a function of personality ( $\beta = 0.361$ ,  $p < 0.000$ ), benefit ( $\beta = 0.268$ ,  $p < 0.000$ ), general attribute ( $\beta = 0.234$ ,  $p < 0.000$ ), functional benefit ( $\beta = 0.203$ ,  $p < 0.001$ ), social risk ( $\beta = -0.157$ ,  $p < 0.01$ ), interaction between knowledge and involvement ( $\beta = 0.051$ ,  $p < 0.000$ ) and gender ( $\beta = -0.383$ ,  $p < 0.01$ ) and age category (41 to 50) ( $\beta = -0.309$ ,  $p < 0.05$ ). The eight variables accounts for an adjusted  $R^2$  of 0.304 of the likelihood of consideration of purchase of original Gucci watches (Table 8.7). The brand personality plays the major role in determining the formation of the consideration set. When the categorical variables are excluded, the interaction variable shows the least impact on the model.

The results also show that the more positive the general product attributes the subjects perceive, the more likely it is that they would consider buying the original Gucci watches. This is not surprising considering that consumers like positive product attributes. The functional benefit appears to have positive and significant impact on consideration of purchase Gucci watches. The positive beta value indicates that the subjects are more likely to consider purchasing Gucci watches as their perceived functional benefit increases. Although Gucci watches are regarded as fashionable products, they are still highly priced products, therefore it is not easy for the subjects to purchase a new version to replace the old one when the fashion has passed. It is imaginable that most consumers still keep the used watches even though they may not

wear them as often as before. Therefore, they would certainly expect the watches to function well and to last a long time.

Table 8.7 Multiple regression analysis of likelihood of consideration of original branded watches final model

Original Rolex Likelihood of consideration						
OLS stepwise regression						
Step	Variables entered	T to enter	Significance	R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*
1	KXI #	4.547	.000	.138	.135	47.15
2	Quality and price	5.902	.000	.200	.194	36.71
3	Practical attributes	5.682	.000	.262	.254	34.66
4	Excitement	5.523	.000	.322	.313	34.70
5	Competence	5.185	.000	.377	.367	35.25
6	Image benefit	3.027	.045	.396	.384	31.73
Regression equation						
	Variable entered	B	SE B	β	T	Significant
	KXI #	.059	.013	.219	4.547	.000
	Quality and price	.326	.055	.271	5.902	.000
	Practical attributes	.320	.056	.267	5.682	.000
	Sincerity	.301	.055	.253	5.523	.000
	Competence	.294	.057	.238	5.185	.000
	Image benefit	.167	.055	.140	3.027	.003
	Constant	2.543	.119		21.308	.000
Original Gucci Likelihood of consideration						
OLS stepwise regression						
Step	Variables entered	T to enter	Significance	R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*
1	Personality	6.016	.000	.130	.127	44.19
2	Image benefit	4.342	.000	.186	.180	33.80
3	General attributes	3.812	.000	.237	.229	30.48
4	KXI #	3.640	.000	.255	.245	25.19
5	Male	-3.154	.002	.273	.261	22.04
6	Functional benefit	3.221	.001	.288	.274	19.71
7	Social risk	-3.143	.002	.312	.296	18.86
8	Age 41 to 50	-2.113	.035	.323	.304	17.26
Regression equation						
	Variable entered	B	SE B	β	T	Significant
	Personality	.361	.060	.297	6.016	.000
	Image benefit	.268	.062	.218	4.342	.000
	General attributes	.234	.061	.189	3.812	.000
	KXI #	.051	.014	.189	3.640	.000
	Male	-.383	.121	-.158	-3.154	.002
	Functional benefit	.203	.063	.161	3.221	.001
	Social risk	-.157	.050	-.158	-3.143	.002
	Age 41 to 50	-.309	.146	-.104	-2.113	.035
	Constant	3.279	.177		18.497	.000
* The overall Fs are significant at 0.000 level						
# Interaction of product knowledge and product involvement						

The negative beta value of social risk variables implies that the more risk the subject perceived the original Gucci might bring them, the less likely it is that they would consider buying this product. This is in line with the risk-averse theory (e.g. Arror 1965; Mitchell 1999). The negative beta value of the gender variable is caused by the choice of reference category. Here, the female category is chosen as the reference category. Thus, the result indicates that males are less likely to include the original Gucci in their



consideration set. This might be because the subjects are more likely to associate Gucci with females.

The same reasoning applies to the negative beta value of the age category (41 to 50). In this case, the under 20 age group is selected as a reference category. The negative value of age category indicates that the subjects aged between 41 and 50 are less likely to consider purchasing original Gucci watches. Gucci watches are projected as young and trendy, and therefore are more attractive to younger people. People aged over 50 did not show significant difference to the reference age group which might be explained by the possibility that people in this age group may consider buying Gucci watches as presents for younger people.

#### 8.4.3.5 Original Burberry Consideration Model

For the original Burberry, the three variables that appear to influence significantly the likelihood of consideration of the Burberry handbags are personality ( $\beta = 0.498$ ,  $p < 0.000$ ), general attributes ( $\beta = 0.359$ ,  $p < 0.000$ ) and image benefit ( $\beta = 0.286$ ,  $p < 0.000$ ). These three variables account for an adjusted  $R^2$  of 0.255 in the regression model (Table 8.8). Personality takes the leading influential role on the response variable, general attribute comes after personality, while benefit appears to have the least effect on the model. Beta values for these three variables are all positive, which is the same as those explaining the original Gucci likelihood of consideration, except for the difference in magnitude.

#### 8.4.3.6 Original Louis Vuitton Consideration Model

For the original Louis Vuitton, four variables that appear to have a significant influence on the likelihood of consideration of these handbags are personality ( $\beta = 0.498$ ,  $p < 0.000$ ), general attributes ( $\beta = 0.359$ ,  $p < 0.000$ ), image benefit ( $\beta = 0.286$ ,  $p < 0.000$ ) and KxI ( $\beta = 0.035$ ,  $p < 0.01$ ). As one can see, in addition to the variables appearing in the original Burberry consideration model, the regression model takes in the interaction between knowledge and involvement variable, as it appears to have a significant impact on the response variable. The sequence of explanatory power of the first three variables remains unchanged, with the interaction variable having the weakest effect on the response variable, although it is still important. The four variables account for an adjusted  $R^2$  of 0.224 of the likelihood of consideration of purchase of the original Louis Vuitton handbags (Table 8.8).

Table 8.8 Multiple regression analysis of likelihood of consideration of original branded handbags final model

Original Burberry Likelihood of consideration						
OLS stepwise regression						
Step	Variables entered	T to enter	Significance	R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*
1	Personality	6.961	.000	.150	.147	44.55
2	General attribute	4.974	.000	.222	.216	35.90
3	Image benefit	3.733	.000	.263	.255	29.81
Regression equation						
	Variable	B	SE B	$\beta$	T	Significant
	Personality	.498	.072	.378	6.961	.000
	General attributes	.359	.072	.270	4.974	.000
	Image benefit	.268	.072	.203	3.733	.000
	Constant	2.501	.071		35.307	.000
Original Louis Vuitton Likelihood of consideration						
OLS stepwise regression						
Step	Variables entered	T to enter	Significance	R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*
1	Personality	5.072	.000	.099	.096	27.82
2	General attributes	4.028	.000	.169	.163	25.69
3	Image benefit	3.344	.001	.211	.202	22.38
4	KXI #	2.886	.004	.236	.224	19.36
Regression equation						
	Variable entered	B	SE B	$\beta$	T	Significant
	Personality	.361	.071	.286	5.072	.000
	General attribute	.293	.073	.227	4.028	.000
	Image benefit	.240	.072	.186	3.344	.001
	KXI #	.035	.012	.167	2.886	.004
	Constant	2.574	.120		21.536	.000
* The overall Fs are significant at 0.000 level						
# Interaction of product knowledge and product involvement						

8.5 Regression Results Using R Commander

The analysis results generated by using the R-Commander package are reported in this section. Decisions are made on which models are to be chosen for further interpretation. The chosen models are interpreted and discussed in detail, followed by a variety of model diagnostics.

8.5.1 Choice of More Appropriate Models

Considering the fact that the response variables and the residuals are positively skewed, it is expected that transforming the response variable data down the ladder of powers will have a positive influence on the model (Fox 2002). Therefore, response variable data are transformed first, followed by transformation of explanatory variables data if the transformation of the response variable data did not appear to be very helpful. Regressions are rerun based on the transformed data. Investigations are conducted on the impact of various transformations on the models. The most improved models are reported and presented together with their corresponding initial models generated before any transformation was conducted (Table 8.14 to Table 8.25).



In general, transformation of data has a positive impact on the models, with the exception of the counterfeit Gucci purchase intention model and counterfeit Gucci likelihood of consideration model, where transformation of data affects the models negatively. For the improved models, the improvement of F-statistics ranges from -1.41 (counterfeit Gucci consideration model) to 6.59 (counterfeit Burberry Likelihood of consideration), and adjusted R-Square improved by between -0.028 (counterfeit Gucci consideration model) and 0.04 (counterfeit Burberry Likelihood of consideration). As one can see, both the improvement of F-statistics and adjusted R-Squares are relatively small. In addition, the regression diagnostics results (histogram of residuals and Q-Q plot) suggest that to some extent the regression assumptions have not been met after the transformation or did not improve much in comparison with the initial situation (see section 8.3.1 for the test of regression assumption results). Accordingly, the conclusion is drawn that the transformation processes have not made any improvement to the models or have not made much improvement to the models. For economy, the histogram of residuals and Q-Q plot of the models after transformation(s) are presented in Appendix 12.

Although in some cases transformation of data led to some degree of improvement in some models, as noted earlier, the improvement is very limited. Moreover, interpreting the transformed model has practical difficulties. Therefore, it is considered to be acceptable and sensible to retain the models which are not involved in any data transformation. In addition, this also makes comparison with SPSS OLS results possible. One thing which needs to be clarified is that the choice is the best one under the current circumstances. Later researchers should justify their choice according to their specific circumstances.

### 8.5.2 Overall Results Using R Commander

The adjusted  $R^2$  of all twelve models (three each for four brands) ranges from 0.154 (counterfeit Burberry likelihood of consideration) to 0.313 (original Rolex purchase intention), which is considered acceptable. The only variable which appears in all of the models is perceived brand personality. These results are in line with the results generated using SPSS in the previous section. Moreover, the personality variable appears to have a dominating effect on purchase intention and consideration for all 12 models. These further demonstrate the important role played by brand personality in



consumer choice processes. More specifically, the brand personality significantly influences the formation of the consumer consideration set and consumer purchase intention. This is consistent across both versions of all four studied luxury brands.

As expected, interaction between product knowledge and product involvement variables is found to be positive and significant in all purchase intention models relating to the original brands. Contrary to expectations, this variable also appears to be positive and significant in all purchase intention models related to counterfeit brands, with the exception of the counterfeit Burberry purchase intention model, in which the interaction variable is not significant. This implies that, generally, consumers with a higher score of interaction between product knowledge and product involvement have a higher tendency to purchase both counterfeit and original branded products, with the exception of counterfeit Burberry. The level of score of interaction between product knowledge and product involvement has no effect on his or her intention to purchase counterfeit Burberry. The interaction variable has the lowest beta values in comparison with other included variables. This result is consistent across all models, which implies that the interaction variable has a limited effect on the models even though it appears significantly influential across all purchase intention models (excluding the counterfeit Burberry purchase intention model). This result is along the same lines as the results of the consideration models of the original brands using SPSS.

Interestingly, the interaction variable does not appear in any of the consideration models relating to counterfeit brands. Product knowledge has positive and significant explanatory power on the consideration models of counterfeit Gucci and counterfeit Louis Vuitton, but not on the other two counterfeit brands. Product involvement does not appear in any consideration models relating to counterfeit brands. This indicates that the level of product involvement does not seem to explain the subjects' likelihood of consideration of counterfeit brands; impact of product knowledge is brand specific. The results related to product involvement are not as expected. This can be explained as a direct outcome of not controlling the usage situation in this current research. Consumers might buy different versions (counterfeit or legitimate) of a brand for different usage situations. For example, a person who possesses high product involvement towards watches might buy original Gucci for work but purchase counterfeit Gucci for a holiday.



Education does not appear in any of the purchase intention regression models. This implies that whether the subjects are well-educated or not has no effect on his/her purchase intention of both original branded products and counterfeit branded products. The results of the current study in relation to the purchase intention of the counterfeits are in line with those of Pau et al. (2001), but contradictory to those of Wee et al. (1995). Similarly, education does not show any significant effect on the consideration models of the counterfeits across four tested brands. These findings are in line with the original branded product consideration models. Gender only has a positive and significant impact on purchase tendency of the original Gucci, but not on the purchase intention model of other original brands. The reasoning provided in SPSS results section can be applied here too (see section 8.4.3.2). Interestingly, the results show that gender has no significant impact on the subjects' purchase tendency of the studied counterfeit branded products, or on likelihood of consideration of the counterfeit version of the examined brands. This implies that gender does not affect consumers' likelihood of consideration and purchase tendency of branded counterfeit products. This might also be true even if the branded product is not projected as gender neutral.

The results also show that the age variable only appears in the original Gucci purchase intention model. Two older age groups (aged 41-50, and aged 50+) have less intention to purchase original Gucci watches. As noted earlier, older people might feel Gucci watches are less attractive to them, as these products are projected to consumers as young and trendy. Given that age does not have a significant effect on the likelihood of consideration and the purchase intention of both counterfeit and branded products except for the purchase intention of the original Gucci watches, this might indicate that age difference does not make any difference to purchase tendency and consideration of counterfeit luxury brands, but the influence of age on purchase intention of the original brand might be brand specific. These results support Bloch et al. (1993) and Wee et al.'s (1995) research findings, but are contradictory to those of Tom et al. (1998), who claim a negative relationship between age and consumer purchase behaviour of counterfeits.

The income variable does not appear to be significantly influential on most models, with exceptions of the original Rolex purchase intention model and the counterfeit Gucci likelihood of consideration model. The positive influential role the income

variable plays in the Rolex purchase intention model can be explained by the highly priced nature of the Rolex watch. It is beyond the researcher's capability to provide any sound explanation for the inclusion of income in the counterfeit Gucci likelihood of consideration model, but not other models. Nevertheless, the results show that in general, the income variable has no significant explanatory power on consumer purchase intention and consideration of both counterfeit and original branded products.

Surprisingly, financial risk and social risk do not appear to have a significant impact on the likelihood of consideration and the purchase tendency in most of the models. More specifically, financial risk is only statistically significant in the counterfeit Gucci consideration model, with social risk only appearing to have significant predictive power on the consideration of counterfeit Burberry handbags. There are a number of explanations which can be offered. In the case of the original branded products, financial risk is not a concern to consumers due to the excellent warranty scheme. This is in response to the focus group finding which reveals that consumers do not perceive financial risk as an issue in relation to the original branded products. In the case of counterfeit branded products, because the prices of the counterfeits are very low in comparison with the original versions, it might not be considered as a serious financial loss even if this money was lost by buying some shoddy stuff. Moreover, consumers might consider that counterfeit handbags and watches can perform similarly to their original counterparts as making them does not require high technology. In addition, handbags are fashionable products, which might less likely require to be long lasting. Consumers are satisfied as long as they look like the original one. Watches are slightly different to handbags due to their requiring a higher level of functionality. This might be the reason for financial risk appearing to be a significant predictor to the consideration of counterfeit Gucci watches. Financial risk not appearing in the consideration of counterfeit Rolex watches can be explained by the price charged for the counterfeit Rolex and counterfeit Gucci being the same. Consumers might expect a lower price on counterfeit Gucci basing their judgement on the price difference between the two original branded products.

The research finding that social risk does not appear to be a significant predictor to the consideration and the purchase tendency of both counterfeit and branded products is in line with past work. For example, Veloutsou and Bian (forthcoming) suggest that social



risk does not seem to contribute to the development of the overall risk in the context of non-deceptive counterfeiting in the UK. This indicates that to some extent British consumers do not consider social risk as a primary concern in their decision-making related to counterfeit branded products. The explanation this study can offer here with regard to the inclusion of social risk in the consideration model of counterfeit Burberry is that consumers may care about more social risk related to counterfeit Burberry compared with other tested counterfeit branded products due to the 'chav' image this particular brand is associated with.

### 8.5.3 Original Rolex Purchase Intention

Seven independent variables account for an adjusted  $R^2$  of 0.313 of the purchase intention towards the original Rolex (Table 8.14). The model suggests that the purchase intention of the original Rolex is a function of general product attributes ( $\beta = -0.16$ ,  $p < 0.001$ ), excitement (personality), ( $\beta = 0.25$ ,  $p < 0.000$ ), practical attribute ( $\beta = 0.16$ ,  $p < 0.001$ ), functional benefit ( $\beta = 0.15$ ,  $p < 0.001$ ), quality and price ( $\beta = 0.22$ ,  $p < 0.000$ ), interaction between knowledge and involvement ( $\beta = 0.10$ ,  $p < 0.000$ ), income: £25,000 to £39,999 ( $\beta = 0.38$ ,  $p < 0.01$ ), and income (£40,000+) ( $\beta = 0.53$ ,  $p < 0.001$ ). The excitement (brand personality) variable is found to have the most impact on the subjects' intention to purchase the original Rolex, judging by its larger beta value in comparison with other variables. The more the subjects perceive the Rolex to have the 'excitement' personality, the more likely their intention to purchase these products.

The tendency to purchase original Rolex watches increases with the increase in the level of the consumer's positive perception of quality and price relation. The more the subjects believe the quality merits the price, the more likely it is that they will buy the products. This variable is the second most powerful explanatory variable in the model. This indicates that the subjects who buy original Rolex are more likely to believe that they are getting value (high standard of quality) for money. The subjects' intention to purchase original Rolex also increases with interaction between knowledge and involvement. However, this variable has the least effect on the model, although it is still significant.

As expected, the more a person perceives the original Rolex to be practical, the greater his or her intention to purchase this product. 'Practical', in this case, refers to 'style'

and ‘practicality’ of the product. The positive and significant beta value for the functional benefit shows that the more a person believes the original Rolex functions well, the more likely it is that he or she will purchase this product. Given the high price of original Rolex watches, people would expect them to function well and have long-term good performance. Actually, Rolex watches have gone far beyond their accurate time-telling function and are regarded as being the same as expensive jewellery and art. Therefore, long product life and good functionality are important for subjects who intend to buy them.

8.14 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Original Rolex Purchase Intention							
Initial Generalised Linear Model before any transformation							
Variables entered	T to enter	Significance	Multiple R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*		
General attribute	-2.86	.001	.333	.313	16.31		
Excitement (Personality)	4.56	.000					
Practical attributes	2.93	.001					
Functional benefit	2.65	.001					
Quality and price	4.06	.000					
KXI <sup>#</sup>	7.35	.000					
Income (£10-24,999)	0.16	>.10					
Income (£25-39,999)	0.16	.01					
Income (£40,000+)	0.16	.001					
Regression equation before any transformation							
Variable entered	B	SE B	T		Significant		
General attributes	-0.16	0.06	-2.86		.001		
Excitement (Personality)	0.25	0.05	4.56		.000		
Practical attributes	0.16	0.06	2.93		.001		
Functional benefit	0.15	0.06	2.65		.001		
Quality and price	0.22	0.05	4.06		.000		
KXI <sup>#</sup>	0.10	0.01	7.35		.000		
Income (£10-24,999)	0.17	0.17	0.16				
Income (£25-39,999)	0.38	0.38	0.16		.01		
Income (£40,000+)	0.53	0.53	0.16		.001		
Constant	0.90	0.16	5.65		.000		
Original Rolex Purchase Intention							
Generalised Linear Model after transformation of explanatory variables							
Variables entered	Power	T to enter	Significance	Multiple R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*	
General attributes	5.78	-3.53	.000	0.365	0.346	18.73	
Excitement (Personality)	3.83	5.62	.000				
Practical attributes	0.08	2.65	.001				
Functional benefit	2.37	2.92	.001				
Quality and price	-0.09	-4.55	.000				
KXI <sup>#</sup>	1.60	7.50	.000				
Income (£10-24,999)	-----	0.80	>.10				
Income (£25-39,999)	-----	2.07	.01				
Income (£40,000+)	-----	3.07	.001				
Regression equation after transformation of explanatory variables							
Variables entered	Power	B	SE B	T		Significant	
General attribute	5.78	-3.94e-05	1.12e-05	-3.53		.000	
Excitement (Personality)	3.83	2.46e-03	4.38e-04	5.62		.000	
Practical attributes	0.08	5.30	2.00	2.65		.001	
Functional benefit	2.37	1.05e-02	3.61e-03	2.92		.001	
Quality and price	-0.09	-9.24	2.03	-4.55		.000	
KXI <sup>#</sup>	1.60	1.43e-02	1.90e-03	7.50		.000	
Income (£10-24,999)	-----	1.22e-01	1.53e-01	0.80		>.10	
Income (£25-39,999)	-----	3.30e-01	1.59e-01	2.07		.01	
Income (£40,000+)	-----	4.84e-01	1.58e-01	3.07		.001	
Constant	-----	3.20	2.84	1.13		>0.10	

\* The overall Fs are significant at 0.000 level

# Interaction of product knowledge and product involvement

----- N/A



It is interesting to see that the general product attributes factor has significant but negative impact on the model. A close examination of the items forming this factor reveals that price and packing are the two items which have the highest factor loading. Therefore, the negative sign indicates that the less expensive the subjects perceive the product to be, the higher the intention of purchase; the better the quality of the packing they perceive, the less likely it is that they will purchase them. The latter indication can be explained by saying that when consumers perceive the package is overriding the product itself, they do not consider that they are getting value for money. As such, these products are less likely to be purchased. Finally, in comparison with the lowest income category, the two income categories above the UK average income level are found to have a higher level of tendency to buy an original Rolex. The second lowest income category does not show a significant difference from the lowest income category. This is not surprising, as an original Rolex is a luxury and extremely expensive product. Low income subjects cannot afford to buy them.

#### 8.5.4 Counterfeit Rolex Purchase Intention

For the counterfeit Rolex (Table 8.15), five independent variables account for an adjusted  $R^2$  of 0.166 of the purchase intention towards this version. The model shows that the purchase intention is a function of competence ( $\beta = 0.28$ ,  $p < 0.000$ ), value for money ( $\beta = 0.12$ ,  $p < 0.001$ ), practical attributes ( $\beta = 0.11$ ,  $p < 0.01$ ), interaction between knowledge and involvement ( $\beta = 0.02$ ,  $p < 0.01$ ) and social risk (peer) ( $\beta = -0.09$ ,  $p < 0.001$ ). In contrast to the original Rolex purchase intention model, the 'excitement' personality is not significant any more and is replaced by the 'competence' personality, which has the most positive effect on the model. This result implies that the brand personality plays very important role in the Rolex purchase intention models. Nevertheless, this is not necessarily to say that the same personality will appear consistently in both the counterfeit related model and original related model. More specifically, the subjects might consider different brand personalities as important in different models related to different versions of a brand.

Value for money is the second most influential explanatory variable in the model. As noted in Chapter 6, the value for money variable is a factor consisting of fun, quality meriting price and status gained for money expended. Therefore, the results suggest

that the more the subject believes the counterfeit Rolex is fun, merits its price and can bring them status, the more likely it is that they will purchase counterfeit products. This finding is consistent with that of Nia and Zaichchow (2000), who report that counterfeit prone consumers claim that counterfeit luxury products are fun and worth the price they paid for them.

8.15 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Counterfeit Rolex Purchase Intention						
Initial Generalised Linear Model before any transformation						
Variables entered	T to enter	Significance	Multiple R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*	
Competence (Personality)	6.31	.000	0.179	0.166	13.73	
Value for money	2.74	.001				
Practicality attributes	2.54	.01				
KXI #	1.98	.01				
Social risk	-2.828	.001				
Regression equation before any transformation						
Variable entered	B	SE B	T		Significant	
Competence (Personality)	0.28	0.04	6.31		.000	
Value for money	0.12	0.04	2.74		.001	
Practicality attributes	0.11	0.04	2.54		.01	
KXI #	0.02	0.01	1.98		.01	
Social risk	-0.09		-2.828		.001	
Constant	1.59	0.13	11.79		.000	
Counterfeit Rolex Purchase Intention						
Generalised Linear Model after transformation of explanatory variables						
Variables entered	Power	T to enter	Significance	Multiple R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*
Competence (Personality)	1.20	6.27	.000	0.182	0.169	14.05
Value for money	2.05	2.69	.001			
Practicality attributes	0.57	2.51	.01			
KXI #	0.39	2.02	.01			
Social risk	1.69	-2.86	.001			
Regression equation after transformation of explanatory variables						
Variables entered	Power	B	SE B	T		Significant
Competence (Personality)	1.20	0.20	0.032	6.27		.000
Value for money	2.05	0.01	0.005	2.69		.001
Practicality attributes	0.57	0.31	0.122	2.51		.01
KXI #	0.39	0.19	0.094	2.02		.01
Social risk	1.69	-0.03	0.009	-2.86		.001
Constant	-----	-0.02	0.33	-0.075		>.10
* The overall Fs are significant at 0.000 level						
# Interaction of product knowledge and product involvement						
----- N/A						

Practical attributes appear to have a positive and significant effect on this model. This is in the same vein as the original Rolex model, which indicates that practicality is considered to be an important factor in the process of Rolex watch (both original and counterfeit versions) evaluation and significantly influences consumer purchase behaviour. Here, the practical attributes consist of ‘watch style’ and ‘practicality’. Surprisingly, the results show that the interaction variable of product knowledge and involvement has a positive and significant effect on the counterfeit Rolex purchase intention. The positive  $\beta$  value indicates that the higher the value of the interaction



variable the more likely the subjects are to purchase counterfeit Rolex. This differs from our expectation. However, it can be explained that with advancements in watch technology, the accurate time-telling function of watches is no longer difficult to achieve. In other words, in terms of time-telling, counterfeit watches can be similar, or even as good as the original. The more knowledgeable the person is about watches, the more he or she is aware of this fact.

The results also show that social risk (peer) has significant explanatory power on the model. The negative beta value indicates that the higher the subject's perception of the social risk related to the purchase of counterfeit Rolex, the less likely it is that he or she will have a tendency to purchase it. This is not surprising and it echoes the focus group finding. Moreover, it is also in line with the risk reverse theory. The expectation is supported. This variable does not appear in the original Rolex purchase intention model, which suggests that perceived level of social risk does not have an effect on consumer purchase tendency of the original Rolex watch. This indicates that variables considered as important by the subjects are different in relation to counterfeit and original brands in the purchase intention stage of consumer choice processes.

There are some differences between the counterfeit Rolex purchase intention model and the original Rolex purchase intention model. Apart from the practical attributes and the interaction variable, functional benefit, general product attributes, excitement variable, and income which are significant in the original Rolex purchase intention model do not appear to have a significant effect on the counterfeit Rolex purchase intention model. The exclusion of income in the counterfeit Rolex intention model is not surprising. This is in line with Tom et al. (1998), who report that not only do low income consumers knowingly purchase counterfeits, consumers with higher incomes do admit intention to purchase counterfeits too. Replacing the dominant role of the 'excitement' (personality) factor in the original Rolex model, the 'competence' (personality) factor has the most significant effect on the purchase intention of counterfeit Rolex. As the subjects' perceived competence brand personality of the counterfeit Rolex watch increases, his or her intention of purchase will increase. The value for money factor of the counterfeit Rolex intention model takes in 'fun' and 'status' elements, which implies that counterfeit Rolex prone consumers do perceive a higher level of fun and status benefit from the counterfeit version. Nevertheless, these elements do not appear to be

significantly influential to the purchase intention of the original Rolex. All this suggests that consumers’ purchase tendency of the original Rolex and the counterfeit Rolex are determined by different factors.

8.5.5 Counterfeit Rolex Likelihood of Consideration

In the case of counterfeit Rolex (Table 8.16), six independent variables account for an adjusted  $R^2$  of 0.260 of the likelihood of consideration. The model suggests that such likelihood of consideration is a function of competence ( $\beta= 0.30, p < 0.000$ ), value for money ( $\beta= 0.28, p < 0.000$ ), practical attributes ( $\beta= 0.24, p < 0.000$ ), excitement ( $\beta= 0.13, p < 0.001$ ), functional benefit ( $\beta= -0.11, p < 0.01$ ), social risk ( $\beta= -0.13, p < 0.000$ ).

8.16 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Counterfeit Rolex Likelihood of Consideration						
Initial Generalised Linear Model before any transformation						
Variables entered	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *	
Competence (Personality)	5.94	.000	0.274	0.260	19.75	
Value for money	5.57	.000				
Practicality attributes	4.87	.000				
Excitement (Personality)	2.62	.001				
Functional benefit	-2.18	.01				
Social risk	-3.49	.000				
Regression equation						
Variable entered	B	SE B		<i>T</i>	Significant	
Competence (Personality)	0.30	0.05		5.94	.000	
Value for money	0.28	0.05		5.57	.000	
Practicality attributes	0.24	0.05		4.87	.000	
Excitement (Personality)	0.13	0.05		2.62	.001	
Functional benefit	-0.11	0.05		-2.18	.01	
Social risk	-0.13	0.04		-3.49	.000	
Constant	2.45	0.12		19.91	.000	
Counterfeit Rolex Likelihood of Consideration						
Generalised Linear Model after transformation of explanatory variables						
Variables entered	Power	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *
Competence (Personality)	0.72	6.25	.000	0.281	0.267	20.46
Value for money	1.91	5.29	.000			
Practicality attributes	1.39	5.32	.000			
Excitement (Personality)	10.04	2.94	.001			
Functional benefit	4.57	-2.91	.001			
Social risk	0.33	-3.21	.001			
Regression equation						
Variables entered	Power	B	SE B		<i>T</i>	Significant
Competence (Personality)	0.72	5.27e-01	8.42e-02		6.25	.000
Value for money	1.91	3.71e-02	7.01e-03		5.29	.000
Practicality attributes	1.39	1.24e-01	2.32e-02		5.32	.000
Excitement (Personality)	10.04	4.24e-08	1.44e-08		2.94	.001
Functional benefit	4.57	-2.28e-04	7.84e-05		-2.91	.001
Social risk	0.33	-6.68e-01	2.08e-01		-3.21	.001
Constant	-----	1.154	3.57e-01		3.23	.001
* The overall <i>F</i> s are significant at 0.000 level						
# Interaction of product knowledge and product involvement						
----- N/A						

Four out of six explanatory variables appearing in the consideration model also have significant effects on the purchase intention of the counterfeit Rolex. These four variables are competence, value for money, practical attribute and social risk. The signs



of the beta values of each variable remain the same across two models, with only the explanatory magnitude varying slightly. One more thing that has no difference is that the personality related variable (competence) also plays the dominant explanatory role in the counterfeit Rolex consideration model.

In contrast to the original Rolex consideration model, the functional benefit appears to negatively influence consideration of counterfeit Rolex. The negative beta value is because the 'disposability' item has the higher factor loading. The negative and significant beta value for this variable shows that the more the subject perceive the counterfeit Rolex as disposable, the more likely he or she will consider buying this product. In comparison with the very low price of the counterfeit product, consumers might not expect the product to have a very long product life. Actually, consumers might consider the disposable nature of the counterfeit product as an advantage over the original branded products. The low price of the counterfeit product makes it possible to change the watches frequently. The low price of the counterfeit product also causes less psychological burden if the subject's interest in the product fades away.

The excitement factor, another dimension of the Rolex personality, has a positive and significant impact on the likelihood of consideration of the counterfeit Rolex. The more the subjects believe that the counterfeit Rolex has the 'excitement' personality, the more likely it is that he or she will consider buying this product. This personality does not appear to have a significant effect on the purchase intention of the counterfeit Rolex. This implies that if the brand is considered to have multiple personalities, this is not necessarily to say that they all play important explanatory roles in influencing the formation of consideration and the purchase intention. In other words, different stages of consumer choice processes might be influenced by different factors.

#### 8.5.6 Original Gucci Purchase Intention

For the original Gucci, the purchase intention is a function of personality ( $\beta = 0.19$ ,  $p < 0.001$ ), image benefit ( $\beta = 0.18$ ,  $p < 0.001$ ), functional benefit ( $\beta = 0.19$ ,  $p < 0.000$ ), gender ( $\beta = -0.28$ ,  $p < 0.01$ ), interaction between knowledge and involvement ( $\beta = 0.07$ ,  $p < 0.000$ ), age category (41 to 50) ( $\beta = -0.45$ ,  $p < 0.01$ ) and age category (50+) ( $\beta = -0.53$ ,  $p < 0.001$ ). These variables account for an  $R^2$  of 0.215 (Table 8.17) of purchase intention towards the original Gucci.

8.17 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Original Gucci Purchase Intention						
Initial Generalised Linear Model before any transformation						
Variables entered	T to enter	Significance	Multiple $R^2$	Adjusted $R^2$	Overall $F^*$	
Personality	3.15	.001	0.237	0.215	10.76	
Image benefit	3.06	.001				
Functional benefit	3.34	.000				
Gender	2.39	.01				
KXI #	5.12	.000				
Age (41-50)	-2.47	.01				
Age (50+)	-2.70	.001				
Regression equation						
Variable entered	B	SE B	T	Significant		
Personality	0.19	0.06	3.15	.001		
Image benefit	0.18	0.06	3.06	.001		
Functional benefit	0.19	0.06	3.34	.000		
Gender	0.28	0.12	2.39	.01		
KXI #	0.07	0.01	5.12	.000		
Age (41-50)	-0.45	0.18	-2.47	.01		
Age (50+)	-0.53	0.18	-2.70	.001		
Constant	1.48	0.19	7.89	.000		
Original Gucci Purchase Intention						
Generalised Linear Model after transformation of explanatory variables						
Variables entered	Power	T to enter	Significance	Multiple $R^2$	Adjusted $R^2$	Overall $F^*$
Personality	2.70	3.44	.000	0.242	0.220	11.05
Image benefit	0.25	3.24	.001			
Functional benefit	-0.006	3.34	.000			
Gender	-----	-2.32	.01			
KXI #	1.10	5.17	.000			
Age (41-50)	-----	-2.42	.01			
Age (50+)	-----	-2.64	.001			
Regression equation						
Variables entered	Power	B	SE B	T	Significant	
Personality	2.70	0.008	0.002	3.44	.000	
Image benefit	0.25	1.75	0.54	3.24	.001	
Functional benefit	-0.006	0.19	0.06	3.34	.000	
Gender	-----	-0.27	0.12	-2.32	.01	
KXI #	1.10	0.05	0.01	5.17	.000	
Age (41-50)	-----	-0.03	0.18	-2.42	.01	
Age (50+)	-----	-0.43	0.18	-2.64	.001	
Constant	-----	-1.61	0.79	-2.03	.01	
* The overall $F$ s are significant at 0.000 level						
# Interaction of product knowledge and product involvement						
----- N/A						

Similar to the original Rolex intention model, personality, functional benefit and interaction between knowledge and involvement variables all have a significant effect on the purchase intention of the original Gucci. Moreover, the directions of influence of these variables are identical to those of the Rolex intention model. Therefore, it is decided that no further interpretation is to be provided on these three variables. One more thing worth noting is that, as with the original Rolex purchase intention model, the personality variable plays a dominating role on explanation of the purchase intention of the original Gucci, and interaction between knowledge and involvement has the least effect on the model.



Perceived image benefit comes after brand personality in determining the purchase intention of the original Gucci. See Chapter 7 for detailed content of the perceived image benefit factor of the original Gucci. Since most purchase behaviour is benefit-driven (Jobber 2004), it is not surprising that the more image benefit the subject perceives, the more likely it is that he or she will purchase this product.

Gender exerts a positive influence on the intention to purchase original Gucci. As the R commander dummy coded male as the reference category, the results indicate female subjects are more likely to purchase original Gucci. This is in line with the original Gucci consideration model. Interestingly, gender only appears in models related to the original Gucci intention model. Nevertheless, this result is in line with the original Gucci consideration model. The possible explanations provided in the original Gucci consideration model section are applicable here.

The negative beta values of the older age groups (aged between 41 to 50 and 50 above) imply that these age groups have less purchase tendency towards the original Gucci. This can be explained by the fact that Gucci watches are projected as young, fashionable and trendy in order to attract young people. Consequently, older age groups are more likely perceive Gucci watches as products for younger generations.

#### 8.5.7 Counterfeit Gucci Purchase Intention

The regression model for the counterfeit Gucci shows that purchase intention for purchasing counterfeit Gucci watches is a function of competence (personality) ( $\beta = 0.23$ ,  $p < 0.000$ ), sophistication (personality) ( $\beta = 0.21$ ,  $p < 0.000$ ), excitement (personality) ( $\beta = 0.17$ ,  $p < 0.000$ ), product attributes ( $\beta = 0.17$ ,  $p < 0.000$ ), image benefit ( $\beta = 0.15$ ,  $P < 0.000$ ) and interaction between knowledge and involvement ( $\beta = 0.12$ ,  $p < 0.01$ ). The six variables account for an adjusted  $R^2$  of 0.216 in explaining the subjects' intention to purchase the counterfeit Gucci (Table 8.18).

In comparison with the original Gucci purchase intention model, the counterfeit model consists of fewer explanatory variables. Gender and age are not significantly influential on the purchase intention towards the counterfeit Gucci, which indicates that they should be utilised to segment the counterfeit Gucci prone consumers. In addition, the

functional benefit factor does not show a significant effect on the purchase tendency towards the counterfeit Gucci either. This implies that it cannot necessarily be said that consumers who knowingly purchase counterfeit Gucci perceive a higher level of functional benefit of counterfeits than the ones who do not buy.

8.18 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation  
Counterfeit Gucci Purchase Intention

Initial Generalised Linear Model before any transformation						
Variables entered	T to enter	Significance	Multiple R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*	
KXI #	2.46	.01	0.230	0.216	15.70	
Sophistication (personality)	4.91	.000				
Image benefit	3.35	.000				
Competence (personality)	5.17	.000				
Excitement (personality)	3.85	.000				
Product attributes	3.99	.000				
Regression equation						
Variable entered	B	SE B		T	Significant	
KXI #	0.12	0.05		2.46	.01	
Sophistication (personality)	0.21	0.04		4.91	.000	
Image benefit	0.15	0.04		3.35	.000	
Competence (personality)	0.23	0.04		5.17	.000	
Excitement (personality)	0.17	0.04		3.85	.000	
Product attributes	0.17	0.04		3.99	.000	
Constant	1.19	0.14		8.65	.000	
Counterfeit Gucci Purchase Intention						
Generalised Linear Model after transformation of response variables						
Variables entered	Power	T to enter	Significance	Multiple R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall F*
KXI #	-----	-2.39	.01	0.202	.0187	13.29
Sophistication (personality)	-----	-4.74	.000			
Image benefit	-----	-3.02	.000			
Competence (personality)	-----	-4.23	.000			
Excitement (personality)	-----	-3.54	.000			
Product attributes	-----	-4.01	.000			
Purchase intention**	-2	-----	-----			
Regression equation						
Variables entered	Power	B	SE B		T	Significant
KXI #	-----	-0.05	0.02		-2.39	.01
Sophistication (personality)	-----	-0.09	0.02		-4.74	.000
Image benefit	-----	-0.06	0.02		-3.02	.000
Competence (personality)	-----	-0.08	0.02		-4.23	.000
Excitement (personality)	-----	-0.07	0.02		-3.54	.000
Product attributes	-----	-0.07	0.02		-4.01	.000
Constant	-----	0.86	0.06		14.63	.000
*The overall F <sub>s</sub> are significant at 0.000 level						
** Response variable						
# Interaction of product knowledge and product involvement						
----- N/A						

The other variables that appeared in the counterfeit Gucci purchase intention model are all included in the original Gucci purchase intention. The directions of influence of these variables are all the same in the original Gucci purchase intention model, with the explanatory magnitude varying slightly. The three extracted personality factors related to the counterfeit Gucci all have significant effect on the purchase intention toward the counterfeits. The personality factors are the dominant factors in explanatory variables



in the counterfeit Gucci purchase intention model, while the KxI appears to be the least influential variable, although it is still significant.

#### 8.5.8 Counterfeit Gucci Likelihood of Consideration

For the counterfeit Gucci, nine variables account for an adjusted  $R^2$  of 0.280 in explaining the subjects' likelihood of consideration of this version of Gucci watches (Table 8.19). The model suggests that such likelihood of consideration is a function of image benefit ( $\beta = 0.34$ ,  $p < 0.000$ ), sophistication (personality) ( $\beta = 0.26$ ,  $p < 0.000$ ), excitement (personality) ( $\beta = 0.23$ ,  $p < 0.000$ ), competence (personality) ( $\beta = 0.16$ ,  $p < 0.001$ ), product attributes ( $\beta = 0.24$ ,  $p < 0.000$ ), product knowledge ( $\beta = 0.13$ ,  $p < 0.01$ ), financial risk ( $\beta = -0.11$ ,  $p < 0.001$ ), social risk ( $\beta = -0.09$ ,  $p < 0.01$ ), income (£25 – 39,999) ( $\beta = -0.41$ ,  $p < 0.001$ ) and income (£40,000+) ( $\beta = -0.54$ ,  $p < 0.000$ ).

In comparison to the counterfeit Gucci purchase intention model, this model consists of more explanatory variables. Five out of six explanatory variables of the counterfeit Gucci intention model appear in the counterfeit Gucci consideration model. They are image benefit, sophistication, excitement, competence and product attributes. The difference is that in the counterfeit consideration model, the image benefit variable replaces the sophistication variable as the dominant explanatory variable, with the sophistication variable as the second most influential variable. This suggests that consumers who consider purchasing counterfeit Gucci perceive a higher level of image benefit. The direction of the beta values related to all these five variables remains the same as the counterfeit Gucci intention model.

Two risk related variables are included in the counterfeit Gucci consideration model, but not in the counterfeit Gucci purchase intention model. The negative beta values of both financial risk and social risk indicate that the higher the perceived risks the less likely the subject will consider the counterfeit Gucci. This implies that perceived risks are the consumers' concern in relation to counterfeit and have a significant impact on the inclusion of counterfeit Gucci in their consideration set. One thing worth mentioning is that the risk variables are the least important explanatory variables in the model, although they appear to have significant explanatory power. These results suggest perceived risks have only limited effect on the inclusion of counterfeit Gucci in consumers' consideration set.

8.19 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Counterfeit Gucci Likelihood of Consideration

Initial Generalised Linear Model before any transformation

Variables entered	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *
Sophistication (personality)	4.90	.000	0.306	0.280	11.66
Image benefit	6.33	.000			
Competence (personality)	3.10	.001			
Excitement (personality)	4.36	.000			
Product attributes	4.57	.000			
Financial risk	-2.70	.001			
Social risk	-2.24	.01			
Income (£25-39,999)	-2.63	.001			
Income (£40,000+)	-3.47	.000			
Product knowledge	2.09	.01			

Regression equation before any transformation

Variable entered	B	SE B	<i>T</i>	Significant
Sophistication (personality)	0.26	0.05	4.90	.000
Image benefit	0.34	0.05	6.33	.000
Competence (personality)	0.16	0.05	3.10	.001
Excitement (personality)	0.23	0.05	4.36	.000
Product attributes	0.24	0.05	4.57	.000
Financial risk	-0.11	0.04	-2.70	.001
Social risk	-0.09	0.04	-2.24	.01
Income (£25-39,999)	-0.41	0.15	-2.63	.001
Income (£40,000+)	-0.54	0.15	-3.47	.000
Product knowledge	0.13	0.06	2.09	.01
Constant	2.57	0.25	10.38	.000

Counterfeit Gucci Likelihood of Consideration

Generalised Linear Model after transformation of response variable

Variables entered	Power	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *
Sophistication (personality)	-----	-4.78	.000	0.279	0.252	10.25
Image benefit	-----	-6.19	.000			
Competence (personality)	-----	-2.46	.01			
Excitement (personality)	-----	-3.86	.000			
Product attributes	-----	-4.35	.000			
Financial risk	-----	2.06	.01			
Social risk	-----	1.72	.10			
Income (£25-39,999)	-----	2.57	.01			
Income (£40,000+)	-----	3.48	.000			
Product knowledge	-----	-1.62	>.10			
Consideration **	-2	-----	-----			

Regression equation

Variables entered	Power	B	SE B	<i>T</i>	Significant
Sophistication (personality)	-----	-0.02	0.005	-4.78	.000
Image benefit	-----	-0.03	0.005	-6.19	.000
Competence (personality)	-----	-0.01	0.005	-2.46	.01
Excitement (personality)	-----	-0.02	0.005	-3.86	.000
Product attributes	-----	-0.02	0.005	-4.35	.000
Financial risk	-----	0.01	0.004	2.06	.01
Social risk	-----	-----	-----	1.72	.10
Income (£25-39,999)	-----	0.03	0.013	2.57	.01
Income (£40,000+)	-----	0.05	0.013	3.48	.000
Product knowledge	-----	-----	-----	-1.62	>.10
Constant	-----	0.85	0.022	39.66	.000

\* The overall *F*s are significant at 0.000 level

\*\*Response variable

# Interaction of product knowledge and product involvement

----- N/A

Two income categories which represent all income categories above the average UK income are significantly influential to the model. The negative beta values imply that compared to the reference income category (-£10,000), the subjects with higher incomes (above the average UK income) are less likely to consider buying counterfeit Gucci



watches. This is in line with Tom et al. (1998), who report a negative relationship between consumer income and purchase tendency of counterfeits.

Interestingly, the interaction variable KxI does not appear in this model. It is replaced by the product knowledge variable. The results show that the likelihood of consideration of the counterfeit Gucci increases with the level of the subjects' self assessed product knowledge. In another words, the more knowledgeable subjects are more likely to consider buying counterfeit Gucci watches. Again, this can be explained by the fact that with advancements in watch technology, the accurate time-telling function of watches is not difficult to achieve. The more knowledgeable the person is about watches, the more he or she is aware of this reality.

#### 8.5.9 Original Burberry Purchase Intention

For the Burberry purchase intention model, three variables account for an adjusted  $R^2$  of 0.218 (Table 8.20). The purchase intention of the original Burberry is a function of personality ( $\beta = 0.28$ ,  $p < 0.000$ ), price ( $\beta = -0.25$ ,  $p < 0.000$ ), and interaction between knowledge and involvement ( $\beta = 0.05$ ,  $p < 0.000$ ). With no difference to results relating to other models, the personality factor has the greatest effect on the model, and interaction appears to have the lowest influence. The beta values of these two variables are all positive, which indicates positive relations with the response variable.

The results show that the subjects are concerned about price. The negative beta value of price indicates that the purchase tendency of the original Burberry decreases as the perceived original Burberry price increase. The Burberry brand image has been heavily contaminated. Consumers consider Burberry as products purchased by 'chavs'. There are also public places which ban people wearing Burberry product from entry. Therefore, the subjects might be more price-sensitive with Burberry compared with other brands.

#### 8.5.10 Counterfeit Burberry Purchase Intention

For counterfeit Burberry, the purchase intention of this version is a function of personality ( $\beta = 0.26$ ,  $p < 0.000$ ), functional benefit ( $\beta = 0.10$ ,  $p < 0.01$ ), price and material ( $\beta = 0.12$ ,  $p < 0.001$ ) and product life ( $\beta = -0.16$ ,  $p < 0.000$ ). The four variables account for an adjusted  $R^2$  of 0.167 of the purchase intention model of counterfeit

Burberry (Table 8.21). With no change, the personality variable has dominant explanatory power on the purchase intention of the counterfeit Burberry.

#### 8.20 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Original Burberry Purchase Intention						
Initial Generalised Linear Model before any transformation						
Variables entered	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *	
Personality1	4.97	.000	0.226	0.218	26.61	
Price4	-4.53	.000				
KXI #	5.61	.000				
Regression equation						
Variable entered	B	SE B		<i>T</i>	Significant	
Personality1	0.28	0.06		4.97	.000	
Price4	-0.25	0.05		-4.53	.000	
KXI #	0.05	0.01		5.61	.000	
Constant	1.23	0.09		13.52	.000	
Original Burberry Purchase Intention						
Generalised Linear Model after transformation of explanatory variables						
Variables entered	Power	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *
Personality1	1.23	5.02	.000	0.250	0.241	30.27
Price4	2.04	-4.27	.000			
KXI #	3.88	6.30	.000			
Regression equation after transformation of explanatory variables						
Variables entered	Power	B	SE B		<i>T</i>	Significant
Personality1	1.23	1.79e-01	3.556e-02		5.02	.000
Price4	2.04	-2.68e-02	6.27e-03		-4.27	.000
KXI #	3.88	7.93e-06	1.26e-06		6.30	.000
Constant	-----	1.31e+00	1.89e-01		6.93	.000
* The overall <i>F</i> s are significant at 0.000 level						
# Interaction of product knowledge and product involvement						
----- N/A						

Surprisingly, the price and material factor, which is the second most powerful explanatory variable in the model, appears to be positively related to the response variable. This is contrary to expectation. The price and material factor consists of consumers' perception of expensiveness of price and quality of product material. Normally one would expect consumers' purchase intention to be negatively related to perceived expensiveness of price and positively related to perceived quality of product material. One possible explanation the researcher can offer for this unexpected result is that the perceived expensiveness of price lies under the tolerance level. Under the tolerance level if the perceived price is very low, consumers might start questioning what they are going to gain for the price they pay. Simply, they might believe that it is too cheap to be true. Consumers might believe that you get what you pay for. Therefore, they might be reluctant to admit that the counterfeits are unbelievably cheap. There is another possible reason for this unexpected result which is that it might be an indication that some of the respondents were misled by the one direction answers to other questions and did not recognise the direction change of the price related question.



Nevertheless, there is no further evidence to support this assumption from the data collected for the other version of this brand and even other brands. As such, the alternative explanation can only be taken as a possibility.

Table 8.21 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Counterfeit Burberry Purchase Intention						
Initial Generalised Linear Model before any transformation						
Variables entered	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *	
Personality	5.83	.000	0.179	0.167	14.86	
Product attributes	2.21	.01				
Price and material	2.75	.001				
Functional benefit	-3.60	.000				
Regression equation before any transformation						
Variable entered	B	SE B	<i>T</i>		Significant	
Personality	0.26	0.04	5.83		.000	
Product attributes	0.10	0.04	2.21		.01	
Price and material	0.12	0.04	2.75		.001	
Functional benefit	-0.16	0.04	-3.60		.000	
Constant	1.37	0.04	31.16		.000	
Counterfeit Burberry Purchase Intention						
Generalised Linear Model after transformation of response variable and explanatory variables						
Variables entered	Power	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *
Personality	0.71	-6.42	.000	0.215	0.204	18.67
Product attributes	4.37	-3.62	.000			
Price and material	-0.92	3.71	.000			
Functional benefit	4.86	4.26	.000			
Purchase intention **	-2	-----	-----			
Regression equation after transformation of response variable and explanatory variables						
Variables entered	Power	B	SE B	<i>T</i>		Significant
Personality	0.71	-1.96e-01	3.06e-02	-6.42		.000
Product attributes	4.37	-1.80e-04	4.97e-05	-3.62		.000
Price and material	-0.92	4.83e-01	1.30e-01	3.71		.000
Functional benefit	4.86	7.20e-05	1.69e-05	4.26		.000
Constant	-----	8.80e-01	7.41e-02	11.88		.000
*The overall <i>F</i> s are significant at 0.000 level						
** Response variable						
# Interaction of product knowledge and product involvement						
----- N/A						

The results also show that product attributes positively and significantly influence the counterfeit Burberry purchase intention. The more positive the perceived product attributes are, the more likely the counterfeit Burberry is to be purchased. The product attribute variable does not appear important to the purchase intention model of the original Burberry. This is determined by the nature of luxury brands. People consider other factors (e.g. brand personality, purchase benefits) as more important than other product attributes, since branded products are well-known for their positive product attributes, and these advantages might have been taken for granted. In contrast, in the case of counterfeit branded products, consumers are more concerned about product attributes, which determine the product appearance. The functional benefit exerts a negative influence on the purchase intention towards the counterfeit Burberry. The functional benefit factor consists of product life and disposability. The negative value

of the functional factor implies that consumers having a higher level of purchase intention toward counterfeit Burberry are less likely to expect that the counterfeit version will last long. In other words, counterfeit prone consumers might be attracted by the disposable nature of counterfeits.

8.5.11 Counterfeit Burberry Likelihood of Consideration

For the counterfeit Burberry consideration model, five variables account for an adjusted  $R^2$  of 0.154 (Table 8.22). The model is a function of personality ( $\beta= 0.28, p < 0.000$ ), product attribute ( $\beta= 0.14, p < 0.001$ ), price and material ( $\beta= 0.15, p < 0.001$ ), functional benefit ( $\beta= -0.11, p < 0.01$ ), social risk ( $\beta= -0.09, p < 0.01$ ). No different to other models, the brand personality comes before any other explanatory variables in determining the likelihood of consideration of the counterfeit Burberry. All four explanatory variables in the counterfeit Burberry purchase intention model appear to have significant impacts on the likelihood of consideration of counterfeit Burberry too. Their influence directions remain the same as they do with the purchase intention model. Therefore, no more reasoning is provided here.

8.22 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Counterfeit Burberry Likelihood of Consideration						
Initial Generalised Linear Model before any transformation						
Variables entered	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *	
Personality	5.34	.000	0.170	0.154	11.06	
Product attributes	2.74	.001				
Price and material	2.78	.001				
Functional benefit	-1.98	.01				
Social risk	-2.11	.01				
Regression equation before any transformation						
Variable entered	B	SE B		<i>T</i>	Significant	
Personality	0.28	0.05		5.34	.000	
Product attributes	0.14	0.05		2.74	.001	
Price and material	0.15	0.05		2.78	.001	
Functional benefit	-0.11	0.05		-1.98	.01	
Social risk	-0.09	0.04		-2.11	.01	
Constant	2.05	0.13		15.36	.000	
Counterfeit Burberry Likelihood of Consideration						
Generalised Linear Model after transformation of response variable and explanatory variables						
Variables entered	Power	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *
Personality	0.14	-5.43	.000	0.206	0.194	17.65
Product attributes	0.89	-3.34	.000			
Price and material	-0.96	3.60	.000			
Functional benefit	7.22	3.13	.001			
Consideration**	-0.8	-----	-----			
Regression equation after transformation of response variable and explanatory variables						
Variables entered	Power	B	SE B		<i>T</i>	Significant
Personality	0.14	-7.76e-01	1.43e-01		-5.43	.000
Product attributes	0.89	-5.69e-02	1.70e-02		-3.34	.000
Price and material	-0.96	2.72e-01	7.56e-02		3.60	.000
Functional benefit	7.22	1.02e-06	3.24e-07		3.13	.001
Constant	-----	1.59e+00	-----		9.48	.000

\*The overall  $F$ s are significant at 0.000 level

\*\* Response variable

# Interaction of product knowledge and product involvement

----- N/A



Contrary to the counterfeit Burberry purchase intention model, the results show that social risk has significant explanatory power to the likelihood of consideration model of the counterfeit Burberry. The negative beta value implies that the more social risk the subjects perceive in relation to counterfeit Burberry, the less likely it is that he or she will consider buying it. Once again, this is in line with the risk-averse theory.

#### 8.5.12 Original Louis Vuitton Purchase Intention

For the original Louis Vuitton, two explanatory variables account for an adjusted  $R^2$  of 0.159 of the behavioural intention towards the purchase of original Louis Vuitton (Table 8.23). The model suggested that the purchase intention toward the original Louis Vuitton handbags is a function of personality ( $\beta = 0.26$ ,  $p < 0.01$ ), and interaction between knowledge and involvement ( $\beta = 0.07$ ,  $p < 0.000$ ). Thus, the higher level of brand personality the subjects perceive, the more likely they are to have higher purchase tendency; the higher the value of the interaction variable, the more likely is the subjects' intention to buy the original Louis Vuitton. These variables are the same as in the purchase intention and consideration models related to other brands, except for the difference in magnitude. Therefore, no more explanation is provided here for the avoidance of repetition.

8.23 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Original Louis Vuitton Purchase Intention						
Initial Generalised Linear Model before any transformation						
Variables entered	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *	
Personality	2.07	0.01	0.165	0.159	27.17	
KXI <sup>#</sup>	6.63	.000				
Regression equation before any transformation						
Variable entered	B	SE B	<i>T</i>	Significant		
Personality	0.13	0.06	2.07	0.01		
KXI <sup>#</sup>	0.07	0.01	6.63	.000		
Constant	1.36	0.11	12.73	.000		
Original Louis Vuitton Purchase Intention						
Generalised Linear Model after transformation of explanatory variables						
Variables entered	Power	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *
Personality	0.26	2.09	.01	.166	.160	27.34
KXI <sup>#</sup>	1.22	6.64	.000			
Regression equation after transformation of explanatory variables						
Variables entered	Power	B	SE B	<i>T</i>	Significant	
Personality	0.26	1.20	0.57	2.09	.01	
KXI <sup>#</sup>	1.22	0.03	0.005	6.64	.000	
Constant	-----	-0.26	0.081	-0.32	>0.10	
*The overall <i>F</i> s are significant at 0.000 level						
# Interaction of product knowledge and product involvement						
----- N/A						

8.5.13 Counterfeit Louis Vuitton Purchase Intention

For the counterfeit Louis Vuitton, in addition to brand personality ( $\beta= 0.26, p < 0.000$ ), and interaction between knowledge and involvement ( $\beta= 0.02, p < 0.001$ ) that appeared in the original Louis Vuitton purchase intention model, three more variables – image benefit ( $\beta= 0.12, p < 0.01$ ), product attributes ( $\beta= 0.19, p < 0.000$ ), and functional benefit ( $\beta= -0.26, p < 0.000$ ) have a significant influence on the purchase intention model. The five explanatory variables account for an adjusted  $R^2$  of 0.195 (Table 8.24). Once again, personality plays a dominant role, with the interaction variable having the least impact on the response variable, even though it is significant.

8.24 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Counterfeit Louis Vuitton Purchase Intention						
Initial Generalised Linear Model before any transformation						
Variables entered	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *	
Image benefit	2.21	.01	0.209	0.195	14.34	
Personality	5.02	.000				
Product attributes	3.56	.000				
Functional benefit	-4.93	.000				
KXI <sup>#</sup>	2.67	.001				
Regression equation before any transformation						
Variable entered	B	SE B	<i>T</i>		Significant	
Image benefit	0.12	0.05	2.12		.01	
Personality	0.26	0.05	5.03		.000	
Product attributes	0.19	0.05	3.56		.000	
Functional benefit	-0.26	0.05	-4.93		.000	
KXI <sup>#</sup>	0.02	0.01	2.67		.001	
Constant	1.32	0.09	15.00		.000	
Counterfeit Louis Vuitton Purchase Intention						
Generalised Linear Model after transformation of response variable and explanatory variables						
Variables entered	Power	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *
Image benefit	-0.80	2.03	0.01	0.223	0.208	15.51
Personality	1.53	-5.35	.000			
Product attributes	1.48	-3.83	.000			
Functional benefit	1.17	5.31	.000			
KXI <sup>#</sup>	-0.18	2.65	.001			
Purchase intention**	-2	-----	-----			
Regression equation after transformation of response variable and explanatory variables						
Variables entered	Power	B	SE B	<i>T</i>		Significant
Image benefit	-0.80	0.19	0.096	2.03		0.01
Personality	1.53	-0.04	0.007	-5.35		.000
Product attributes	1.48	-0.03	0.008	-3.83		.000
Functional benefit	1.17	0.07	0.014	5.31		.000
KXI <sup>#</sup>	-0.18	0.41	0.154	2.65		.001
Constant	-----	0.37	0.158	2.34		.01
*The overall <i>F</i> s are significant at 0.000 level						
** Response variable						
# Interaction of product knowledge and product involvement						
----- N/A						

Functional benefit appears to be as important as the brand personality variable. This is shown by the same absolute beta values of two variables. Again, the same reasoning used to explain its negative impact on purchase intention and consideration related to other counterfeit brands can be applied here, too. This indicates that consumers do take



product life into account in the process of decision-making in relation to counterfeit luxury brands and it appears to be very influential to purchase behaviour related to counterfeits.

Image benefit and product attributes all appear to have positive and significant effects on the purchase intention of the counterfeit Louis Vuitton handbags. The higher the level of image benefit the subjects perceive, the higher purchase tendency they have. This result is not surprising, as consumer purchase behaviour is benefit-driven (Bloch et al. 1993; Jobber 2004). The reasoning provided in the section of purchase intention of counterfeit Burberry in relation to the explanation of the positive and significant effect of product attribute on purchase intention can also be applied here to explain the influential role of product attribute on the purchase tendency of the counterfeit Louis Vuitton.

#### 8.5.14 Counterfeit Louis Vuitton Likelihood of Consideration

Five variables account for an adjusted  $R^2$  of 0.307 in the consideration of the counterfeit Louis Vuitton model (Table 8.25). Four out of these five variables also appear in the counterfeit Louis Vuitton purchase intention model. They are personality ( $\beta = 0.32$ ,  $p < 0.000$ ), image benefit ( $\beta = 0.27$ ,  $p < 0.000$ ), product life ( $\beta = -0.23$ ,  $p < 0.000$ ), and product attributes ( $\beta = 0.32$ ,  $p < 0.000$ ). These variables are the same as those explaining the purchase intention for the counterfeit Louis Vuitton, except for the difference in magnitude. One thing remaining unchanged is the dominant role of brand personality.

The interaction between knowledge and involvement in the purchase intention model is replaced by the product knowledge variable ( $\beta = 0.12$ ,  $p < 0.05$ ) in the counterfeit Louis Vuitton consideration model. These results show that consumer perceived product importance or relevance does not have a significant effect on their consideration of counterfeit Louis Vuitton. Nevertheless, the positive and significant impact of the product knowledge implies that the more knowledgeable the subject considers he or she to be, the more likely it is that he or she will have a higher tendency to consider buying counterfeit Louis Vuitton handbags. This variable appears to the least explanatory power on the model.

8.5.15 Model diagnostics

The chosen models for interpretation are tested for possibility of multicollinearity, non-constant error variance problems and outliers. VIF and GVIF (when it is necessary) are used to assess the assumption of no multicollinearity. Fox and Monette (1992) suggested that the VIF method for detecting collinearity is not fully applicable to models that include related sets of regressors, such as dummy regressors constructed from a categorical variable. They generalize the notion of variance inflation by considering the relative size of the joint confidence region for the coefficients associated with a related set of regressors. The measure is named generalized variance-inflation factor (GVIF). R-commander automatically generates the GVIF value when a categorical variable is included in the model. The constant variance assumption is assessed by examining the plot of studentized residuals against fitted values of the chosen models. Cook’s distance and leverage value are used to identify outliers. The rules set up in previous sections in relation to all these tests are still applicable here. Therefore, there is no need for repetition.

8.25 Comparison of the Initial Generalised Linear Model and the Generalised Linear Model after Transformation

Counterfeit Louis Vuitton Likelihood of Consideration						
Initial Generalised Linear Model before any transformation						
Variables entered	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *	
Image benefit	5.10	.000	0.320	0.307	25.50	
Personality	6.17	.000				
Product attributes	6.15	.000				
Disposability	-4.43	.000				
Knowledge	2.46	.01				
Regression equation before any transformation						
Variable entered	B	SE B	<i>T</i>		Significant	
Image benefit	0.27	0.05	5.10		.000	
Personality	0.32	0.05	6.17		.000	
Product attributes	.032	0.05	6.15		.000	
Disposability	-0.23	0.05	-4.43		.000	
Knowledge	0.12	0.05	2.46		.01	
Constant		0.13	12.92		.000	
Counterfeit Louis Vuitton Likelihood of Consideration						
Generalised Linear Model after transformation of explanatory variables						
Variables entered	Power	<i>T</i> to enter	Significance	Multiple <i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Overall <i>F</i> *
Image benefit	1.28	4.89	.000	0.325	0.312	26.08
Personality	1.13	6.33	.000			
Product attributes	0.49	6.25	.000			
Disposability	2.43	-4.58	.000			
Knowledge	0.33	2.62	.001			
Regression equation after transformation of explanatory variables						
Variables entered	Power	B	SE B	<i>T</i>		Significant
Image benefit	1.28	0.15	0.031	4.89		.000
Personality	1.13	0.25	0.040	6.33		.000
Product attributes	0.49	1.13	0.181	6.25		.000
Disposability	2.43	-0.02	0.003	-4.58		.000
Knowledge	0.33	0.66	0.254	2.62		.001
Constant	-----	-1.87	0.483	-3.87		.000
*The overall <i>F</i> s are significant at 0.000 level						
----- N/A						



Table 8.26 Collinearity statistics Rolex and Gucci

Original Rolex			Counterfeit Rolex			Original Gucci			Counterfeit Gucci		
Intention			Intention			Intention			Intention		
Variables	GVIF	Variables	GVIF	Variables	GVIF	Variables	GVIF	Variables	GVIF	Variables	GVIF
General	1.06	Competence1	1.02	Competence1	1.02	Personality	1.06	Sophistication	1.02	Sophistication	1.02
attributes		(Personality)		(Personality)				(personality)		(personality)	
Excitement	1.02	Value for	1.01	Value for	1.01	Image	1.07	Image Benefit	1.00	Image Benefit	1.09
(Personality)		money		money		benefit		(personality)			
Practical	1.07	Practicality	1.01	Practicality	1.01	Functional	1.02	Image benefit	1.01	Competence	1.03
attributes		attributes		attributes		benefit				(personality)	
Functional	1.02	#	1.00	Excitement	1.01	Gender	1.07	Competence	1.01	Excitement	1.01
benefit		KXI		(Personality)				(personality)		(personality)	
Quality and	1.02	Peer	1.04	Functional	1.05	#	1.17	Product	1.00	Product	1.02
price				benefit		KXI		(personality)		attributes	
#	1.15			Social risk	1.10	Age	1.11	Financial risk	1.01	Financial risk	1.12
KXI											
Income	1.05							Social risk		Social risk	1.09
								Knowledge		Knowledge	1.04
								Income		Income	1.04
# Interaction of product knowledge and product involvement											

Table 8.27 Collinearity statistics Burberry and Louis Vuitton

Original Burberry			Counterfeit Burberry			Original Louis Vuitton			Counterfeit Louis Vuitton		
Intention			Intention			Intention			Intention		
Variables	VIF	Variables	VIF	Variables	VIF	Variables	VIF	Variables	VIF	Variables	VIF
Personality	1.01	Personality	1	Personality	1.02	Personality	1.03	Image benefit	1.00	Image Benefit	1.00
Price	1.01	Product attributes	1	Product attributes	1.01	#	1.03	Personality	1.00	Personality	1.00
#		Price and material	1	Price and material	1.02	KXI		Product attributes	1.00	Product attribut3	1.00
	1.02	Functional benefit	1	Functional benefit	1.06			Functional benefit	1.01	Functional benefit	1.01
				Social risk	1.11			Knowledge	1.02	Knowledge	1.01
# Interaction of product knowledge and product involvement											

Table 8.26 and Table 8.27 show the multicollinearity test results. For all chosen models, the VIF or GVIF are all well below 5, ranges between 1.00 and 1.15. For the counterfeit Burberry purchase intention model, all the VIF is constant with a value of 1. This is because all the explanatory variables in the model are factors extracted from factor analysis, and the factors are extracted using the Varimax method. Therefore, there is no relationship between all involved variables. It is clear that none of the models is suffering from a multicollinearity problem.

The plots of the residuals versus the fitted values lie in an almost horizontal band; there is no trace of fanning out (Appendix 13). This shows the likelihood of constant variance. However, one should be aware that in all cases, it appears that quite a high percentage of observations gathered are along one line. This is caused by the severely skewed nature of the data. None of the cases has a Cook's distance greater than 1 across all selected models. The identified cases with leverage values greater than three times the average value are presented in Table 8.28. The number of undue influential cases ranges between 1 and 9, accounting for only very small percentage (all less than 5 percent) of the overall sample. Therefore, it is considered acceptable.

In sum, the various model diagnostics results show that there is no multicollinearity problem, non-constant error variance problems is not a concern either. There are some outliers. However, their number is very limited (less than 5 percent in every model). Discarding the outliers does not cause significant changes to the models, nor to the regression coefficients. Here, Field's (2000) claim that cases with large leverage values may not necessary have a strong influence on the regression coefficients because they are measured on the outcome variables rather than the predictor is supported. All this provides evidence that our models are fairly accurate. Therefore, it is decided that there is no necessity to report the regression results without the outliers.

## 8.6 Summary

This chapter focuses on data analysis and presenting data analysis results. Regression techniques are adopted for data analysis in the current research. A decision is made on the choice of the OLS over the loglinear regression and the logistic regression after a scrupulous examination of the collected data. Various model diagnostics are conducted. In addition to the multicollinearity test conducted in Chapter 7, the adopted diagnostics



Table 8.28 Cases with undue influence

Rolex (n = 321)										Gucci (n=321)										Burberry (n=277)										Louis Vuitton (n=277)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
OR		CR		CR		OG		CG		CG		OB		CB		CB		OLV		CLV		CLV		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention		intention	

techniques include a constant variance test, a casewise diagnostics test (outliers and undue influential cases).

According to the skewed nature of the collected data, two commonly adopted statistical analysis software programmes - SPSS and R statistical software - are used to analyse data in order to obtain more robust results. The SPSS software is used to analyse the data when the assumptions of the OLS are met to a large extent, whereas when the assumptions of the OLS are severely broken the R is utilised to transform the data and for regression of the response variables. Mainly, the Box-Cox and Box-Tidwell techniques and the GLM statistics are used. Results generated using the two software programmes are presented in two separate sections. The more appropriate ones are chosen to be interpreted in detail.

Despite the researcher's efforts, data transformation does not appear to improve the overall models greatly. As a consequence, the models generated based on the untransformed data are selected for interpretation and discussion. Nevertheless, in order to provide the reader with a clear view about the improvement brought to the regression model after the data transformation, the results generated from the transformed data are presented as well. Although data transformation does not bring about much more ideal results, the use of the data transformation method backs up the notion that the initial models regressed based on the untransformed data are the best choices under the current circumstances.

The research results shows that the determinants of the consideration set and purchase intention are brand and product specific for both original and counterfeit branded products. However, the personality variable is the only one which constantly appears in every model and acts as the dominant explanatory variable to the response variables in fifteen out of sixteen models. Detailed explanations and interpretations are provided in this chapter alongside the presented research results. Given that the main objective of this chapter is to present the research results and to provide detailed interpretation of the results, the summary of the research finding are not reported here. This is one of the objectives of the final chapter of this research.



## Chapter 9 Conclusion



## Chapter 9 Conclusion

### 9.1 Introduction

The main objectives of this final, closing chapter of the thesis are to provide a short summarisation of the project by underscoring the main conclusions reached from the study and the main contributions of the current research. Moreover, this chapter will also identify the managerial implications of the study and discuss some limitations of the approach taken in the present study. In addition, this chapter offers some recommendations for further research that could be encouraged or assisted by the present work.

Given that detailed discussions about each individual model were provided directly after the research results presented in Chapter 8, this chapter starts with a summary of the research findings. To recap, as well as in response to Chapter 4, an overview of the proposed research hypothesis is conducted and presented at the end of the 'Summary of Findings' section. The hypotheses test results are demonstrated in a table format with the aim of providing readers with a clear, overall picture.

The evidence of the worthwhile nature of this research is outlined in detail in the research contribution section. Specifically, the theoretical contributions and methodological contributions of the research are discussed. This section highlights the capability of the researcher as a doctoral student of mastering the existing knowledge in relevant areas as well as being able to go beyond the existing knowledge.

The discussion on the implications has two themes: managerial implications and policy implications. In other words, the findings of the present study will benefit marketers/strategists of brand owners, and national and international policy makers. Following the implications section, the research limitations are analysed. Lastly, the various possible avenues for further research in the study of counterfeiting, consumer choice process, and branding-related issues are suggested. As usual, this chapter concludes with a brief chapter summary.



## 9.2 Summary of Research Findings

The aim of this study is to evaluate the variables which are most important in the different stages of consumer choice process in the context of non-deceptive counterfeiting. From the results of the multiple regression analysis, it can be seen that various determinants have significant impact on the formation of the consideration set and consumers' purchase intention towards both counterfeit and original branded luxury products. These determinants include brand personality, benefits (image benefit, functional benefit and value for money in relation to gained quality), consequences (including social risk, financial risk, and security concerns) product attributes (general attributes and practical attributes), product knowledge, interaction between product knowledge and product involvement, demographics (age, household income and gender). However, there exist some differences in the kinds of determinants and their degree of importance on the purchase intention toward different brands and different versions (counterfeit and genuine) of a brand. This is also true in the formation of the consideration set.

Brand personality variable is the only variable which appears in all 16 regression models. In addition, the brand personality's dominant position in terms of explaining the response variables remains unchanged across all but two models of two studied consumer choice processes, with it dropping to the third most important variable on only one occasion (after the value for money and practical product attribute variables); in one case it is the second most influential variable (after the perceived image benefit variable). In general, the findings seem to suggest that, among the variables tested in this study, the brand personality variable performs the best in explaining the formation of the consideration set and consumers' purchase intention towards counterfeit and original luxury brands.

As noted earlier, brand personality is regarded as the communication tool for marketing strategies to build, sustain and increase consumer trust and loyalty (Siguaw et al. 1999; Johnson et al. 2000). Without denying the above notion, the research findings of this study move one step forward by suggesting that favourable brand personality is the core influential variable in the two crucial stages of consumer choice process. In other words, whether a branded product is chosen by a consumer or not is determined by the level of preference of the perceived brand personality (both counterfeit and genuine). The more

favoured the perceived brand personality is, the more likely the branded product is to be purchased. The brand personality has a direct and substantial effect on consumer purchase behaviour of luxury branded products. As a result, the perceived brand personality has a direct influence on a brand's market share. Therefore, these findings provide empirical support to Biel (1993) and Aaker (1991), who claim that brand personality is a key determinant of brand equity.

The image benefit variable has a uniform and positive effect on the likelihood of consideration across all four original branded products. Nevertheless, it only appears to be influential on the purchase intention of the original Gucci but not other purchase intention models of the original branded products. The influence of image benefit on counterfeit luxury branded products is consistent across the consideration process and the purchase intention process. In other words, when it appears to be significantly/insignificantly influential on the likelihood of consideration of a counterfeit, it is also has uniform effect (significant/insignificant) on the purchase intention toward the counterfeit. The effects of image benefit on consumer choice processes are more likely to be brand specific. No pattern emerged within a specific product category in relation to the image benefit effect on the stages of consumer choice process. Generally speaking, image benefit has a limited effect on both consideration process and purchase intention process, although its influence is significant, with the exception of Gucci models.

The functional benefit variable features positively and prominently in the likelihood of consideration and the purchase intention towards original branded watches (more function-oriented products) with the exception of the Rolex consideration model. In contrast, the functional benefit variable does not appear to be influential on consumer consideration and purchase intention towards original branded handbags (more fashion-oriented products). The scenario is almost the other way round in relation to counterfeit brands. The functional benefit has a significant uniform effect on the purchase consideration and the intention towards counterfeit handbags, but no influence (except on the counterfeit Rolex consideration model) on the likelihood of consideration and the purchase intention towards counterfeit watches. Consumers' consideration and intention to purchase both original and counterfeit Rolex is dominated by the value for money variable. For the original Rolex the value for money variable refers to quality and price



relationship, whereas for the counterfeit Rolex the value for money variable is more complex, it is composed of 'fun', 'status' and 'quality and price relationship'.

Despite the fact that numerous researchers have demonstrated a significant and positive relationship between perceived benefit and consumer decision-making (e.g. Bove and Johnson 2000; Mai and Ness 1997; Cho et al. 2002), the current research findings suggest that it is not always the case that the perceived benefit has significant effects on both the consideration and purchase intention process. In addition, whenever the influence of the perceived benefit is significant, its influence on the studied choice processes appear to be very limited in comparison with other influential variables. These results challenge previous research findings. Moreover, the research results of the present study further suggest that the influence of the perceived benefit is brand specific and product specific (functional vs. fashionable), as well as product version specific (counterfeit vs. genuine).

For fashion or fashion-oriented luxury branded products (Gucci, Burberry, Louis Vuitton), the general product attribute variable is important to consumers' consideration and purchase intention in relation to counterfeits. On the other hand, it appears to be influential on the likelihood of consideration of the original branded products, but not the consumers' purchase intention. For function-oriented luxury branded products (Rolex), the general attribute variable does not seem to be influential on the consumers' consideration of either counterfeit or original luxury branded products, nor on the consumers' purchase intention of a counterfeit version. Nevertheless, it does have a significant effect on the consumers' purchase intention towards original branded products.

The practical product attribute variable does not have an effect on consumer consideration and purchase intention towards fashion or fashion-oriented branded products (Gucci, Burberry, and Louis Vuitton). This is consistent across both counterfeit and original versions of these brands. On the other hand, consumer consideration and purchase intention towards function-oriented luxury branded products (Rolex) is significantly influenced by the practical product attributes. This effect appears to be significant in both counterfeit and original versions. In general, it seems that the influence of the practical product attribute on different stages of consumer

choice processes can be categorised according to the functional or fashionable nature of the studied brands. More specifically, the practical product attribute is influential on the consumer choice processes (consideration and intention) of function-oriented branded products, whereas general product attributes are more likely to have a significant impact on consumer choice processes in relation to fashion-oriented luxury branded products.

Consumers perceive two broad categories of product attributes in relation to luxury brands (both counterfeit and genuine versions). These categories are named general product attributes and practical attributes. Even though consumers use perceived product attributes to evaluate brands/products in their decision-making process (Puth et al. 1999), this is not necessarily to say that one can expect the perceived product attributes to have a significant effect on consumer choice in all cases. In general, the influence of the perceived general attributes and practical attributes is product specific (functional vs. fashionable) and brand version specific (counterfeit vs. genuine).

In comparison with the extracted factors relating to brand image, the results of the current study clearly show that the perceived brand personality has more explanatory power on the two examined consumer choice processes (consideration and purchase intention) than either perceived benefits/consequences and perceived product attributes. The dominant influential power of the perceived brand personality is consistent across all 16 regression models with two exceptions only. These results certainly demonstrate the important role played by the perceived brand personality on determination of consumer behaviour. This research provides substantial support to the notion that perceptions of a brand are the real drivers of consumer purchase behaviour (Biel 1992; Friedman and Zimmer 1988; Assael 2004) by suggesting that consumers' perceptions of luxury have a substantial influence on two of the most crucial stages (consideration set and purchase intention) of the consumer choice process.

This research reveals that neither the product involvement nor the self-assessed product knowledge (excluding the counterfeit Louis Vuitton consideration model and the counterfeit Gucci consideration model) shows a significant effect on the formation of the consideration set and the consumers' purchase intention on their own, with two exceptions out of 16 models. Generally speaking, the product knowledge variable and product involvement variable influence consumer choice processes through their



interaction variable when they appear to be influential. The interaction variable of the self-assessed product knowledge and the product involvement has a positive and uniform effect on the consideration of the original luxury branded products, and the purchase intention towards both counterfeit and original luxury branded products. It does not have a significant impact on the consideration of counterfeit luxury brands.

These findings suggest that there is a higher probability that consumers with a higher level of product knowledge as well as a higher level of product involvement will consume both original luxury branded products and their counterfeit versions. The positive influence of the interaction variable on the purchase intention towards the counterfeit luxury branded products contradicts the expectation of this research. It is believed that these unexpected results can be explained by consumers with a higher level of product knowledge and product involvement perhaps purchasing counterfeits for different usage situations to those of the genuine branded luxury brands, as they regard the counterfeits as a lower grade of the genuine ones (Nia and Zaichkowsky 2000; Penz and Stöttinger 2003).

Although the interaction variable appears to have significant explanatory power in the consumer choice processes, its magnitude of influence is nevertheless not substantial. In most cases, it has the least influence on the models in comparison with other variables. This finding has important implications for policy makers and luxury branded goods manufacturers in their fight against counterfeiting. Detailed discussion is provided in the research implication section.

In contrast to Wee et al. (1995), who find that demographic variables feature prominently in the set of non-price determinants of purchase intention towards counterfeit goods, the findings of this research suggest that demographic variables (age, gender, educational attainment and income) do not show much effect on consumer choice processes. This is particularly true with the luxury branded handbags. None of the demographic variables remains in any of the handbag related models. In the case of the luxury watch related models, the results are not as straightforward as with handbags. Nevertheless, the appearances of these variables in the models are still very limited. Income, age and gender only show significant effect on two out of eight models related to watches. Consumers' educational attainment does not affect any stage of consumer

choice process across all four brands and two versions of each brand; this is in the same vein as Bian and Veloutsou's (2006) finding.

The overall research results suggest that security concerns have no effect on either likelihood of consideration or consumer purchase intentions towards counterfeit and original luxury branded products. There is not much difference with financial risk. It only appears to have a significant effect on one out of 16 models. It seems that there is more chance of social risk affecting consideration process than purchase intention process in relation to counterfeits, whereas it does not affect any stage of the consumer choice process concerning original luxury branded products, with the exception of the original Gucci consideration model. These results provide further evidence that the determinants can vary across different stages of consumer choice process. The level of consumers' perceived risk appears to have a negative relationship with the likelihood of consideration and the purchase intention whenever the relationship is significant. These results are in line with Charkraborty et al. (1996) and Wee et al.'s (1995) research findings. In addition, the current research further suggests that among six risk dimensions, social risk might be the only risk dimension that concerns consumers when they are facing a choice of counterfeit luxury branded products.

According to the above summarized research findings, this research also shows that the determinants of likelihood of consideration and purchase intention towards original branded products and counterfeit branded products are brand specific and brand version specific. These findings go beyond previous research. For example, Granbois and Summers (1975) and Kalwani and Silk (1982) reported that purchase intention is product specific. More recently, Wee et al. (1995) suggested that determinants of purchase intention towards counterfeit products are product specific. Nevertheless, it is once again undoubted that brand personality is the dominant determinant variable of the formation of the consideration set and the consumers' purchase intention towards both counterfeit and original luxury branded products.

In addition, this research also suggests that there exist some differences in the kinds of determinants of the consideration process and the purchase intention process. Accordingly, this research proposes that the differences in the kinds of determinants of the consideration process and the purchase intention process to a large extent might



contribute to the causes of the variance in choice which is not explained by consideration suggested by Hauser and Wernerfelt (1989) and Hauser (1978). Please refer to Chapter 3, section 3.3.4.1 for detailed findings of these two works. In general, the number of the determinants of the consideration process appears to be slightly greater than the number of the determinants of the purchase intention process, with one exception (the original Rolex consideration model) out of sixteen models. This implies that consumers might evaluate more criteria in the consideration stage than the intention stage. The numbers of determinants of all sixteen models are presented in Table 9.1.

**Table 9.1** Number of determinants

	Purchase intention		Consideration	
	Original brand	Counterfeit brand	Original brand	Counterfeit brand
Rolex	7	5	6	6
Gucci	6	6	8	9
Burberry	3	4	3	5
Louis Vuitton	2	5	4	5

All the above findings are generated from the regression modelling data analysis stage. In order to provide a clear view of the above noted generalised research findings, the test results of all the proposed hypotheses in Chapter 4 are presented in Table 9.2.

In addition to these valuable findings generated from the principal data analysis, this research also explores some worthwhile insights from the qualitative research stage, as well as from the factor analysis stage. The main findings are summarised as follows.

Given that previous research suggests that brand image is composed of brand personality, product attributes and benefits/consequences (e.g. Plummer 2000, 1985), one would think that risk- and security-related concerns should be categorised under the consequence dimension of the brand image. Financial risk, social risk and security issues did appear to be the focus group participants' concerns relating to the purchase of the studied luxury branded products. Nevertheless, factor analysis in the principal research reveals that neither risk-related concerns nor security concerns matched well with the extracted factors related to brand image. Therefore, the empirical data has demonstrated that risk and security concerns should perhaps not be regarded as a composition of brand image.

Table 9.2 Hypotheses test results

Code	Hypothesis Content	Brand	Consideration	Intention
$H_{involvement1}$	$H_{involvement1}$ : The level of product involvement has a positive relationship with the likelihood of consideration and the purchase intention of original branded products	R	S KxI	S KxI
		G	S KxI	S KxI
		B	X	S KxI
		LV	S KxI	S KxI
$H_{involvement2}$	The level of product involvement has a negative relationship with the likelihood of consideration and the purchase intention of counterfeit branded products.	R	X	# KxI
		G	X	# KxI
		B	X	X
		LV	X	# KxI
$H_{knowledge1}$	The level of consumers' self-assessed product knowledge has a positive relationship with the likelihood of consideration and the purchase tendency of the BP.	R	S KxI	S KxI
		G	S KxI	S KxI
		B	X	S KxI
		LV	S KxI	S KxI
$H_{knowledge2}$	The level of consumers' self-assessed product knowledge has a negative relationship with the likelihood of consideration and the purchase tendency of the CBP.	R	X	# KxI
		G	S	# KxI
		B	X	X
		LV	S	# KxI
$H_{age1}$	Age of a consumer has a positive relationship with the likelihood of consideration and the purchase intention of BP.	R	X	X
		G	Partially S	Partially S
		B	X	X
		LV	X	X
$H_{age2}$	Age of a consumer has a negative relationship with the likelihood of consideration and the purchase intention of CBP.	R	X	X
		G	X	X
		B	X	X
		LV	X	X
$H_{income1}$	Consumer income has a positive relationship with the likelihood of consideration and the purchase tendency of BP.	R	X	S
		G	X	X
		B	X	X
		LV	X	X
$H_{income2}$	Consumer income has a negative relationship with the likelihood of consideration and the purchase tendency of BP.	R	X	X
		G	Partially S	X
		B	X	X
		LV	X	X
$H_{gender}$	Gender will have a significant effect on CBP consumption, with males being more likely to consider CBP and intend to purchase CBP in the context of non-deceptive counterfeiting.	R	X	X
		G	X	X
		B	X	X
		LV	X	X
$H_{education1}$	The level of educational attainment has a positive relationship with the likelihood of consideration and purchase tendency of BP.	R	X	X
		G	X	X
		B	X	X
		LV	X	X
$H_{education2}$	The level of educational attainment has a negative relationship with the likelihood of consideration and purchase tendency of CBP.	R	X	X
		G	X	X
		B	X	X
		LV	X	X
$H_{personality1}$	The level of consumers' favourableness to the brand personality has a positive relationship with the likelihood of consideration and the purchase intention of the BP.	R	S	S
		G	S	S
		B	S	S
		LV	S	S
$H_{personality2}$	The level of consumers' favourableness to the brand personality has a positive relationship with the likelihood of consideration and the purchase intention of the CBP.	R	S	S
		G	S	S
		B	S	S
		LV	S	S
$H_{risk1}$	The level of consumers' perceived risk (financial risk and social risk) has a negative relationship with the likelihood of consideration and the purchase intention of BP.	R	X	X
		G	S Social risk	X
		B	X	X
		LV	X	X
$H_{risk2}$	The level of consumers' perceived risk (financial risk and social risk) has a negative relationship with the likelihood of consideration and the purchase intention of CBP.	R	S Social risk	S Social risk
		G	S both risks	X
		B	S Social risk	X
		LV	X	X
$H_{attribute1}$	Consumers' perceptions of product attributes (general attribute and practical attribute) have a positive influence on likelihood of consideration of products and purchase intention of BP.	R	S Practical attribute	S Both
		G	S General attribute	X
		B	S General attribute	X
		LV	S General attribute	X
$H_{attribute2}$	Consumers' perceptions of product attributes have a positive influence on likelihood of consideration of products and purchase intention of CBP.	R	S Practical attribute	S Practical attribute
		G	S General attribute	S General attribute
		B	S	S
		LV	S Product attribute	S Product attribute
$H_{benefit(image \oplus f)}$	Consumers' perceptions of benefits (image and functional benefit) have a positive influence on likelihood of consideration of products and purchase intention original branded products.	R	S Image benefit	S Functional benefit
		G	S both benefits	S both
		B	S Image benefit	X
		LV	S Image benefit	X
$H_{benefit(image \oplus f)}$	Consumers' perceptions of benefits (image and functional benefit) have a positive influence on likelihood of consideration of products and purchase intention of counterfeit branded products.	R	X *	X
		G	S Image benefit	S Image benefit
		B	S *	S *
		LV	S Image benefit *	S Image benefit *

R = Rolex, G = Gucci, B = Burberry, LV = Louis Vuitton, S = Support, X = Reject

\* = Reject functional benefit related hypotheses. The relationship appears to be opposite to what were proposed.

# = Hypotheses are rejected. The relationship appears to be the opposite of what was proposed.



The qualitative research part of this research shows that Aaker's (1997) brand personality measure is not practical due to its lengthy nature. In addition, it is not greatly applicable to any examination concerning individual luxury brands. This is because, first of all, focus group data shows that all individual luxury brands possess customised brand personalities which have not been covered by Aakers' scale. Secondly, the projected brand personalities are normally very much focused. In most cases, they are only several personal traits rather than several dozen. This research reveals that the number of relevant personality traits of the examined luxury brand ranges from 6 to 14, which is at least two-thirds fewer than the 42 traits suggested by Aaker (1997). In addition, this research also shows that some personality traits included in Aaker's (1997) brand personality scale are not applicable in the UK context. This finding is in the same vein of those of Davies and Roper (2001) and Diamantopoulos et al. (2005).

### 9.3 Research Contributions

It is argued that this research will contribute to both the literature of the consumer choice process, the study of counterfeiting and branding, as well as to the research method, in several ways. The discussion about the research contributions are presented in two separate sub-sections – theoretical contributions and methodological contributions.

#### 9.3.1 Theoretical Contributions

First, the study links together two important research streams (counterfeiting study and consumer choice process study), thus providing insights into how consumers' perceptions of CBP and BP affect the formation of the consideration set and the purchase intention in the context of non-deceptive counterfeiting. This research contributes to the existing literature by establishing the determinants of different consumer choice processes of both CBP and BP, which appears to be a significantly under-researched area.

People respond on the basis of their perceptions of reality, not reality per se (Lewin 1936; Puth et al. 1999). A number of researchers confirm that perceptions are important to study of consumer decision-making (e.g. Schiffman and Kanuk 1991), even if they are misconceptions of actual events (Porter and Claycomb 1997). Analysis of consumer

perceptions and decision-making processes is therefore extremely important in order to understand consumer behaviour, so marketers can determine more readily what influences consumers to buy (Schiffman and Kanuk 1991), and draft better positioning strategies. In line with these views, this research argues that Priester et al's (2004) "A2SC2" model might provide little that is new to the existing literature, due to the possibility of incorrect appliance of the reasoned action theory and the adoption of unreliable measures (see Chapter 3 for details). Accordingly, this research argues that examination of the influence of consumers' perceptions of brands on consumer choice processes will provide valuable insights in understanding consumer behaviour in the context of non-deceptive counterfeiting.

Brand image is defined as being how the brand is perceived by consumers (Aaker 1996). In other words, the brand image is the consumers' perceptions of a brand. As this research aims to investigate luxury branded products, the influence of brand image of the studied brands on the consumer choice processes (consideration set formation process and purchase intention process) is examined. This is the first research which has been undertaken with the aim of understanding consumer purchase behaviour from brand level. As reported earlier, the brand personality is the only factor which appears to have significant influence on both the consideration and consumer purchase tendency of the examined brands. This result is consistent across all four examined brands and two versions of each brand. In addition, generally speaking, the brand personality also appears to be the most influential variable in all consideration models and purchase intention models, except one. The current research findings provide empirical support to Batra et al. (1993) and Biel (1993) who claim that brand personality is considered to be an important factor for the success of a brand in terms of preference and choice, and Dubois and Patemault (1995) who suggest that luxury items are bought for what they mean, more than for what they are. More importantly, the consistent research findings across four investigated luxury brands and different versions of a brand make it safe to say that consumers' perceptions of a brand are significantly influential on the formation of the consideration and the development of the purchase intention. These findings, together with other research findings in this study, have established the crucial role played by brand image in the formation of the consideration set stage and purchase intention stage of consumer choice process.



This research not only fills the identified literature gap by discovering the determinants of the formation of the consideration set and the purchase intention from a brand perspective, but also reveals that consumers are more likely to evaluate more criteria in the consideration process than in the intention process, the criteria used by the consumers to evaluate the branded luxury being different to some extent to the one they use to judge the counterfeit version. This finding is completely new to marketing literature.

Secondly, although it is not the main priority of this research, the present study tested Plummer's (2000) brand image component proposition. Brand image concept has attracted a lot of research interest. Within the last half century, numerous researchers have offered their propositions about the components of this notion (see Chapter 5 for details). The most recent one is Plummer (1985, 2000) who claims that brand image has three primary components - the physical elements/attributes, the functional characteristics/benefits or consequences of using a brand, and the way the brand is characterised/brand personality. All the propositions of previous researchers are theoretical in nature. It appears that empirical supports to the theoretical propositions are scarce. The present research fills this research gap.

In general, the research results of this study support Plummer's (2000) proposition. However, this research further reveals that the perceived benefit/consequence component of brand image is not only restricted to functional characteristics as Plummer (2000) claimed. In fact, consumers also perceive experiential benefits (for example, fun) and symbolic related benefits (e.g. prestige). This research finding is consistent with the conventional benefit literature (see Park et al. 1986; Solomon 1987; Keller 1993), which suggests that the perceived benefit/consequence component of brand image should take a broader view, rather than limiting itself to functional characteristics.

The qualitative study of this research also suggests that consumers do perceive risks and even have security worries when facing the choice of BP and CBP. Consumers consider these perceived risks and security worries as possible purchase consequences. Nevertheless, the survey research reveals that the perceived risks and security worries do not fit in well with any factor extracted using factor analysis. This research suggests

that risk and security concerns should not be taken as a subcontract of the consequence component of the brand image. Obviously, these findings refine the brand image theory and enrich the brand image literature.

### 9.3.2 Methodological Contributions

#### Contribution to brand personality measure

This study tests the generalizability of Aaker's (1997) brand personality scale by examining the stability of the five brand personality dimensions in different empirical settings (different brand, different versions of a brand and different country). Despite the fact that Aaker's (1997) brand personality scale is commonly adopted, the current research reveals a number of shortcomings of this scale. The items included in the Aaker (1997) personality scale are not exhaustive. The qualitative research results show that two out of four tested brands take in new items, which implies that Aaker's (1997) scale is not exhaustive. More than two-thirds of the items included in the Aaker (1997) scale are considered irrelevant and unimportant to the studied brands. These findings are consistent across all studied brands. The number of remaining items ranges from 6 to 14 after testing, which is obviously far fewer than what Aaker (1997) recommended. The items remaining in the scale appear to be distinguishable across brands, which corresponds to the brand specific nature. In line with previous research, the present research finds that some items are difficult to understand for UK residents, as some items have different meanings to what they might have in America. In sum, consistent with prior researchers (e.g. Davies and Roper 2001; Koebel and Ladwein 1999), the current research provides empirical evidence to support the view that Aaker's (1997) personality scale is not problem-free and should not be considered as universally applicable.

That said, one thing that must be clarified is that this research has no intention whatsoever of devaluing Aaker's (1997) contribution to the brand personality measure development. On the contrary, what the present research has done is to regard the Aaker (1997) scale as a foundation of the brand personality traits of all the studied brands. The master list of the brand personality traits of each studied brand was generated mainly based on the brand personality traits included in the Aaker (1997) brand personality scale with brand personality traits extracted from other three sources as complementary. The level of importance and relevance of the pool of brand



personality traits were then tested using focus group discussions. The most important and relevant personality traits were retained for further examination. Consequently, the approach adopted by the current research not only enriches and customizes the brand personality of each brand, but at the same time it also helps to revalidate the scale. Therefore, it might be worth duplicating in future research.

#### Contribution to scale development

Given that this research is designed to investigate four brands and two versions (counterfeit and original) of each brand, a number of questions had to be asked more than once in the questionnaire. In some cases, they were repeated eight times. As a result, the initial research instrument was more than fourteen pages long. Considering the possibility that some potential respondents might be put off by the very lengthy questionnaire, and as repetition can accelerate boredom (McLauchlan 1987), the researcher developed a new technique which is applicable to research examination of more than one brand/product. This new technique was developed based on Kelly's (1955) repertory-grid technique and the commonly-adopted Likert scale (Likert 1932). Apart from retaining all the advantages of the repertory-grid technique and the Likert scale, the newly developed scales also reduce the possibility of "haloing" effects warned of by Beckwith and Lehmann (1975). In addition, the application of these scales reduced the length of the research instrument almost by half. For further details of the new technique, please refer to Chapter 5.

The applicability of this scale was tested in the principal study. In general, the majority of the respondents did not appear to have any difficulties in terms of responding to the structure of the new scale. Nevertheless, it appears that one fifth of the unusable questionnaires were the result of the use of the new scales. Considering that they only accounted for less than five percent of the total questionnaires collected, it is concluded that the new scale worked well in practice in the current study. Based on the identified problems related to use of this scale, it is further suggested that the usable response rate would be improved on a larger scale if later researchers/fieldworkers addressed the multiple uses of one statement to respondents. The newly developed scales provide alternative choices to future researchers who are interested in investigating multiple brands or products in their research.

### Contribution to measures of gender

This research first challenges the exhaustiveness of the conventional means in terms of categorising people as male and female. It appears that there might be an alternative gender category (or categories). Although only one respondent regards himself/herself as “intersexed”, this is sufficient to advise caution concerning how to address gender issues in future research. For example, ‘gay’ males might appear to be feminine and have similar preferences and even purchase behaviour to females. On the contrary, ‘gay’ females might appear to be masculine and behave similarly to males. Researchers should take this into account, as data collected from these groups might be different to those of other groups, and as a result might bias related research findings.

### Contribution to data analysis

Although numerous researchers have stressed the importance of meeting the assumptions of OLS before this technique is applied (e.g. Field 2005; Cohen et al. 2003), it appears that a number of researchers have not taken this suggestion into account in the study of counterfeiting (e.g. Wee et al. 1995). In agreement with Cordell et al. (1996), the current study argues that researchers should avoid any blind use of OLS in the study of the counterfeiting phenomenon. Additionally, this research provides a detailed discussion on the suitability of the conventional logistic regression and loglinear technique as a replacement for OLS when the normality assumption of GLM is broken, before it coming to the conclusion that OLS regression is considered more appropriate under current circumstances, subject to data transformation being conducted when necessary. The idea of the use of loglinear regression is discarded for the inclusion of factor scores in the regression models in the current study. Logistic regression is considered inappropriate due to the emergence of the severely uneven split of the data. This argument puts a question mark against the rationale for the use of logistic regression in Cordell et al. (1996).

The R Commander package’s `box.cox` and `box.tidwell` data transformation functions are applied for the first time in analysing counterfeiting related data. Through detailed discussion, this current research demonstrates that the conventional OLS and logistic regression statistics should be used with caution, particularly in the examination of consumers’ purchase intention of counterfeits and highly-priced original luxury branded products; it also presents future researchers with guidance on the analytical and



systematic procedures which should be followed before coming to a decision with regard to which statistics are more accurate for a specific research. The current research is the first to integrate the advantages of both SPSS and R software.

#### 9.4 Implications

The predominance of the brand personality variable in determinants of the consideration and the purchase intention of counterfeit and original luxury branded product challenges previous notions, such as perceived benefits usually being the most important in judgements of preference or choice (Lefkoff-Hagius and Mason 1993). The uniform positive influence of brand personality on purchase intention towards both counterfeit and original luxury branded products indicates there is a greater chance that consumers will make a purchase of the counterfeits over the original branded luxury products when they perceive the counterfeits possess a similar kind of brand personality to the original ones. Original luxury branded goods manufacturers should therefore try to differentiate their brand personality as much as possible from the counterfeit versions. This can be achieved by emphasising the brand personality differences of these two versions. As this research suggested earlier (Chapter 6), the ‘typical user, brand endorsers, company employees and the CEO of the company’ are the direct influential factors on consumer perceived brand personality. As such, marketing campaigns might gain remarkable success if they were set up around the themes of differences between the typical user, brand endorsers, company employees and the CEO of the company of the original luxury brand and the counterfeited versions.

Since the image benefit has a positive and significant effect on the consideration and the purchase intention of some specific counterfeit luxury brands, in their anti-counterfeit efforts these original luxury brand manufacturers could emphasis the distinctive image benefits the original branded products can bring to consumers and the diminishing of positive image benefits or even the negative image benefit related to the counterfeit versions. The message that needs to be communicated to consumers should be that no counterfeits can deliver the same image benefit projected by the original luxury branded products.

To stress the functional benefit of the original luxury branded products over the counterfeits would be a good strategy in terms of increasing sales for the manufacturers

of the function-oriented luxury original branded products, as the functional benefit appears to be significantly influential on consumers' purchase intention of the original function-oriented luxury branded products. Meanwhile, the function-oriented luxury original branded product manufacturers should always bear in mind that perceived functional benefit is their advantages and they should never compromise it on any occasion. Nevertheless, this strategy may not necessarily work well in terms of decreasing the consumer demand for counterfeit function-oriented luxury branded product due to there being no sign that the functional benefit has a negative relationship with purchase intention towards the function-oriented counterfeit luxury products. Given that the functional benefit has no effect on neither the consideration nor the purchase intention towards the fashion-oriented original luxury branded products, to emphasise the function benefit may not necessarily have any positive effect on sales of the fashion-oriented luxury branded products.

One thing which must be clarified is that the 'functional benefit' related to handbags refers to 'disposability', meaning 'with short but acceptable length of product life' and 'can be thrown away without too much concern about the financial loss involved'. Therefore, the research finding is in fact suggesting that the more likely it is that consumers believe that the counterfeit luxury branded products are disposable, the more chance there is that they are going to buy them. 'High level of disposability' and 'only a fraction of the price of the original luxury branded product' are two kinds of characteristic possessed by the counterfeits only, which the original luxury branded product cannot ever achieve. This appears to be a real challenge faced by the original luxury branded products manufacturers. To win this campaign from this particular aspect, this research would suggest that marketers or strategists of the original luxury branded products manufacturers should think about directing consumer consumption. For example, they could emphasise the importance of consuming the 'genuine product' and being 'genuine'; they could also stress the benefits and sense related to 'go for one which is really good, rather than for ten crappy things'. The image that needs to be established for the original luxury branded products should be 'genuine', 'green' and 'long-lasting'.

Integrating environmental protection and anti-counterfeiting tasks, policy makers can help to educate the public by informing them about the environmental concern caused



by a massive amount of disposable goods. This device might be more effective if the policy makers could provide the public with some solid figures in relation to how many disposables can be generated per head in a lifetime, the scope of environmental concerns caused by the counterfeit manufacturing process, as well as the consumption of counterfeits.

As interaction between the self-assessed product knowledge and the product involvement is found to be an important determinant in purchase intention of both counterfeit and original luxury branded products, consumers who scored higher values in the interaction variable are inclined towards the purchase of counterfeit and original branded products, except for the counterfeit Burberry. The effect of the interaction variables on the consideration and purchase intention is insufficient, although it appears to be significant. There are two implications for the original luxury branded product manufacturers. When one variable is held unchanged, improving the score of another variable will increase consumers' purchase tendency of both original and counterfeit luxury branded products. Looking at this result might give the first impression that this does not make any logical sense at all, particularly when the value of the product knowledge is held unchanged, since people will expect that consumers with higher product involvement are less counterfeit-prone. Nevertheless, as explained earlier, people with higher product involvement might buy counterfeit luxury goods for other purposes, or to use them in different situations to the original branded luxury ones. Acknowledging this, improving product knowledge and product involvement of a luxury branded product might have a positive effect on sales of the product, but it is not a device which will work effectively in terms of curbing counterfeits. Perhaps the marketers of the original luxury branded products may need to think seriously about the marketing mix strategy they adopt. According to the figures presented in Chapter 2, counterfeits are clearly taking a serious market share. Consumers buy counterfeits over the original ones to use them under certain consumption situations in the context of non-deceptive counterfeiting. Therefore, the marketers of the original luxury branded product manufactures could consider carrying out differentiated marketing, which involves targeting several market segments. Here one should be aware that this research is suggesting that the marketers should segment the markets according to the different product usage situation, but without segmenting the consumers.



The current research findings suggest that, generally speaking, demographic variables do not appear to have a significant effect on consumer purchase intention towards counterfeit and the original luxury branded products. This is particularly true with the purchase tendency towards the counterfeits. Nevertheless, there are two unique cases which show that age and gender or income do appear to be significantly influential. As a result, this research suggests that purchase intention is not only product-specific but also brand-specific too. In general, the findings relating to the demographic variables in this research support the recommendation concerning segmenting the markets according to the different product usage situations. This is in contrast to Wee et al. (1995), who recommend the segmentation of consumers according to their demographic profiles. However, the Gucci case does provide some evidence for Wee et al.'s (1995) suggestion. All in all, marketers should acknowledge the brand specific nature of the consumer purchase intention. They should work on an individual brand basis rather than following the traditional product specific rule in the study of counterfeits.

The discovery of the differences in the kinds and numbers of determinants of the consideration process and the purchase intention process has serious implications for marketers. It shows that, to some extent, consumers adopt different criteria to evaluate goods at different stages of the choice process, and the number of criteria used by the consumer decreases when nearing the final decision. As being included in the consideration set is, to a great extent, a necessary condition for ensuring a product is purchased (Hauser and Wernerfelt 1990; Kardes 1994; Roberts and Lattin 1991; Shocker et al. 1991; Nedungadi 1990), there is a need for marketers to be fully aware of the criteria utilised by their consumers to form the consideration set of the branded products of their interest. In addition, they should also acknowledge the determinants of the consumer purchase intention. The effectiveness assessment of their marketing strategy may need to take into account how well the strategy fits in with the identified determinants of the different stage of choice processes. So doing will lead to a more cost effective and efficient marketing strategy, and will provide them with clear ideas what they lose to competitors if their product is considered, but not chosen by their consumers. Given that the consideration set is dynamic, this requires the marketers to monitor the identified determinants of the consideration set and the purchase intention on a regular basis to ensure that the strategy modification is led in the right direction.



This research argues that marketers should never forget the salient role played by their consumers. There might be a gap between the brand identity they are trying to establish and the brand image which represents how consumers perceive their brands. This research suggests and demonstrates that the most scientific approach to obtaining the precise information about their brand image is to collect information from their potential consumers. The approach adopted in the current study sets up an example for marketers in terms of collecting accurate brand image data. Marketers have an important role to play in terms of attempting to build a certain brand identity. However, they have very limited control of the brand image. Nevertheless, they can achieve a good understanding of their consumers' perceptions of their brands by replicating the methods the current research has utilised, as these will help them to monitor the projected brand identity and readjust their brand identity if necessary.

### 9.5 Limitations

The present study is exploratory in nature, and to some extent lacks the sophistication and statistical rigours found in most confirmatory types of research. For instance, a convenience sample was used rather than a probability sample. Although the use of the convenience sample has been justified thoroughly from both theoretical and practical perspectives and the researcher is convinced of its practical advantages, the researcher is nevertheless still not entirely confident in claiming that the sampling method she adopted is better theoretically than probability sampling. As such, generalisability to the whole population of consumers may be limited to some extent.

With regard to the sample of the qualitative study, this research used small focus groups (five to six participants), and one group on each brand to create the list of brand image related items to be tested in the principal survey research. Even though the researcher and the observer were extremely well-prepared for the focus group discussions, and sincerely made every endeavour they could to keep it under their control, they still could not possibly avoid criticisms about having reached a conclusive list of items too quickly. It is accepted that more than one focus group on each brand would certainly appear to be more rigorous academically. However, considering the very tight budget and the time constraint, to conduct more focus group discussions would have been a luxury the researcher could not envisage. Consequently, the door is left open to a certain degree to the possibility of an inexhaustive and possibly biased pool of items.

In this research, only one version of CBP of each tested brand was used as stimulus. In reality, the tested original branded products might have a range of counterfeit versions (Gentry et al. 2001) available in the market place. The perceived image of these counterfeit versions might be distinguishable from each other even in the context of non-deceptive counterfeiting. Therefore, the research findings should be viewed with caution. More specifically, they might only be applicable to the counterfeit versions appearing in flea markets but not the ones sold in shopping malls, which are more likely to be better quality and higher price versions of counterfeits (Gentry et al. 2001).

The findings of this study are the outcome of an empirical analysis of the respondents' responses to four luxury brands in a stimulus-based situation. The findings cannot be used to make generalisations of generic brands. In addition, the research findings are not 'all-encompassing' because they do not consider deceptive counterfeiting and blur counterfeiting. Consumers might have different perceptions of the CBP in the cases of deceptive counterfeiting and blur counterfeiting in comparison to the non-deceptive counterfeiting, which would rebalance the explanatory power of the individual factors. As a result, it is likely that the factors with significantly influential power on the consideration set and the purchase intention could be different to the factors remaining in the models in this present study. Therefore, the research findings of this research should not be applied to deceptive counterfeiting and blur counterfeiting.

Neither did this research maintain the consistency of the stimuli used in this study. Real counterfeit examples (provided by the Trading Standards Glasgow) and pictures of the original BP as stimuli were used in the present study. The researcher is fully aware that some bias might occur due to using different product formats as stimuli. However, due to the studied brands being all highly-priced products, buying the genuine products was not an option due to the restricted research budget. Moreover, it is also considered that to provide the real original products to research participants in the field might cause security concerns to the field workers. Therefore, the use of pictures of the original branded products is regarded as acceptable under the specific circumstance. For the detailed justification of using different formats of stimuli, please refer to Chapter 5.



The very lengthy nature of the research questionnaire was a handicap of this research. As reported earlier, this was one of the direct reasons for the relatively high rate of unusable questionnaires collected. The researcher was fully aware of this shortcoming before the field work started. As can be clearly seen in Chapter 5, great effort was put into reducing the length of the research instrument. These include a piece of qualitative research and the development of a new scale suitable for measuring multiple brands or products. The length of the research instrument was reduced, but the final questionnaire covers seven pages (excluding the cover page and the contact information page), so it is still relatively long. However, the length of the research questionnaire was determined by the nature of this research. There was not much else the researcher could have done.

By law, manufacturing and selling counterfeits in the UK are crimes (see the Patent Office re the 2002 Act). Purchasing counterfeits is considered as morally unacceptable and even as supporting organised crime. This research data is based on consumers' self-reports, which means that the data collected could be influenced by the respondents' attempts to produce more socially acceptable responses. Therefore, there is a possibility that the data collected might be biased to a certain degree. In order to avoid this happening, a number of devices were adopted in this research (use of neutral language, clarification of the academic use of the data at the beginning of the questionnaire, displaying the figure that one-third of UK consumers knowingly purchase counterfeits). The researcher would certainly expect all her efforts to have assisted in minimizing the bias if not avoiding it completely.

This research only examined two product categories and two brands of each product category (watches and handbags). As consumer consideration and purchase intention of CBP and BP are found to be brand specific in this study, previous research suggests that consumer accomplices of counterfeits are product specific (e.g. Wee et al. 1995); as such, perhaps a more diverse choice of products and a more rigorous sampling procedure could have been adopted to improve the validity of this exploratory study. Saying that, to investigate more brands is a kind of luxury the researcher could not even contemplate under the financial budget for this research. The sampling procedure was also restrained by the budget and time limitation. The researcher has no intention of denying that there is a room for improvement. Nevertheless, the improvement could

have only been achieved if a much larger budget had been available and she had had more time for this piece of work.

In the case of non-deceptive counterfeiting, most of the time consumers encounter counterfeits with the absence of the BP. Therefore, the designed stimulus approach in the present study to some extent moves away from the real purchase situation of counterfeits. In fact, consumers often face a large set of counterfeit alternatives in the market place (which can be a variety of brands and different designs of one brand). Previous research findings based on the study of genuine products suggest that consumers use screening criteria to reduce the number of alternatives that will ultimately be compared. In a familiar purchase situation, a simple screening rule might rely on brand familiarity or memory accessibility (Desai and Hoyer 2000; Johnson and Lehman 1997). In a novel purchase situation, especially one that is stimulus based, the consumer is likely to focus on one or more attribute cut-offs (Chakravarti and Janiszewski 2003). If this holds true in the context of non-deceptive counterfeiting, it is not surprising that the current research findings to a certain degree might differ to the findings generated from data collected from any real market places.

This research used simple multiple regression analysis rather than multiple discriminant analysis, as the researcher felt that unless it was certain that the consumers' perceptions of the branded products were the determinants of the consideration and purchase intention in the context of non-deceptive counterfeits, using multiple discriminant analysis to distinguish between buyers and non-buyers of CBP and BP based on their demographics, consumers' perceptions of studied brands and consumer's attitudes towards the examined product categories (product involvement and self-assessed product knowledge) would perhaps be rather premature.

The research findings are preliminary in their nature. More fine-tuning is required, especially to address the methodological and statistical issues mentioned above. Despite these limitations, it is anticipated that the preliminary findings reported in this study will evoke greater research interest in the study of counterfeiting. It is also expected that the current work will engender future research activities which can contribute to our understanding of this aspect of consumer cognitive processes and final consumer behaviour.



## 9.6 Further Research

The counterfeiting phenomenon has attracted more and more research interest since counterfeits burgeoned in the 1970s. A great amount of academic research has emerged in both regional and international journals over the last two decades. Nevertheless, there do not exist any systematic review articles to synthesise the previous research. Consequently, research in the study of counterfeiting appears to be arbitrary to later researchers. A systematic review of the previous work can provide future researchers with guidance from both theoretical and methodological perspectives. In addition, a synthesis of the previous research findings would certainly assist in generating strategic and managerial implications, which are based on a broader view in comparison to any individual research.

This research tested the influence of the financial risks and the social risks on two individual stages of the consumer choice process in the context of non-deceptive counterfeiting. None of the tested types of the risks appeared to be statistically significant in either the consideration models or the purchase intention models. Psychological risk was not examined in this research. The reason for this sub-construct of the risk concept being left unexamined in this research is that the influential variables related to brand image were generated from focus group discussions, and the psychological risk did not appear to be a principal concern of the participants of the focus groups. However, this construct is found to be the best predictor of the overall risk in the context of non-deceptive counterfeiting (Veloutsou and Bian, forthcoming). Further research should investigate the effect of this particular sub-construct of the risk concept on consumer behaviour in the context of non-deceptive counterfeiting.

Despite the appealing and practical role played by the consideration set, a commonly accepted measure of this concept does not exist for the reason that this construct appears to be difficult to measure and quantify (Punj and Srinivasan 1989). Given the absence of a scientific measure of this construct, research related to the consideration set is restricted to investigating issues related to consideration set size and components. The studied brands/categories are categorised as either 'considered' or 'not considered'. With limited sources, the researcher found that the only exception was Troye (1983) who used a 5-item scale to measure this concept. However, as reported earlier in Chapter 5, Troye did not report how he developed this 5-item scale; neither did he test

the scale's reliability and validity. The researcher adopted this scale for the very simple reason that this measure was the only multi-item scale she could find. The scale's reliability and validity were tested in the present study and it proved to be both reliable and valid. Clearly, there is a need for developing a better consideration set measurement scale.

The empirical model would be a more sophisticated and more complex one, in which self-image construct is taken into consideration explicitly. Specifically, self-image might play a moderating role in the consideration and purchase intention models. Similarly, later researchers could extend the current research by examining the moderating role of the self-assessed product knowledge on consumer choice processes. Alternatively, they could also investigate the impact of the objective product knowledge on consumer behaviour in the non-deceptive counterfeiting. This would reveal whether heavy users would behave in the same way as light users of a particular brand/product when facing the choice of counterfeits.

Future research could test more brands (say around ten brands in one product category), including generic brands, using both similarity judgement and attribute-based multidimensional scaling techniques to explore where CBP and BP are located in the spatial map. This is consistent with Malhotra (1999), who suggested that eight brands or stimuli should be included to obtain a well-defined spatial map. Direct similarity judgement may be used for obtaining the spatial map, and attribute ratings may be used as an aid to interpret the dimensions of the perceptual map. Similar procedures can be used for preference data. These efforts will assist marketers to obtain a clear view as to where their brands stand in the market place where the counterfeits exist.

The present study investigated the determinants of the consideration set and the purchase tendency of both CBP and BP. Future research should examine whether these effects replicate when consumers' actual behaviour is measured. Ideally this should be conducted on the site of sales. The recommended research is worthwhile because purchase intention does not necessarily explain the final choice very well (e.g. Bonfield 1974). Thus, it would be interesting to see whether modelling the final choice would result in identical research results to modelling the purchase tendency in the context of non-deceptive counterfeiting.



This research discovered in the process of the preliminary qualitative study that the respondents encountered difficulties in defining the brand personality when the personality related to direct sources, and indirect sources do not stay at the same level (see Chapter 5 for details). In other words, the participants appeared to be confused when their perceived brand personalities did not match with their perceived personality of the brand's typical users, brand endorsers and company employees (direct source of brand personality according to Aaker (1997); the direct influential factors to brand personality according to this current research). Additionally, this research also revealed that the so-called direct sources of brand personality set out by Aaker (1997) are not exhaustive (see Chapter 5 for details). Considering the commonality of this confusion that appeared in the focus group participants, this research illustrates that this kind of confusion did not emerge by chance. It may have occurred in previous research, but it does not appear to have been reported. To explore this issue further is beyond the scope of the current research, and therefore remains unexamined in this research. It is proposed that it might be more accurate if Aaker's (1997) 'direct sources' of brand personality were renamed as 'influential factors' of brand personality. Whether there are any more 'influential factors' and how the 'influential factors' influence the perceived brand personality are matters to be explored. These are what future researchers should devote their efforts to.

If the sample size is large enough, when the severe skew effect appears, future researchers might consider separating the observations into flooring/ceiling cases and shifting cases. Here, the flooring cases refer to the observations of those who claimed 'strongly disagree', the ceiling cases are the observations of those who claimed 'strongly agree', with the shifting cases being observations of those who stated 'disagree', 'neutral', 'agree' and 'strongly agree' in relation to tests on the likelihood of consideration and purchase intention. Researchers might consider running regressions on the shifting observations data. This will provide insights about consumers who do not hold strong negative or positive purchase intentions towards the tested brand/product. In addition, an examination of demographic differences between the two groups might also provide some useful insights.

The current research only investigates the determinants of the consideration set and the purchase intention in the context of non-deceptive counterfeiting from the brand image level. It is still not quite clear whether the BP brand image is affected or not after entry of CBP. To achieve this, a before-after experimental design with control would enable researchers to observe the potential change in brand image as a result of the entry of CBP. This type of design has been used by a number of previous studies in the study of brand extension (e.g. Diamantopoulos et al. 2005; Morrin 1999) due to its high level of control in accounting for extraneous factors which can assist in enhancing the internal validity of the research (Calder et al. 1981).

The research results of the present research show strong influence of the perceived brand personality on the purchase intention and consideration models. This dominant, positive and significant influence is consistent across all studied brands and two versions of each brand. All studied brands are luxury brands in this study. As such, it may be interesting as future research to investigate generic brands, for which consumers' perceived brand personality level might differ to that of luxury brands. Given that this research is conducted in the UK context, additional research is necessary to support firmly the suitability of the consumer-related measures and models across cultures. Therefore, the study should be replicated to other types of products, larger samples and in other culture groups.



# Appendix

## **Appendix 1 Letter to Supermarkets**

General Manager  
Asda Superstores  
20, Rothes Drive  
Glasgow G23 5EZ

25<sup>th</sup> October 2005

Dear General Manager

### **Your Assistance in Academic Research**

I am writing to you to ask for your assistance in a piece of **academic research** concerning the study of **consumer perceptions** of counterfeit branded products as opposed to genuine branded products. The studied brands are Louis Vuitton, Burberry, Gucci and Rolex. This study is being undertaken by the Business and Management School at the **University of Glasgow** as a part of my **doctoral research**.

Your store has been selected as a potential site for data collection. I would be grateful if you will allow this research to be conducted at the entrance of your store. If so, a well trained interviewer wearing a badge with his/her name, and the university logo will collect data at the entrance of your store between 15<sup>th</sup> November 2005 and 30<sup>th</sup> November 2005.

Every *nth* shopper is met by the interviewer who wishes the individual good morning (evening) and asks whether the subject is a Glasgow resident. The Glasgow resident is offered a package of chocolate (worth about £2.50). The interviewer then introduces him/herself as a student working on a university research project and asks the shopper to participate in a 15-20 minutes survey and ensures confidentiality.

I wonder whether you would be able to provide the interviewer with a desk and two chairs at the entrance of your store for displaying the samples used in this study and for the use of the survey participants. We would certainly greatly appreciate whatever help you can provide in assisting completion of this research.

As a doctoral researcher, I am unable to offer you anything other than purchasing the chocolate used in this research from your store. However, if you are interested in our research findings, I am willing to develop a specific executive summary of the findings, as well as the implications at the end of the project, as a mark of my gratitude for the help you provide.

Once again, I would like to express my sincere thanks for your help. I look forward to hearing from you very soon.

Yours sincerely

(Doctoral Researcher) Xuemei Bian

Supervisors: Professor Luiz Moutinho  
Chair of Marketing  
Professor Angus Laing  
Head of Business and Management School





FAO Xuemei Bian  
Business and Management School  
University of Glasgow  
Gilbert Scott Building  
GLASGOW  
G12 8QQ

Tesco Stores Ltd.  
Westbourne Centre  
Kelburn Street  
Barrhead  
Glasgow  
G78 1LS

0141 532 7300

10/11/05

Dear Xuemei,

Thank you for your letter regarding academic research.

I am very sorry but we will be unable to accommodate you on this occasion due to the lack of space and also the time of year.

I would like to wish you well for the future.

Yours sincerely,  
For and on Behalf of  
Tesco Stores Ltd.

A handwritten signature in black ink, appearing to read 'M. Leslie', is written over the printed name.

Murray Leslie  
Store Manager

## Appendix 3 Response from Supermarket 2

Print - Close Window

**From:** "Loraine Weir" <loraineweir@fsmail.net>  
**To:** xuemeibian1@yahoo.com  
**Subject:** Study of consumer perceptions at Tesco Milngavie  
**Date:** Mon, 7 Nov 2005 21:37:58 +0100 (CET)

Dear Mr Bian,

Regarding your letter dated the 26th of October 2005 to carry out some research at Tesco Milngavie on consumer perception, between the 15th November and 30th of November 2005.

I am unable to allow you to do this as all research, charity collections etc, has to go through our Head Office who authorise this and provide you with a headed letter, stating that you can carry out this research. This is to ensure we do not have people double booked and too much congestion at the store.

If you would still like to carry out this research you can contact our head office at:

Tesco Stores Ltd, Tesco House, Delamare Road, Cheshunt, Hertfordshire, EN8 9SL.

Sorry for the delay in replying to your letter, but I have only just received it.

If you would like to discuss this further with me, you can contact me at the store on 0141 532 7465.

Yours Sincerely

Loraine Weir

Services Manager

Tesco Milngavie





UNIVERSITY  
of  
GLASGOW

## An Examination of the Factors Influencing the Formation of the Consideration set and Consumer Purchase Intention in the Context of Non-deceptive Counterfeiting

by

Xuemei Bian

Your participation is **absolutely crucial** to the completion of this research. Any information you provided will be kept **strictly confidential**. Information identifying the respondent will not be disclosed under any circumstances.

In case you require **further explanation**, please contact Mrs. Xuemei Bian at [x.bian.1@research.gla.ac.uk](mailto:x.bian.1@research.gla.ac.uk) or on: 0141 330 2000 (ext: 0311).

Before you start completing this questionnaire, please note that:

- **Counterfeit product**: Counterfeit products are those bearing a trademark that is identical to, or indistinguishable form, a trademark registered to another party.
- Research findings suggests that about **one third** of British people knowingly purchase counterfeit branded products.
- There are **no right or wrong answers** to the following statements.
- We are interested in **your opinion** even if you have no direct experience with any counterfeit product. In this study, you are provided with counterfeit examples and pictures of original branded products. Please base your opinion on the objects provided to you.



Questionnaire on Counterfeit and Original Branded Products

A: How aware are you of counterfeit goods?

1. What counterfeit goods do you believe are available in Glasgow? (Tick all that apply)

Clothing

☐

Footwear

☐

Watches

☐

Electronic products

☐

Jewellery

☐

Perfume

☐

Alcohol

☐

Other

☐

2. Have you bought counterfeit goods before? (Tick one that applies)

Yes

☐

No

☐

3. Please indicate what you bought that was counterfeit goods? (Tick all that apply)

Clothing

☐

Footwear

☐

Watches

☐

Electronic products

☐

Jewellery

☐

Perfume

☐

Alcohol

☐

Other

☐

B: How interested are you in watches and handbags?

Please circle one appropriate number (1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5: strongly agree) to express your level of agreement.

For example:

0

Watches are important to me.

Strongly disagree

1

2

3

4

Strongly agree

5

	Watches	Strongly disagree		Neutral		Strongly Agree
1	Watches are important to me.	1	2	3	4	5
2	I get bored when people talk to me about watches.	1	2	3	4	5
3	Watches mean a lot to me.	1	2	3	4	5
4	I perceive watches as exciting products.	1	2	3	4	5
5	I like watches.	1	2	3	4	5
6	Watches matter to me.	1	2	3	4	5
7	Watches are interesting products.	1	2	3	4	5
8	Watches are great fun.	1	2	3	4	5
9	Watches are appealing to me.	1	2	3	4	5
10	I care about the watches I buy.	1	2	3	4	5

	Handbags	Strongly disagree		Neutral		Strongly agree
11	Handbags are important to me.	1	2	3	4	5
12	I get bored when people talk to me about handbags.	1	2	3	4	5
13	Handbags mean a lot to me.	1	2	3	4	5
14	I perceive handbags as exciting products.	1	2	3	4	5
15	I like handbags.	1	2	3	4	5
16	Handbags matter to me.	1	2	3	4	5
17	Handbags are interesting products.	1	2	3	4	5
18	Handbags are great fun.	1	2	3	4	5
19	Handbags are appealing to me.	1	2	3	4	5
20	I care about the handbags I buy.	1	2	3	4	5





C: How knowledgeable are you about watches and handbags?

Please circle one appropriate number (1: strongly disagree, 2: disagree; 3: neutral, 4: agree; 5: strongly agree) to express your level of agreement.

For example:

0	I feel very knowledgeable about watches.	Strongly disagree 1	2	Neutral 3	4	Strongly agree 5
---	--	------------------------	---	--------------	---	---------------------

Watches 		Strongly disagree				Strongly agree
1	I feel very knowledgeable about watches.	1	2	3	4	5
2	I can give people advice about different brands of watches.	1	2	3	4	5
3	I only need to gather very little information in order to make a wise decision.	1	2	3	4	5
4	I feel very confident about my ability to tell the difference in quality between different brands of watches.	1	2	3	4	5


Handbags 		Strongly disagree				Strongly agree
5	I feel very knowledgeable about handbags.	1	2	3	4	5
6	I can give people advice about different brands of handbags.	1	2	3	4	5
7	I only need to gather very little information in order to make a wise decision.	1	2	3	4	5
8	I feel very confident about my ability to tell the difference in quality between different brands of handbags.	1	2	3	4	5


D: What do you think about the design features of these four brands?

Please circle one appropriate number (1: strongly disagree, 2: disagree; 3: neutral, 4: agree; 5: strongly agree) to express your level of agreement.


For example:


		Original Rolex					Counterfeit Rolex				
		Strongly disagree				Strongly agree	Strongly disagree				Strongly agree
0	I can get the size I want.	1	2	3	4	5	1	2	3	4	5

Watches 		Original Rolex					Counterfeit Rolex				
		Strongly disagree				Strongly agree	Strongly disagree				Strongly agree
1	I can get the size I want.	1	2	3	4	5	1	2	3	4	5
2	It is expensive.	1	2	3	4	5	1	2	3	4	5
3	The packaging is good.	1	2	3	4	5	1	2	3	4	5
4	The watch is waterproof.	1	2	3	4	5	1	2	3	4	5
5	It is Swiss made.	1	2	3	4	5	1	2	3	4	5
6	The materials are good.	1	2	3	4	5	1	2	3	4	5
7	They have the style I like.	1	2	3	4	5	1	2	3	4	5
8	The product is practical.	1	2	3	4	5	1	2	3	4	5

Watches 		Original Gucci					Counterfeit Gucci				
		Strongly disagree				Strongly agree	Strongly disagree				Strongly agree
9	I can get the size I want.	1	2	3	4	5	1	2	3	4	5
10	It is expensive.	1	2	3	4	5	1	2	3	4	5
11	The materials are good.	1	2	3	4	5	1	2	3	4	5
12	They have the style I like	1	2	3	4	5	1	2	3	4	5
13	The product is practical	1	2	3	4	5	1	2	3	4	5



Handbags 		Original Burberry					Counterfeit Burberry				
		Strongly disagree				Strongly agree	Strongly disagree				Strongly agree
14	I can get the size I want.	1	2	3	4	5	1	2	3	4	5
15	It is expensive.	1	2	3	4	5	1	2	3	4	5
16	The materials are good.	1	2	3	4	5	1	2	3	4	5
17	They have the style I like	1	2	3	4	5	1	2	3	4	5
18	I can get the colour I want.	1	2	3	4	5	1	2	3	4	5
19	The product is practical.	1	2	3	4	5	1	2	3	4	5


Handbags 		Original Louis Vuitton					Counterfeit Louis Vuitton				
		Strongly disagree				Strongly agree	Strongly disagree				Strongly agree
20	I can get the size I want.	1	2	3	4	5	1	2	3	4	5
21	It is expensive.	1	2	3	4	5	1	2	3	4	5
22	The materials are good.	1	2	3	4	5	1	2	3	4	5
23	They have the style I like	1	2	3	4	5	1	2	3	4	5
24	I can get the colour I want.	1	2	3	4	5	1	2	3	4	5
25	The product is practical.	1	2	3	4	5	1	2	3	4	5

**E: What the benefit or consequences be for you, in buying these goods?**

Please circle the appropriate number (**1: strongly disagree, 2: disagree; 3: neutral, 4: agree; 5: strongly agree**) to express the level of your agreement.

For example:

		Original Rolex					Counterfeit Rolex				
		Strongly disagree				Strongly agree	Strongly disagree				Strongly agree
0	In buying this version, you get high standard quality.	1	2	3	4	5	1	2	3	4	5

Watches 		Original Rolex					Counterfeit Rolex				
		-				+	-				+
1	In buying this version, you get a high standard of quality.	1	2	3	4	5	1	2	3	4	5
2	This product is a statement of your self-image.	1	2	3	4	5	1	2	3	4	5
3	This product can bring you fun.	1	2	3	4	5	1	2	3	4	5
4	The quality of the product merits the price.	1	2	3	4	5	1	2	3	4	5
5	In buying this product, you get value for money for the status it brings you.	1	2	3	4	5	1	2	3	4	5
6	You can throw it away after a while.	1	2	3	4	5	1	2	3	4	5
7	This product brings you exclusivity.	1	2	3	4	5	1	2	3	4	5
8	This product can make you attract other people's attention.	1	2	3	4	5	1	2	3	4	5
9	This product can bring you prestige.	1	2	3	4	5	1	2	3	4	5
10	This product may not function well.	1	2	3	4	5	1	2	3	4	5
11	This product might make you become a target for muggers.	1	2	3	4	5	1	2	3	4	5
12	You are concerned about being found out by your peers for using this product.	1	2	3	4	5	1	2	3	4	5
13	In buying this product, you are concerned about financial loss.	1	2	3	4	5	1	2	3	4	5




Watches 		- Original Gucci +					- Counterfeit Gucci +				
		Strongly Disagree				Strongly agree	Strongly Disagree				Strongly agree
		1	2	3	4	5	1	2	3	4	5
14	In buying this version, you get a high standard of quality.										
15	This product is a statement of your self-image.										
16	This product can bring you fun.										
17	The quality of the product merits the price.										
18	In buying this product, you get value for money for the status it brings you.										
19	You can throw it away after a while.										
20	This product brings you exclusivity.										
21	This product can make you attract other people's attention.										
22	This product can bring you prestige.										
23	This product may not function well.										
24	This product gives people impression that what you wear is fashionable.										
25	You are concerned about being found out by your peers for using this product.										
26	In buying this product, you are concerned about financial loss.										
Handbags 		- Original Burberry +					- Counterfeit Burberry+				
		1	2	3	4	5	1	2	3	4	5
27	In buying this version, you get a high standard of quality.										
28	This product is a statement of your self-image.										
29	This product can bring you fun.										
30	The quality of the product merits the price.										
31	In buying this product, you get value for money for the status it brings you.										
32	You can throw it away after a while.										
33	This product brings you exclusivity.										
34	This product can make you attract other people's attention.										
35	This product might not last long.										
36	You are concerned about being found out by your peers for using this product.										
37	You are concerned about being singled out by society for using this product.										
38	In buying this product, you are concerned about financial loss.										
Handbags 		-Original Louis Vuitton+					-Counterfeit LouisVuitton+				
		1	2	3	4	5	1	2	3	4	5
39	In buying this version, you get a high standard of quality.										
40	This product is a statement of your self-image.										
41	This product can bring you fun.										
42	The quality of the product merits the price.										
43	In buying this product, you get value for money for the status it brings you.										
44	You can throw it away after a while.										
45	This product brings you exclusivity.										
46	This product can make you attract other people's attention.										
47	This product can bring you prestige.										
48	This product may not last long.										
49	This product gives people impression that what you wear is fashionable.										
50	This product might make you become a target for muggers.										
51	You are concerned about being found out by your peers for using this product.										
52	You are concerned about become a target of anti-capitalists for using this product										
53	In buying this product, you are concerned about financial loss.										




F: What characteristics would these brands have if they were people?


We would like you to think of each version of a brand as if it was a person. Think of the set of human characteristics associated with each brand. For example, you might think that the human characteristics associated with Mercedes Benz are *smart*, *successful*, and *prestigious*. Please **circle** the appropriate number (1: **not at all descriptive**, 2: **not very descriptive**; 3: **neutral**, 4: **descriptive**; 5: **extremely descriptive**) to indicate the level of descriptive of the adjectives provided.


For example:		Original Rolex					Counterfeit Rolex				
		Not at all descriptive				Extremely descriptive	Not at all descriptive				Extremely descriptive
0	Cheerful	1	2	3	4	5	1	2	3	4	5

Watches 		Original Rolex					Counterfeit Rolex				
		Not at all descriptive				Extremely descriptive	Not at all descriptive				Extremely descriptive
1	Cheerful	1	2	3	4	5	1	2	3	4	5
2	Young	1	2	3	4	5	1	2	3	4	5
3	Independent	1	2	3	4	5	1	2	3	4	5
4	Reliable	1	2	3	4	5	1	2	3	4	5
5	Hardworking	1	2	3	4	5	1	2	3	4	5
6	Secure	1	2	3	4	5	1	2	3	4	5
7	Successful	1	2	3	4	5	1	2	3	4	5
8	For leader	1	2	3	4	5	1	2	3	4	5
9	Confident	1	2	3	4	5	1	2	3	4	5
10	Glamorous	1	2	3	4	5	1	2	3	4	5
11	Classic	1	2	3	4	5	1	2	3	4	5

Watches 		Original Gucci					Counterfeit Gucci				
		Not at all descriptive				Extremely descriptive	Not at all descriptive				Extremely descriptive
12	Trendy	1	2	3	4	5	1	2	3	4	5
13	Exciting	1	2	3	4	5	1	2	3	4	5
14	Cool	1	2	3	4	5	1	2	3	4	5
15	Contemporary	1	2	3	4	5	1	2	3	4	5
16	Reliable	1	2	3	4	5	1	2	3	4	5
17	Secure	1	2	3	4	5	1	2	3	4	5
18	Corporate	1	2	3	4	5	1	2	3	4	5
19	Successful	1	2	3	4	5	1	2	3	4	5
20	Glamorous	1	2	3	4	5	1	2	3	4	5
21	Good looking	1	2	3	4	5	1	2	3	4	5
22	Smooth	1	2	3	4	5	1	2	3	4	5
23	Classic	1	2	3	4	5	1	2	3	4	5
24	Beautiful	1	2	3	4	5	1	2	3	4	5
25	Elegant	1	2	3	4	5	1	2	3	4	5




Handbags 		Original Burberry					Counterfeit Burberry				
		Not at all descriptive				Extremely descriptive	Not at all descriptive				Extremely descriptive
26	Down to earth	1	2	3	4	5	1	2	3	4	5
27	Original	1	2	3	4	5	1	2	3	4	5
28	Unique	1	2	3	4	5	1	2	3	4	5
29	Contemporary	1	2	3	4	5	1	2	3	4	5
30	Reliable	1	2	3	4	5	1	2	3	4	5
31	Corporate	1	2	3	4	5	1	2	3	4	5
32	Successful	1	2	3	4	5	1	2	3	4	5
33	Feminine	1	2	3	4	5	1	2	3	4	5
34	Outdoorsy	1	2	3	4	5	1	2	3	4	5


Handbags 		Original Louis Vuitton					Counterfeit Louis Vuitton				
		Not at all descriptive				Extremely descriptive	Not at all descriptive				Extremely descriptive
35	Trendy	1	2	3	4	5	1	2	3	4	5
36	Contemporary	1	2	3	4	5	1	2	3	4	5
37	Successful	1	2	3	4	5	1	2	3	4	5
38	Upper class	1	2	3	4	5	1	2	3	4	5
39	Feminine	1	2	3	4	5	1	2	3	4	5
40	Smooth	1	2	3	4	5	1	2	3	4	5

**G: Will you consider buying these watches and handbags?**

Please circle one appropriate number (1: **strongly disagree**, 2: **disagree**; 3: **neutral**, 4: **agree**; 5: **strongly agree**) to express your level of agreement.

For example:		Original Rolex					<i>Counterfeit</i> Rolex					Original Gucci					<i>Counterfeit</i> Gucci				
		-				+	-				+	-				+	-				+
I would definitely consider		1	2	3	2	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
buying these watches.																					

Watches 	Original Rolex					Counterfeit Rolex					Original Gucci					Counterfeit Gucci				
	-				+	-				+	-				+	-				+
I would consider buying these watches.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I would recommend these watches.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
These watches are attractive to me.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
These watches are acceptable to purchase.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
These watches are acceptable within the price range I am willing to pay.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

Handbags 	Original Burberry					<i>Counterfeit Burberry</i>					Original Louise Vuitton					<i>Counterfeit Louise Vuitton</i>				
	-				+	-				+	-				+	-				+
I would consider buying one these handbags.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I would recommend these handbags.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
These handbags are attractive to me.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
These handbags are acceptable to purchase.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
These handbags are acceptable within the price range I am willing to pay.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5







**Contact information**

Your time and effort in relation to completion of this question is ***very much appreciated***. In case that we need to contact you for additional information associated to this questionnaire, could we contact you? Please **tick** one that applies.

Yes ☐ No ☐

We would ***highly appreciate*** if you could provide us with your ***contact details***, but if you would prefer to remain anonymous, please return the questionnaire with the following section blank.

Your name: .....

Address: .....

.....

.....

Telephone no: .....

Email address:.....

**If you have decided not to participate**

**Please list reasons for not being able to participate in this research:**

Thank you very much for your cooperation!

## Appendix 5 Cover Letter

10th November 2005

Dear Participant

I would like to invite you to participate in a piece of *academic research* on study of consumers' perceptions of counterfeit branded products as opposed to genuine branded products. This study is undertaken by the Business and Management School at the University of Glasgow as a part of my *doctoral research*.

Previous research reveals that *consumer demand for counterfeit products* is one of the reasons why this practice is booming despite societies' effort in trying to curb it. Therefore, *your participation is absolutely crucial* to the successful completion of this research, and to the completion of my PhD.

It doesn't matter whether or not you buy counterfeit products, you are still qualified to participate. Please complete the attached questionnaire to *help me*. The questionnaire is designed to be *user-friendly*. It will take you about *15 to 25* minutes to complete.

Any information provided by you will be kept *strictly confidential* and is for *academic use only*. Information identifying the respondent *will not be disclosed* under any circumstances.

Once more I would like to stress that your participation is *critical* in completing this research and would be *highly appreciated*. Should you have any query about this in relation to this question, please do not hesitate to contact me on 0141 3302000 (ext: 0311), alternatively you can email me at [X.Bian.1@research.gla.ac.uk](mailto:X.Bian.1@research.gla.ac.uk).

Yours sincerely

Xuemei Bian

PhD Candidate

Business and Management School

University of Glasgow



## **Appendix 6 Letter to Potential Focus Group Participants**

9<sup>th</sup> June 2005

Dear Participant

I would like to invite you to participate in a focus group discussion about consumers' perceptions of counterfeit branded products as opposed to original branded products. This study is undertaken by the Business and Management School at the University of Glasgow as a part of my doctoral research.

In this study counterfeit products are those bearing a trademark that is identical to, or indistinguishable from, a trademark registered to another party. During the last three decades counterfeiting has grown as a global phenomenon. The UK is considered to be one of the main recipients of counterfeits in the world and sales of these products are extensive in the UK. There is no doubt that as an individual you are influenced by counterfeit products at least indirectly, if not directly.

It has been widely accepted that consumer demand for counterfeit products is one of the reasons why this practice is booming. This research sets up the study of consumers' perceptions of counterfeit branded products and branded product and investigation of influence of counterfeit branded products on consumer decision-making process as its research aims. Therefore, your participation is absolutely crucial to the successful completion of this research, and to the completion of my PhD.

During the focus group, you will have the chance to show your knowledge about counterfeit branded products and branded products, and to express your perceptions of them. There are no right or wrong answers. Personal perceptions are what this part of research is trying to find out. Any information provided by you will be strictly confidential and is for academic use only.

Four focus groups will be conducted on:

- 27<sup>th</sup> June (Monday) (12.30-2.30)
- 2<sup>nd</sup> July (Saturday) (5.00-7.00)
- 6<sup>th</sup> July (Wednesday) (5.30-7.30)
- 10<sup>th</sup> July (Sunday) (3.00-5.00).

Each focus group will last between one and one and a half hours.

All focus groups will be conducted in Room 2a on level 1, at the Business and Management School. Please find the full address of the venue from the back of your appointment card. Tea, coffee, biscuits and Chinese dessert is provided before and after the focus group discussion.

Once more I would like to stress that your participation is very important for this study and will be highly appreciated. Please choose a time suitable for you from the Appointment Card and write down your name and contact number in the place provided in the back of the cards and return one of them to the person who contacted you and keep one for your own reference.

Please also find enclosed my contact card. Should you have any query, please do feel free to contact me.

Yours sincerely,

Xuemei Bian  
Doctoral Researcher



Appendix 7 Appointment Card and Researcher Contact Card

Appointment card (front)

	12.30– 2.30	5.30– 7.30	3.00– 5.00	5.00– 7.00	Attend (please tick)
27 <sup>th</sup> June (Mon)	Focus group				
6 <sup>th</sup> July (Wed)		Focus group			
10 <sup>th</sup> July (Sun)			Focus group		
2 <sup>nd</sup> July (Sat)				Focus group	

Appointment card (back)

Your name: .....  
Your telephone number:.....  
Your email: .....  
Venue of focus group:  
Room **2a** ,Level **1**  
Business and Management School  
Gilbert Scott Building  
University of Glasgow G12 8QQ

The researcher’s contact card

**Xuemei Bian** (Doctoral Researcher)  
607C  
Gilbert Scott Building  
Business and Management School  
University of Glasgow G12 8QQ  
Tel: 0141 3302000 (Ext: 0311)  
Fax: 0141 3305669  
Email: xuemeibian1@yahoo.com



Appendix 8
Descriptive Statistics of Involvement, Knowledge, Consideration Set and Purchase Intention

	N	Range	Min	Max	Mean	Std. Deviation	Variance
Watches are important to me.	321	4	1	5	3.23	1.183	1.398
I do not get bored when people talk to me about watches.	321	4	1	5	2.60	1.195	1.428
Watches mean a lot to me.	321	4	1	5	2.78	1.188	1.410
I perceive watches as exciting products.	321	4	1	5	2.74	1.130	1.277
I like watches.	321	4	1	5	3.46	.958	.918
Watches matter to me.	321	4	1	5	3.09	1.116	1.245
Watches are interesting products.	321	4	1	5	2.95	1.052	1.107
Watches are great fun.	321	4	1	5	2.59	1.018	1.037
Watches are appealing to me.	321	4	1	5	3.05	1.073	1.150
I care about the watches i buy.	321	4	1	5	3.53	1.202	1.444
Handbags are important to me.	277	4	1	5	2.99	1.472	2.167
I do not get bored when people talk to me about handbags.	277	4	1	5	3.12	1.372	1.883
Handbags mean a lot to me.	277	4	1	5	2.79	1.314	1.726
I perceive handbags as exciting products.	277	4	1	5	2.83	1.342	1.801
I like handbags.	277	4	1	5	3.18	1.397	1.953
Handbags matter to me.	277	4	1	5	2.87	1.353	1.831
Handbags are interesting products.	277	4	1	5	2.90	1.365	1.862
Handbags are great fun.	277	4	1	5	2.77	1.317	1.734
Handbags are appealing to me.	277	4	1	5	3.01	1.417	2.007
I care about the handbags I buy.	277	4	1	5	3.18	1.517	2.301
I feel very knowledgeable about watches.	321	4	1	5	2.50	1.116	1.245
I can give advice about different brands of watches.	321	4	1	5	2.18	1.154	1.332
I only need to gether very little information in order to make a wise decision.	321	4	1	5	2.89	1.043	1.089
I feel very confident about my ability to tell the difference in quality between different brands of watches.	321	4	1	5	2.76	1.194	1.427
I feel very knowledgeable about handbags.	277	4	1	5	2.39	1.262	1.594
I can give advice about different brands of handbags.	277	4	1	5	2.28	1.259	1.585
I only need to gether very little information in order to make a wise decision.	277	4	1	5	2.57	1.215	1.477
I feel very confident about my ability to tell the difference in quality between different brands of handbags.	277	4	1	5	2.58	1.340	1.795
I can get the size I want.	321	4	1	5	3.84	1.096	1.201
I would consider buying these watches.	321	4	1	5	2.73	1.512	2.286
I would recommend these watches.	321	4	1	5	3.36	1.419	2.013
These watches are attractive to me.	321	4	1	5	3.25	1.473	2.171
These watches are acceptable of purchase.	321	4	1	5	3.35	1.417	2.008
These watches are acceptable within the price range I am willing to pay.	321	4	1	5	2.37	1.368	1.872
I would consider buying these watches.	321	4	1	5	1.96	1.242	1.542
I would recommend these watches.	321	4	1	5	1.79	1.065	1.134
These watches are attractive to me.	321	4	1	5	2.01	1.214	1.475
These watches are acceptable of purchase.	321	4	1	5	2.04	1.239	1.536
These watches are acceptable within the price range I am willing to pay.	321	4	1	5	2.50	1.473	2.170
I would consider buying these watches.	321	4	1	5	2.95	1.483	2.200
I would recommend these watches.	321	4	1	5	3.32	1.365	1.862
These watches are attractive to me.	321	4	1	5	3.35	1.415	2.003
These watches are acceptable of purchase.	321	4	1	5	3.30	1.397	1.953
These watches are acceptable within the price range I am willing to pay.	321	4	1	5	2.56	1.382	1.909
I would consider buying these watches.	321	4	1	5	1.98	1.277	1.631
I would recommend these watches.	321	4	1	5	1.76	1.031	1.063
These watches are attractive to me.	321	4	1	5	1.99	1.237	1.531
These watches are acceptable of purchase.	321	4	1	5	1.96	1.209	1.461
These watches are acceptable within the price range I am willing to pay.	321	4	1	5	2.46	1.468	2.156
I would consider buying one these handbags.	278	4	1	5	2.31	1.466	2.148
I would recommend these handbags.	277	4	1	5	2.60	1.509	2.277
These handbags are attractive to me.	277	4	1	5	2.56	1.530	2.342
These handbags are acceptable of purchase.	277	4	1	5	2.85	1.541	2.375
These handbags are acceptable within the price range I am willing to pay.	277	4	1	5	2.37	1.407	1.981
I would consider buying one these handbags.	277	4	1	5	1.66	1.081	1.168
I would recommend these handbags.	277	4	1	5	1.61	.975	.950
These handbags are attractive to me.	277	4	1	5	1.75	1.115	1.244
These handbags are acceptable of purchase.	277	4	1	5	1.79	1.059	1.121
These handbags are acceptable within the price range I am willing to pay.	277	4	1	5	2.16	1.355	1.837



I would consider buying one these handbags.	277	4	1	5	2.73	1.497	2.242
I would recommend these handbags.	277	4	1	5	2.95	1.460	2.132
These handbags are attractive to me.	277	4	1	5	3.02	1.496	2.239
These handbags are acceptable of purchase.	277	4	1	5	3.07	1.425	2.031
These handbags are acceptable within the price range I am willing to pay.	277	4	1	5	2.50	1.369	1.874
I would consider buying one these handbags.	277	4	1	5	1.86	1.221	1.491
I would recommend these handbags.	277	4	1	5	1.77	1.085	1.176
These handbags are attractive to me.	277	4	1	5	1.94	1.204	1.449
These handbags are acceptable of purchase.	277	4	1	5	1.91	1.154	1.332
These handbags are acceptable within the price range I am willing to pay.	277	4	1	5	2.26	1.396	1.948
I have intention to buy these watches.	321	4	1	5	2.09	1.322	1.747
I intend to buy these watches.	321	4	1	5	1.98	1.237	1.531
I have high purchase interest of these watches.	321	4	1	5	2.03	1.285	1.652
I buy these watches.	321	4	1	5	1.74	1.174	1.378
I probably buy these watches.	321	4	1	5	1.94	1.288	1.659
I have intention to buy these watches.	321	4	1	5	1.59	1.055	1.112
I intend to buy these watches.	321	4	1	5	1.48	.929	.863
I have high purchase interest of these watches.	321	4	1	5	1.48	.936	.875
I buy these watches.	321	4	1	5	1.41	.925	.855
I probably buy these watches.	321	4	1	5	1.43	.913	.834
I have intention to buy these watches.	321	4	1	5	2.28	1.331	1.773
I intend to buy these watches.	321	4	1	5	2.09	1.259	1.585
I have high purchase interest of these watches.	321	4	1	5	2.17	1.323	1.751
I buy these watches.	321	4	1	5	1.84	1.197	1.432
I probably buy these watches.	321	4	1	5	2.03	1.283	1.646
I have intention to buy these watches.	321	4	1	5	1.61	1.052	1.107
I intend to buy these watches.	321	4	1	5	1.50	.929	.863
I have high purchase interest of these watches.	321	4	1	5	1.49	.919	.844
I buy these watches.	321	4	1	5	1.45	.934	.873
I probably buy these watches.	321	4	1	5	1.50	1.007	1.013
I have intention to buy these handbags.	277	4	1	5	1.79	1.157	1.338
I intend to buy these handbags.	277	4	1	5	1.71	1.104	1.219
I have high purchase interest of these handbags.	277	4	1	5	1.71	1.138	1.295
I buy these handbags.	277	4	1	5	1.58	1.069	1.143
I probably buy these handbags.	277	4	1	5	1.64	1.093	1.195
I have intention to buy these handbags.	277	4	1	5	1.37	.844	.713
I intend to buy these handbags.	277	4	1	5	1.35	.805	.648
I have high purchase interest of these handbags.	277	4	1	5	1.40	.898	.806
I buy these handbags.	277	4	1	5	1.36	.864	.746
I probably buy these handbags.	277	4	1	5	1.38	.887	.787
I have intention to buy these handbags.	277	4	1	5	2.06	1.284	1.648
I intend to buy these handbags.	277	4	1	5	1.93	1.193	1.422
I have high purchase interest of these handbags.	277	4	1	5	2.02	1.278	1.634
I buy these handbags.	277	4	1	5	1.77	1.149	1.321
I probably buy these handbags.	277	4	1	5	1.89	1.227	1.506
I have intention to buy these handbags.	277	4	1	5	1.55	1.054	1.110
I intend to buy these handbags.	277	4	1	5	1.47	.938	.881
I have high purchase interest of these handbags.	277	4	1	5	1.52	1.009	1.019
I buy these handbags.	277	4	1	5	1.50	1.065	1.135
I probably buy these handbags.	277	4	1	5	1.52	1.069	1.142
Valid N (listwise)	277						

Appendix 9 Descriptive Statistics of Brand Image

	N	Range	Min	Max	Mean	Std. Deviation	Variance
I can get the size I want. R	321	4	1	5	3.84	1.096	1.201
It is expensive. R	321	4	1	5	4.63	.765	.585
The packaging is good. R	321	4	1	5	4.29	.877	.769
The watch is waterproof. R	321	4	1	5	4.24	.898	.806
It is Swiss made. R	321	4	1	5	4.17	.984	.967
The materials are good. R	321	4	1	5	4.44	.808	.653
They have the style I like. R	321	4	1	5	3.83	1.083	1.174
The product is practical. R	321	4	1	5	3.75	1.159	1.342
I can get the size I want. CR	321	4	1	5	2.68	1.109	1.230
It is expensive. CR	321	4	1	5	1.97	.943	.890
The packing is good. CR	321	4	1	5	2.17	.952	.907
The watch is waterproof. CR	321	4	1	5	2.08	.950	.903
It is Swiss made. CR	321	4	1	5	1.67	.879	.772
The materials are good. CR	321	4	1	5	1.85	.911	.830
They have the style I like. CR	321	4	1	5	2.70	1.114	1.240
The product is practical. CR	321	4	1	5	2.76	1.146	1.313
I can get the size I want.	321	4	1	5	3.96	1.074	1.154
It is expensive.	321	4	1	5	4.50	.833	.695
The materials are good.	321	4	1	5	4.33	.892	.796
They have the style I like.	321	4	1	5	3.92	1.091	1.190
The product is practical.	321	4	1	5	3.65	1.158	1.340
I can get the size I want.	321	4	1	5	2.68	1.141	1.301
It is expensive.	321	4	1	5	1.98	.948	.899
The materials are good.	321	4	1	5	2.06	.967	.934
They have the style I like.	321	4	1	5	2.58	1.113	1.238
The product is practical.	321	4	1	5	2.61	1.108	1.227
I can get the size I want.	277	4	1	5	3.75	1.157	1.338
It is expensive.	277	4	1	5	4.34	.968	.936
The materials are good.	277	4	1	5	4.09	1.017	1.035
They have the style I like.	277	4	1	5	3.45	1.275	1.625
They have the style I like.	277	4	1	5	3.58	1.221	1.490
The product is practical.	277	4	1	5	3.60	1.196	1.430
I can get the size I want.	277	4	1	5	2.83	1.203	1.448
It is expensive.	277	4	1	5	1.97	.918	.843
The materials are good.	277	4	1	5	2.06	.934	.873
They have the style I like.	277	4	1	5	2.44	1.107	1.225
I can get the colour I want.	277	4	1	5	2.47	1.037	1.076
The product is practical.	277	4	1	5	2.77	1.149	1.321
I can get the size I want.	277	4	1	5	3.97	1.033	1.068
It is expensive.	277	4	1	5	4.52	.841	.707
The materials are good.	277	4	1	5	4.23	.936	.876
They have the style I like.	277	4	1	5	3.77	1.150	1.323
I can get the colour I want.	277	4	1	5	3.77	1.124	1.263
The product is practical.	277	4	1	5	3.62	1.175	1.380
I can get the size I want.	277	4	1	5	2.81	1.235	1.525
It is expensive.	277	4	1	5	1.92	.850	.722
The materials are good.	277	4	1	5	2.05	.899	.809
They have the style I like.	277	4	1	5	2.55	1.137	1.292
I can get the colour I want.	277	4	1	5	2.57	1.122	1.260
The product is practical.	277	4	1	5	2.70	1.179	1.390
In buying this version, you get a high standard of quality.	321	3	2	5	4.63	.700	.490
The product is a statement of your self-image.	321	4	1	5	4.17	1.031	1.063
This product can bring you fun.	321	4	1	5	3.20	1.093	1.196
The quality of the product merits the price.	321	4	1	5	3.63	1.190	1.416
In buying this product, you get value for money for the status it brings you.	321	4	1	5	3.33	1.262	1.592
You can throw it away after a while.	321	4	1	5	1.30	.625	.390
This product brings you exclusivity.	321	4	1	5	3.67	1.276	1.629
This product can make you attract other people's attention.	321	4	1	5	3.92	1.140	1.300
This product can bring you prestige.	321	4	1	5	3.70	1.222	1.493
This product may not function well.	321	4	1	5	1.55	.728	.530
This product might make you become a target for muggers.	321	4	1	5	4.36	.902	.813
You are concerned about being found out by your peers for using this product.	321	4	1	5	2.35	1.290	1.665
In buying this product, you are concerned about financial loss.	321	4	1	5	3.50	1.376	1.895
In buying this version, you get a high standard of	321	4	1	5	1.75	.813	.661



quality.							
The product is a statement of your self-image.	321	4	1	5	2.64	1.255	1.575
This product can bring you fun.	321	4	1	5	2.57	1.144	1.308
The quality of the product merits the price.	321	4	1	5	2.82	1.377	1.896
In buying this product, you get value for money for the status it brings you.	321	4	1	5	2.41	1.204	1.449
You can throw it away after a while.	321	4	1	5	4.19	1.011	1.021
This product brings you exclusivity.	321	4	1	5	2.03	1.069	1.143
This product can make you attract other people's attention.	321	4	1	5	2.87	1.327	1.760
This product can bring you prestige.	321	4	1	5	2.32	1.115	1.242
This product may not function well.	321	4	1	5	4.22	.962	.925
This product might make you become a target for muggers.	321	4	1	5	3.21	1.391	1.936
You are concerned about being found out by your peers for using this product.	321	4	1	5	3.01	1.396	1.950
In buying this product, you are concerned about financial loss.	321	4	1	5	2.20	1.271	1.616
In buying this version, you get a high standard of quality.	321	4	1	5	4.47	.767	.588
The product is a statement of your self-image.	321	4	1	5	4.06	1.034	1.068
This product can bring you fun.	321	4	1	5	3.24	1.155	1.333
The quality of the product merits the price.	321	4	1	5	3.68	1.170	1.369
In buying this product, you get value for money for the status it brings you.	321	4	1	5	3.42	1.210	1.463
You can throw it away after a while.	321	4	1	5	1.49	.779	.607
This product brings you exclusivity.	321	4	1	5	3.54	1.247	1.555
This product can make you attract other people's attention.	321	4	1	5	3.88	1.120	1.255
This product can bring you prestige.	321	4	1	5	3.58	1.240	1.538
This product may not function well.	321	4	1	5	1.77	.990	.980
This product gives people impression that what you wear is fashionable.	321	4	1	5	4.01	1.043	1.087
You are concerned about being found out by your peers for using this product.	321	4	1	5	2.34	1.220	1.488
In buying this product, you are concerned about financial loss.	321	4	1	5	3.41	1.371	1.881
In buying this version, you get a high standard of quality.	321	4	1	5	1.77	.909	.826
The product is a statement of your self-image.	321	4	1	5	2.64	1.263	1.595
This product can bring you fun.	321	4	1	5	2.58	1.141	1.301
The quality of the product merits the price.	321	4	1	5	2.80	1.356	1.839
In buying this product, you get value for money for the status it brings you.	321	4	1	5	2.45	1.150	1.323
You can throw it away after a while.	321	4	1	5	4.16	1.051	1.105
This product brings you exclusivity.	321	4	1	5	2.18	1.046	1.094
This product can make you attract other people's attention.	321	4	1	5	2.90	1.294	1.675
This product can bring you prestige.	321	4	1	5	2.41	1.115	1.242
This product may not function well.	321	4	1	5	4.13	1.044	1.089
This product gives people impression that what you wear is fashionable.	321	4	1	5	3.04	1.298	1.686
You are concerned about being found out by your peers for using this product.	321	4	1	5	3.10	1.272	1.618
In buying this product, you are concerned about financial loss.	321	4	1	5	2.36	1.275	1.624
In buying this version, you get a high standard of quality.	277	4	1	5	4.30	.975	.950
The product is a statement of your self-image.	277	4	1	5	3.98	1.111	1.235
This product can bring you fun.	277	4	1	5	3.16	1.241	1.540
The quality of the product merits the price.	277	4	1	5	3.59	1.258	1.583

In buying this product, you get value for money for the status it brings you.	277	4	1	5	3.33	1.278	1.634
You can throw it away after a while.	277	4	1	5	1.62	.939	.882
This product brings you exclusivity.	277	4	1	5	3.36	1.274	1.623
This product can make you attract other people's attention.	277	4	1	5	3.85	1.141	1.303
This product might not last long.	277	4	1	5	1.87	.996	.993
You are concerned about being found out by your peers for using this product.	277	4	1	5	2.57	1.305	1.703
You are concerned about being singled out by society for using this product.	277	4	1	5	2.87	1.361	1.853
In buying this product, you are concerned about financial loss.	277	4	1	5	3.24	1.342	1.800
In buying this version, you get a high standard of quality.	277	4	1	5	1.82	.945	.893
The product is a statement of your self-image.	277	4	1	5	2.69	1.275	1.627
This product can bring you fun.	277	4	1	5	2.57	1.201	1.442
The quality of the product merits the price.	277	4	1	5	2.74	1.351	1.825
In buying this product, you get value for money for the status it brings you.	277	4	1	5	2.43	1.158	1.340
You can throw it away after a while.	277	4	1	5	4.22	.989	.979
This product brings you exclusivity.	277	4	1	5	2.19	1.051	1.105
This product can make you attract other people's attention.	277	4	1	5	2.95	1.262	1.592
This product might not last long.	277	4	1	5	4.24	.941	.885
You are concerned about being found out by your peers for using this product.	277	4	1	5	3.10	1.327	1.761
You are concerned about being singled out by society for using this product.	277	4	1	5	2.99	1.330	1.768
In buying this product, you are concerned about financial loss.	277	4	1	5	2.48	1.276	1.627
In buying this version, you get a high standard of quality.	277	4	1	5	4.37	.945	.894
The product is a statement of your self-image.	277	4	1	5	4.00	1.120	1.254
This product can bring you fun.	277	4	1	5	3.24	1.238	1.532
The quality of the product merits the price.	277	4	1	5	3.57	1.294	1.673
In buying this product, you get value for money for the status it brings you.	277	4	1	5	3.43	1.294	1.674
You can throw it away after a while.	277	4	1	5	1.50	.792	.628
This product brings you exclusivity.	277	4	1	5	3.60	1.204	1.450
This product can make you attract other people's attention.	277	4	1	5	3.90	1.105	1.222
This product can bring you prestige.	277	4	1	5	3.52	1.206	1.453
This product might not last long.	277	4	1	5	1.70	.851	.724
This product give people impression that what you wear is fashionable.	277	4	1	5	3.83	1.190	1.417
This product might make you become a target for muggers.	277	4	1	5	4.08	1.102	1.215
You are concerned about being found out by your peers for using this product.	277	4	1	5	2.49	1.276	1.628
You are concerned about become a target of anti-capitalist for using this product.	277	4	1	5	2.76	1.189	1.414
In buying this product, you are concerned about financial loss.	277	4	1	5	3.14	1.404	1.972
In buying this version, you get a high standard of quality.	277	4	1	5	1.88	1.028	1.057
The product is a statement of your self-image.	277	4	1	5	2.71	1.270	1.613
This product can bring you fun.	277	4	1	5	2.52	1.169	1.366
The quality of the product merits the price.	277	4	1	5	2.79	1.384	1.915
In buying this product, you get value for money for the status it brings you.	277	4	1	5	2.53	1.211	1.467
You can throw it away after a while.	277	4	1	5	4.20	1.018	1.037
This product brings you exclusivity.	277	4	1	5	2.26	1.046	1.093
This product can make you attract other people's attention.	277	4	1	5	2.94	1.271	1.616



This product can bring you prestige.	277	4	1	5	2.39	1.077	1.159
This product might not last long.	277	4	1	5	4.16	.989	.977
This product give people impression that what you wear is fashionable.	277	4	1	5	2.94	1.275	1.626
This product might make you become a target for muggers.	277	4	1	5	3.13	1.278	1.633
You are concerned about being found out by your peers for using this product.	277	4	1	5	2.96	1.322	1.748
You are concerned about become a target of anti-capitalist for using this product.	277	4	1	5	2.55	1.130	1.278
In buying this product, you are concerned about financial loss.	277	4	1	5	2.39	1.218	1.484
Cheerful	321	4	1	5	2.80	1.168	1.364
Young	321	4	1	5	2.49	1.140	1.301
Independent	321	4	1	5	3.49	1.151	1.326
Reliable	321	4	1	5	4.12	.965	.932
Hardworking	321	4	1	5	4.08	.950	.903
Secure	321	4	1	5	4.03	1.047	1.096
Successful	321	4	1	5	4.32	.908	.825
For leader	321	4	1	5	3.88	1.047	1.096
Confident	321	4	1	5	4.11	1.015	1.031
Glamorous	321	4	1	5	3.79	1.103	1.216
Classic	321	4	1	5	4.08	1.095	1.200
Cheerful	321	4	1	5	2.51	1.118	1.251
Young	321	4	1	5	2.55	1.193	1.423
Independent	321	4	1	5	2.45	1.051	1.104
Reliable	321	4	1	5	2.11	1.054	1.110
Hardworking	321	4	1	5	2.22	1.044	1.090
Secure	321	4	1	5	2.19	1.068	1.140
Successful	321	4	1	5	2.24	1.126	1.269
For leader	321	4	1	5	2.16	1.057	1.117
Confident	321	4	1	5	2.42	1.132	1.281
Glamorous	321	4	1	5	2.32	1.055	1.112
Classic	321	4	1	5	2.24	1.144	1.310
Trendy	321	4	1	5	4.07	.999	.998
Exciting	321	4	1	5	3.52	1.073	1.150
Cool	321	4	1	5	3.71	1.104	1.219
Contemporary	321	4	1	5	3.74	1.064	1.133
Reliable	321	4	1	5	3.89	1.078	1.162
Secure	321	4	1	5	3.74	1.100	1.211
Corporate	321	4	1	5	3.62	1.089	1.186
Successful	321	4	1	5	4.00	1.032	1.066
Glamorous	321	4	1	5	4.04	1.008	1.017
Good looking	321	4	1	5	3.78	1.154	1.331
Smooth	321	4	1	5	3.69	1.097	1.203
Classic	321	4	1	5	3.68	1.083	1.174
Beautiful	321	4	1	5	3.73	1.154	1.331
Elegant	321	4	1	5	3.87	1.078	1.162
Trendy	321	4	1	5	2.87	1.193	1.423
Exciting	321	4	1	5	2.54	1.063	1.130
Cool	321	4	1	5	2.53	1.084	1.175
Contemporary	321	4	1	5	2.55	1.092	1.192
Reliable	321	4	1	5	2.13	1.030	1.062
Secure	321	4	1	5	2.17	1.038	1.078
Corporate	321	4	1	5	2.18	1.030	1.061
Successful	321	4	1	5	2.23	1.071	1.147
Glamorous	321	4	1	5	2.47	1.151	1.325
Good looking	321	4	1	5	2.55	1.164	1.355
Smooth	321	4	1	5	2.34	1.039	1.080
Classic	321	4	1	5	2.25	1.028	1.056
Beautiful	321	4	1	5	2.30	1.092	1.192
Elegant	321	4	1	5	2.32	1.124	1.262
Down to earth	277	4	1	5	2.48	1.209	1.461
Original	277	4	1	5	3.07	1.356	1.839
Unique	277	4	1	5	2.91	1.360	1.851
Contemporary	277	4	1	5	3.17	1.149	1.320
Reliable	277	4	1	5	3.47	1.166	1.359
Corporate	277	4	1	5	3.32	1.170	1.370
Successful	277	4	1	5	3.54	1.217	1.481
Feminine	277	4	1	5	3.43	1.233	1.521
Outdoorsy	277	4	1	5	2.83	1.229	1.511
Down to earth	277	4	1	5	2.36	1.180	1.392
Original	277	4	1	5	1.89	.964	.930
Unique	277	4	1	5	1.87	.966	.932
Contemporaty	277	4	1	5	2.26	1.088	1.184
Reliable	277	4	1	5	1.98	.985	.971

Corporate	277	4	1	5	2.08	.991	.982
Successful	277	4	1	5	2.01	1.046	1.094
Feminine	277	4	1	5	2.51	1.215	1.475
Outdoorsy	277	4	1	5	2.23	1.118	1.251
Trendy	277	4	1	5	3.94	1.108	1.228
Contemporary	277	4	1	5	3.76	1.057	1.117
Successful	277	4	1	5	3.99	1.068	1.141
Upper class	277	4	1	5	4.02	1.139	1.297
Feminine	277	4	1	5	3.93	1.068	1.140
Smooth	277	4	1	5	3.61	1.154	1.332
Trendy	277	4	1	5	2.67	1.220	1.490
Contemporary	277	4	1	5	2.62	1.119	1.252
Successful	277	4	1	5	2.24	1.075	1.155
Upper class	277	4	1	5	2.05	1.090	1.189
Feminine	277	4	1	5	2.69	1.238	1.532
Smooth	277	4	1	5	2.32	1.060	1.123
Valid N (listwise)	277						



# Appendix 10 Scale Reliability Test Results (product knowledge, consideration set, and purchase intention)

Table 1 Knowledge Reliability Test Results (watches and handbags)

	Pearson correlation			Cronbach $\alpha$	Cronbach $\alpha$ if item deleted	Item-total correlation
Watches	1	2	3	0.77		
Feel knowledgeable					0.67	0.67
Can give advice	0.70*				0.69	0.63
Gather little information	0.33*	0.25*			0.81	0.39
Confident	0.53*	0.53*	0.43*		0.69	0.63
* Correlation is significant at 0.01 level (2 tailed) No of cases = 321						
Handbags	1	2	3	0.89		
Feel knowledgeable					0.85	0.80
Can give advice	0.81*				0.84	0.81
Gather little information	0.61*	0.62*			0.89	0.69
Confident	0.67*	0.69*	0.65*		0.87	0.75
* Correlation is significant at 0.01 level (2 tailed) No of cases = 277						

Table 2 Consideration Set Reliability Test Results (watches)

	Pearson correlation				Cronbach $\alpha$	Cronbach $\alpha$ if item deleted	Item-total correlation
Original Rolex	1	2	3	4	0.88		
consider buying						0.85	0.76
Recommend to buy	0.64*					0.85	0.75
Feel attractive	0.66*	0.69*				0.85	0.75
Feel acceptable	0.60*	0.69*	0.60*			0.86	0.72
Willing to buy	0.63*	0.48*	0.54*	0.53*		0.88	0.63
* Correlation is significant at 0.01 level (2 tailed) No of cases = 321							
Counterfeit Rolex	1	2	3	4	0.89		
Consider buying						0.85	0.78
Recommend to buy	0.68*					0.86	0.72
Feel attractive	0.68*	0.68*				0.85	0.76
Feel acceptable	0.67*	0.65*	0.61*			0.85	0.75
Willing to buy	0.58*	0.46*	0.58*	0.60*		0.89	0.65
* Correlation is significant at 0.01 level (2 tailed) No of cases = 321							
Original Gucci	1	2	3	4	0.90		
Consider buying						0.88	0.77
Recommend to buy	0.67*					0.88	0.79
Feel attractive	0.67*	0.77*				0.88	0.79
Feel acceptable	0.68*	0.70*	0.69*			0.88	0.79
Willing to buy	0.63*	0.56*	0.56*	0.59*		0.90	0.66
* Correlation is significant at 0.01 level (2 tailed) No of cases = 321							
Counterfeit Gucci	1	2	3	4	0.90		
Consider buying						0.79	0.86
Recommend to buy	0.66*					0.70	0.88
Feel attractive	0.74*	0.68*				0.81	0.87
Feel acceptable	0.71*	0.64*	0.67*			0.78	0.86
Willing to buy	0.58*	0.45*	0.64*	0.64*		0.68	0.89
* Correlation is significant at 0.01 level (2 tailed) No of cases =321							

Table 3 Consideration Reliability Test Results (handbags)

	Pearson correlation				Cronbach $\alpha$	Cronbach $\alpha$ if item deleted	Item-total correlation
Original Burberry	1	2	3	4	0.93		
Consider buying						0.90	0.84
Recommend to buy	0.81*					0.90	0.86
Feel attractive	0.76*	0.81*				0.91	0.82
Feel acceptable	0.71*	0.73*	0.67*			0.91	0.78
Willing to buy	0.69*	0.65*	0.64*	0.65*		0.92	0.73
* Correlation is significant at 0.01 level (2 tailed)				No of cases = 277			
Counterfeit Burberry	1	2	3	4	0.90		
Consider buying						0.85	0.82
Recommend to buy	0.82*					0.86	0.78
Feel attractive	0.83*	0.74*				0.85	0.83
Feel acceptable	0.66*	0.64*	0.68*			0.87	0.73
Willing to buy	0.49*	0.48*	0.57*	0.54*		0.91	0.58
* Correlation is significant at 0.01 level (2 tailed)				No of cases = 277			
Original LV	1	2	3	4	0.92		
Consider buying						0.90	0.83
Recommend to buy	0.79*					0.90	0.84
Feel attractive	0.79*	0.81*				0.89	0.84
Feel acceptable	0.71*	0.73*	0.74*			0.90	0.80
Willing to buy	0.62*	0.60*	0.60*	0.62*		0.93	0.67
* Correlation is significant at 0.01 level (2 tailed)				No of cases = 277			
Counterfeit LV	1	2	3	4	0.90		
Consider buying						0.89	0.81
Recommend to buy	0.76*					0.89	0.80
Feel attractive	0.80*	0.75*				0.88	0.85
Feel acceptable	0.66*	0.71*	0.72*			0.89	0.77
Willing to buy	0.61*	0.58*	0.66*	0.61*		0.92	0.69
* Correlation is significant at 0.01 level (2 tailed)				No of cases = 277			

Table 4 Purchase Intention Reliability Test Results (watches)

	Pearson correlation				Cronbach $\alpha$	Cronbach $\alpha$ if item deleted	Item-total correlation
Original Rolex	1	2	3	4	0.94		
Have intention						0.93	0.82
Intent to buy	0.87*					0.91	0.90
Be interested	0.75*	0.81*				0.93	0.81
Purchase	0.65*	0.71*	0.64*			0.93	0.78
Possibility of purchase	0.71*	0.80*	0.75*	0.85*		0.92	0.86
* Correlation is significant at 0.01 level (2 tailed)				No of cases = 321			
Counterfeit Rolex	1	2	3	4	0.95		
Have intention						0.94	0.84
Intent to buy	0.84*					0.93	0.89
Be interested	0.81*	0.84*				0.93	0.89
Purchase	0.70*	0.78*	0.77*			0.94	0.82
Possibility of purchase	0.74*	0.79*	0.84*	0.81*		0.94	0.87
* Correlation is significant at 0.01 level (2 tailed)				No of cases = 321			
Original Gucci	1	2	3	4	0.94		
Have intention						0.93	0.84
Intend to buy	0.86*					0.92	0.87
Be interested	0.80*	0.83*				0.92	0.88
Purchase	0.66*	0.72*	0.72*			0.94	0.79
Possibility of purchase	0.72*	0.73*	0.80*	0.80*		0.93	0.84
* Correlation is significant at 0.01 level (2 tailed)				No of cases = 321			
Counterfeit Gucci	1	2	3	4	0.94		
Have intention						0.94	0.79
Intent to buy	0.77*					0.92	0.88
Be interested	0.79*	0.83*				0.91	0.90
Purchase	0.65*	0.80*	0.77*			0.93	0.81
Possibility of purchase	0.69*	0.77*	0.83*	0.77*		0.92	0.84
* Correlation is significant at 0.01 level (2 tailed)				No of cases = 321			



Table 5 Purchase Intention Reliability Test Results (handbags)

	Pearson correlation				Cronbach $\alpha$	Cronbach $\alpha$ if item deleted	Item-total correlation
Original Burberry	1	2	3	4	0.96		
Have intention						0.96	0.87
Intent to buy	0.90*					0.95	0.93
Be interested	0.86*	0.89*				0.95	0.92
Purchase	0.73*	0.82*	0.82*			0.96	0.86
Possibility of purchase	0.78*	0.85*	0.86*	0.87*		0.95	0.90
* Correlation is significant at 0.01 level (2 tailed) No of cases = 277							
Counterfeit Burberry	1	2	3	4	0.96		
Have intention						0.96	0.88
Intent to buy	0.86*					0.95	0.90
Be interested	0.85*	0.87*				0.95	0.92
Purchase	0.78*	0.83*	0.82*			0.96	0.87
Possibility of purchase	0.83*	0.82*	0.88*	0.86*		0.95	0.90
* Correlation is significant at 0.01 level (2 tailed) No of cases = 277							
Original LV	1	2	3	4	0.96		
Have intention						0.96	0.88
Intent to buy	0.88*					0.95	0.92
Be interested	0.87*	0.92*				0.95	0.93
Purchase	0.77*	0.80*	0.82*			0.96	0.86
Possibility of purchase	0.80*	0.82*	0.86*	0.84*		0.96	0.88
* Correlation is significant at 0.01 level (2 tailed) No of cases = 277							
Counterfeit LV	1	2	3	4	0.97		
Have intention						0.96	0.89
Intent to buy	0.90*					0.96	0.94
Be interested	0.84*	0.90*				0.96	0.91
Purchase	0.80*	0.86*	0.84*			0.96	0.89
Possibility of purchase	0.83*	0.88*	0.86*	0.87*		0.96	0.91
* Correlation is significant at 0.01 level (2 tailed) No of cases = 277							

Appendix 11 Bivariate Correlation

Table 1 Original Rolex

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Security	Social risk	Financial risk	involvement
Factor 2	.000										
Factor 3	.000	.000									
Factor 4	.000	.000	.000								
Factor 5	.000	.000	.000	.000							
Factor 6	.000	.000	.000	.000	.000						
Factor 7	.000	.000	.000	.000	.000	.000					
Security	.132(*)	.248(**)	.163(**)	.055	-.080	-.228(**)	-.032				
Social risk	-.240(**)	.033	-.072	.112(*)	-.030	.077	.037	.093			
Financial risk	-.050	.149(**)	.009	.024	.012	-.003	-.081	.283(**)	.136(*)		
Involvement	.119(*)	.195(**)	.129(*)	.096	.168(**)	-.013	.073	.051	-.036	-.049	
Knowledge	.043	.203(**)	.134(*)	.090	.200(**)	-.079	.050	.078	.063	-.043	.505(**)

\* Correlation is significant at the 0.05 level (2-tailed).  
\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 2 Counterfeit Rolex

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Security	Social risk	Financial risk	involvement
Factor 2	.000										
Factor 3	.000	.000									
Factor 4	.000	.000	.000								
Factor 5	.000	.000	.000	.000							
Factor 6	.000	.000	.000	.000	.000						
Factor 7	.000	.000	.000	.000	.000	.000					
Security	.152(**)	-.036	.380(**)	.187(**)	.149(**)	.105	.043				
Social risk	.146(**)	.034	.191(**)	.079	.083	.099	.216(**)	.176(**)			
Financial risk	.050	.154(**)	.293(**)	-.110(*)	.014	.074	-.066	.172(**)	.168(**)		
Involvement	.008	-.058	.016	.092	-.017	-.005	-.035	-.007	.003	.006	
Knowledge	-.049	-.110(*)	-.009	-.007	.028	-.058	-.002	-.026	.005	-.055	.505(**)

\*\* Correlation is significant at the 0.01 level (2-tailed).  
\* Correlation is significant at the 0.05 level (2-tailed).

Table 3 Original Gucci

	Factor 1	Factor 2	Factor 3	Factor 4	Social risk	Financial risk	Involvement
Factor 2	.000						
Factor 3	.000	.000					
Factor 4	.000	.000	.000				
Social risk	-.144(**)	.079	-.016	.212(**)			
Financial risk	-.098	-.037	.037	-.085	.202(**)		
Involvement	.096	.210(**)	.079	-.085	-.051	-.057	
Knowledge	.107	.193(**)	.064	-.035	.021	-.050	.505(**)

\*\* Correlation is significant at the 0.01 level (2-tailed).



Table 4 Counterfeit Gucci

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Social risk	Financial risk	Involvement
Factor 2	.000								
Factor 3	.000	.000							
Factor 4	.000	.000	.000						
Factor 5	.000	.000	.000	.000					
Factor 6	.000	.000	.000	.000	.000				
Social risk	.010	.165(**)	-.097	.057	-.069	.253(**)			
Financial risk	.120(*)	.235(**)	.043	-.011	.018	-.093	.185(**)		
Involvement	.034	-.023	.035	.037	-.031	.100	.066	.058	
Knowledge	.027	-.080	-.081	-.045	-.075	.056	-.020	-.022	.505(**)

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 5 Original Burberry

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Social risk	Single out	Financial risk	Involvement
Factor 2	.000								
Factor 3	.000	.000							
Factor 4	.000	.000	.000						
Factor 5	.000	.000	.000	.000					
Social risk	-.024	-.007	-.093	-.003	.149(*)				
Single our	-.107	.065	-.010	.098	.088	.596(**)			
Financial risk	-.075	.088	-.050	.115	-.089	.110	.303(**)		
Involvement	.143(*)	.085	.137(*)	.118(*)	.041	.010	.001	.070	
knowledge	.077	.159(**)	.214(**)	.065	.037	.021	.036	.069	.730(**)

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 6 Counterfeit Burberry

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Social risk	Single out	Financial risk	Involvement
Factor 2	.000								
Factor 3	.000	.000							
Factor 4	.000	.000	.000						
Factor 5	.000	.000	.000	.000					
Social risk	-.110	.045	.116	-.031	.189(**)				
Single out	-.118	.108	.149(*)	-.058	.233(**)	.672(**)			
Financial risk	.004	.148(*)	.095	.017	.006	.167(**)	.252(**)		
Involvement	-.065	.087	.033	.056	.021	.025	.058	.036	
Knowledge	-.023	.014	-.043	.024	.039	-.034	-.015	-.019	.730(**)

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 7 Original Louis Vuitton

	Factor 1	Factor 2	Factor 3	Factor 4	Security	Social risk	Target of Anti-socialist	Financial risk	Involvement
Factor 2	.000								
Factor 3	.000	.000							
Factor 4	.000	.000	.000						
Security	.366(**)	.071	.112	-.174(**)					
Social risk	.018	-.018	-.111	.188(**)	.102				
Target of anti-socialist	.126(*)	-.025	-.087	.042	.224(**)	.414(**)			
Financial risk	-.037	.043	-.014	-.120(*)	.267(**)	.286(**)	.275(**)		
Involvement	.053	.157(**)	.165(**)	-.029	.004	-.100	-.017	.021	
Knowledge	.116	.146(*)	.207(**)	-.029	.058	-.032	.022	.023	.730(**)

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Table 8 Counterfeit Louis Vuitton

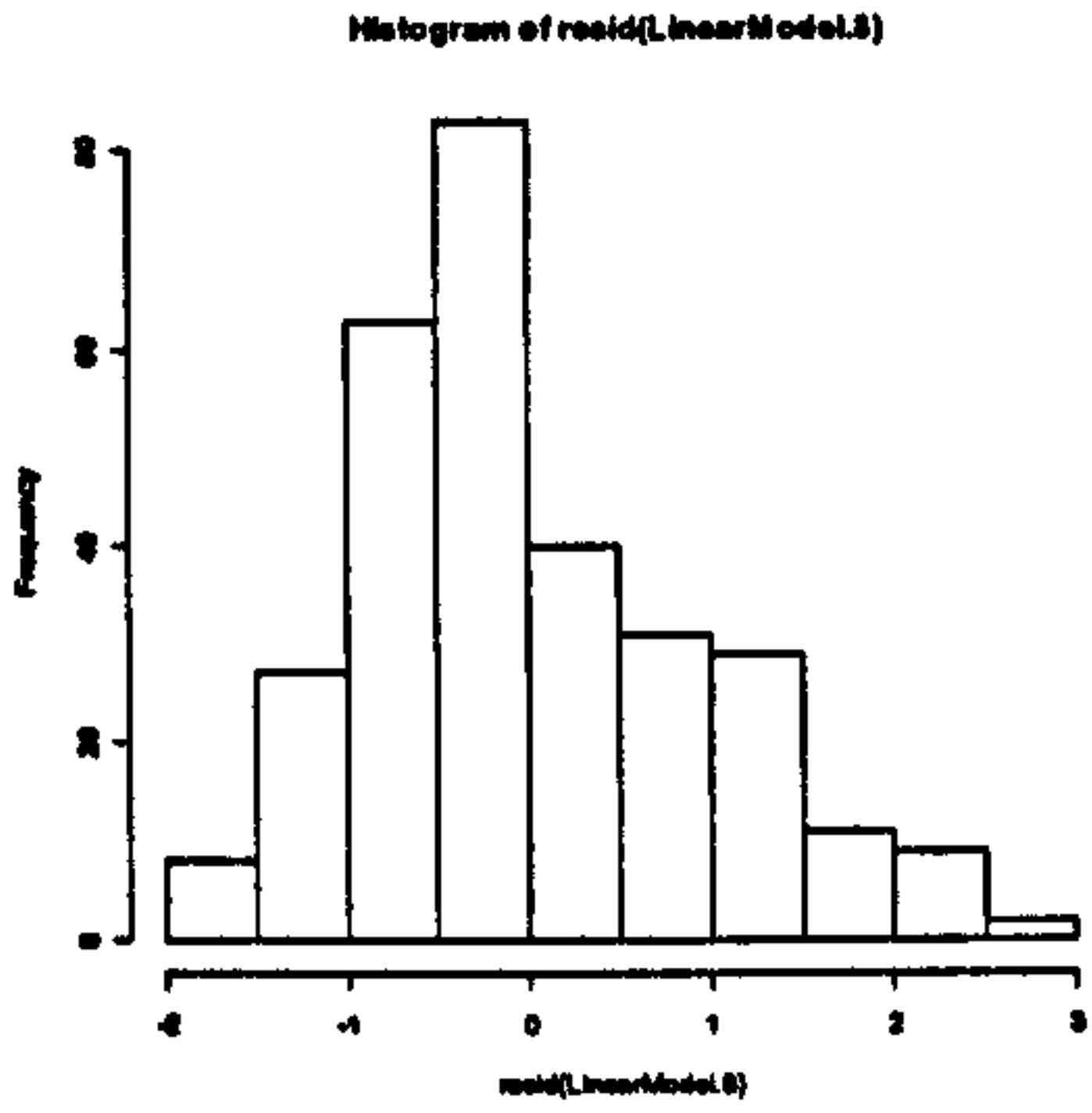
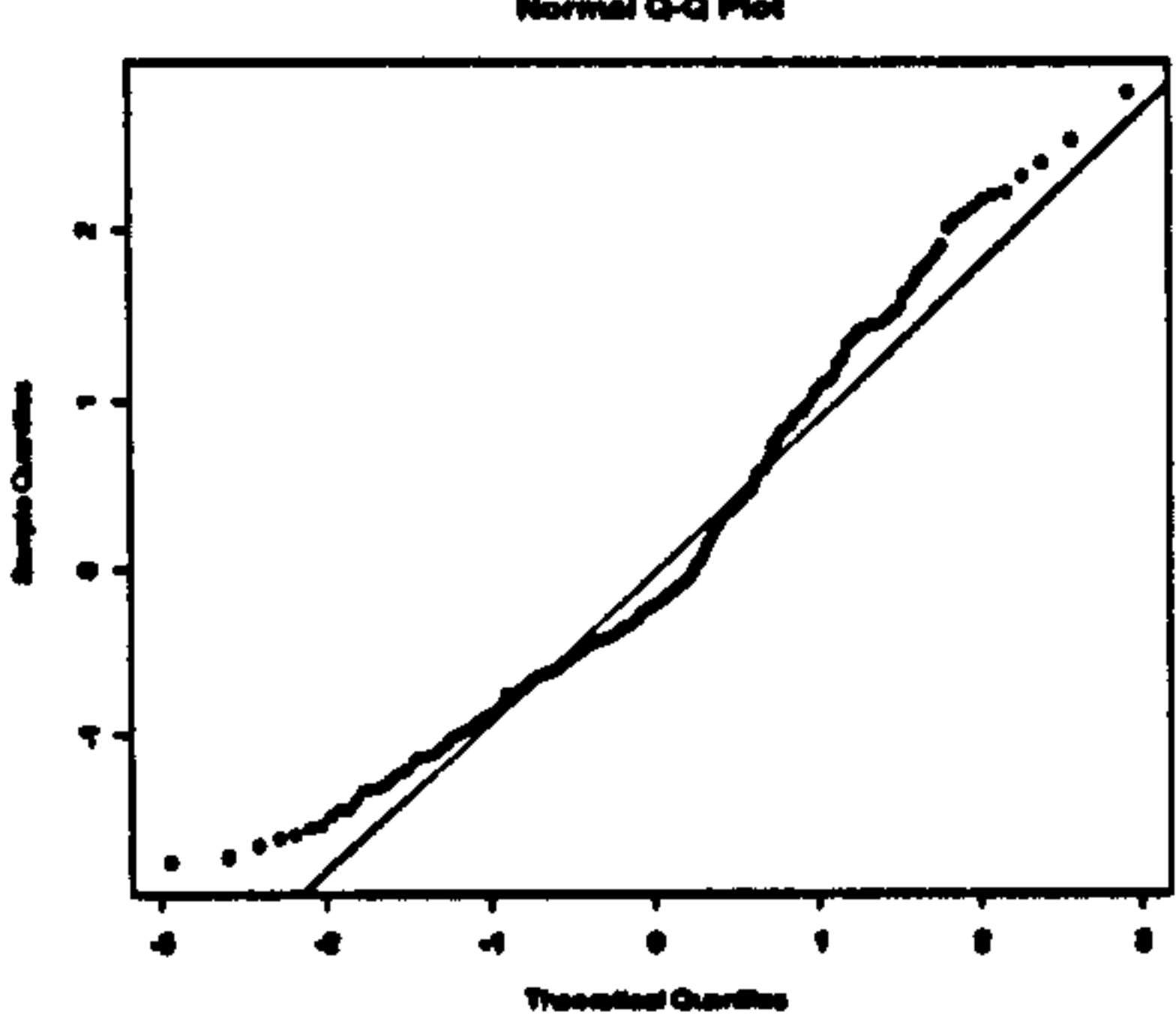
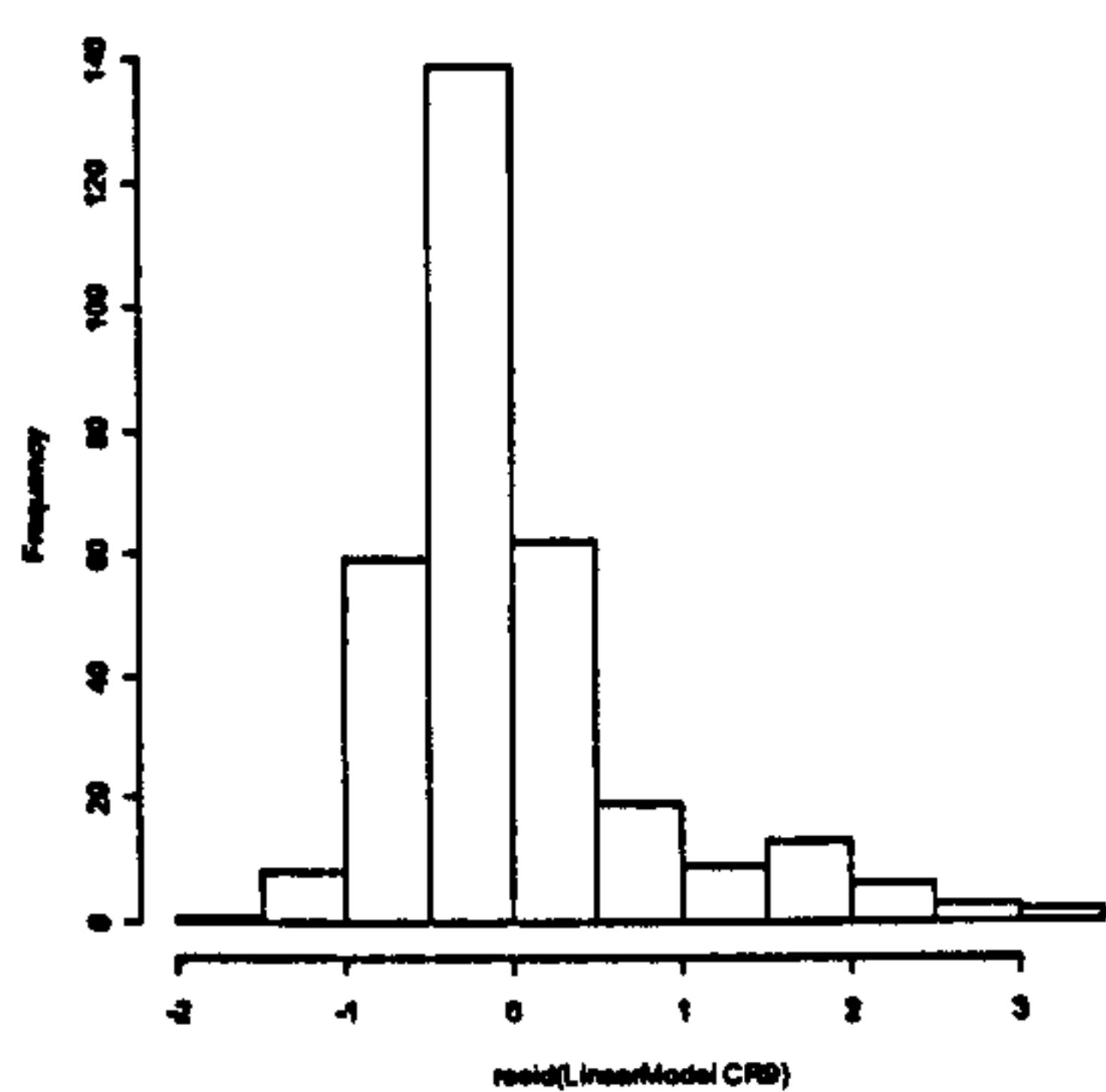
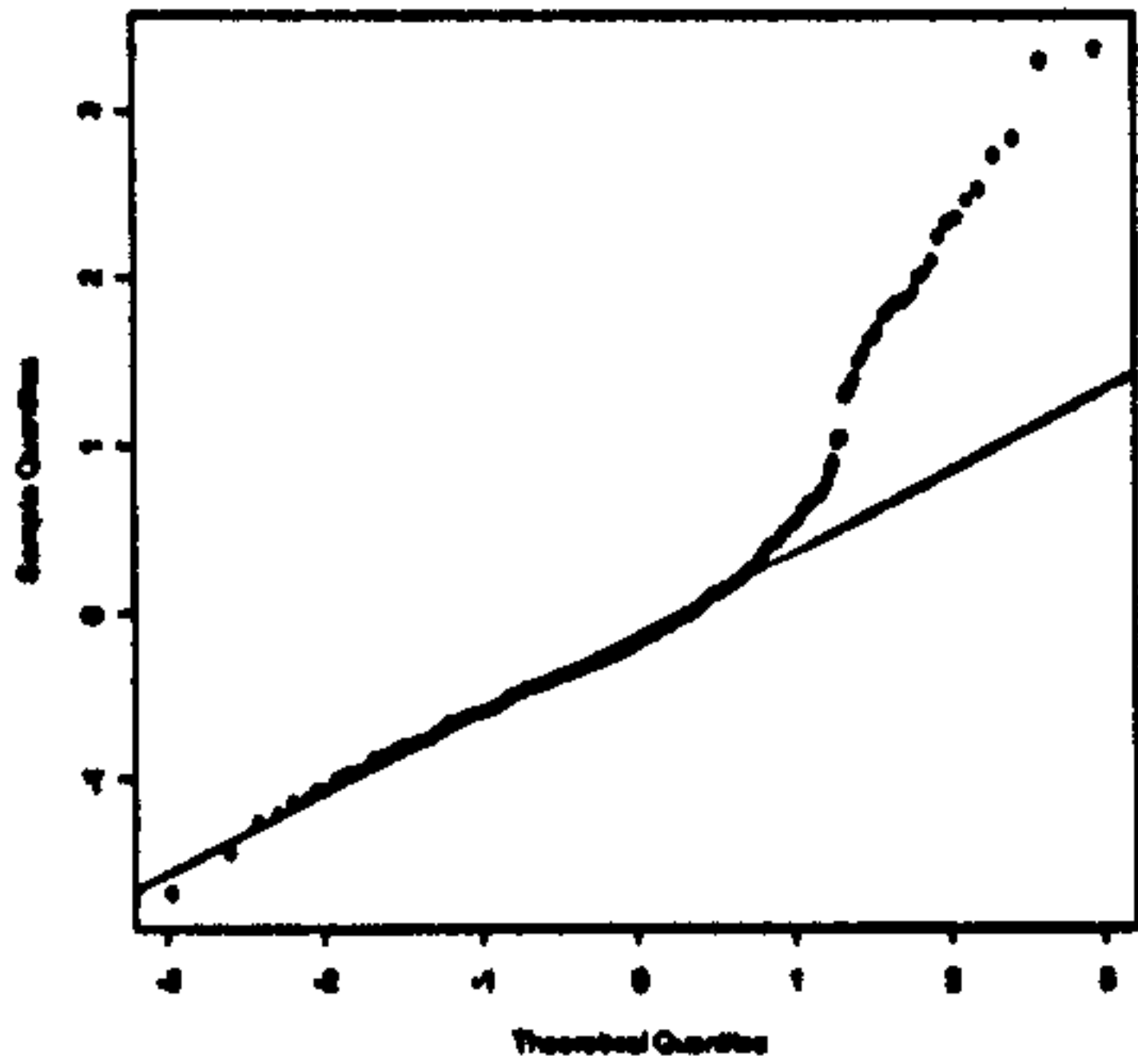
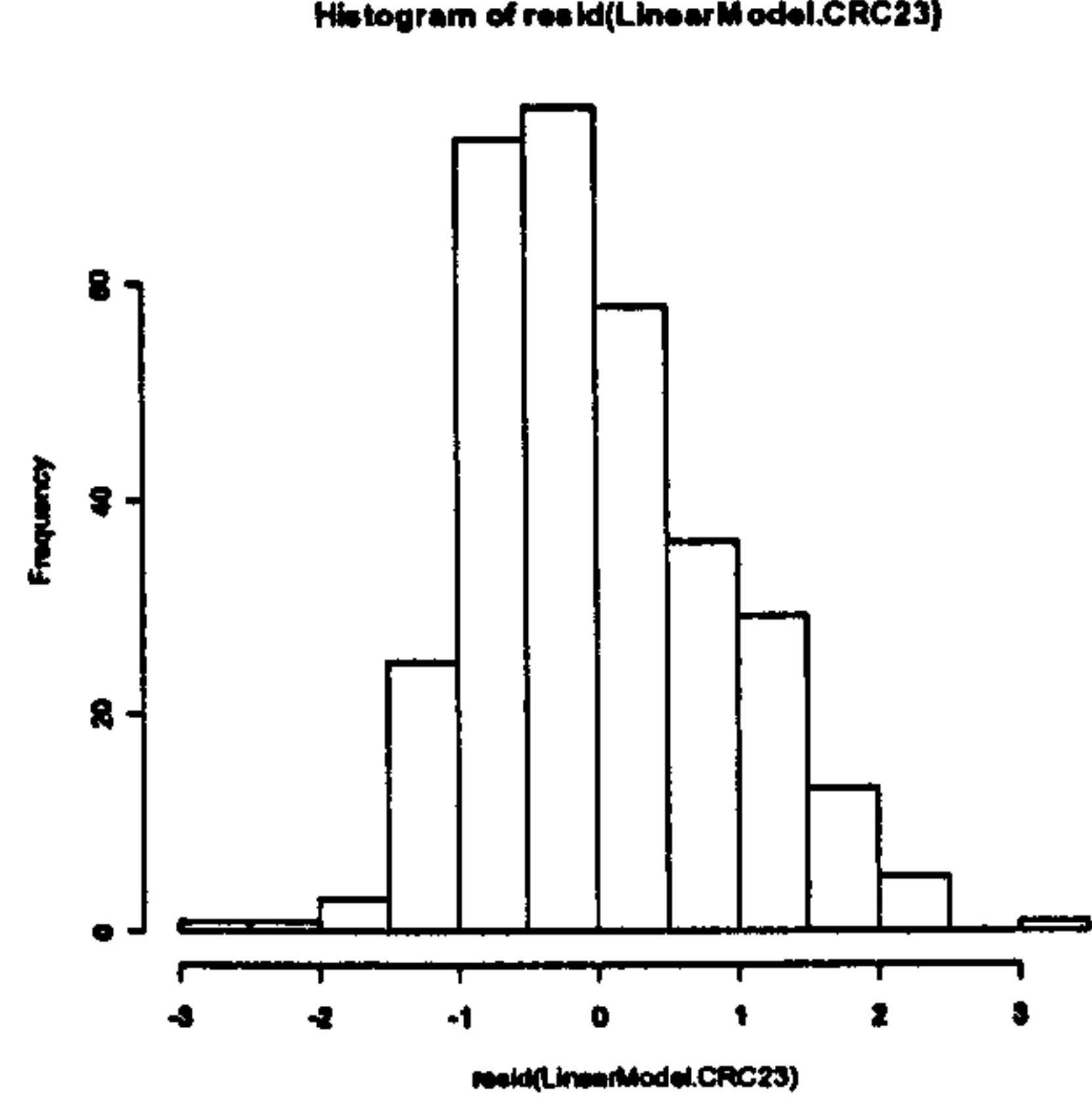
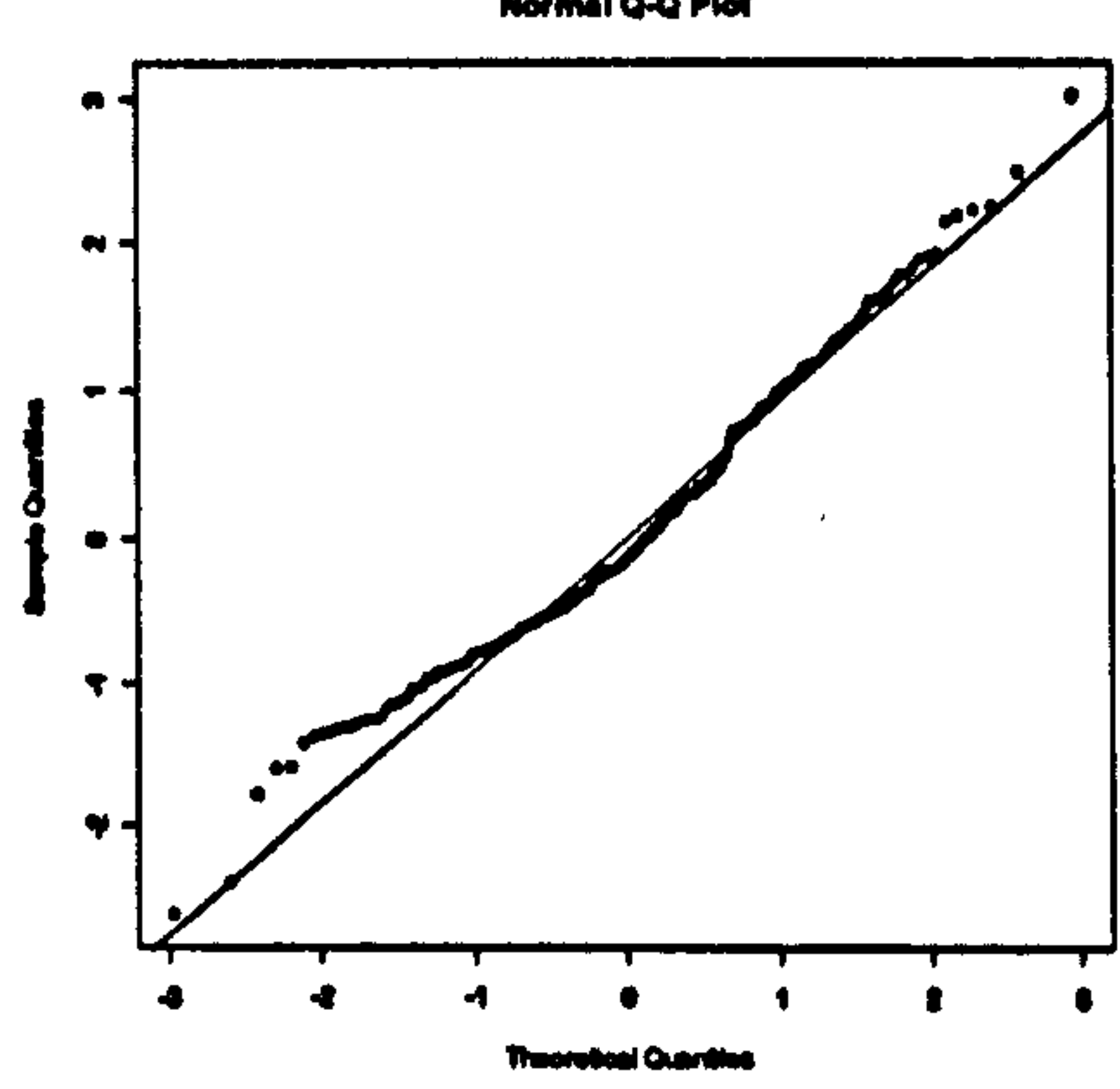
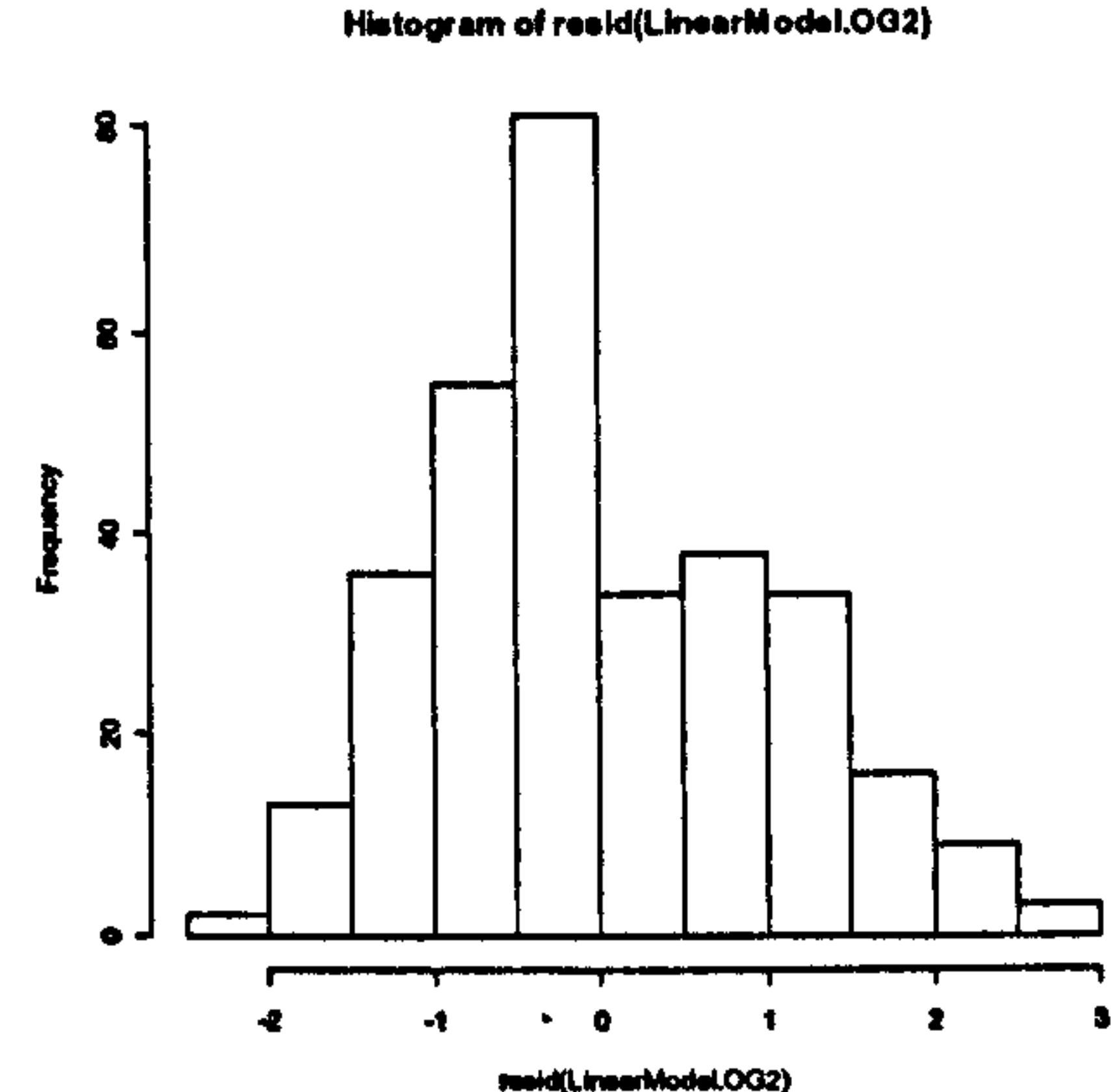
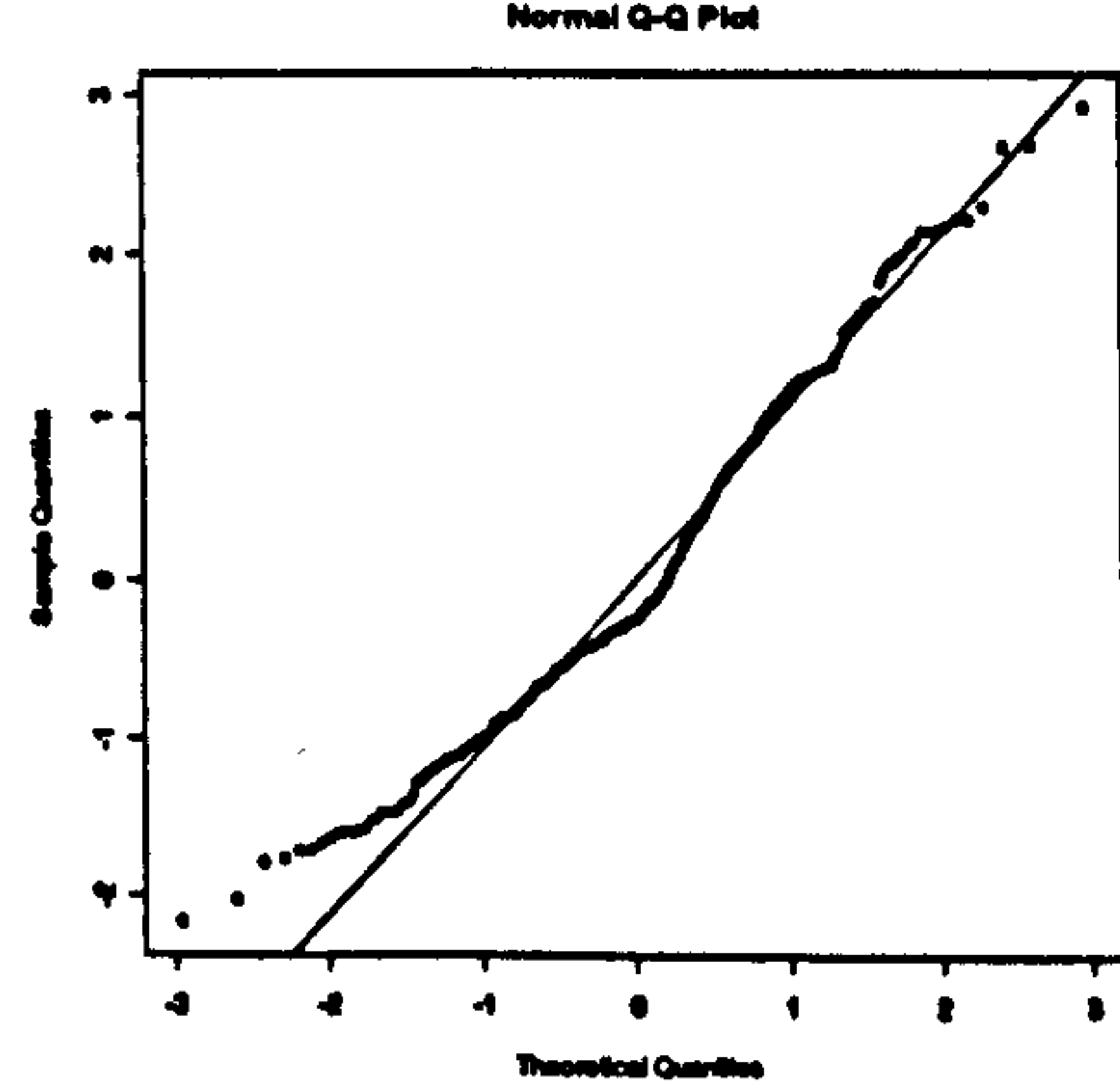
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Security	Social risk	Target of anti-socialism	Financial risk	Involvement
Factor 2	.000									
Factor 3	.000	.000								
Factor 4	.000	.000	.000							
Factor 5	.000	.000	.000	.000						
Security	.566(**)	.232(**)	.092	.111	.027					
Social risk	.128(*)	-.092	.073	.268(**)	-.048	.209(**)				
Target of anti-socialism	.247(**)	.084	-.032	.118(*)	.069	.378(**)	.325(**)			
Financial risk	.122(*)	.029	.032	-.014	.099	.124(*)	.189(**)	.348(**)		
Involvement	.024	-.050	.087	.116	.090	-.019	.023	-.023	-.009	
Knowledge	.025	-.006	.045	.101	.055	.003	.026	-.032	-.016	.730(**)

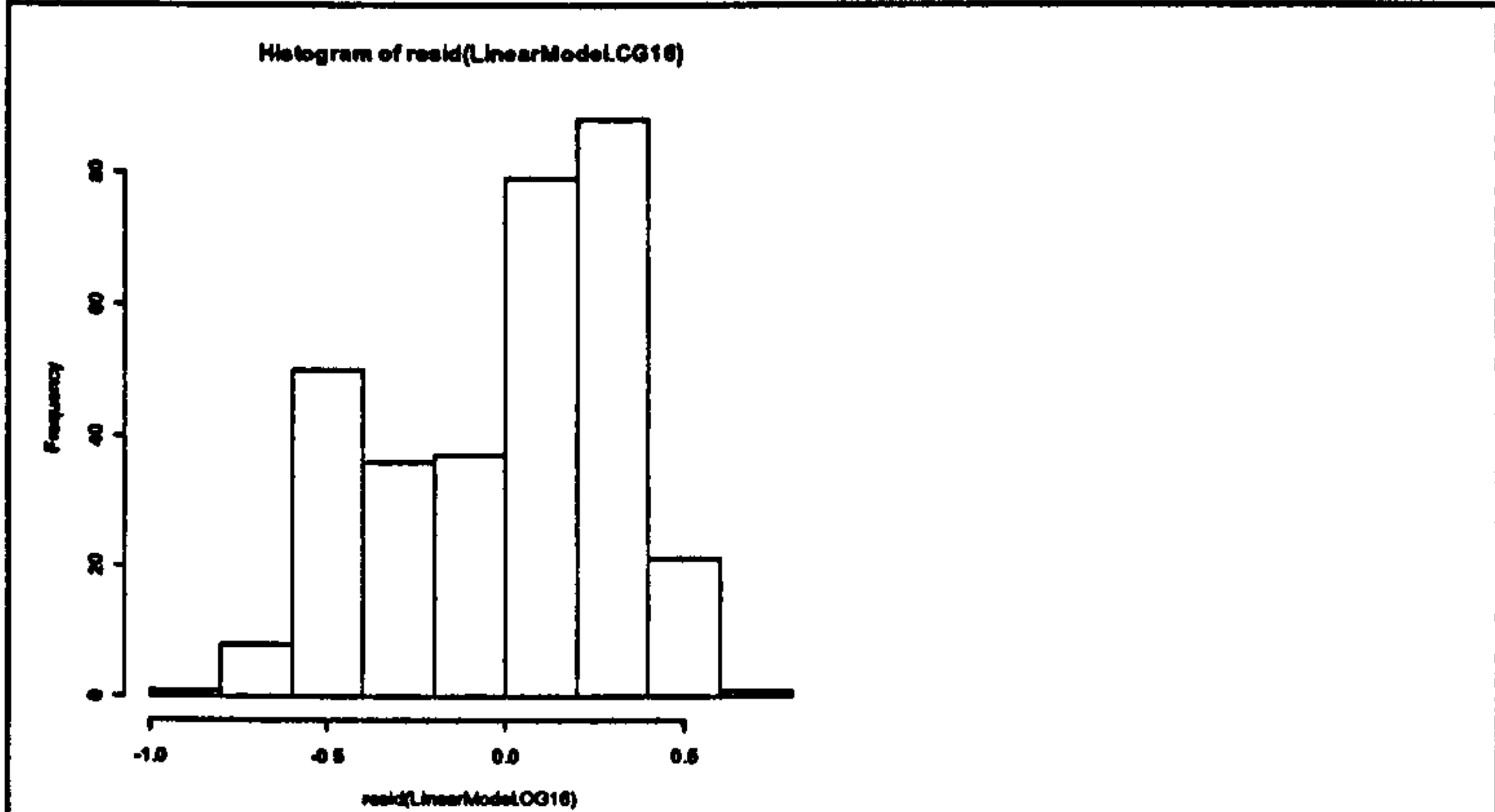
\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

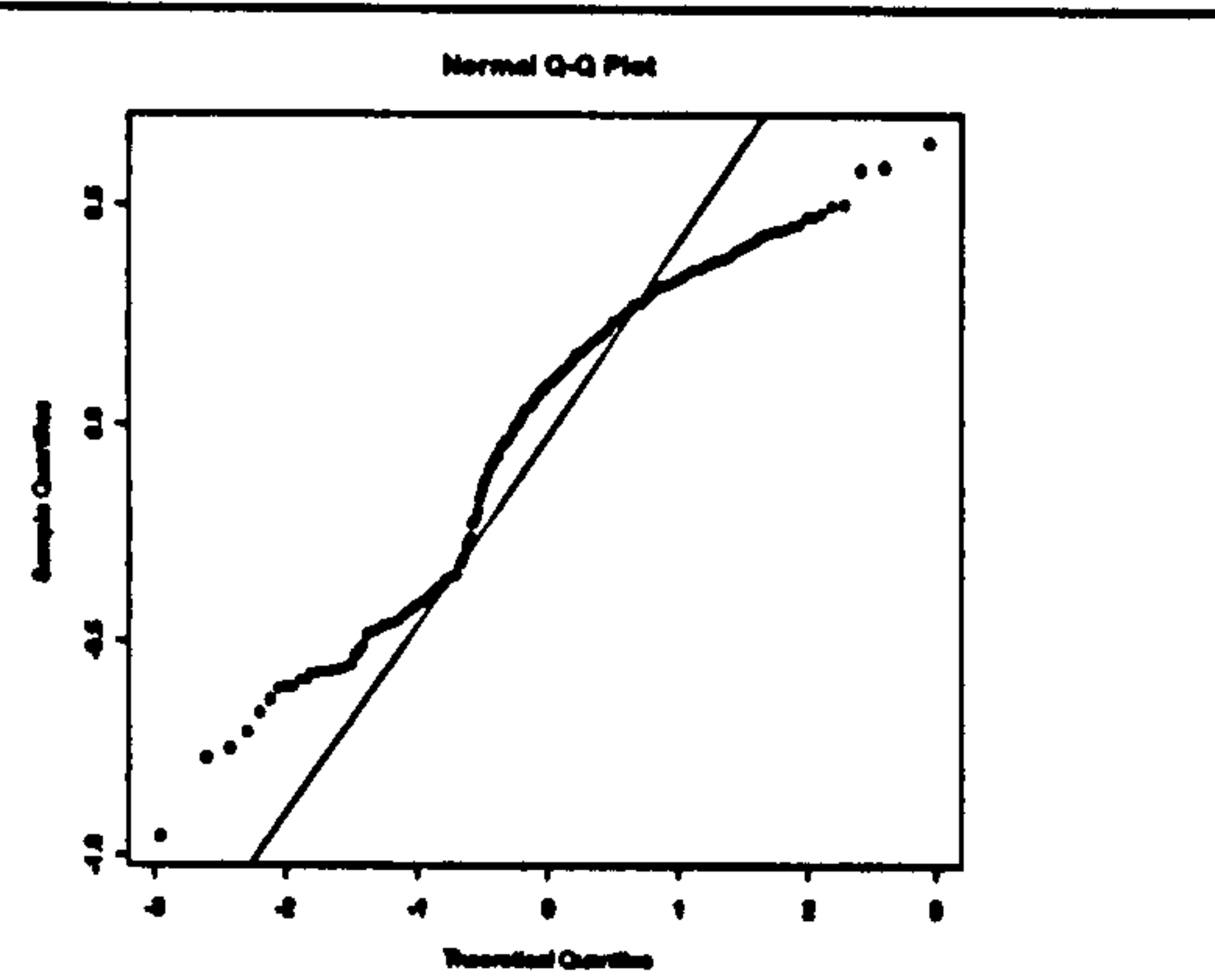


Appendix 12 Histogram of Residues and qq-plot after Transformation

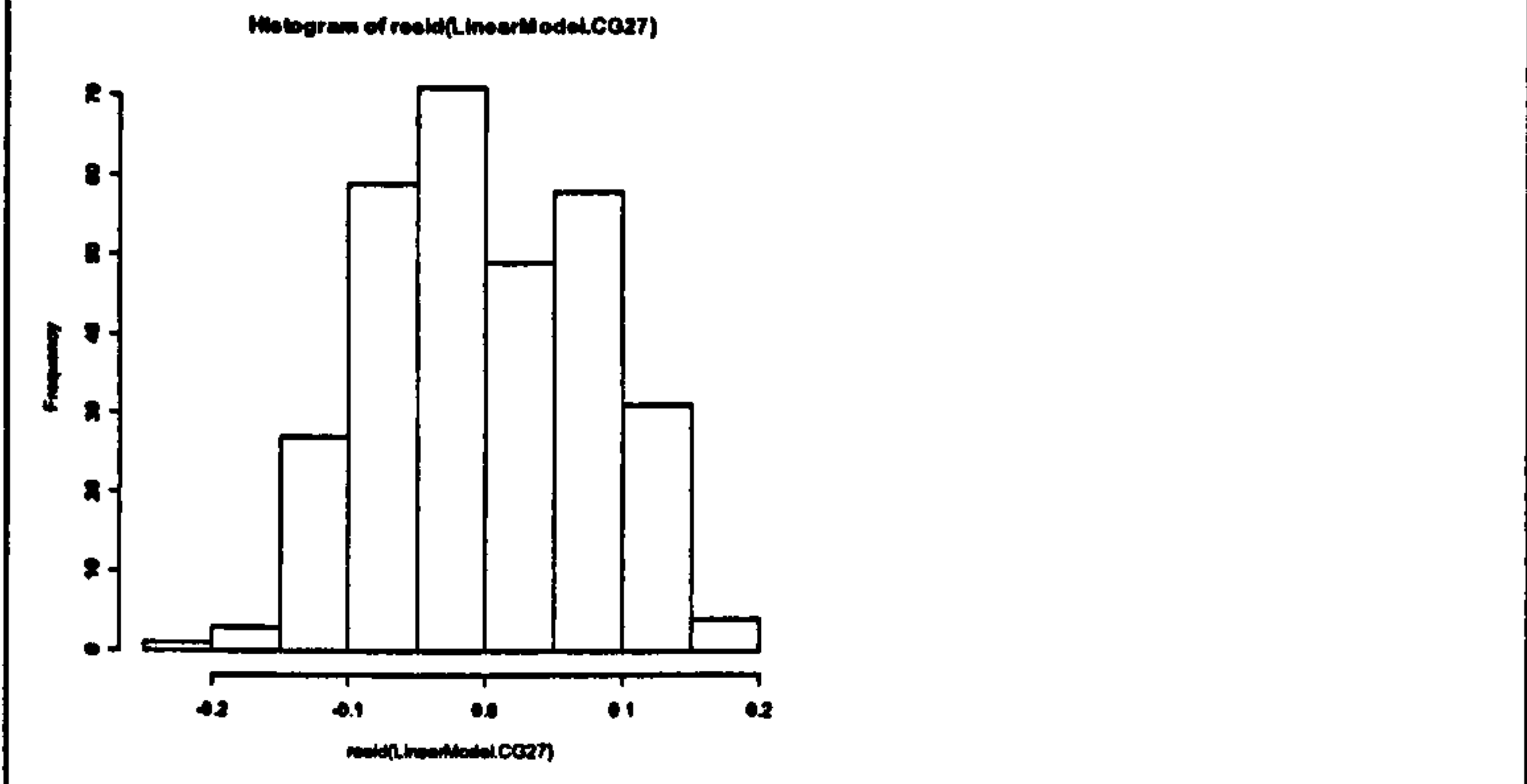
<div><p>Histogram of resid(LinearModel.S)</p><p>Original Rolex purchase intention</p></div>	<div><p>Normal Q-Q Plot</p><p>Original Rolex purchase intention</p></div>
<div><p>Histogram of resid(LinearModel.CR9)</p><p>Counterfeit Rolex purchase intention</p></div>	<div><p>Normal Q-Q Plot</p><p>Counterfeit Rolex purchase intention</p></div>
<div><p>Histogram of resid(LinearModel.CRC23)</p><p>Counterfeit Rolex likelihood of consideration</p></div>	<div><p>Normal Q-Q Plot</p><p>Counterfeit Rolex likelihood of consideration</p></div>
<div><p>Histogram of resid(LinearModel.OG2)</p><p>Original Gucci purchase intention</p></div>	<div><p>Normal Q-Q Plot</p><p>Original Gucci purchase intention</p></div>



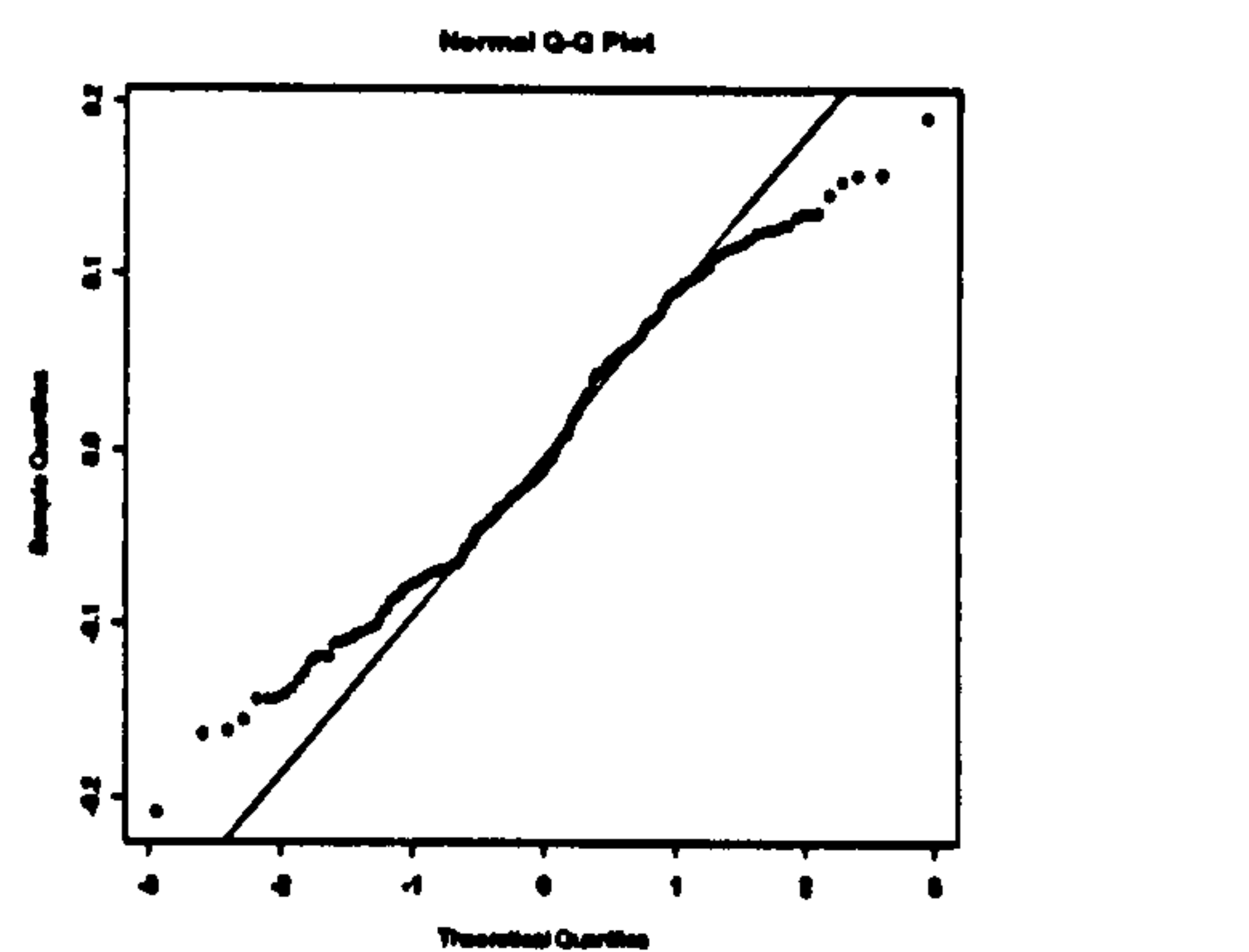
Counterfeit Gucci purchase intention



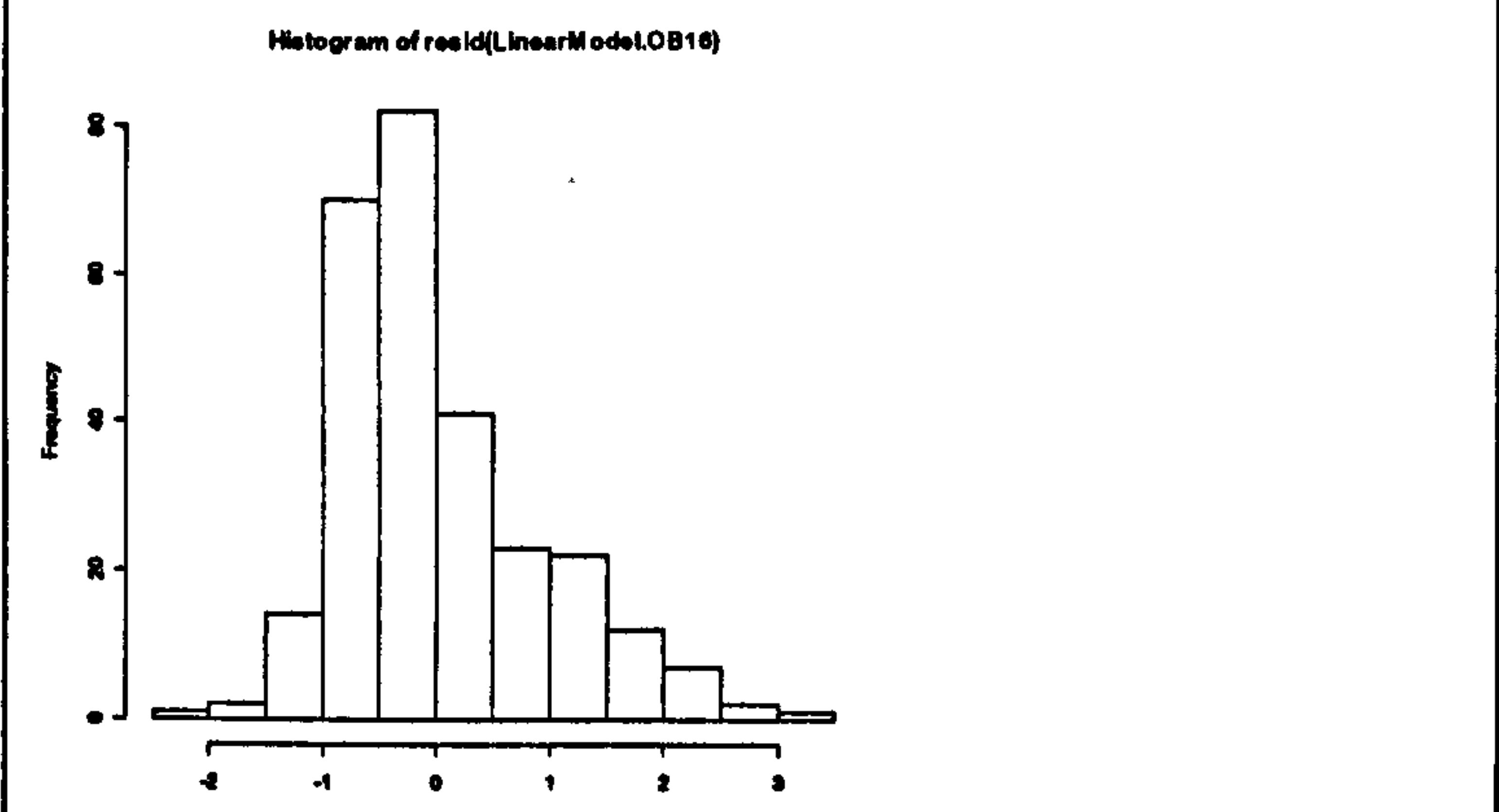
Counterfeit Gucci purchase intention



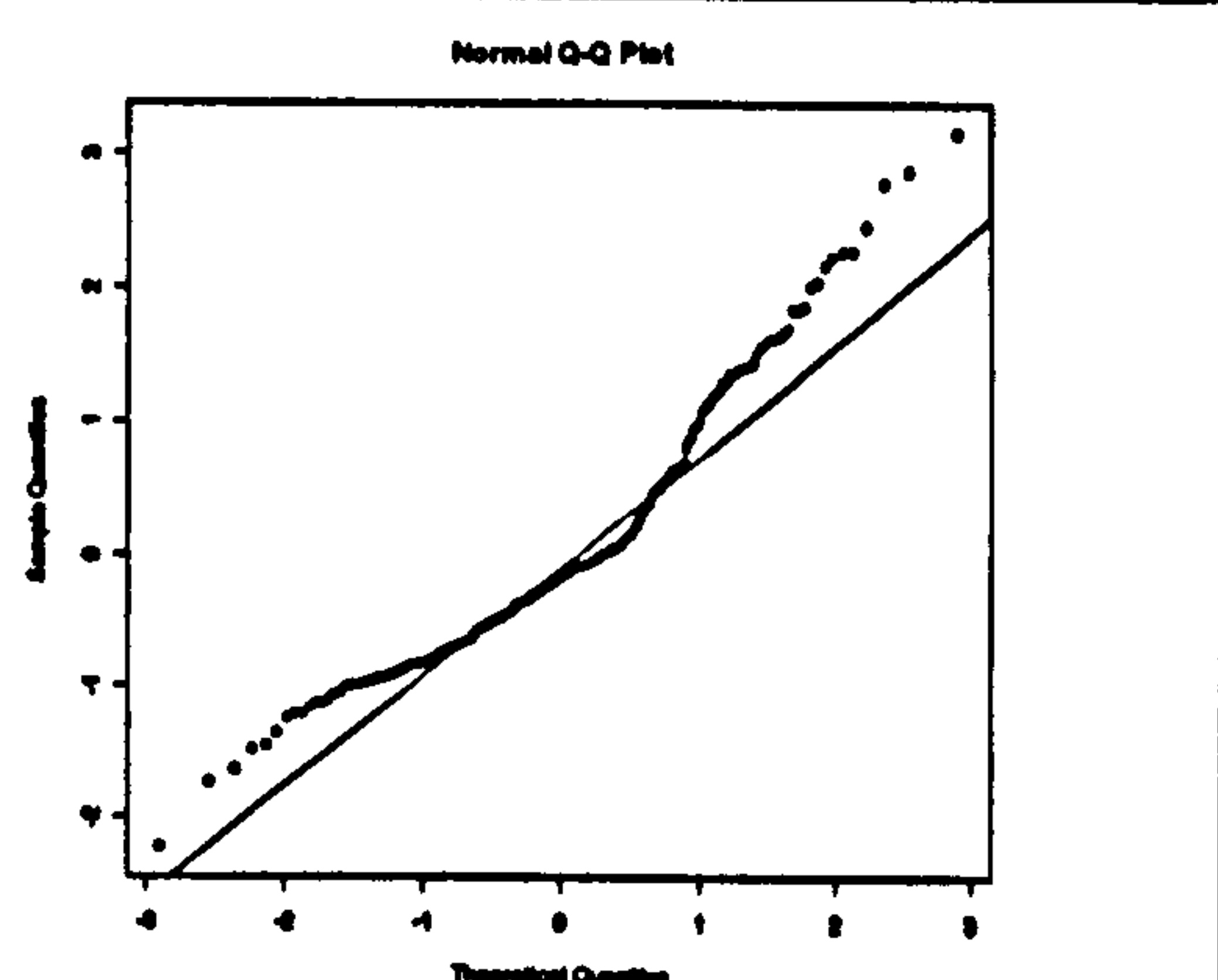
Counterfeit Gucci likelihood of consideration



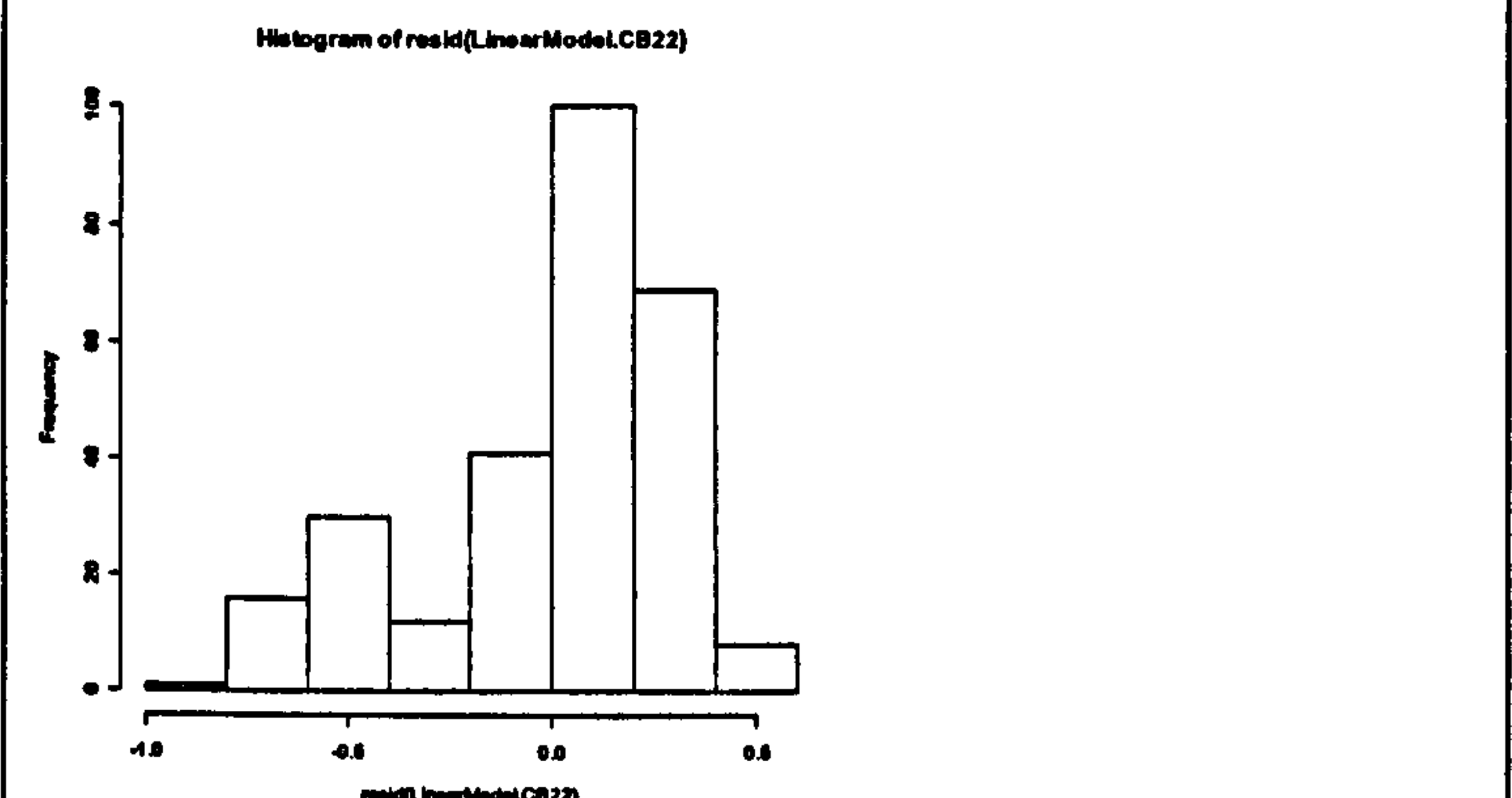
Counterfeit Gucci likelihood of consideration



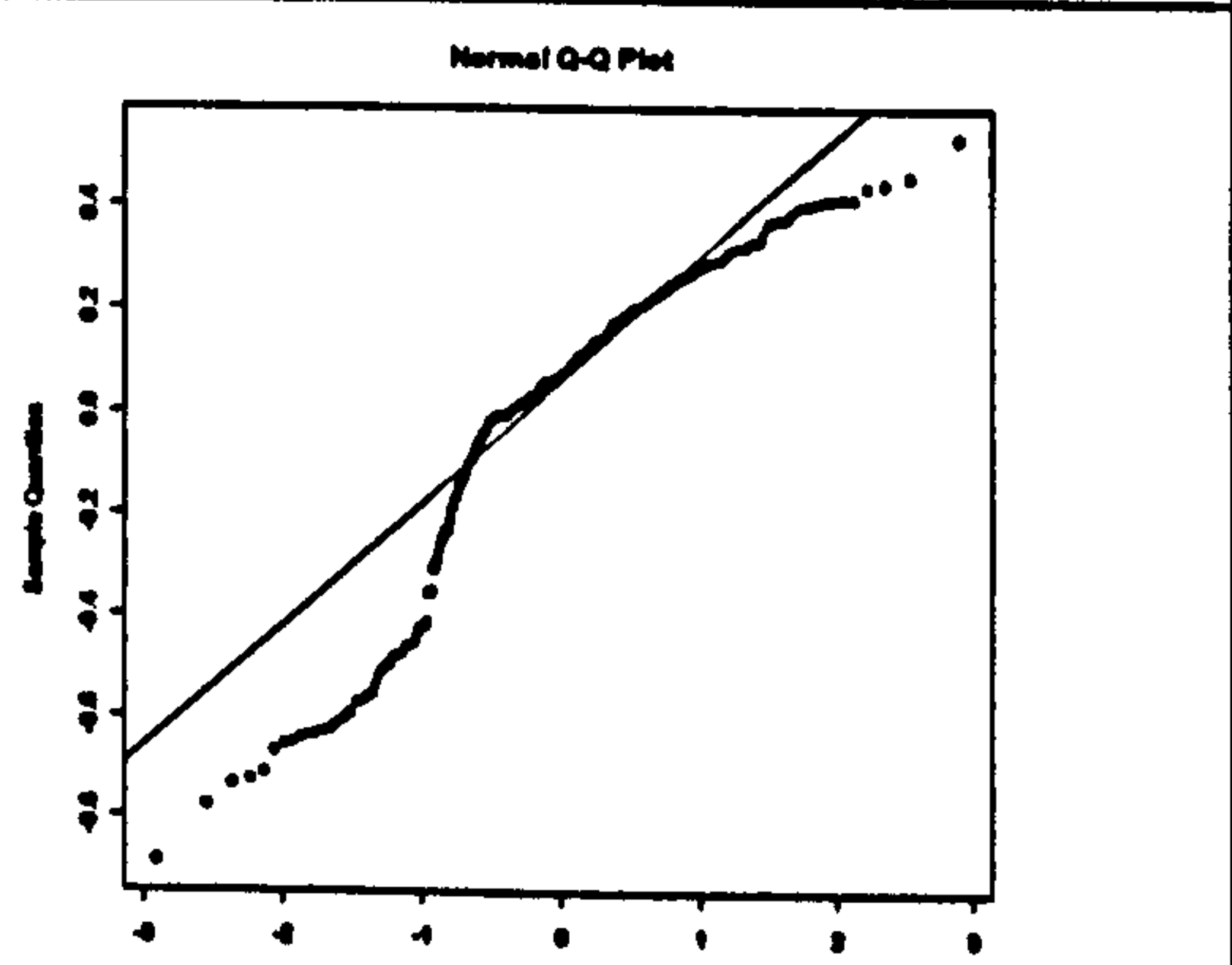
Original Burberry purchase intention



Original Burberry purchase intention

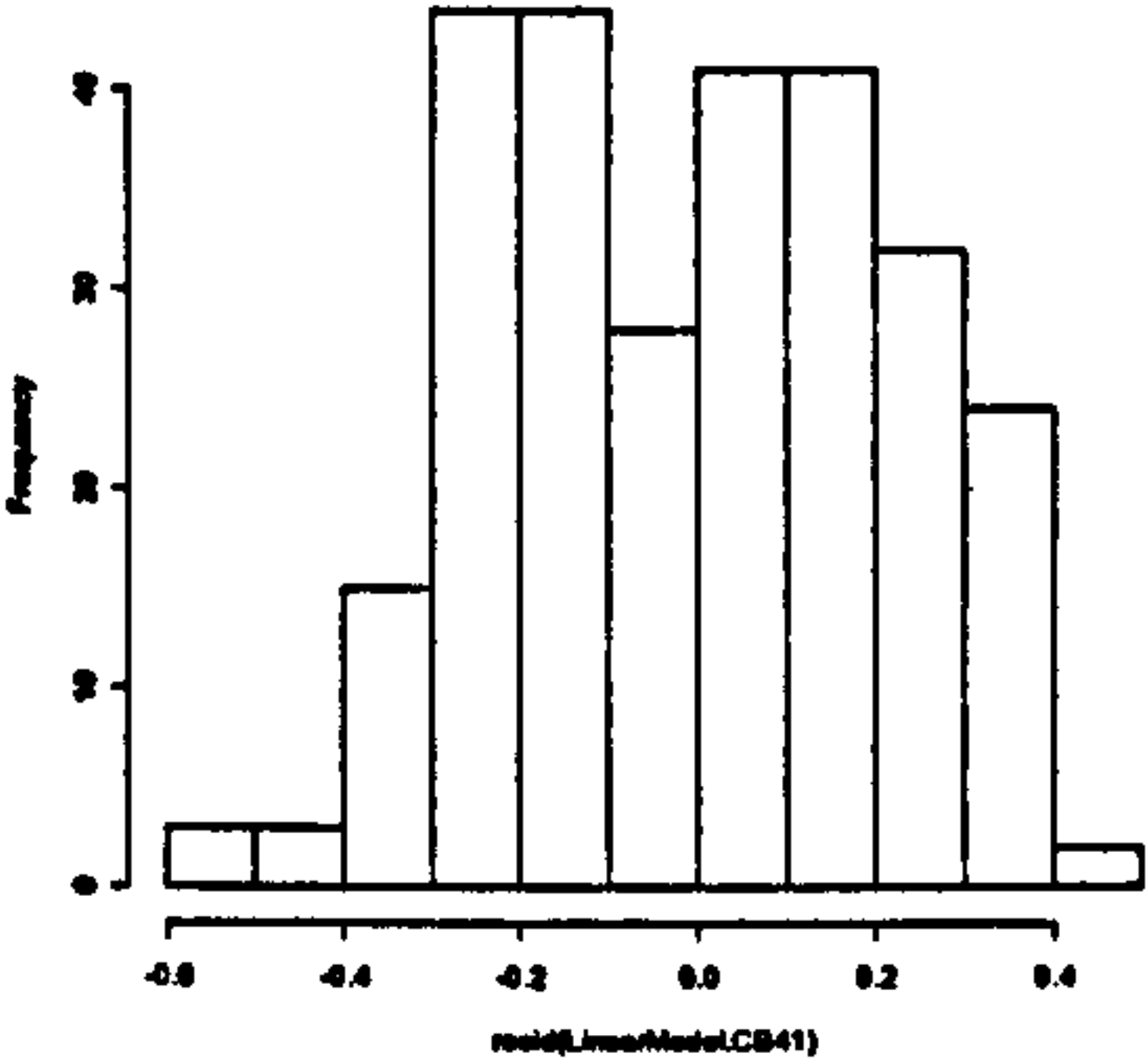
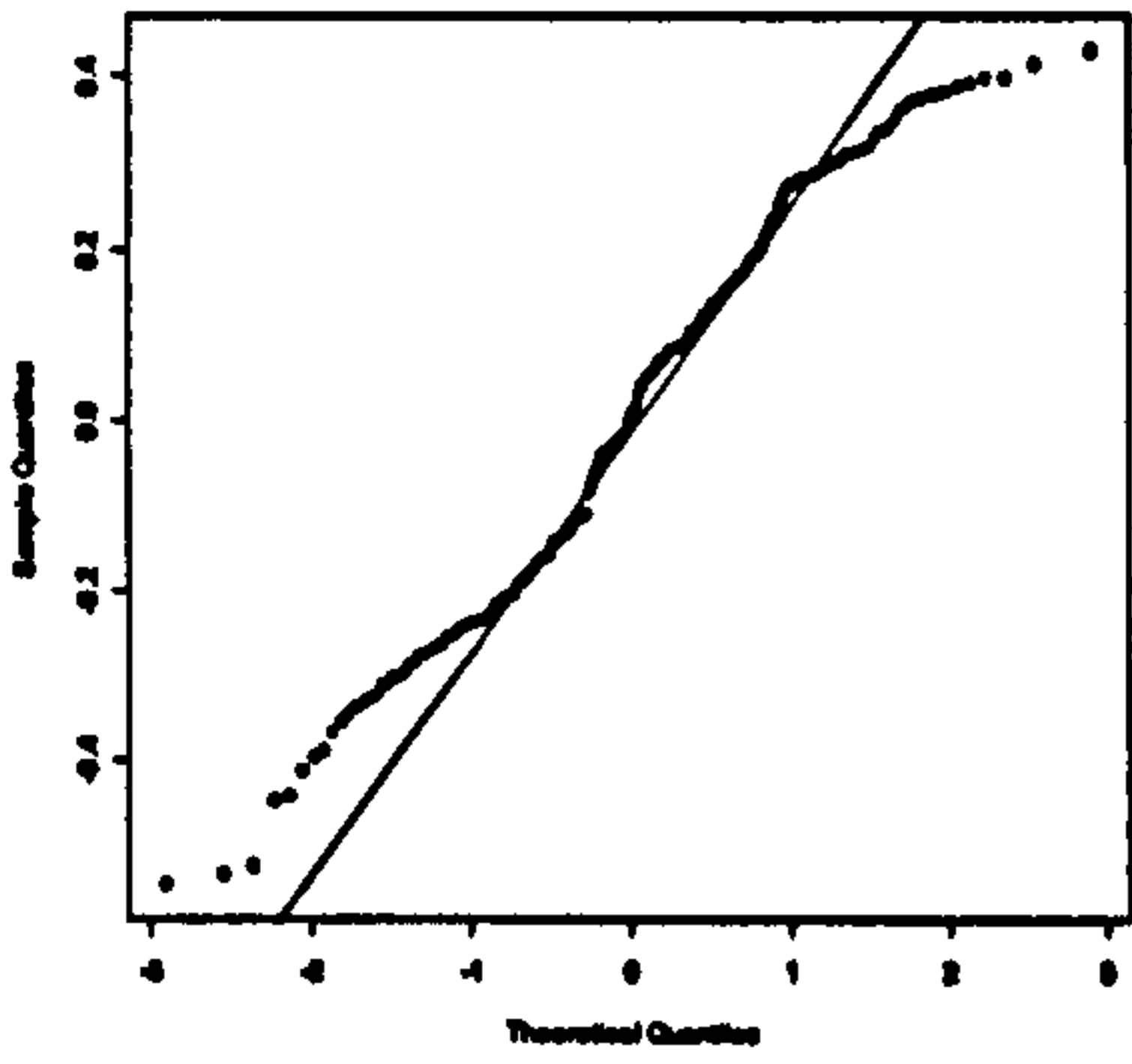
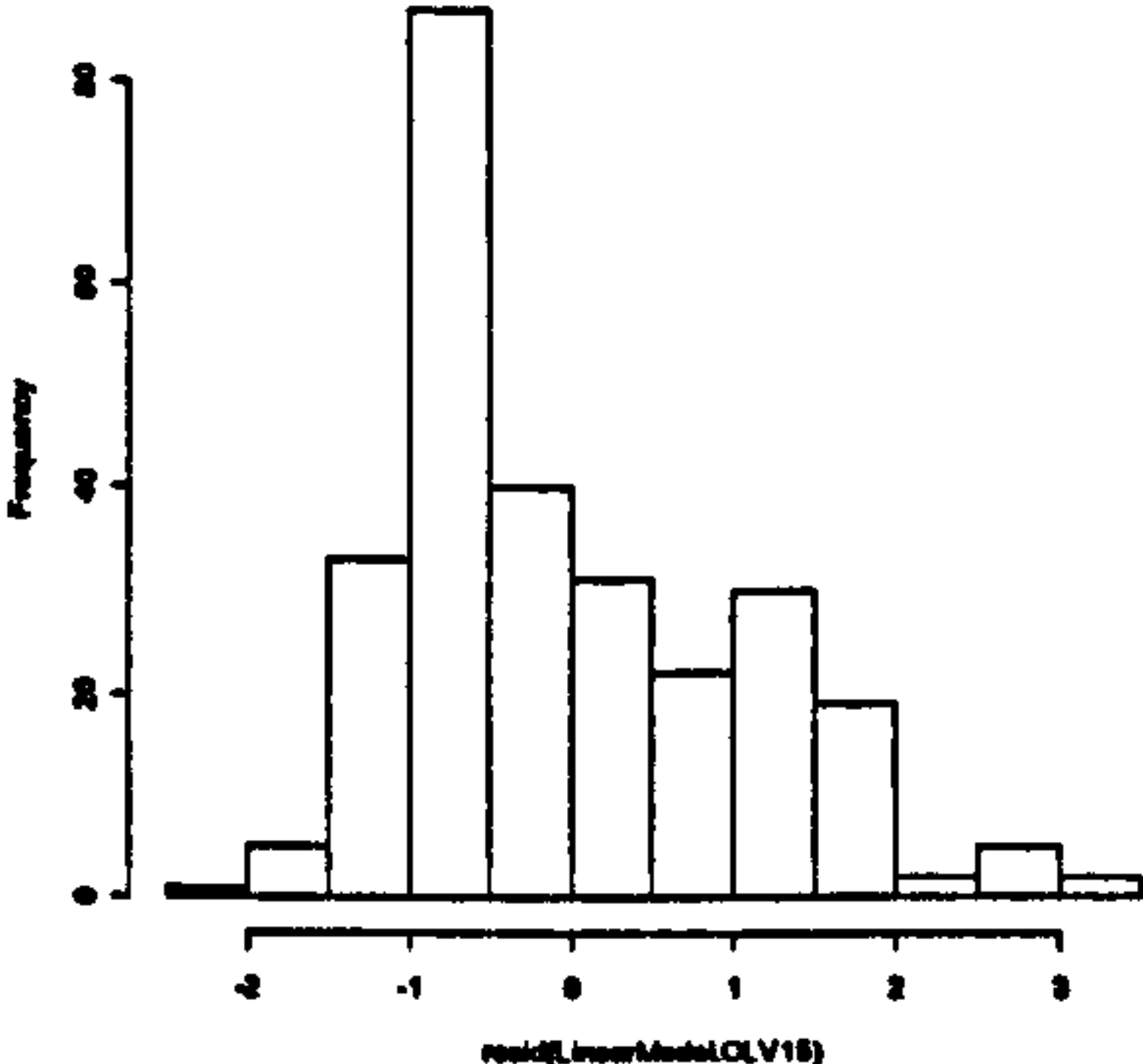
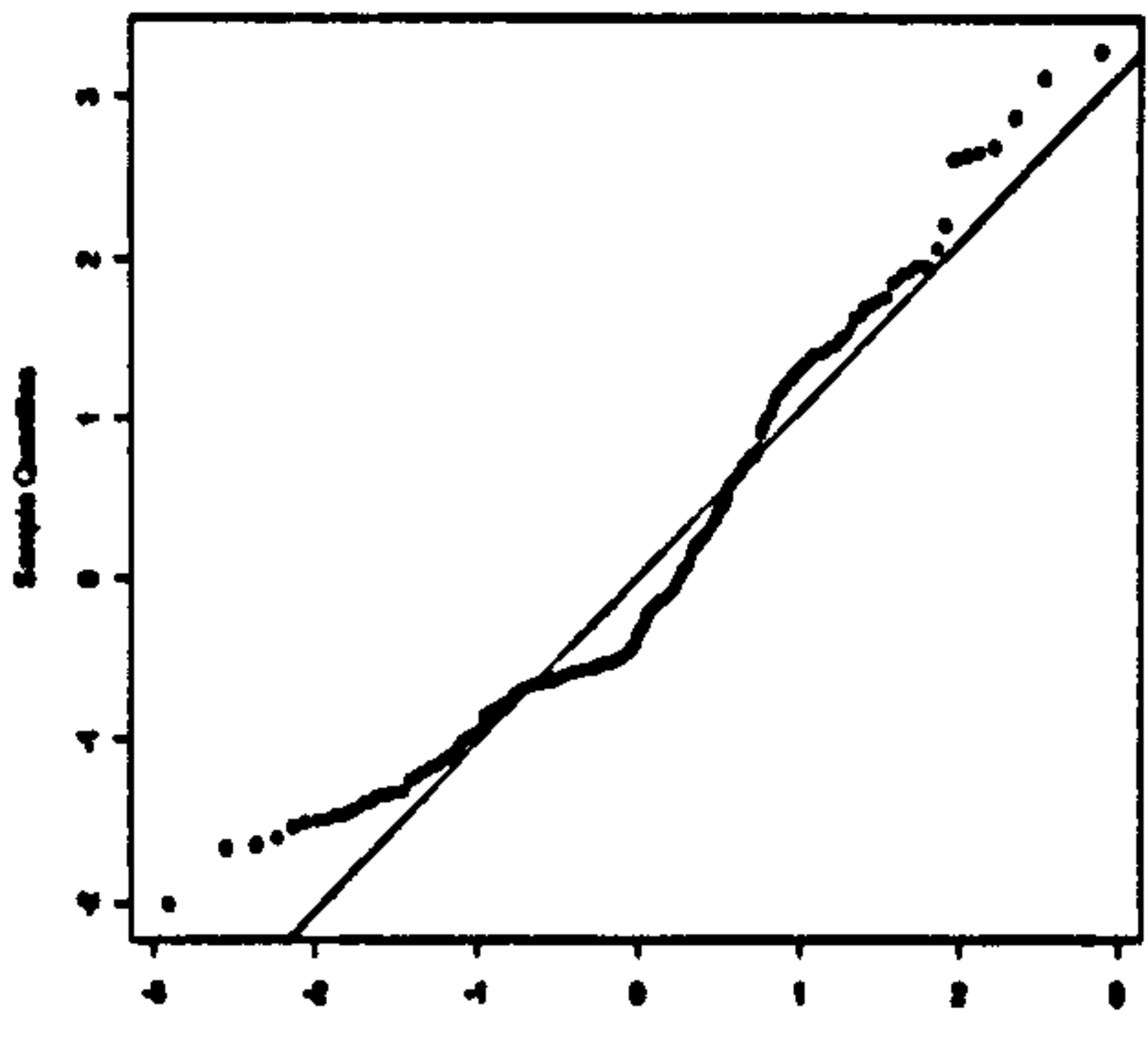
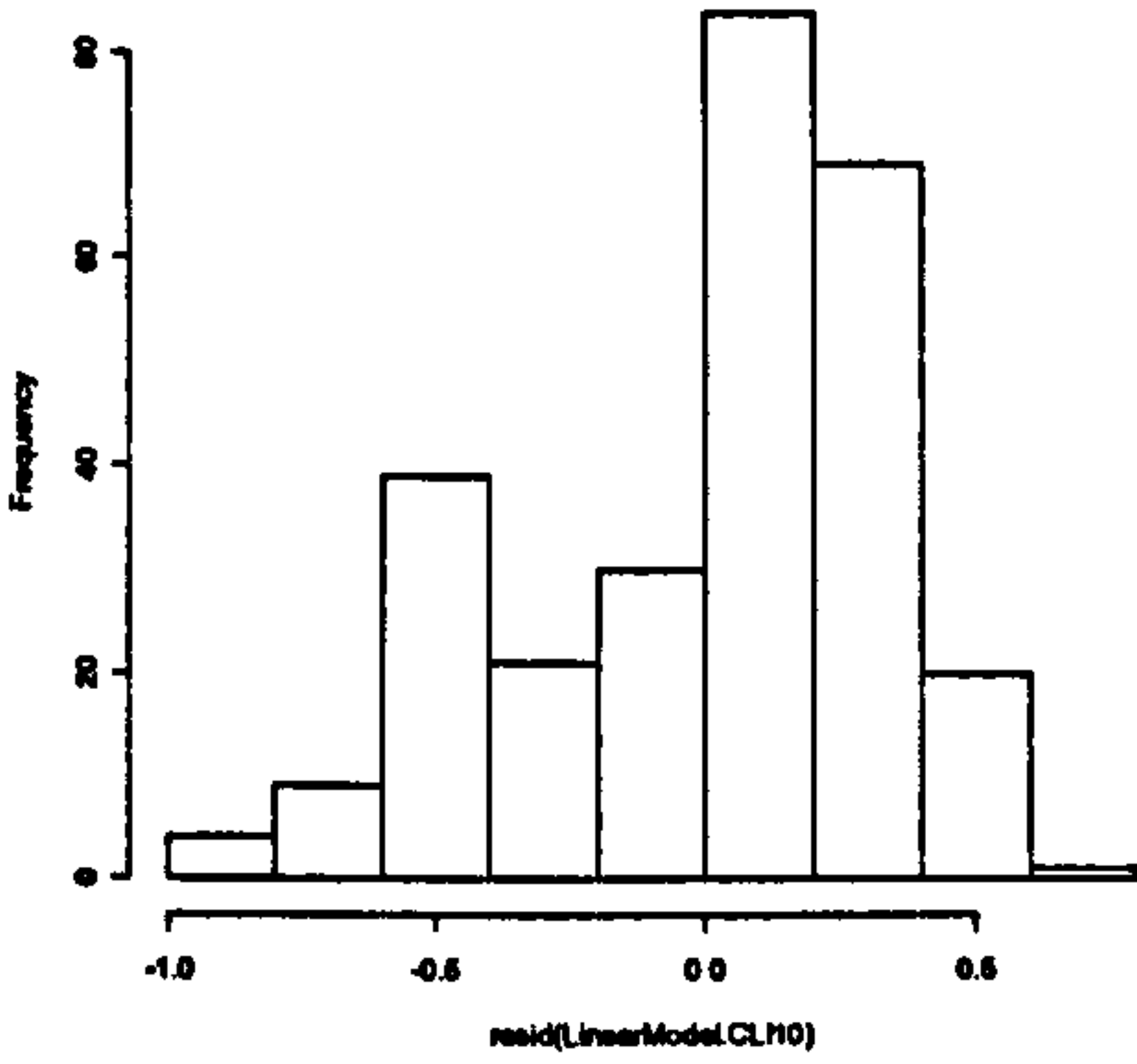
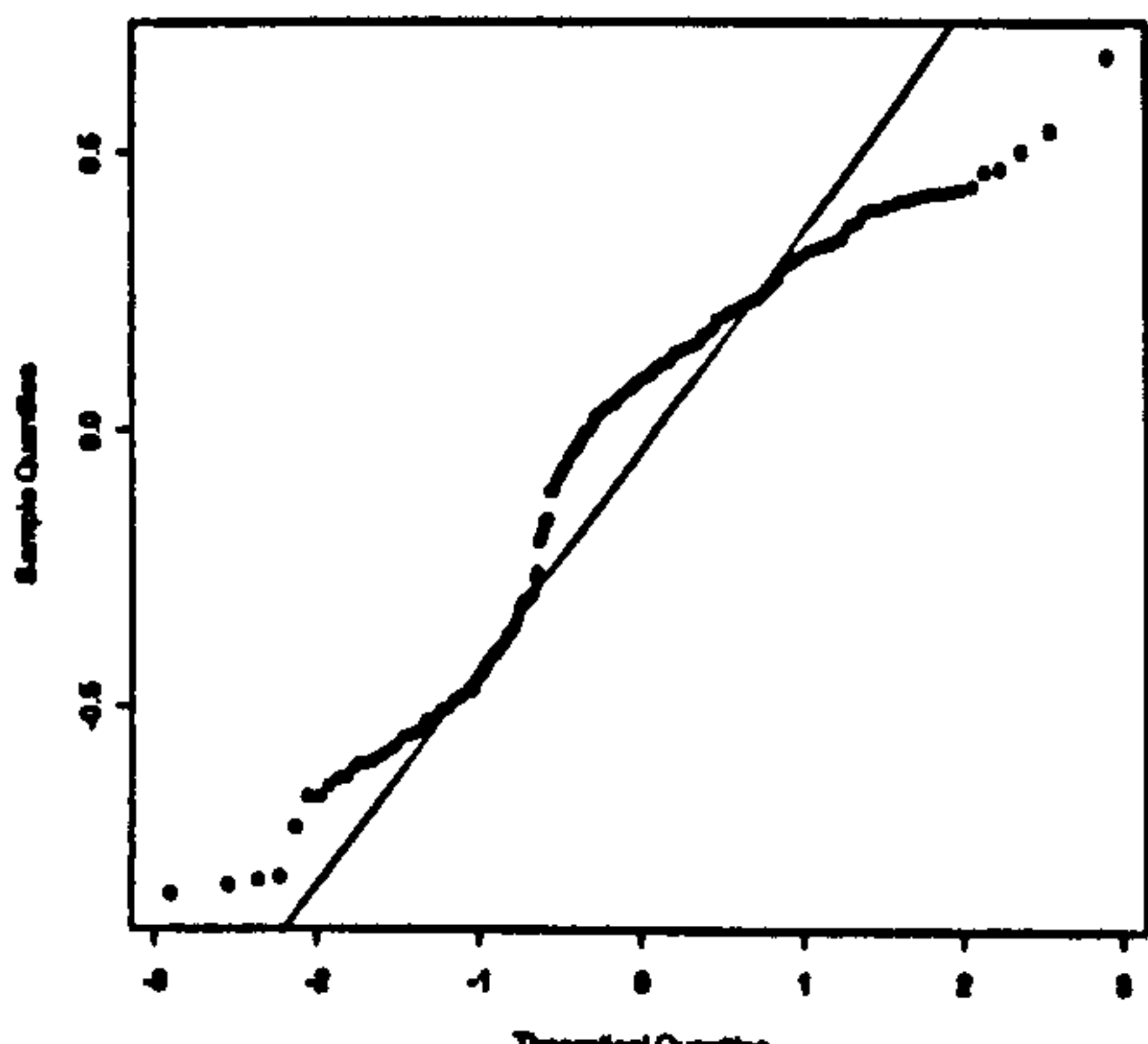


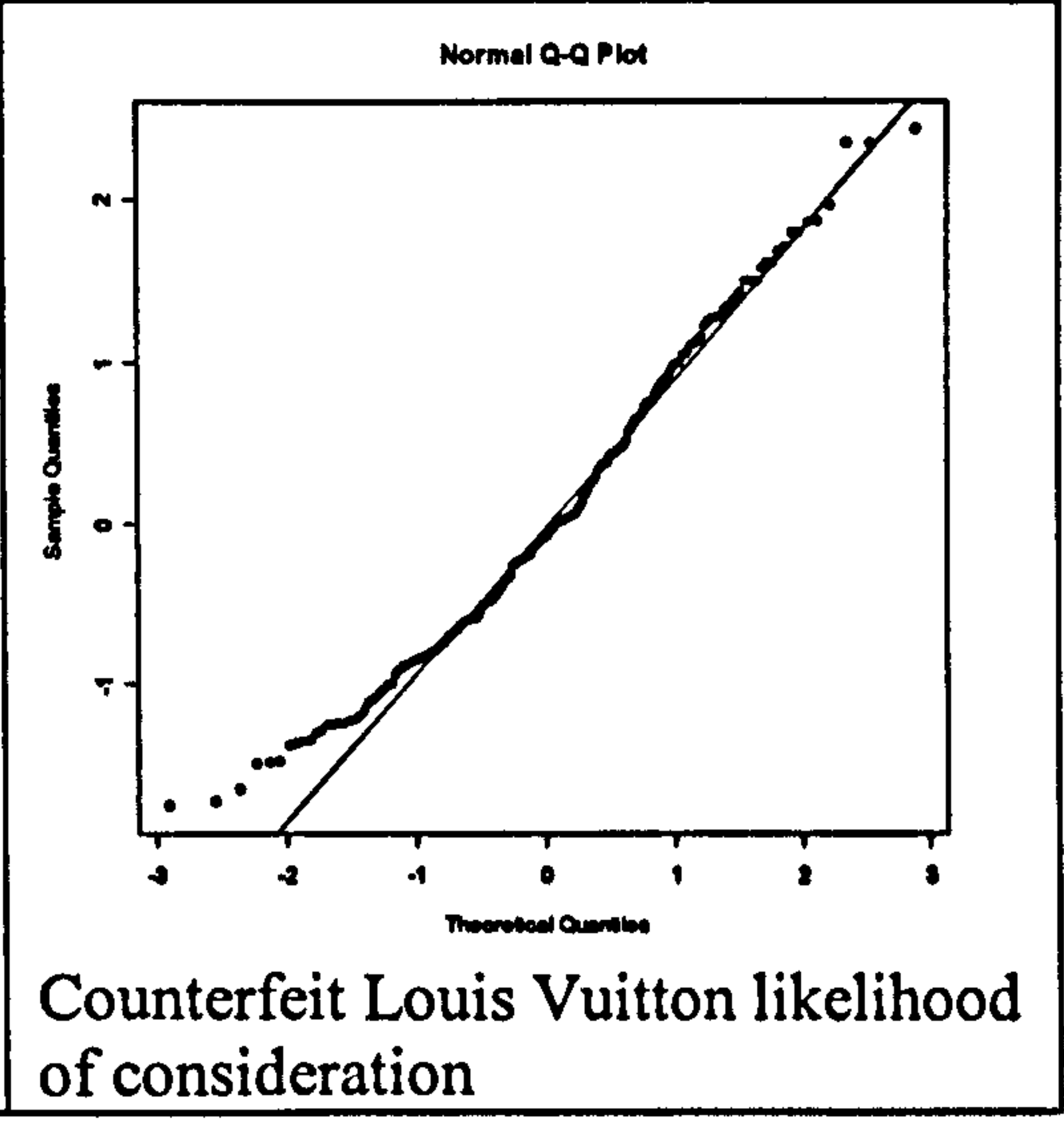
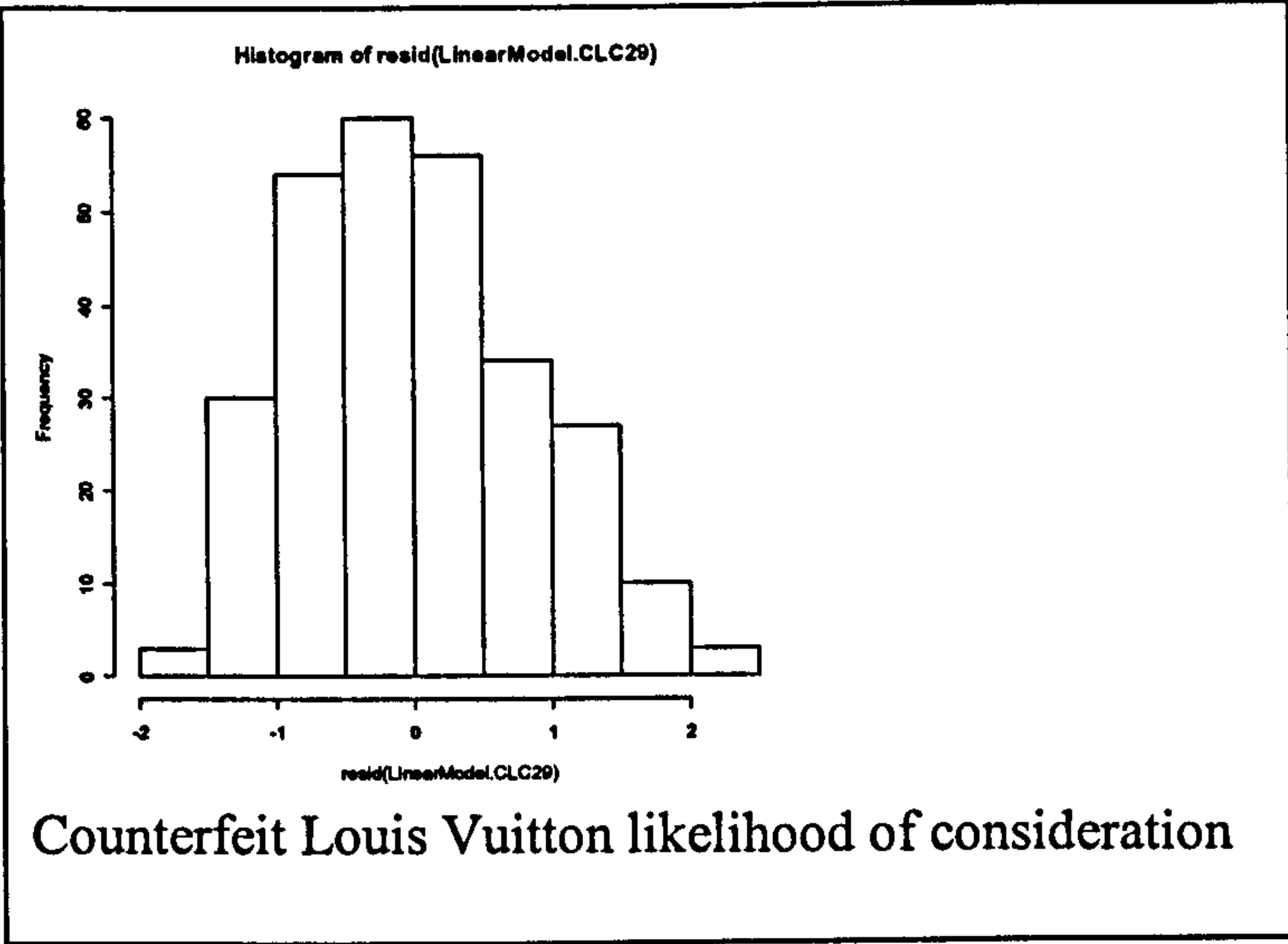
Counterfeit Burberry purchase intention



Counterfeit Burberry purchase



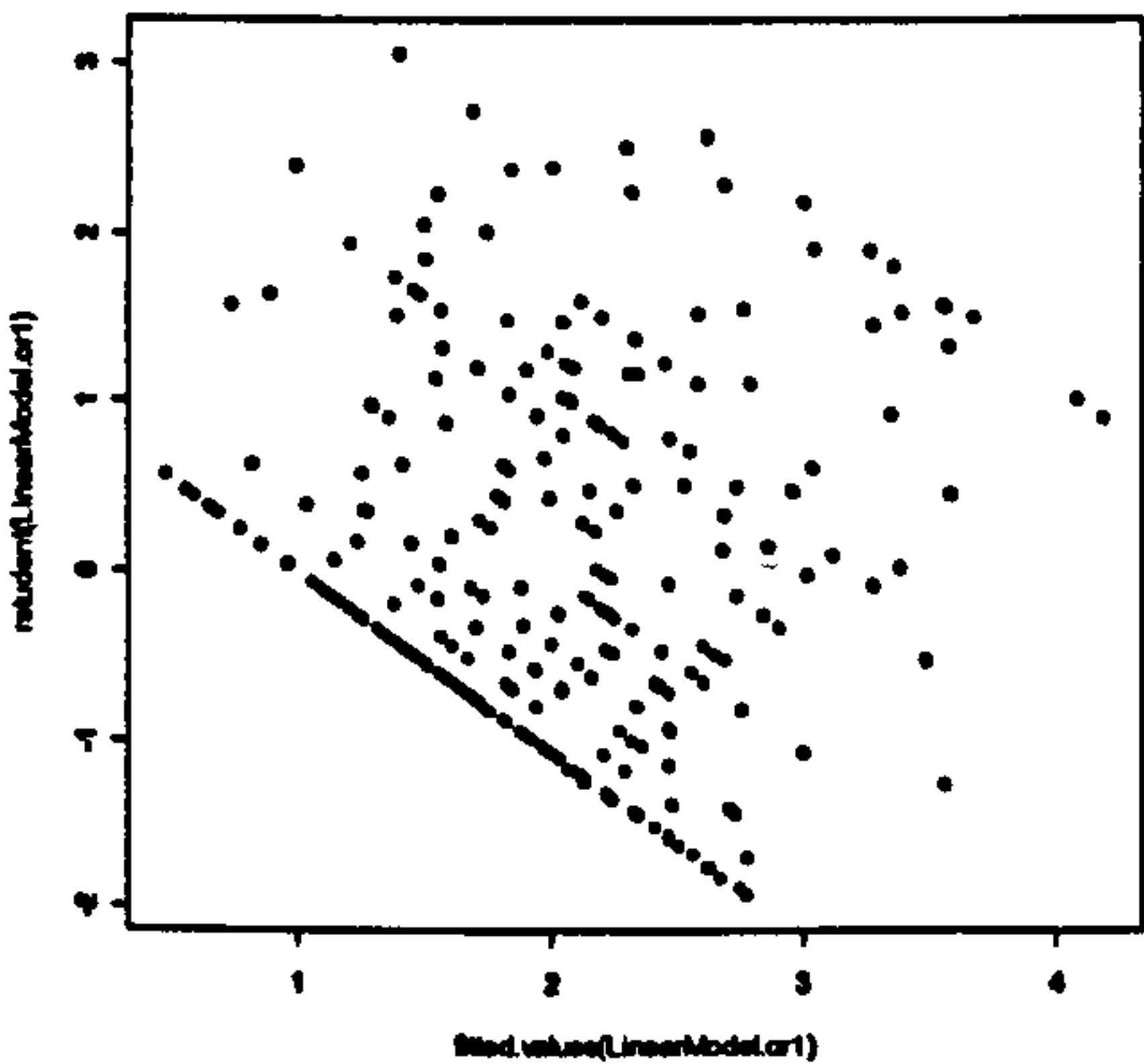
	intention
<p>Histogram of resid(LinearModel.CB41)</p>  <p>Counterfeit Burberry likelihood of consideration</p>	<p>Normal Q-Q Plot</p>  <p>Counterfeit Burberry likelihood of consideration</p>
<p>Histogram of resid(LinearModel.OLV15)</p>  <p>Original Louis Vuitton purchase intention</p>	<p>Normal Q-Q Plot</p>  <p>Original Louis Vuitton purchase intention</p>
<p>Histogram of resid(LinearModel.CL10)</p>  <p>Counterfeit Louis Vuitton purchase intention</p>	<p>Normal Q-Q Plot</p>  <p>Counterfeit Louis Vuitton purchase intention</p>



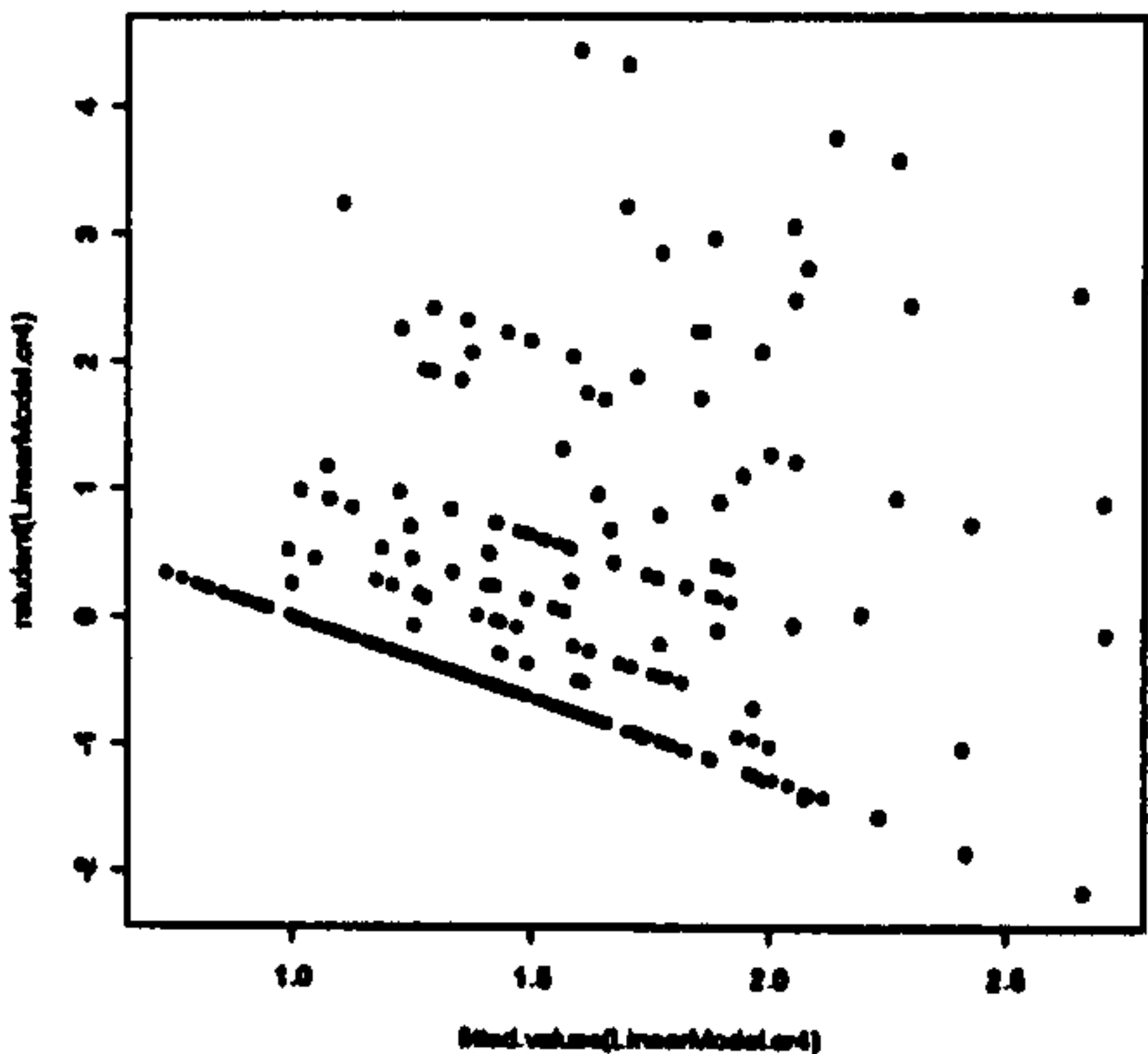


Appendix 13 Residuals versus the Fitted Values

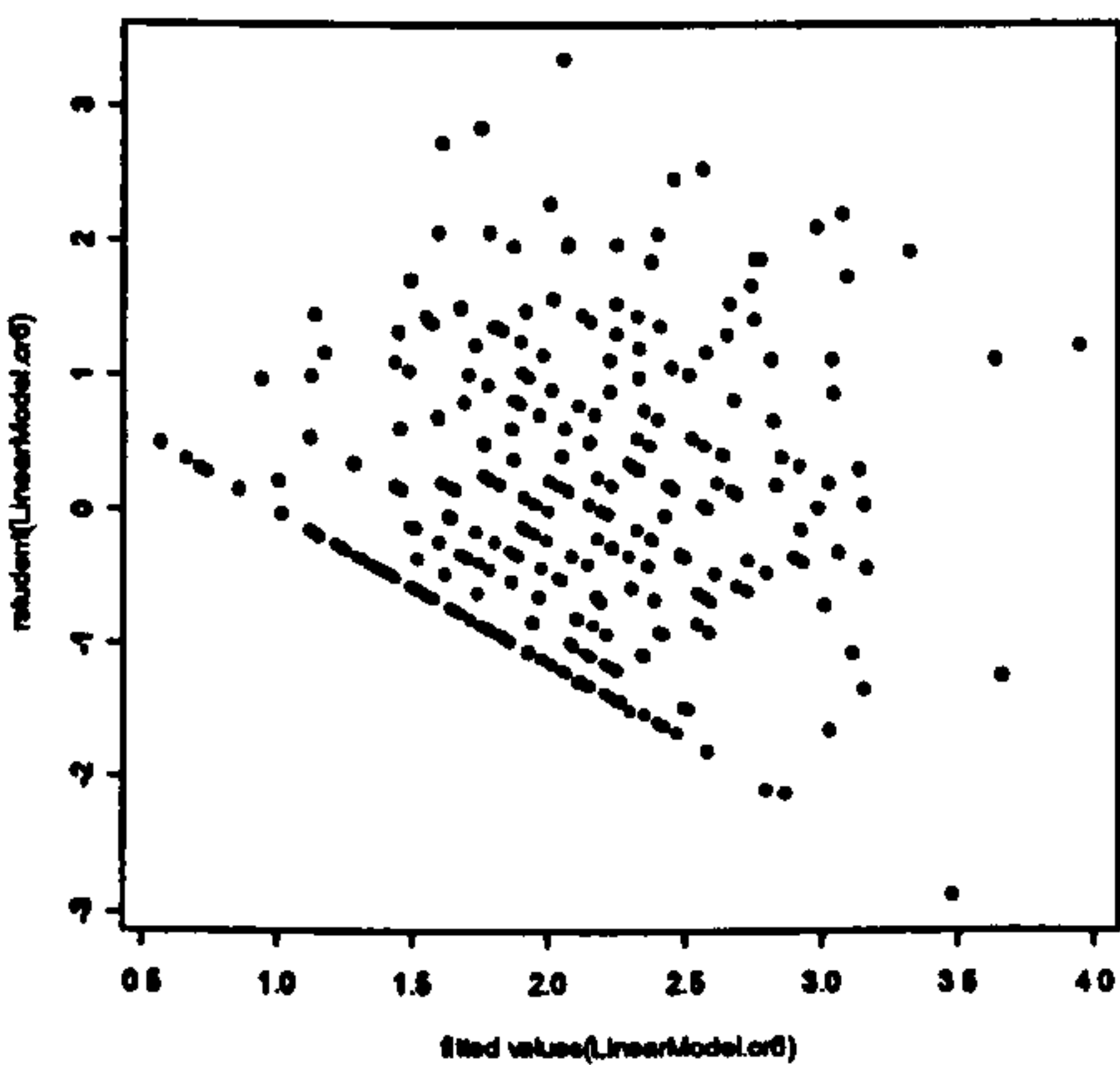
Original Rolex purchase intention



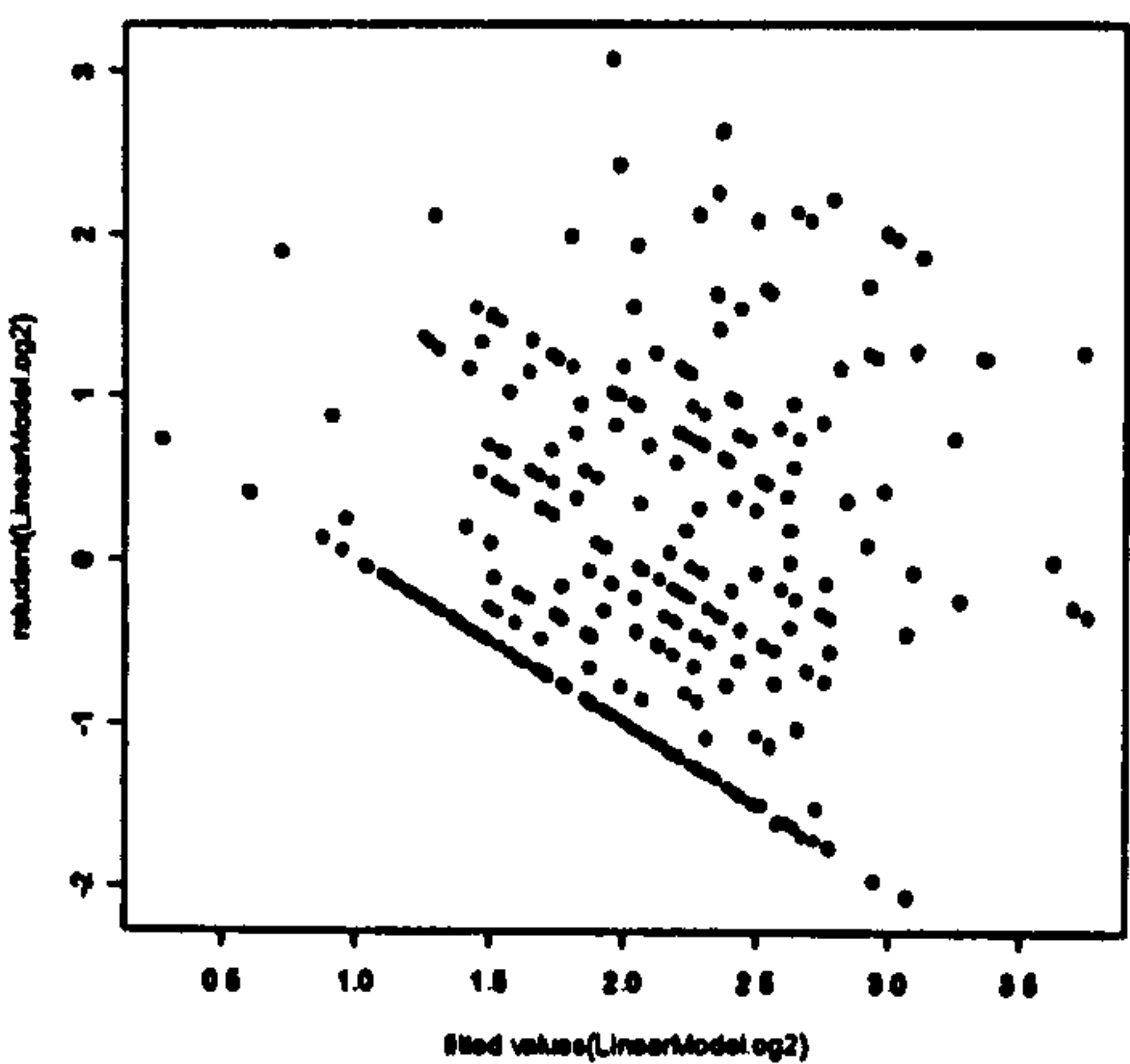
Counterfeit Rolex purchase intention



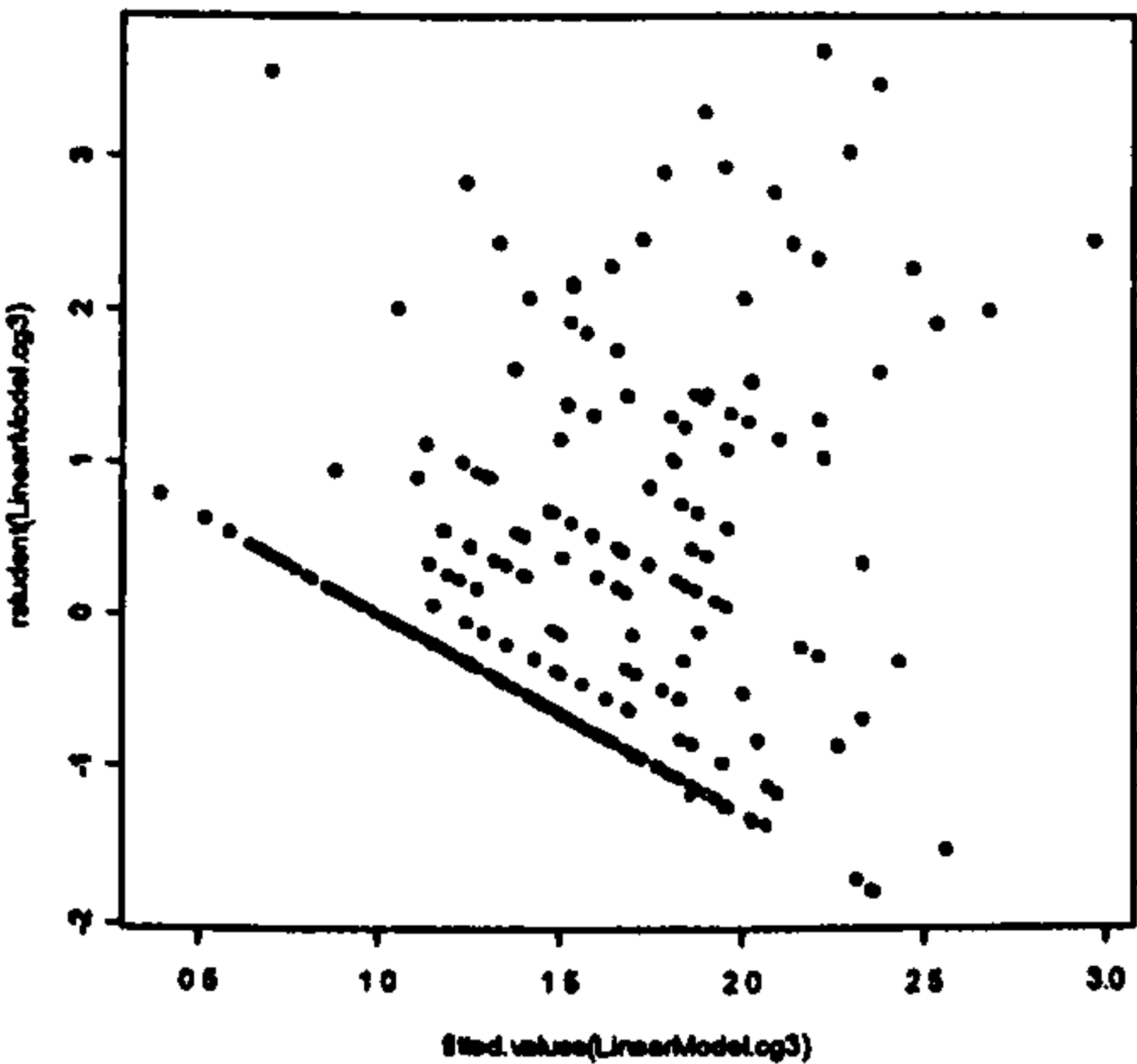
Counterfeit Rolex likelihood of consideration



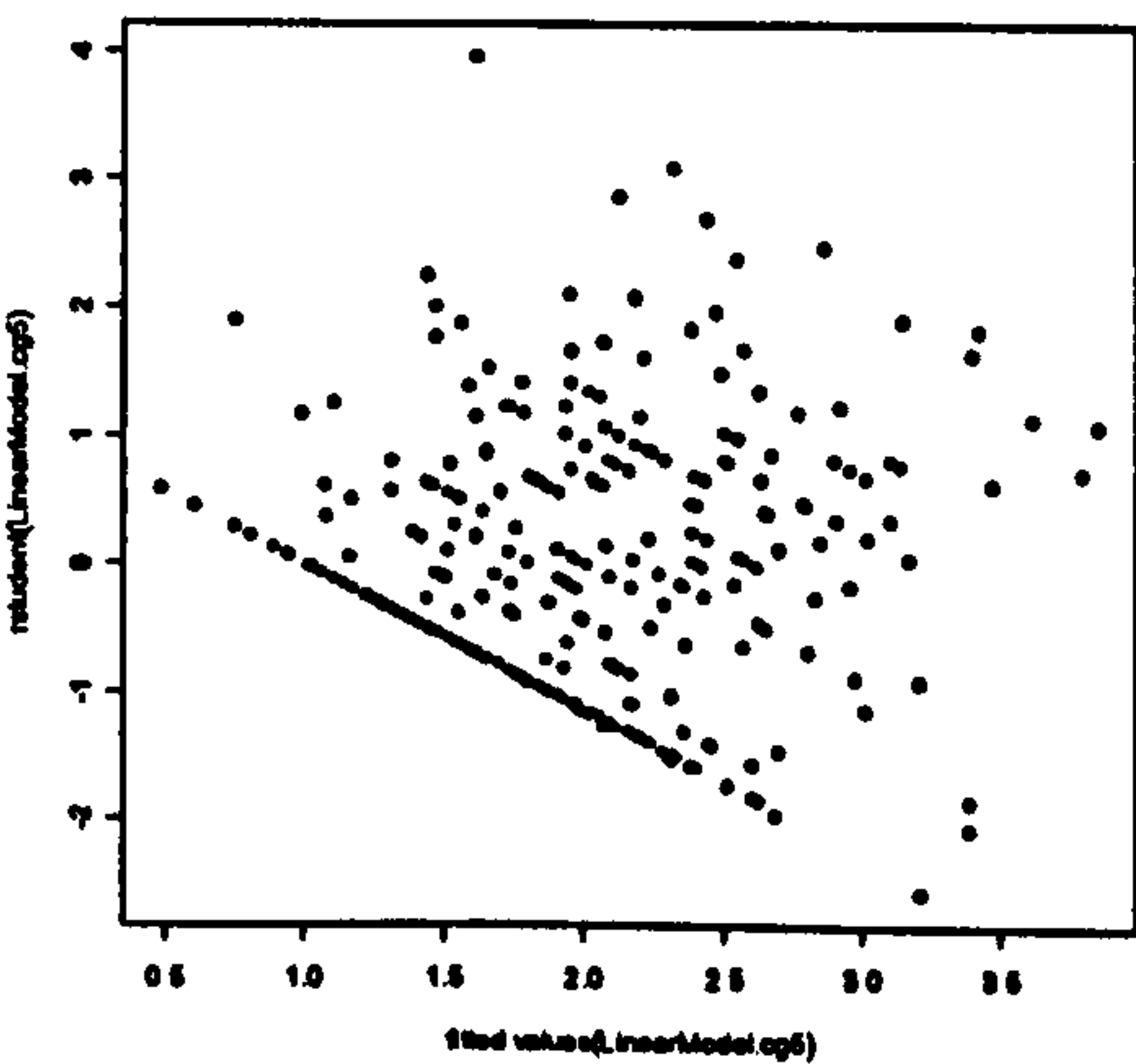
Original Gucci purchase intention



Counterfeit Gucci purchase intention

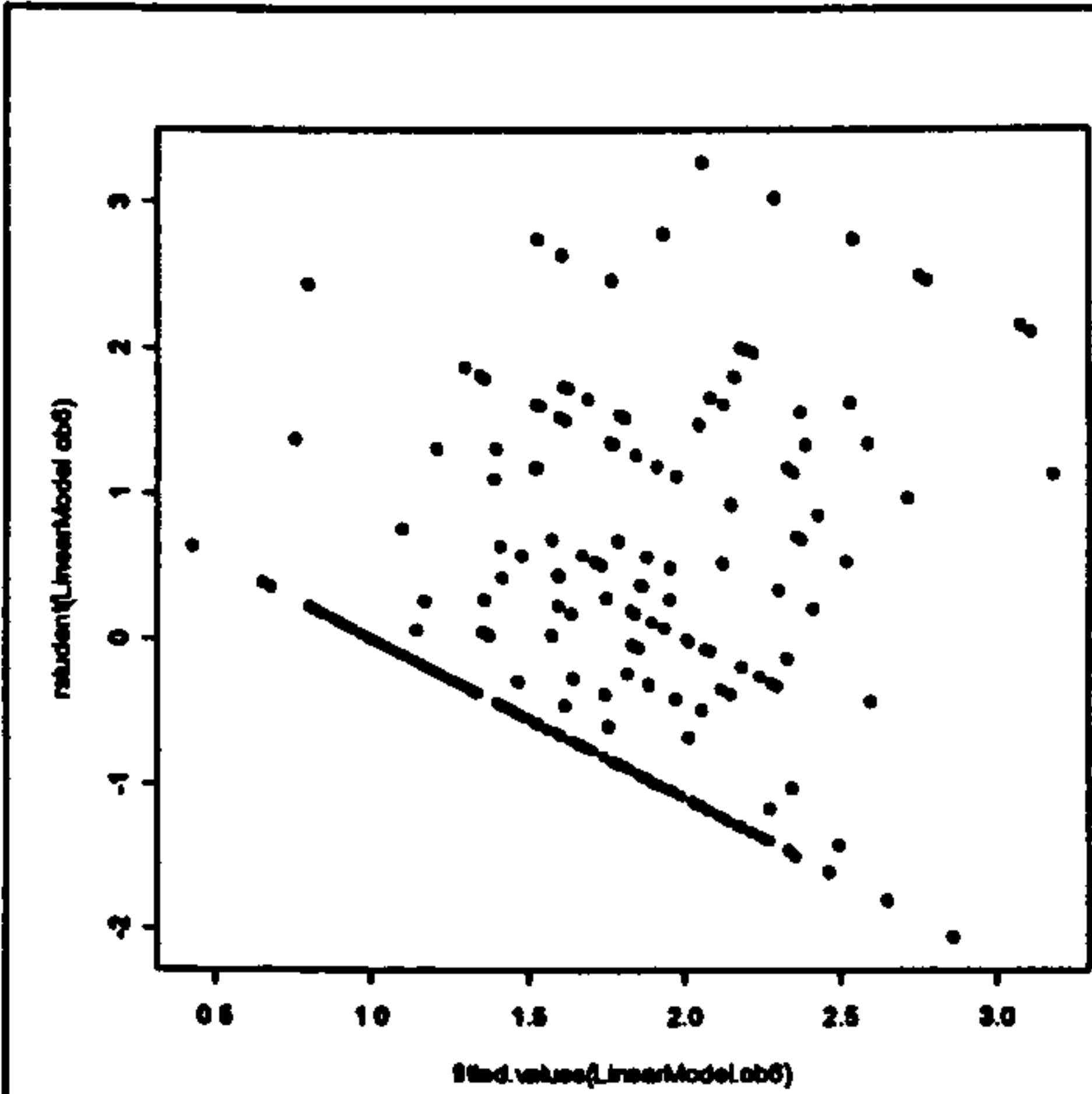


Counterfeit Gucci likelihood of consideration

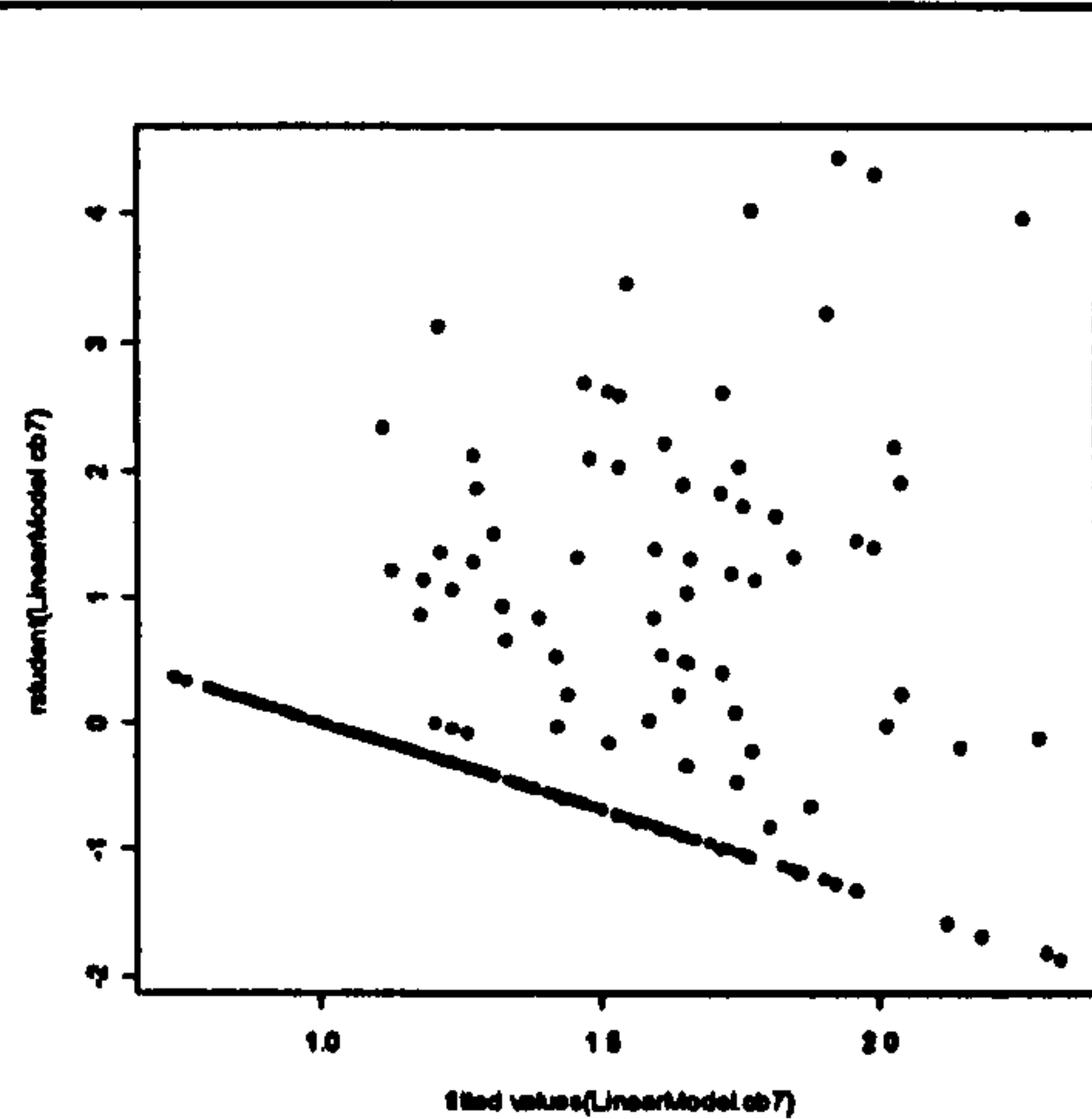


Original Burberry purchase intention

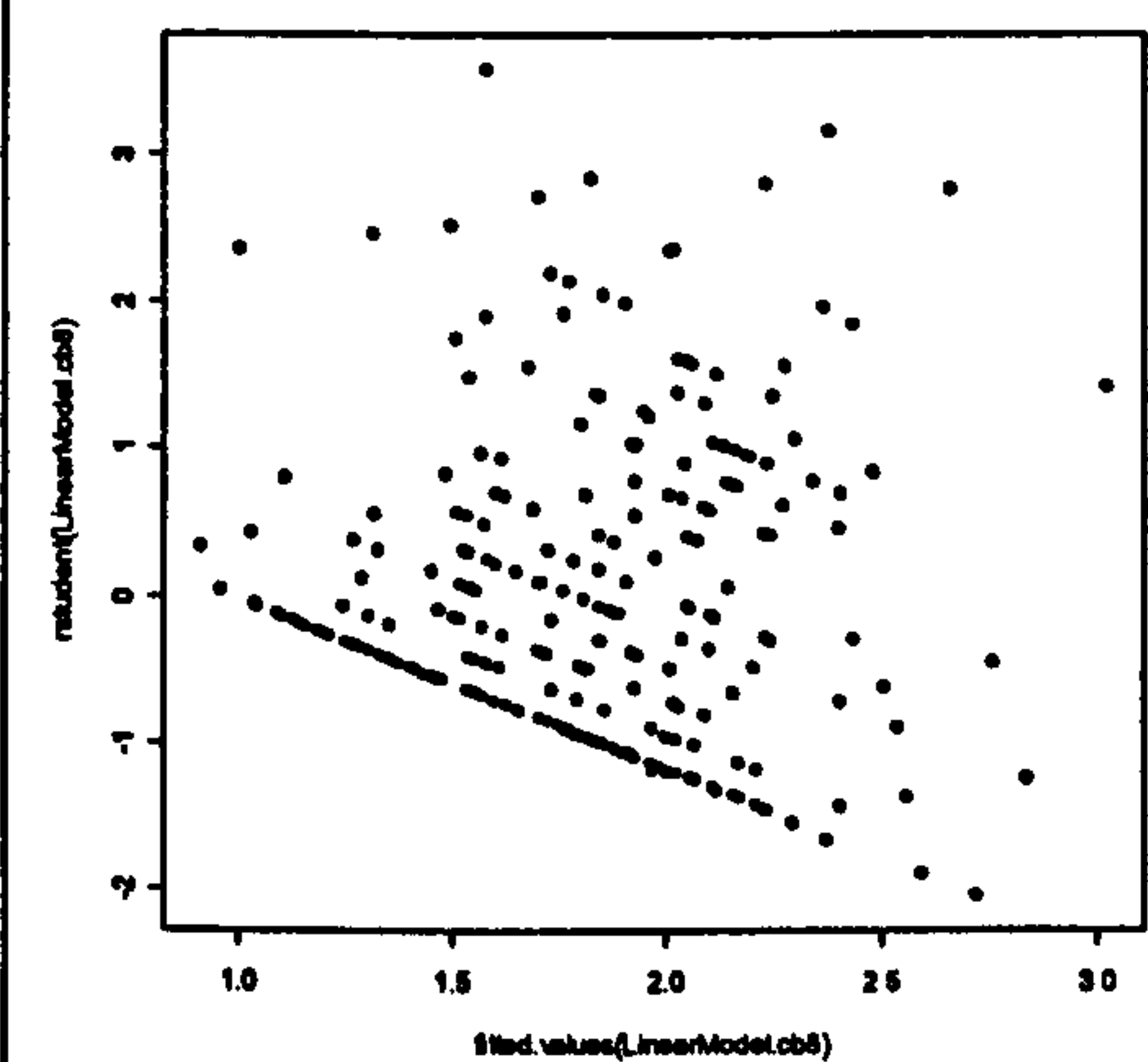
Counterfeit Burberry purchase intention



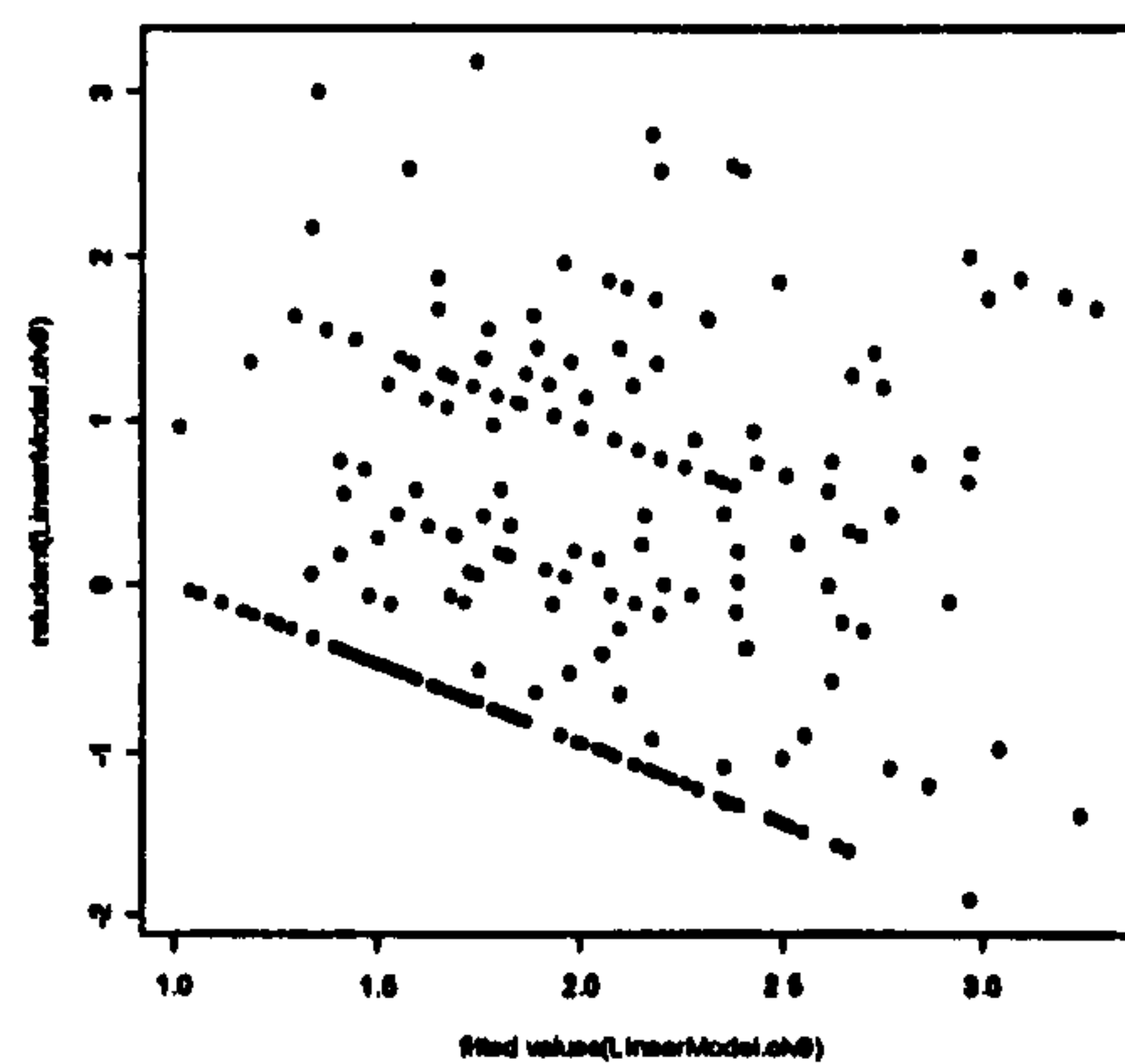
Counterfeit Burberry likelihood of consideration



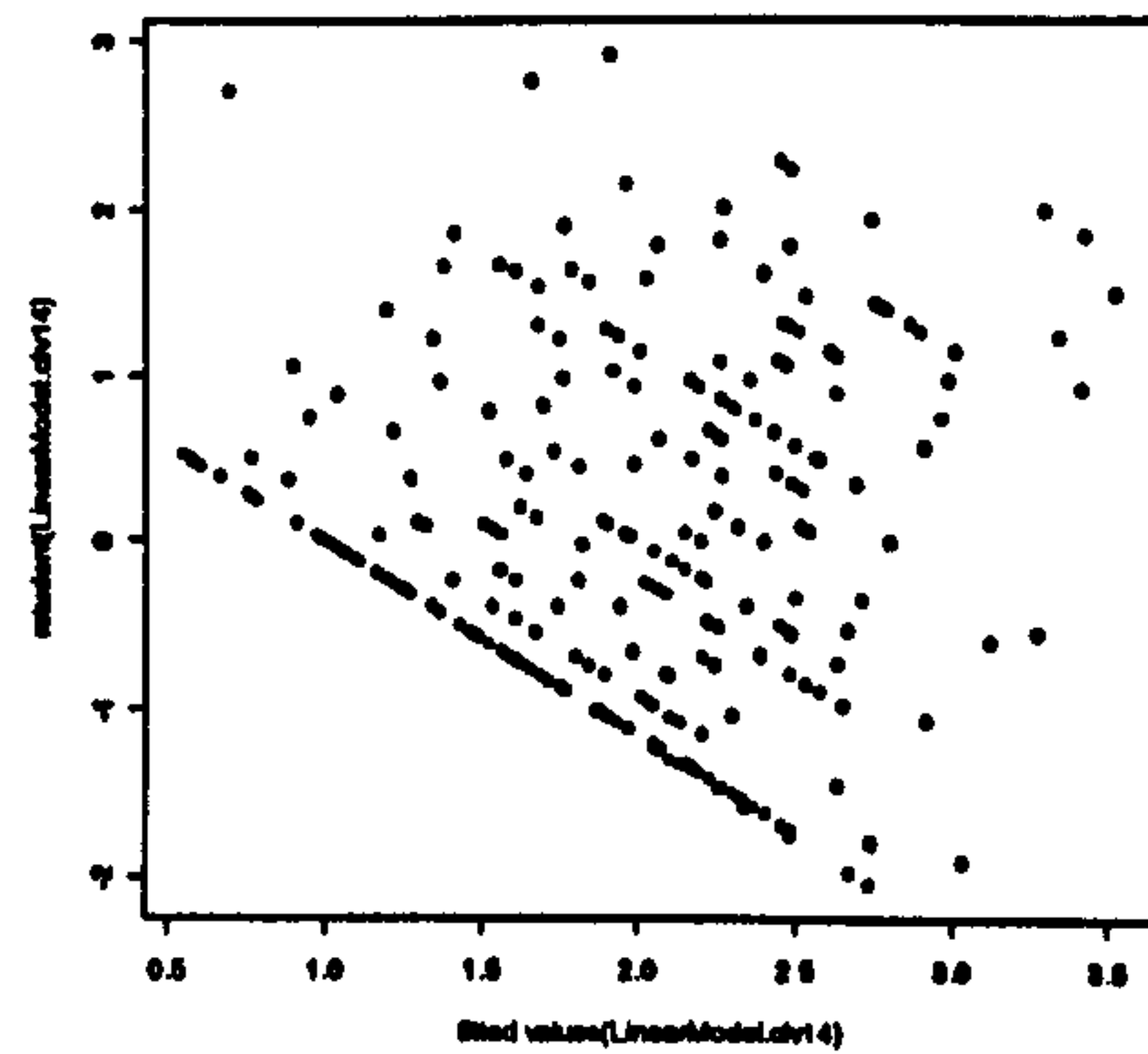
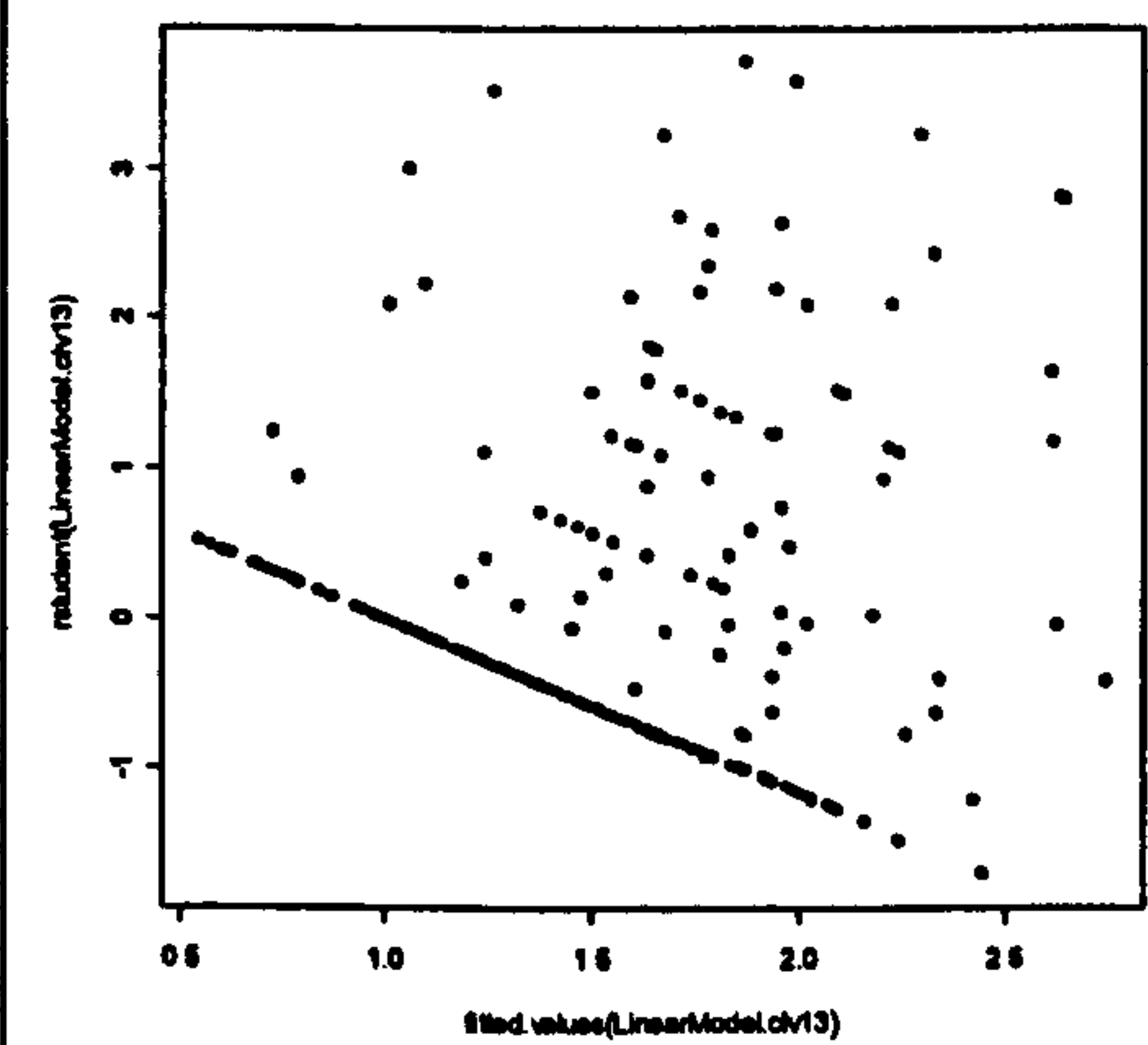
Original Louis Vuitton purchase intention



Counterfeit Louis Vuitton purchase intention



Counterfeit Louis Vuitton likelihood of consideration





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