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**CONSTRAINTS OF NON-OIL-RELATED SMEs' ACCESS TO BANK FUNDING:  
CREDIT DISCOURAGEMENT INCIDENTS IN OIL-BASED ECONOMY**

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Degree of Doctor of Philosophy**

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## **ABSTRACT**

Oil continues to be the primary engine for Oman's economic growth and sustainability. The growth of revenue from oil has had a positive impact on economic development and social welfare since its discovery in the 1960s. However, the oil market is vulnerable to global price volatility and from depletion, both of which would have an adverse impact on economy growth. The current sharp reduction of the global market price for oil has forced Oman's policymakers to seek to increase the contribution of Small and Medium Enterprises (SMEs) to its gross domestic product. Banks are the main source of finance for SMEs in Oman to expand. But because of the risks associated with the opacity of SMEs, banks seem reluctant to lend these firms, with the share of lending comprising only 3% of the total bank loan portfolio.

Previous studies of the financial constraints encountered by SMEs have largely focused on the supply-side, hence little is known about this issue from the demand-side perspective. The aim of this study is to examine the role of demand constraints on access to bank finance. Specifically, the study investigates the influences of firm-level strategy, banking relationships, and the characteristics of the primary owners of firms and firm-level characters on entrepreneurs' decisions over borrowing - are firms discouraged from borrowing? Using primary data from a research survey, the study estimates the maximum likelihood of firms' ability to access finance from banks. The findings reveal that compared to applicant firms, discouraged firms that thought their application would be rejected are those that hold a long relationship for more than 6 years with their main bank, Omani-fronted businesses, and those operate in service and trade activities. The empirical analyses confirms that the discouragement determinants are the opposite of those of firms that have been willing to access banks for credit when required. The results also indicated that banks still rely on collateral and the interest rate to alleviate the problem of lack information even if firms show a good performance in their previous sales growth. This could be attributed to imperfect information, unregulated banking relationships and the impact of the oil economy downturn on banking liquidity. For a policy perspective this research suggests that in order to address information asymmetry within non-oil-related SME sector the Central Bank of Oman should include an SME database within the Banking Credit Statistical Bureau (BCSB) to facilitate information exchange in the market as well as enhancing banking relationships.

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## **AUTHOR'S DECLARATION**

“I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.”

Printed Name: Rabab Hamad Mubarak Al Hasni

Signature: \_\_\_\_\_

## **ABBREVIATIONS**

BA	Business Angels
Big4	Famous International Audit Firms
CBO	Central Bank of Oman
FDI	Foreign Direct Investment
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
HSM	Heckman Selection Model
IFC	International Finance Corporation
IMF	International Monetary Fund
MoF	Ministry of Finance
MoCI	Ministry of Commerce and Industry
NCSI	National Centre for Statistics and Information
ODB	Oman Development Bank
OMR	Omani Rial
PASMED	Public Authority for Small and Medium Enterprises Development of Oman
SMEs	Small and Medium Enterprises
VC	Venture Capital
VIF	Variance Inflation Factor

## CHAPTER ONE

### 1. INTRODUCTION

#### 1.1 Motivation: Research Context Scope

The Sultanate of Oman remains an oil-based economy since the discovery of this resource in the 1960s. Like its neighbouring Gulf Cooperation Council (GCC) countries such as Kuwait, Saudi Arabia and Qatar, the oil fiscal revenues represent 77% of the total state revenues and it contributed more than 60% to exports in 2013 and 2014 (Cherif and Hasanov, 2014; IMF, 2016). The annual report of 2018 of the Central Bank of Oman (CBO) reported that the petroleum sector's contribution remains critical to economic growth, representing 36% of the nominal GDP and 78% of the state budget revenues (CBO, 2018b). In contrast, non-petroleum activities accounted for only 28% of the total GDP in 2018 (ibid). With soaring oil prices in the market, the implausibly massive revenues have increased the country's reliance on oil and meant that other industries have been disregarded. The boom in oil revenues has provided opportunities to increase the standard of living and society's well-being. Government expenditure is utilised significantly to develop infrastructure, welfare services such as health and education, logistics, electricity, and the provision of affordable food (Callen et al., 2014; Cherif and Hasanov, 2014). Furthermore, the governments of oil producers countries tend to invest in heavy industry oil derivatives (i.e. businesses that are established from the oil industry: refineries, mining, chemical and gas industries) as additional a value-added resource to contribute on GDP (IMF, 2016). The increases in oil revenues led to an expansion of the banking sector's liquidity, assets and deposits. Therefore, the sector's profitability increases, which in turn leads to an increase in the opportunities lending share in the market (IMF, 2016).

##### 1.1.1 Oil Wealth as the Curse of Upas Tree

Extant studies acknowledge that the relationship between wealth and economic growth is negative in some resource-rich economies (e.g. Sachs and Warner, 1999; Frankel, 2010; Cherif and Hasanov, 2014), despite the value and abundance of resource wealth in the market. Thus, the adverse outcomes were referred to as 'the paradox of plenty' by Karl (1997). Other economists argued that a wealth of oil for the economic engine should be perceived as a 'double-edged sword' (Frankel, 2010) as it is both a boon and a curse. In brief,

despite the incredible earnings that can be gained from the oil sector, the curse of slow growth or unsustainability is expected to occur in certain circumstances. Just like the Indonesian Upas tree, the reality of oil domination over the economy can be symbolised as a mortal spell. The Upas tree has widespread offshoots which contain poison that is known to be deadly to anything growing around it or breathing in its atmosphere (Henderson and Ho, 2014; Hannigan, 2020). With regard to oil dependency, economies are vulnerable to three main issues that play role of a poison: Dutch Disease, price market volatility, and depletion. These may de-accelerate economic growth and the country may therefore remain below the poverty line, as in the case of Nigeria (Frankel, 2010; Van der Ploeg, 2011).

The issue of oil price volatility is analogous to the Dutch Disease phenomenon because they are both about the impact of price fluctuations on the functions and performance of the economy. The phenomenon of ‘Dutch Disease’ was explored when economic growth had a negative impact in Holland after the discovery of North Sea gas (Ahrend, 2006; Carneiro, 2007). The symptoms of Dutch Disease include a significant sharp upwards shift in the real exchange rate of oil commodity exports (i.e. the inflow of foreign currency). As a result, the incredible revenues from oil exports impede non-oil related manufacturing activities in terms of export competitiveness and performance (Ahrend, 2006) due to governmental concentration on developing the functions of the hydrocarbon sector. In turn, this leads to increased costs of manufacturing goods, and rising wages in the manufacturing sector and governmental institutions (Ahrend, 2006; Cherif and Hasanov, 2014). Thus, the private sector tends to hire non-national labourers with lower wages, as seen in GCC countries (Callen et al., 2014). This may be because companies seek to reduce in part the high cost of manufacturing goods by reducing wages. Thus, the cost of maintaining living standards within the community becomes very high. In local markets, there is an expansion in the consumption of imported goods because they are cheaper than locally manufactured goods. As a result, few members of the population can gain the benefits from the hydrocarbon sector because they employ a limited skilled local workforce, the majority of which is imported from overseas (IMF, 2016). In addition, some oil-based economies may show inequality in standards of living (Van der Ploeg, 2011) due to unequal government expenditure that focuses on towns or cities, with less attention being paid to rural zones. Examples are Angola and Chad where about 64% of the population is below the poverty line (Carneiro, 2007).

Moreover, the significant sharp reduction in oil commodity prices impacted directly on the state budget, which in turn negatively influenced income allocation and improvements in

social affairs, such as education and health services (Carneiro, 2007; Van der Ploeg, 2011). This issue reduces oil contributions to the GDP and leads to declining economic growth (Tehranchian, and Seyyedkolae, 2017). A study conducted in Nigeria shows that the correlation between oil price volatility and economic growth is positive, leading to fluctuations in government expenditure, the inflation rate and the unemployment rate (Mgbame et al., 2015).

Irrespective of the high estimates of oil reserves in known fields in these countries, another curse that can hover over these types of economies is that oil is a finite energy resource (Cherif and Hasanov, 2014). Oman is one of these economies that is threatened with a depletion of its oil reserves in the near future (ibid). Furthermore, prior studies argue that the wealth of natural resources depends on their extraction costs (Van der Ploeg, 2011; Frankel, 2010). Other researchers claim that they are extracted with low technology, which may result in very limited production (Ahrend, 2006). This would indicate that some oil reserves could be under-produced due to difficulties in transforming the inventories (i.e. materials not extracted from the ground) of abundant natural resources into financial wealth (i.e. by exports). This is another explanation of the oil curse (ibid).

### **1.1.2 The Current Oil Global Price Crisis and Volatility**

In the middle of 2014, the economies of oil-producing countries were subjected to dramatic declines in revenue due to falling global prices of oil (IMF, 2016) from US\$110 to US\$40 per barrel (Bowler, 2015). Thus, the state's oil revenues were converted into deficits and decelerated growth, followed by financial risks and unemployment (IMF, 2016). This severe oil economic crisis forced Oman's government to establish long-term economic diversification instead of relying on a mono-resource economy (Miniaoui and Schilirò, 2016). One of its strategies was promoting the contribution of the SME sector to the state GDP – in particular those operating in the non-hydrocarbon sector (Callen et al., 2014).

There are successful examples of oil-based economies that have enjoyed the blessing of this resource and avoided its curse by diversifying their economies with non-oil-related investments. By 2004, the SME sector in Malaysia had become fundamental to economic growth and it represented 97% of the total market establishments of the country (Khan and Khalique, 2014). Norway is one of the largest oil exporters after Saudi Arabia and Russia; however, the country has achieved remarkable growth in other non-oil economic activities,

significantly in the manufacturing sector, even during oil revenue booms (Van der Ploeg, 2011). In the GCC zone, the United Arab Emirates has successfully diversified its economy away from crude oil. Dubai has enhanced diversification by boosting developments in tourism, telecommunications, finance and manufacturing businesses, while other Emirates have concentrated on the businesses of farming, quarrying, cement and logistics services (e.g. shipment). One exception is Abu Dhabi, which has invested in petrochemicals and fertilisers (Van der Ploeg, 2011).

Given that oil is the dominant resource for driving the private sector growth in many of the less-developed oil-based economies, most of the businesses are operated within this sector (e.g. refinery, mining, extractive industries). Some of the small local oil businesses are also the suppliers (subcontractors) of the large petroleum companies, such as in the industry of oilfield services, transport and distribution and technology services. The domination of the oil resource in these economies has helped in accelerating the growth of these businesses. As they grow, the revenues of this sector has contributed towards supporting banking sector liquidity, which has led to increased stakeholders' interest in this sector in terms of development and financing. In contrast, and as mentioned in the previous section (1.1.1), the low share of non-oil-related SMEs reflects the lower growth and diversification of these countries' economic activities, which are dominated by the large enterprises of oil companies. The next section explains the importance of the SME contribution to the economy growth and sustainability that is anticipated to resolve the issues surrounding the negative impact of oil in the economy.

## **1.2 The Significance of SME Sector**

Previous academic studies and international agencies widely acknowledged that the SME sector can significantly contribute to economic growth. The study conducted by the Small Enterprise Assistance Fund (SEAF) to examine the impact on economic growth of investing in SMEs affirmed that every dollar invested in SMEs generates an additional US\$12 to the national economy (SEAF, 2007). The sector contributes by increasing state revenues from taxation (Erdogan, 2019). In addition, diversifying the SME sector contributes to sustaining economic growth by increasing non-oil export activities, which should compensate for the losses caused by the threats of oil volatility or depletion (IMF, 2016). Furthermore, SMEs play an important role in increasing employment levels and income per capita (Nesta, 2017; Erdogan, 2019). In the US, small businesses represent half of the private sector and between

1993 and 2008 they employed 60% of the workforce (Cowling et al., 2016). Furthermore, 73% of the UK private sector has created two million jobs since 2010 (Nesta, 2017). In Malaysia and Thailand, the SME sector accounts for the employment of around 60% and 65% of the total labour force, respectively (Khan and Khalique, 2014). In Oman the SME sector employs around 60% of the total workforce, but it contributes only 16% to the Sultanate's GDP (Al-Barwani et al., 2014).

Nonetheless, by examining a dataset of 119 developing countries from the World Bank Enterprise Survey, prior research has affirmed that the lack of credit being made available to the SME sector is the major obstacle hindering the sector's growth and sustainability in the market (Wang, 2016). The empirical research conducted by Beck (2010) disclosed that although banks in oil-based economies are profitable and liquid, fewer loans are provided to firms in the SME sector. The report of the World Bank disclosed that in GCC regions such as Oman, the credit made available to this sector remains low, representing only 2% of the total credit portfolio when compared to non-oil exporters, which is attributed to the large concentration on oil activities (Rocha et al, 2011). Oman has a bank-based financial system, with a limited role for the stock market. Thus, it seems that personal savings or family funding and debt are the main financial sources for these enterprises (Al-Barwani et al., 2014). The CBO report pointed out that more than 70% of commercial banks suggested that there is a need to increase the opportunities for lending to SMEs to compete with large firms in the credit market (ibid). Therefore, in recognition of the relevance of SMEs for diversification and economy growth, the CBO aimed to increase the loans to SMEs to at least 5% of the total lending portfolio by the end of the year 2015 (Circular CBO BM 1108, 6 May 2013 cited in CBO, 2015). However, the share of loans provided to SMEs only very slightly increased to nearly 3% in 2014, compared to 2.8% in 2012 and 2013 (Oxford Business Group, 2016).

### **1.3 Theoretical and Empirical Concept of SMEs Access to Finance**

The fundamental problem of a lack of finance for SMEs stems from the market imperfections of this sector. Besides the shortage of skilled and qualified human resources within the SME sector, the major market deficiency is that SMEs are less transparent. These firms are less likely to keep or record their financial statements on a formal regular basis or to have them certified by a formal external auditor (McCarthy et al., 2017). As a result, this imperfect

information, known as ‘opaqueness’, ruins the relationship between the bank lenders and SMEs (De la Torre, 2010).

Stiglitz and Weiss (1981) argued that in an imbalanced market, i.e. when the demand for credit is higher than the supply in the market, a lack of accurate information on some loan applications shifts banks’ attitudes towards minimising their lending risks by rationing the credit available to the SME sector. This reduces the rate of investments in the market, implying that banks prefer to apply credit rationing by reducing the number of loans supplied rather than by increasing interest rates (Erdogan, 2019). It is argued that the high cost of collateral and interest rates does not eliminate bank credit rationing among these firms (Stiglitz and Weiss, 1981). In a situation of information asymmetry, there are two types of risks. Banks become unable to determine the quality level – good or bad – of firms’ loan applications, even by strengthening their screening systems, because some risky clients may not be deterred by the additional costs such as high interest rates (Deakins and Hussain, 1994; Beck, 2007; Dong and Men, 2014). This type of risk is known as adverse selection risk (Deakins and Hussain, 1994). A further concern is a lack of certainty regarding the attitude of borrowing firms, i.e. whether the borrowers will use the funds appropriately for the required project, without breaking the loan covenant. This is a type of moral hazard risk (Deakins and Hussain, 1994; Beck, 2007; Dong and Men, 2014) where the lenders are unable to control the attitude of the borrowers towards the funding (McCarthy et al., 2017).

This has encouraged many scholars to intensively investigate the issue of a lack of funding for small firms from the side of financial suppliers, in order to understand the mismatch between the two parties through the lens of the banking sector. Some econometricians have examined the influence of banking ownership, structure, legislation and economic information on SME lending transactions (e.g. Berger and Udell, 2006; Beck, 2007; Beck et al., 2008). Dong and Men (2014) conducted a study on in emerging economies, and found that the presence of information, the banking concentration ratio and the level of economic and institutional development significantly influence the financing of SMEs as well as their access to external finance. In another strand of the literature, scholars have applied qualitative research methodology to develop an in-depth understanding of bank loan officers/managers’ decisions about lending by examining the process and criteria that are applied for small business loan applications (e.g. Fletcher, 1995; Wilson, 2016). They suggested improving risk evaluation and making standardised lending decisions among bank

managers in order to alleviate the issue of adverse selection risk and the credit constraints that would occur within small firms (Fletcher, 1995).

Thus, based on the supply side's perceptions of lending to SMEs, many governments and international agencies have exerted strong efforts to reform the banking sector. In developed economies such as the US and the UK, policymakers tend to enhance credit availability by launching Loan Guarantee Schemes (LGS) to increase the level of investment in viable SMEs (Levenson and Willard 2000; Cowling and Mitchell, 2003; Freel et al., 2012.). Furthermore, the International Finance Corporation (IFC) has significantly contributed to financing SMEs. In 2010, the agency increased its investment to approximately US\$400 million in the First Bank of Nigeria (FBN), the First City Monument Bank (FCMB) and the GT Bank in order to boost their advisory services and funding for SMEs (Gbandi and Amissah, 2014). The government of Chile entered into cooperation with banks through partial credit guarantees (Fondo de Garantía para Pequeños Empresarios (FOGAPE)) in order to encourage lending to SMEs, thus, reducing the moral hazard (De la Torre et al., 2008; 2010). Despite the great focus on supply-side reforms and subsidies, the problem of limited capital for SMEs remains, and is a cause for grave concern.

Using an IFC survey, the World Bank and banks from 12 developed and developing countries created a survey to investigate the lack of funding for SMEs by assessing bank involvement within this sector. De la Torre et al. (2010) found evidence that the banking sector was not unwilling to grant finance to the SME sector. First, they found that banks perceive these firms as a pivotal and strategic sector and banks are well positioned to increase their operations and involvement in the sector. Second, banks participation in financing SMEs does not exclusively rely on the lending relationship but it is found that some firms have obtained loans without banks relying on firms' soft information. Third, even during the period of instability in the financial market (2007–2009), banks did not change their level of involvement with these firms; rather, a wide range of products and services was offered to SMEs and large firms via new lending technologies, business models and risk management systems. The authors affirmed that this involvement of the banks increased SMEs' competitiveness in the market, but there is still plenty of scope for expansion. This may indicate that the lack of financing can be seen from the perspective of the demand side rather than focusing on the supply side.

### **1.3.1 Demand-side Financial Constraint Perspective**

Jovanovic (1982, cited in Cressy, 1995:293) argued that “banks may not be the only parties uninformed about success probabilities of business borrowing.” The author Cressy argued that borrowing constraints can also exist internally by entrepreneurs. His study found that over their lifetime, firms that had accessed lenders saw their profits grow, while those that had implemented borrowing controls recorded low profits. Thus, prior studies assume that financial failure on the demand side is caused by entrepreneurs’ attitudes towards external funding (Cressy, 1995; Cressy and Olofsson, 1997a; Beck et al., 2006; Canton et al., 2013). In turn, this would shape entrepreneurs’ behaviour and decisions over borrowing, and hence impact potential investment rates and growth.

Under conditions of uncertainty and based on the Pecking Order Theory (POT), firm owners at an early stage prefer to use their own funds (e.g. personal wealth or firm retained earnings). When these have been depleted, the next stage is to seek a loan, while equity financing is the final decision (Myers and Majluf, 1984). However, prior studies provide evidence that some entrepreneurs are averse to outsider financial control (Cressy, 1995; Berggren et al., 2000; Mason and Harrison, 2004; Silver et al., 2015). Carter and Mwaura (2014) stated that ‘debt avoidance’ is a type of risk aversion (Carter and Mwaura, 2014). It is like control aversion (Cressy, 1995). This implies that business owners tend to avoid seeking external funding in order to avoid its associated risks. In terms of equity financing, some firms dislike using this type of financing because of concerns over losing their business power, control, and wealth (e.g. family-based businesses). With respect to debt, entrepreneurs may tend to avoid the credit risks of banks because of concerns over losing personal property (e.g. home, land, cars and account deposits) if they encounter difficulties with repaying the loan. This might leave their property vulnerable to being impounded by bankers (Coleman, 2000). Through the methods of a focus group and a mail survey completed by 534 Australian SMEs, along with a review of the extant literature, the findings of the study illustrated that none of the firms had been dissuaded by funders, instead, the unwillingness of business owner to take risks or to maintaining business control are the demand-side issues that have a significant role in the capital structure decision making (Watson et al., 2009). This would indicate that that is based on the firms' owner desire to seek external finance. In GCC regions, the perception of business owners regarding failure is different than in western countries, thus; risk-taking is not desirable in the culture of these markets. This means that family-based investment tends to be made in less risky sectors such as real estate and hospitality

(Miniaoui and Schilirò, 2016). This behaviour may suggest that business owners' willingness to keep information confidential may reduce their wish to approach banks when funds are needed and rather relying on family funding source.

As a result of information asymmetry, Levenson and Willard (2000) found that beside rejected loan applications (around 2.14%), a significant number of firms (i.e. 4.22%) were small businesses discouraged from borrowing in the United States. Several papers have shown that among their samples of small businesses, a significant proportion were incidents of discouragement that cannot be ignored: in Pakistan it was estimated that about 44.36% of firms were discouraged (Chakravarty and Xiang 2013); 40% were discouraged borrowers in Eastern Europe, 17% in Western Europe (Brown et al., 2011) and 39.2% in the UK (Rostamkalaei et al., 2020).

The conventional definition of the discouragement phenomenon is attributed to the trepidation and sensations that eventually shape entrepreneurs' attitudes towards and decisions over borrowing. A financially discouraged firm is described as "a good firm requiring finance that chooses not to apply to the bank because it feels its application will be rejected" (Kon and Storey, 2003: 47), as the result of an imperfect market that shows only some information, and not perfect information. Imperfect screening together with positive application costs (i.e. financial, in-kind, or psychic) are important conditions for creating discouragement among small business borrowers (Kon and Storey, 2003). Under imperfect information, Freel et al. (2012) argued that the effect of decreasing the application costs would lead to increase the rate of application from good and bad borrowers simultaneously, hence, may increase the bank screening errors, as a result, bank will increase the borrowing costs. Thus, in this condition discouragement is expected to exist.

Firms that have not approached banks are not necessarily discouraged from borrowing, although this influences business growth in the long term. Mac an Bhaird et al. (2016) stated that financial discouragement is not a problem with firms that are uncreditworthy as it is considered as efficient self-rationing for the credit market. This is because it reduces the potential default risks of uncreditworthy firms that bank could encounter in the long run. In contrast, inefficient self-rationing among good firms may lead to potential reductions in the level of investments in the market.

Furthermore, previous studies have found that some firms have faced another significant credit constraint by lenders – so-called informal rejection. These firms eschewed formal loan applications because in a meeting the bank loan officers or managers informed them that their application would not be successful (Rostamkalaei et al., 2020). Wynant and Hatch (1991:116, cited in Rostamkalaei et al., 2020) stated that “[...] a large number of financing requests are declined or discouraged after a meeting with the client ... [and it] is only in those instances where the proposed financing involves a reasonable chance of being approved that a formal application results.” These firms were defined as direct discouraged firms (Fraser, 2014).

Nonetheless, Fraser (2014:11) found that around 75% of non-applicants were happy non-seekers of finance: “[...] chosen not to apply because they simply have no current need for finance.” However, firms that tend to rely heavily on internal finance such as retained earnings, which could be not the right solution, even if the firm enjoys abundant earnings. As a consequence of information asymmetry, Beck et al. (2006) argued that firms are financially constrained when their utilisation of internal finance exceeds investment expenditures as a result of higher costs, in particular firms that have a lack of collateral (Carpenter et al., 2002). Thus, business growth will either remain unchanged or deteriorate due to insufficient finance (Storey, 1994; Beck et al., 2006; Clarke et al., 2006; Canton et al., 2013; Ferrando and Mulier, 2015).

#### **1.4 Research Gap**

Fraser stated, “discouragement may, like loan denials, lead to financial constraints” (2009:587), and may be in terms of its effect on business growth and market sustainability. Notwithstanding, discouragement is an invisible case within SMEs that need for bank financing but eschewed borrowing. Thus, in terms of making policies, unlike incidences of bank loan rejection, it would not be easy or possible for policymakers to specify the appropriate reforms that would help to solve the issues of such demand-side constrained firms due to an absence of clear information about the rates of their existence and nature in the market. This may explain why most government interventions are concentrated on the supply-side as they intend to solve issues of default risks and rejected loan applications. The problem of discouraged SMEs is expected to be high in cost in the entire macro-economy and even more in less-developed economies than in developed economies. Cowling et al. (2016) clarified that banking rationing against viable investments may mean that banks lose

opportunities to charge premiums. Hence, their lending portfolios will be at a sub-optimal level with a reduction in profitability. From the demand side, the restrictions of funding availability will not only lower the rate of investment in the market but will also entail a series of limitations such as reductions in job vacancies, and it will gradually deaccelerate macroeconomic growth (Fraser et al., 2019; Carter and Mwaura, 2014; Cole and Sokolyk, 2016; Cowling et al., 2016). This is because business operations will either stop or the firm will abandon the market. Furthermore, reductions in SME growth may increase poverty rates or reduce the standard of living; this might be obvious in unstable economies like oil-based economies.

Previous studies revealed that variation in the characteristics of the countries' economies may explain the variation of financing constraints among SMEs across the countries (Beck et al., 2006; Berger and Udell, 2006). Compared to developing countries, developed oil-based economies, as for instance in the case of Norway, have shown notable growth in manufacturing industry, witness the least corruption and have developed institutions (Van der Ploeg, 2011). Beck et al. (2006) disclosed that developed economies that have a strong and developed financial system, viable and developed market securities, efficient legal and judicial infrastructure and high GDP per capita have lower financing constraints. These findings were found to be consistent with a later study by Beck et al. (2011). The implication is that countries which enjoy a strong developed economy in all its aspects are more capable of enhancing SMEs' growth and diversity and probably have greater success in mitigating financial discouragement among firms compared to developing countries.

Despite the diverse and burgeoning literature on demand-side constraints on SMEs' ability to access banks, few studies have investigated the problem of financial discouragement among SMEs; most of them are concentrated on developed economies (e.g. Han et al., 2009; Freel et al., 2012; Mac an Bhaird et al., 2016) rather than less-developed economies where the discouragement levels are greater (e.g. Chakravarty and Xiang, 2013; Gama et al., 2017). The problem of discouragement is also predicted to be exacerbated at times of economic crises. Therefore, some of these studies have examined the problem before and after the latest financial crisis (e.g. Cowling et al., 2012; Cowling et al., 2016; Rostamkalaei, 2017; Mac an Bhaird et al., 2016). However, to the best of our knowledge, no studies have examined non-oil-related SMEs' financial constraints, in particular credit discouragement, in less-developed oil-based economies during an oil price crisis. In fact, during the period of the global oil price crisis, commercial banks were vulnerable to the liquidity crunch due to

a drawdown of oil revenue deposits in the banking system. Hence, the interest rate would increase and the private sector would be prone to a credit crunch (IMF, 2016). This situation is expected to impact firms' demand for financing.

Moreover, most of these empirical studies employed national and international secondary data (e.g. Han et al., 2009; Freel et al., 2012; Gama et al., 2017; Rostamkalaei et al., 2020). This has expanded the definition of credit discouragement to issues of collateral requirements, credit history and the difficulty of the application procedures, and also increased the level of ambiguity of this aspect in the literature (Brown et al., 2018b). For instance, Gama et al. (2017:35) defined the discouraged borrower as “[...] does not apply for a loan for different reasons, such as tough loan prices or loan contract procedures or fear of rationing, that is, the scale of discouragement as a function of bank screening errors, application costs, and the difference in interest rates between the bank and other money lenders.” Another study has described discouraged borrowers are firms that need finance but chose not to apply because of lending procedures were very complicated, high interest rate, high collateral requirements, and corruption existence in loan allocation system (Chakravarty and Xiang, 2013). This may suggest that the differences in definitions of credit discouragement may be detrimental to the original definition or they may cause the debate in the literature to expand away from the original concept. Furthermore, this may indicate the existence of bias when comparing prior empirical studies since some of these studies refer to different types of discouragement statuses among small businesses. Therefore, Brown et al. (2018b) contended that the researchers need to articulate the concept of credit discouragement incidents within firms clearly before starting their empirical investigations. The use of a secondary data set also leads to the problem of selection bias where researchers may find it difficult to distinguish, for example, between firms that needed credit but were discouraged from applying for a loan and those that did not apply for credit because they had no need for it (e.g. Freel et al., 2012). Therefore, in order to avoid bias, many previous studies employed the Heckman selection model (HSM), the probit selection model (e.g. Fraser, 2009; Freel et al., 2012; Cowling et al., 2016) or the three-step sequential model (e.g. Cole and Sokolyk, 2016).

In developed economies, the existing financial secondary data (e.g. financial statements) have allowed researchers to deduce financial constraints among SMEs on a large scale (e.g. Cole and Sokolyk, 2016). On the other hand, in less-developed economies, in particular oil-based economies (e.g. the Sultanate of Oman), this type of information is very limited and

restricted. In addition, these firms are not publishing regular information as they are not listed on the securities market. There is a lack of research on the determinants of demand-side financial constraints for the SME sector in developing economies. In particular, there is a gap in knowledge about the factors that influence borrowing decisions, whether firms are discouraged from borrowing. Furthermore, the empirical question remains about whether SMEs that are discouraged from borrowing differ from firms that have approached banks for finance but were not successful i.e. firms credit constrained by lenders (Cole and Sokolyk, 2016).

Brown et al. (2018b) stated that there is a dearth of evidence in the literature about the influences of some other factors such as business orientation towards exporting and growth on the likelihood of discouragement incidents. In addition, there is scant evidence regarding how keeping formal quality business information (e.g. financial reports audited by one of the Big 4 audit firms or a formal comprehensive business plan) or using a source of financial advice can influence business owners' borrowing decisions. Moreover, it worth noting that the different contexts of culture, perceptions, attitudes, market policies and regulations, and economic-political status are all catalysts to designing a different understanding and knowledge of such a problem in diverse financial markets all over the world. For instance, one of the important unique factors related to the Omani context is the SME ownership issue, known as 'Hidden Trade' by policymakers. The CBO report disclosed that these firms are registered as having Omani business owners, but in fact, they are just agents for foreign owners (principle). Put simply, these firms are just Omani-fronted businesses that are owned and managed by non-real owners. Thus, policymakers are concerned about their implications for the national economy and for recent policies that aimed to enhance social participation in expanding entrepreneurship and encourage national jobseekers to start their own businesses, adding to established SMEs.

## **1.5 Research Objectives**

In light of the research gap outlined above, the main objective of this research is to re-examine the critical barrier of financial demand constraint, specifically, the discouragement incidents among non-oil-related SMEs since this issue have grave concern on firms growth. The research objectives are detailed below:

**First**, investigate the influence of firm-level strategy, banking relationship, primary owners and firms' characteristics on entrepreneurs' decisions over borrowing. This is achieved by

estimating the maximum likelihood of firms' ability to access banks – whether or not firms are discouraged from borrowing.

- Q1: Among non-oil-related SMEs that needed finance, which firms that had applied for bank loans and which had not?
- Q2: If exist, what are the determinants of discouraged non-oil-related SMEs (i.e. characteristics)?

**Second**, estimate the determinants of firms that had approached bank loan officers or manager but were unsuccessful, and those of firms that had received bank loans.

- Q3: Does the Omani banking sector reduce or exacerbate the discouragement issue in the market?
- Q4: Do discouraged borrowers differ from credit constrained firms?

**Third**, identify the various reasons for firms' inability to access bank financing (i.e. discouragement, informal rejection, rejection and refusing bank's offer).

- Q5: What are the reasons for being financially constrained and not approaching banks?

**Fourth**, investigate whether demand-side financial constraints impact business growth.

- Q6: How do financial constraints impact non-oil-related SMEs' growth?

## **1.6 Research Significance**

Studying non-oil-related SMEs' demand for bank financing and the challenges encountered from the primary business owners' perspective is significant and a catalyst to the Omani economy and other relevant economies' reform of socio-economical dimensions in this respect.

Ensuring the availability of the needed funds for viable enterprises would enhance economic diversification and expand market mass production. In addition, the diversification of SMEs would encourage business competitiveness and local innovations. This in turn would drive businesses to internationalise their products and services across the world, thus increasing state revenues and community well-being. Furthermore, enhancing non-oil-related SMEs' market competitiveness should induce governments to improve the investment infrastructure and regulate the market.

Moreover, prior studies have manifested that in the Sultanate of Oman, there is overcrowding of employment in the government sector compared to the private sector (Miniaoui and

Schilirò, 2016; Ewers, 2016, Callen et al, 2014; Hvidt, 2013). This is due to the fact that secured income is higher for government jobs (Ibrahim et al., 2017) and individuals may wish to secure a high-level position in the government in order to maintain their social prestige. To attract a growing workforce towards the private sector, currently, Oman's government is focusing on promoting entrepreneurship diversification. It has released the Tanfeedh programme, which studies private market challenges (CBO, 2018b; Al Markazi, 2018). The main obstacle to enhancing investments and business growth was the lack of capital (Rocha et al, 2011; Al-Barwani et al, 2014). Thus, ensuring financial support for SMEs would be a great means of encouraging national jobseekers to run their own businesses, thus reducing unemployment rates in the Sultanate labour market. Furthermore, this would perhaps reduce the overwhelming burden on public sector expenditure.

Another significance of this study is that it would help to contribute in generalising research results among the economies from a similar context, such as in the GCC regions; this is especially important given that most of the reports by national and international agencies appeal to the policymakers of these countries to solve the problem of an unstable oil economy. In fact, these regions share similar characteristics in terms of social customs and cultural principles. In addition, their economies face similar challenges relating to market labour (inflexible labour laws and high unemployment rates) and bank-oriented financial systems, insufficient access to finance hindering SMEs' growth and a lack of a non-oil export industry contribution. As with Oman, the Saudi government has exerted more efforts in reforming labour regulation since 2014 (IMF, 2016). The Saudi regulations have also focused on easing female employment issues by opening access within more sectors in the private sector to employ them. Therefore, the findings of this study is expected to provide reflections upon the demand-side constraints among non-oil-related SMEs on the question of accessibility to bank finance in other oil-based economies that are similar to the Oman context.

Therefore, studying credit constrains from the perspective of SME owners in terms of their ability to access banks to raise business capital is particularly significant, not only for addressing the gap in the literature but also for fulfilling the need of the Sultanate to increase the private sector's contribution to GDP. Thus, this will drive the present study to contribute theoretically and empirically to the relevant existing literature reviews.

## **1.7 Research Contribution**

The present study contributes in several aspects to emerging literature on the demand-side constraints on SMEs' access to banks for loans. The uniqueness of an oil-based economy makes a valuable contribution to the emerging knowledge on demand-side constraints on accessing banks for financing. Most existing empirical studies examining the financing of SMEs have focused on developed economies such as Europe (e.g. Freel et al., 2012; Fraser, 2019; Carter and Mwaura, 2014; Fraser, 2014; Mac an Bahird et al., 2016) and the United States (e.g. Cavalluzzo et al., 2002; Han et al., 2009a; Cole and Sokolyk, 2016). Thus, by using an oil-based economic context, the present study has contributed to research on business owners' attitudes and decisions over borrowing during an economic oil crisis. It has reflected on the variations in firms' demand for bank loans based on the dimensions of the business culture, perceptions and attitudes, and market policies and regulations in the country.

Oman, like several developing countries, suffers from a lack of scientific research as published papers related to SME development comprise descriptive information with multifaceted insights (e.g. Rocha et al, 2011; Al-Barwani et al., 2014; Al-Maimani and Johari, 2015). None of these studies have tested the factors that influence business owners' borrowing decisions or estimated the likelihood of discouragement among non-oil-related SMEs. Through a distinctive approach, this research uses a researcher-constructed survey that is compatible with the nature of the non-oil-related SMEs context in Oman. The questionnaire provided a wide perspective on firms' discouragement and other credit constraints and their impact on business growth. Unlike previous studies, this research was able to provide information about the reasons behind SME financial constraints (e.g. loan application rejection, refuse loan offered, informal rejection, partial lending, and discouragement). The survey provides evidence on the existing issue of business ownership, i.e. Omani-fronted businesses, and weaknesses in legal enforcement in the market. Although this type of business exists in many GCC countries, to the best of our knowledge, no studies have studied its impact on SME financing and growth.

Moreover, the constructed survey avoided the problem of selection bias that exists in many previous studies (e.g. Freel et al., 2012; Cole and Sokolyk, 2016). Through the primary data of the present study, the researcher was able to determine the variations of firms' demand status clearly. The research identified the attributes of firms that had applied for bank credit

and the characteristics of those who needed credit but had not applied because of fear of bank rejection or any other reasons.

Previous studies have not looked at the impact of the type of audited report, export intensity or satisfaction with banking relationship on borrowing decisions, i.e. whether primary business owners of non-oil-related SMEs are discouraged from borrowing or not. The current empirical analysis provides evidence that firms' export intensity, past sales growth, satisfaction with and length of banking relationship, using non-Big 4 audit firms, prior relevant business experience, formal education levels and sector industry types are significantly related to borrowing decisions. The interesting key finding is that long banking relationship of more than 6 years is positively related to the likelihood of being financially discouraged from borrowing. This could be attributed to a lack of historic business records, which may drive private businesses to rely on personal financing in Oman. Furthermore, the empirical evidence affirmed that Omani-fronted businesses are more likely to be discouraged from applying for bank credit. This result contributes to the report of the CBO (e.g. Al-Barwani et al., 2014).

In addition, the study was able to determine the characteristics of firms that were financially constrained by bank lenders (Research Question - RQ5). It was found that credit constrained firms are most likely to be female-owned businesses, firms with owners who have prior relevant business experience and those operating in the service sector. The current study also contributes by comparing discouraged non-applicants with constrained firms (RQ6). The results show that credit discouragement occurs within firms that hire Big 4 audit firms, have more than 6 years relationship with their main bank, are neither satisfied nor dissatisfied with their main bank, are Omani-fronted businesses and operate in the trade sector.

Finally, based on the empirical findings, the present research detailed implications and recommendations for the government of Oman and other stakeholders of SMEs. This could benefit other governments in a similar context such as GCC regions. The main recommendation is to develop the current Banking Credit Statistical Bureau (BCSB) to overcome the issue of information asymmetry by considering the inclusion of registered SMEs' information within this bureau. In addition, it is recommended that the scheme of loan guarantees be expanded in order to act as a substitute for the collateral that might be needed by creditors. The criteria should help to manage financial support allocation with no discrimination between firms' financial demands. Moreover, this interesting context merits

further research attention because of the grave concerns over its consequences (e.g. reduction in standard of living, deacceleration in economic development), which need urgent interventions from both scientists and policymakers. Therefore, this research offers opportunities for future directions such as developing a comparative cross-sectional study among GCC countries to explore demand-side constraints (e.g. discouragement issue) of SMEs' access to banks.

## **1.8 Research Structure**

The thesis is divided into eight chapters, including the preface chapter, as outlined below:

*Chapter One* introduces the background to the research context, literature review, research gap, objectives, significance and contributions.

*Chapter Two* reviews the empirical and theoretical literature on demand-side constraints experienced by SMEs in terms of accessing banks for funding, with a spotlight on studies about credit discouragement among these firms. The chapter also discusses the hypothesised factors of the firm-level strategy, primary owners' characteristics and sector types, discussing their relationship with the probability of being discouraged.

*Chapter Three* presents a general background on Oman's economy. Specifically, the chapter sheds light on the nature of the SME sector and financial market in the Sultanate. Additionally, it discusses government policies along with banking sector orientation towards supporting SMEs' development and growth in the market.

*Chapter Four* discusses the research design and data collection method as well as providing details about the questionnaire construction, and the validity and reliability assessment.

*Chapter Five* presents the statistical methods of the assumption tests for the proposed research model.

*Chapter Six* presents a descriptive analysis of the research sample dataset. In particular, it provides a descriptive analysis of the dependent and independent variables of the research model.

*Chapter Seven* discusses the empirical findings on the determinants of firms that had applied for bank credit, those that were discouraged from borrowing, and those that were credit constrained by lenders.

*Chapter Eight* presents the conclusion and summary of the key findings of the empirical analysis, including the study's implications and recommendations, its limitations and directions for future research.

## **CHAPTER TWO**

### **2. THEORETICAL AND EMPIRICAL PERSPECTIVE OF SMES' CREDIT CONSTRAINTS**

This chapter presents a review of the literature on Small and Medium Enterprises' (SMEs) finance, considering studies in both developed and less-developed economies. The chapter is divided into three main parts. The first part discusses the main theories that highlight the financing constraints problem in relation to the demand-side perspective. The second part reviews the empirical studies on the demand-side financial constraints, with a particular spotlight on the credit discouragement phenomenon among small firms. The third part considers the main factors that are predicted to influence the ability of firms to access bank finance, notably firms' strategy, banking relationship, industry sector, and business owner characteristics. Section 2.5 summarises the chapter.

#### **2.1 Theoretical Perspective of SMEs' Bank Credit Constraints**

In the literature, there is no standard theoretical framework that deals with financing SMEs. However, prior studies have attempted to investigate the factors that might impact SMEs' access to bank loans based on a set of solid theories, such as Information Asymmetry Theory, Pecking Order Theory (POT), Signalling Theory, and Human Capital Theory – which are discussed in the next section.

The following sections explain these theories and their relation to firms' financing under a condition of uncertainty.

##### **2.1.1 Information Asymmetry**

Information is an essential component of making decisions that would help individuals, businesspeople and policy makers to proceed with their transactions efficiently and effectively (Connelly et al., 2011; Domeher et al., 2017). Information sources include public information, which is free of charge and available for the whole community through the channels of media and social networks, government reports, and private information that is very restricted and offered only to a limited group (Connelly et al., 2011). However, information imperfections – the opacity and limitations of knowledge – are pervasive in

developed and underdeveloped economies (Stiglitz, 2002) and may hinder their economic growth (Shi, 1996).

The natural status of asymmetric information is explained when “different people know a different thing”, for instance if the workers know more than their employer (Stiglitz, 2002:469). Therefore, from the perspective of many economists and academic scholars, asymmetric information is a grave concern because some individuals’ attitudes lead them to maximise actions that serve their own interests but not the interests of others, which would lead to negative consequences (e.g. Akerlof, 1970; Stiglitz and Weiss, 1981; Deakins and Hussain, 1994; Rocha et al, 2011; Domeher et al., 2017). The first support for the asymmetric information argument came from the ‘lemon market’ assumption, developed by George Akerlof (Fazzari et al., 1988). Expounding on the effect of a lack of information, Akerlof (1970) explains that this assumption suggests that when there are two different car dealers, one of which has a good car while the other has a bad one, buyers will not be able to distinguish which one of them has the best quality car. This is because both dealers would have equal transaction costs since the price of the bad car has been increased to match the price of the good car in order to hide the imperfections of the car’s production. Therefore, buyers may choose the risky car because they have less information about it than the dealer does. Consequently, the good sellers (i.e. good investments) are no longer able to accommodate their business costs and they therefore exit the market. This may lead to missed opportunities of profitable investments that can sustain economic growth.

### **2.1.2 Credit Rationing and Asymmetric Information Theory**

In the same vein as the lemon market concept, the relationship between creditors and SME debtors is damaged by information opacity within the credit market. Thus, the theory of credit rationing has been used in several research studies to examine the impact of the severity of informational asymmetry on decision making by lenders and borrowers about business capital structures (e.g. Fraser, 2009; Cowling et al., 2012; Freel et al., 2012; Gama et al., 2017; Rostamkalaei et al., 2020). Radical explanations of this relationship have been laid down by Stiglitz and Weiss (1981). The scholars assumed that in a situation of asymmetric information and uncertainty, credit markets drive to ration their finance facilities, even in market equilibrium conditions. Credit rationing within financial markets occurs in “a situation in which interest rates do not fully adjust to equalise the demand for and supply of credit” (Domeher et al., 2017: 197). Therefore, some good borrowers are

rejected despite their willingness to take on the obligations of the loan contract (Stiglitz and Weiss, 1981).

Asymmetric information is very costly because lenders such as banks are unable to discriminate between the loan costs (i.e. interest rates) of good and bad borrowers (Stiglitz and Weiss, 1981; Hillier and Ibrahim, 1993; Wagenvoort, 2003). In addition, in the uncertainty approach, it is assumed that the loan applicants have more information about their projects' returns than finance suppliers (Stiglitz and Weiss, 1981). An alternative assumption is that both loan contract parties have the same knowledge about the project before it is undertaken; however, after the project is carried out, the borrowers would have better information than the lenders about its operation and returns (Dimsdale, 1994). This situation has increased lenders' concerns about loan contract risks and whether firm borrowers have enough credibility and creditworthiness to repay the principal amount along with the interest rate (Bruns and Fletcher, 2008).

To allocate loans safely, banks may exert a great deal of effort on collecting information about firms, as well as enhancing financing guidelines and terms, and the process of making decisions. However, the process of gathering information by allocating resources and monitoring ventures closely is considered to be costly and uneconomical for the lenders (Deakins and Hussain, 1994). Instead, according to Stiglitz and Weiss (1981), lenders prefer to avoid risks by increasing loan application costs using interest rates. Consequently, two significant loan contract risks may arise in this aspect within the credit markets: adverse selection and moral hazard (Stiglitz and Weiss, 1981; Deakins and Hussain, 1994; Nekaa et al., 2017).

Adverse selection risk explains the risk when business owners have a large tendency to reveal little information about their new venture to bank lenders before signing a contract (ex-transaction approved) (Deakins and Hussain, 1994; Stiglitz., 2002; Domeher et al., 2017). In a free market, when the demand for credit exceeds the supply, banks tend to increase the interest rate to achieve price equilibrium (Domeher et al., 2017). The increase in the interest rate increases the willingness of risky borrowers to apply for bank finance, while discouraging good borrowers from proceeding with their applications (Stiglitz and Weiss, 1981; Williamson, 1987; Kon and Storey, 2003; Freel et al., 2012; Abdesamed and Wahab, 2014). This condition may be more obvious in a banking-based market (Dimsdale, 1994).

Thus, two types of error may occur due to market opacity, as stated by Fletcher (1995). Firstly, there is type I error: the probability of a lending default risk happening when the bank loan officers decline a loan proposal that is in fact good. Secondly, a type error II occurs when banks approve a loan proposal that seems good but is in fact a risky proposal. The author emphasises that the concerns that would prevent these risks (type error I) from occurring will not be detected and will therefore not impact the career of the banker unless the banks observe that profitability targets are unmet. The loan officers receive low quantity and quality of information about the potential ventures, thus it is inevitable that these errors will happen.

The further risk that may occur as a result of asymmetric information within the loan application contract is 'moral hazard' (Ekpu, 2016). This risk exists after the signing of the loan contract between the borrowers and the lenders, where the agent is more likely to change his/her behaviour after obtaining the funds, which may adversely impact the principal's returns (Stiglitz and Weiss, 1981; Domeher et al., 2017). For instance, aspirant business borrowers may need external finances to run several projects, but due to the higher costs of external borrowing, they may choose to finance some of their projects internally. Therefore, they are likely to behave in a riskier manner after receiving the funds from the lender by exerting less effort and paying less attention to the project, or by shifting the loan to other projects (Fraser et al., 2015; Nekaa et al., 2017).

Banks cannot control and monitor the borrowers' behaviours after the contract is signed; thus, lenders tend to request collateral to secure borrower behaviours that might disadvantage the lent finance. Rahman et al. (2017) found that risky SME borrowers are obliged to provide collateral for a loan application; however, when there is a lack of asymmetric information, the collateral requirements for financing SMEs are reduced. The authors also observed that banks are more likely to collateralise long-term loans than short-term loans. Collateral may take various forms such as personal and firm assets, inventory or high-value account receivables that should align with the level of loan contract risk. A collateralised contract provides assurance for lenders regarding the capability of borrowers to make the repayments when the relationship between the collateral and the borrower's risk is negative (Jimenez et al., 2006). However, collateral values cannot always play an effective role in the loan transaction because some asset values depreciate periodically (Deakins and Hussain, 1994). A reduction in collateral value would cause considerable problems such as the inability to cover the contract costs, hence causing a default on the loan. Furthermore, not all SMEs have

the assets required for security for a loan (Deakins and Hussain, 1994). Libyan SMEs are an example of that (Samawi et al., 2016). Thus, the provision of information seems to be a crucial component of enhancing credit availability for firms.

As is evident from the above explanations, asymmetric information is a major factor that can influence the attitude and decisions of not only creditors but also firms' owners. The creditors adjust their loan pricing based on the quality of the available knowledge about potential projects. Similarly, firms' owners may prepare for loan contract costs based on the available knowledge about bank loan procedures, charges and business capability to obtain the loan or they may eschew borrowing even if there is a need for funding. Therefore, credit rationing theory under asymmetric information is considered in the present study in the Omani context.

### **2.1.3 Pecking Order Theory (POT)**

The POT is among the most dominant theories of financing for SMEs (e.g. Beck et al, 2008; Serrasqueiro and Nunes, 2012; Robb and Robinson 2014; Kumar et al., 2017). The POT was originally developed by Myers and Majluf (1984) (Leary and Roberts, 2010). The theory was constructed from the agency theory perspective of Jensen and Meckling (1976) due to the presence of information asymmetries in the relationship between the two parties (i.e. agent/insider and principal/outsider) in the financial market (Hall et al., 2000). Under conditions of uncertainty, the POT theory posits that the owner-manager of a firm possesses more and superior information about the health, prospects and true value of their business than outsiders (e.g. creditors and shareholders). López-Gracia and Sogorb-Mira (2008) stated that the issuing of new securities in the financial market might cause firms to incur high information costs and be undervalued in the market because of the information asymmetries. This leads firms to follow a specific hierarchy of financial sources in order to avoid the business being undervalued in the market and to reduce the risk that may arise from information opacity. Accordingly, firm owner-managers prefer to depend on internal financing (i.e. retained earnings) as it is less costly than external funding (Myers 1984; Myers and Majluf 1984). When the internal funds are exhausted, the firm's owner-manager prefer to finance the business through debt, while choosing equity financing as a last source. This is because of the lower information costs associated with debt than with equity financing. The last option is financing through equity issuing, which entails high information costs (Fazzari et al., 1988; López-Gracia and Sogorb-Mira, 2008).

Given the above, the POT indicates a negative relationship between the insider and outsider in such uncertain circumstances. Allen (1993) posits that the POT suggests a negative relationship between debt finance and profitability. Likewise, Hall et al. (2000) found that short-term debt correlates negatively with profitability, asset structure, age and size, but positively with SME growth. Some prior studies have argued that the owner-manager decisions regarding their hierarchical order of funding preferences is particularly relevant to certain firm characteristics such as size and age (e.g. Beck et al, 2008; Serrasqueiro and Nunes, 2012; Kumar and Rao., 2015; Balogun et al., 2016; Quartey et al., 2017; Kumar et al., 2017). Young and small firms are more likely to adopt this behaviour because of the higher costs involved with the insufficient information (Robb and Robinson, 2014; Serrasqueiro and Caetano, 2015). At the stage of applying for a bank loan, an ex-ante problem of adverse selection and moral hazard may be present since the funders are unable to discern viable businesses, as discussed in the lemon market scenario by Akerlof (1970). Therefore, bank lenders will ask for high costs (e.g. interest rate and securities) as a means of avoiding default payment risks (López-Gracia and Sogorb-Mira, 2008). Therefore, these firms may refrain from seeking loans to raise their business capital (Kumar et al., 2017).

Based on the capital structure hierarchy, firm owners may prefer to raise their capital through equity sources only when they become financially constrained (Beck et al., 2008); in other words, it is a last resort. Moreover, equity funding might be perceived as an expensive financial source compared to a loan (e.g. Bruns and Fletcher, 2008; Armstrong et al, 2013; Silver et al, 2015), especially in a bank-based system context. In addition, Myers (1984) noted that an owner-manager issuing shares in the market may indicate an undervaluation of the investment. As a result, many firms will be reluctant to release equity; thus, they either strive to attain and retain business profits or they apply for a loan rather than looking for equity financing (Atherton, 2009). In addition, there is evidence that young and private firms, in particular those owned by families, refuse to relinquish equity to external investors in order to retain their control and power within the company (Cressy, 1995; Berggren et al., 2000; Hiebl, 2013).

However, Myers (1977) pointed out that at the initial stage in the financial lifecycle, SMEs with inadequate internal funding have to strive hard to survive; firms tend to use short-term loans to accommodate their need for investment opportunities. This is because it is easy for creditors to monitor the repayment of a short-term loan and its associated costs, compared

to a long-term loan. SMEs' age and growth performance can help to alleviate the issue of a lack of information within their banking relationship, whereas the lack of reputation of young firms (Diamond, 1989) and the lack of tangible assets (Berger and Udell, 1998) can mar this relationship as a result of opacity (Serrasqueiro and Nunes, 2012; Kumar and Rao, 2015). Kumar and Rao (2016) stated that the age, profitability, liquidity and tangibility are the main determinants of Indian SMEs' capital structure. Another study showed that the capital structure decision of Ghanaian SMEs is influenced by managerial ownership, since firms with many shareholders are less likely to apply for a loan (Abor, 2008).

Since SMEs are characterised as opaque firms, the POT is perfect to describe the decisions about capital structure taken by both lenders and borrowers. In addition, the attributes of firm-level strategy, primary owner characteristics and industry type can influence financial decisions by encouraging firms to seek finance when it is needed or by discouraging them from borrowing.

#### **2.1.4 Signalling Theory**

Many researchers in various disciplines have adopted the signalling theory to specify and analyse its relationship with research associated with the adverse impacts of information opacity. For example, it has been applied in the accounting field in relation to the subject of corporate governance (e.g. Bell et al., 2012) economics and entrepreneurship (e.g. Ross, 1977; Krasniqi, 2010; Robson et al, 2013). The essential objective of the signalling theory is to reduce information opacity between two parties during communication (Spence, 1973; Eddleston et al, 2016). The theory was initiated when Spence (1973) attempted to analyse the signalling model in the labour market context under conditions of uncertainty and great information asymmetry. The signalling model depends on the signaller's ability to reveal a quality signal of unobservable information or observable signals in order to meet the requirements of the receiver (Connelly et al, 2011).

Figure 2.1 illustrates the mechanism of the signalling theory between the two parties. The insider is the official person who knows everything about the organisation, product and human resources, such as an employer or manager, or the Board of Directors. While the insider has positive and negative information, the communication between the two parties underlies the deliberate positive signals that would indicate a positive image of the sender attributes (Connelly et al, 2011). Generally, the insider tends to focus on the positive

information and reduce the negative information in order to fulfil the demands of the outsider (ibid). The receiver is the outsider (i.e. stakeholders such as customers, creditors and shareholders) who observes the signal and translates what has been observed. The collected information will give insights to the receiver about the returns that will be gained from the signaller. For instance, the employer focuses on the skills, competence and capabilities of a job applicant that will accelerate the organisation's profit, development and growth. Accordingly, the outsider (e.g. employer) makes the decision and allocates the resources according to the qualities that have been valued as positive.

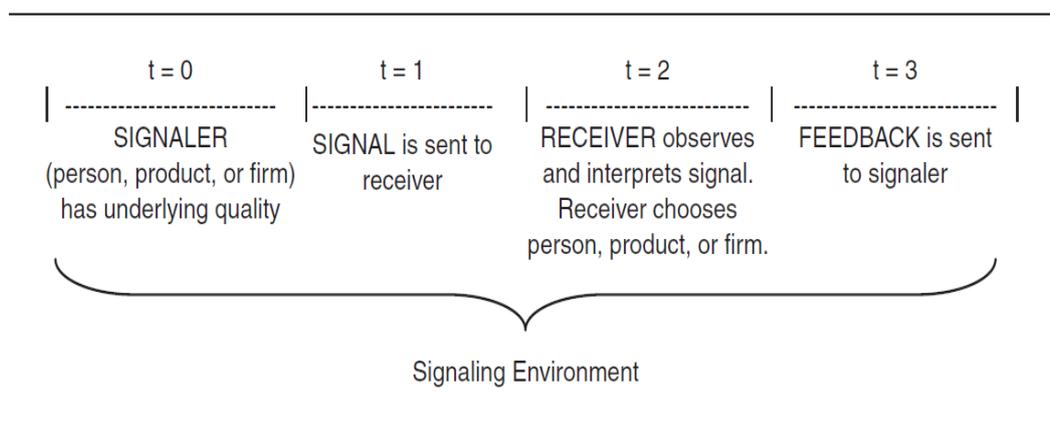
In the context of financing SMEs, the interpretation of the quality signal suggests that owners may possess certain characteristics or resources – to be the quality signal - that would be an opportunity to alleviate information opacity, hence increasing their ability to approach banks successfully for financing. Thus, in the literature, researchers have used the theory to argue that funders may evaluate the quality of entrepreneurial projects by examining the signals that reflect the viability of the business (e.g. legitimacy, stability and future potentials) and owner's commitment toward the project (Jain et al. 2008, Eddleston et al., 2016). Sufficient and credible information revealed through signalling theory by SME owner-managers is considered to be a kind of anchor that reduces banks' lending costs (Berger and Udell, 1988). The quality signals that are reflected by the actions of entrepreneurs and their past behaviours would effectively create greater trust and make the entrepreneurs more credible in the eyes of the funders than words and verbal promises (Busenitz et al., 2005).

However, when firm owners (i.e. the signallers) transfer unclear information to bank lenders (i.e. the receivers), such as an insufficient and incomplete formal business plan (Bruns and Fletcher, 2008), or financial statement information (Bruns et al, 2008; Van Tendeloo, and Vanstraelen, 2008; Chen et al, 2011; Van Caneghem and Van Campenhout, 2012), this may cause credit rationing (Robson et al., 2013). Under uncertainty, bankers need to distinguish between quality and non-quality signals (Kon and Storey, 2003). Reducing opacity by exerting efforts to obtain the required information is costly, since the quality signals of the insider's characteristics may not be observable and the receivers focus only on what is observable when assessing the application (Deakin and Hussain, 1994; Kon and storey, 2003). If the opacity cannot be reduced, banks will either reduce the risk by involving high costs in the loan contract, or they will turn down the application (Domehera et al., 2017).

A study of SMEs in Kosovo revealed that the profitability of enterprises is not an adequate quality signal for bank lending, even if firms are performing well (Krasniqi, 2010). As a substitute, bankers strive to secure the lending contract with the use of collateral and interest rates (ibid). Banks may not be able to rely on profit measurement as a credit signal because it is volatile, varying with the business and market conditions. Therefore, they rely on a high cost factor (e.g. collateral) to deter adverse selection and the misbehaviour of the ‘bad borrowers’, as well as making sure that their money will return with profits. Other studies have found that education is a positive signal for financiers (Fay and Williams, 1993; Parker and Praag, 2006; Irwin and Scott, 2010). This factor is statistically significant when interacted with the age of the SME owner-manager (Ogubazghi and Muturi, 2014).

The current study suggests that firms which have positive signals of business-level strategy and primary owner characteristics do not only encourage lenders to finance them, but also enhance owners’ self-confidence in making borrowing decisions confidently. The quality signals of firms’ creditworthiness can reflect on owners’ confidence and their willingness to seek finance. For instance, if a firm has performed well in sales growth in the past or if formal comprehensive and audited information is available, owners are encouraged to seek a bank loan when needed. Therefore, this theory is considered for the current study.

Figure 2.1: An Illustration of the Signalling Environment



Note: t = time.

Source Connelly et al. (2011)

### 2.1.5 Human Capital Theory

The Human Capital Theory (HCT) was developed by Becker (1964). The theory was originally concerned with explaining the estimation of an individual's income distribution from their investments in human capital (Unger et al., 2011). The term 'human capital' in this theory refers to the knowledge and skills that are acquired from school and work experience (Becker, 1964). Further prior studies by Garibaldi (2006) argued that the characteristics acquired from investing in human capital will influence the value of the firm (Bruns et al., 2008), hence, increasing individuals' income, which would promote their economic productivity (Tan, 2014). This is suggested to increase economic growth.

Spence (1973) considered education to be a human capital signal that differentiates the quality of workers' ability (i.e. high or low), enabling the higher-quality labour force to earn better salaries. From the point of view of the HCT, the quality of knowledge and skills transferred to the business owners increases their chances of success in the market. This is because individuals are expecting to receive high compensation for their investments in human capital. Cassar (2006) contended that entrepreneurs who have invested more in their knowledge and skills were more able to enhance their business growth and profits, relative to those who have entered entrepreneurship with less knowledge and skills. Unger et al. (2011) suggested that the entrepreneurs who enter the market with higher-quality human capital investments want to receive higher compensation for that. If this is not the case, qualified and well-educated business owners will disband their firms to search for more profitable employment opportunities in the market (Gimeno et al., 1997). This indicates that business owners with quality human capital attributes will have enhanced business survival and success in the market.

Thus, the perspective of HCT has been adopted within the scope of entrepreneurship and SME financing. For instance, and not as a limitation, education, level of experience and training have been used to investigate its relationship with firms' ability to access bank loans (e.g. Smith-Hunter, 2006; Brun et al., 2008; Irwin and Scott, 2010; Abdesamed and Wahab, 2014; Cowling et al. 2018; Piva and Rossi-Lamastra, 2018). Piva and Rossi-Lamastra, (2018) found that education and business experience were the only factors compatible with enhancing start-up quality and reducing information asymmetries, and that these factors would promote entrepreneurs' successful access to equity crowdfunding.

With respect to the current study, it is suggested that highly educated and experienced firm owners are more optimistic about seeking finance. This is because acquiring quality of knowledge will help business owners to prepare their business plan with fully clear information, and a loan application that aligns with the lender's procedures and terms. Thereby, this will increase owners' confidence in seeking finance once they require it. Also, it is supposed that these owners know more about the appropriate time and conditions for seeking finance for their potential investments than those who lack knowledge and high-quality formal education. High-quality owner attributes and a high level of confidence are likely to reduce credit rationing among SMEs, in particular those in the non-oil sector in Oman.

## **2.2 Empirical Perspective of SMEs' Bank Credit Constraints**

In this section, the research discusses SMEs' market failure in financing by covering empirical studies that demonstrate financing constraints from the demand-side, in particular the problem of credit discouragement among these firms.

### **2.2.1 SMEs' Market Failure**

Neither bonds nor equities are the ideal financing options for the SME sector. Unlike large firms, SMEs are constrained by such types of market public securities (Bruns and Fletcher, 2008) since both of these funding options are associated with substantial costs associated with contracting and the process of issuing the securities (Armstrong et al, 2013; Silver et al, 2015). SMEs tend to lack the audited information that ideally should be shared with investors (Berger and Udell, 1998; Van Caneghem and Van Campenhout, 2012; Gama et al, 2017). In addition, firm owners may be concerned about losing their control over the business in favour of external shareholders (Berggren et al, 2000) due to the influence of the ownership factor (Hiebl, 2012) and the inherent mistrust towards funders (Fink and Kessler, 2010; Howorth and Moro, 2012; Silver et al, 2015). Silver et al. (2015) used a sample of 459 small firms to examine the effects of Chief Executive Officers' relinquishment of control aversion and the influence of their attitudes towards external funders. The findings revealed that the apprehension felt over losing their control over the firm creates information asymmetry, which decreases funding availability via equity sources for these businesses.

Previous research has shown that most SMEs use internal funds (Mason and Harrison, 2004; Dong and Men, 2014) and in some cases informal sources such as friends and family to acquire the funds necessary for business growth (Abor and Biekpe, 2006; Wilson et al., 2007; Irwin and Scott, 2010; Poposka and Kostovski, 2014), which is consistent with the POT. Around 73% of Libyan SMEs rely on informal financial sources (Badri, 2006 cited in Abdesamed and Wahab, 2014). The Global Entrepreneurship Monitor Report (2006) alluded to evidence from the GEM nations datasets that the majority of finance comes from informal external sources, such as close family (32%), other relatives (14.5%), work colleagues (14.7%), friends or neighbours (13.3%) and strangers (7.3%) (Bygrave and Quill, 2006).

Nonetheless, internal finance sources such as retained earnings and revenues cannot be a substitute for external finance, especially for growth-oriented firms (Berger, 1998; Bruns and Fletcher, 2008; Krasniqi, 2010). This is because firms' internal funding is susceptible to being exhausted (Robb and Robinson, 2014). By employing listed and unlisted firms' market data to examine the significance of financing structure and its effect on firms' growth, Rahaman (2011) revealed that constrained firms depend significantly on their internal finance to support business growth. Making the transition from internal to external finance enhances their business growth, which becomes a primary source of funding (ibid). Empirical evidence for Indian SMEs indicated that the provision of bank finance is a significant incentive to improve export performance, while internal finance may hinder firms' profitability and efficiency – the higher export revenue ratio is associated with a higher ratio of firms approaching institutions for financing (Raju and Rajan, 2015). Where there is a reliance on inadequate internal finance, business growth will either not occur or deteriorate significantly (Storey, 1994; Beck et al, 2006; Clarke et al, 2006; Canton et al, 2013; Ferrando and Mulier, 2015), while in other cases firms may quit the market (Rostamkalaei, 2017).

Therefore, early studies have agreed that a strong advanced banking sector is the major actor in sustaining the provision of finance for SMEs' investments and development in the market (e.g. Beck and Demirgüç-Kunt, 2006; Berger and Udell, 1995; Mac an Bhaird et al, 2016; Rostamkalaei and Freel, 2016). Unlike market-oriented financial systems such as in the US, many countries follow bank-based financial systems to support economic performance: see examples from Sweden (Sjögren and Zackrisson, 2005), Africa (Domeher et al., 2017; Mutoko and Kapunda, 2017) and Gulf Cooperation Council (GCC) countries (Rocha et al, 2011; Miniaoui and Schilirò, 2016). Bruns and Fletcher (2008:173) stated that “most SMEs

are concerned with obtaining debt funding from banks because this is a more attractive, realistic and obtainable source than external equity.” Furthermore, the authors noted that banking debt costs are lower than the costs associated with external equity and those which demand a high return to debt (ibid). Banks are not seeking to share firms' periodic profits since they are not involved with business management, as shareholders are. From a loan contract, banks gain limited returns on the basis of the interest rate. Thus, the only concern of bank funders is making sure that the borrowers are able to repay the loan with its associated costs; otherwise, unsuccessful financed projects would lead to the bank losing the amount loaned (Bruns and Fletcher, 2008).

### **2.2.2 Financing Constraints on the Demand Side**

SMEs face greater difficulties with raising their required business capital through banks compared to large companies (Berger and Udell, 2006; Beck et al., 2006; Berger and Black, 2011; Cenni et al., 2015). The lack of finance threatens their ability to grow and survive in the market (Rocha et al., 2011; Wang, 2016). The estimated total credit gap of formal firms in the US is US\$1.5–1.8 trillion (Jinjarak and Wignaraja, 2016), whilst Micro-Small and Medium sized Enterprises (MSMEs) in developing countries encounter an estimated credit gap of US\$2.1–2.6 trillion (Stein et al., 2013). In Libya, only 11% of SMEs are accessing bank loans (Abdesamed and Wahab, 2014). This problem of unmet bank financing for the SME sector – which is termed credit rationing – stems from the asymmetric information issue (Gama et al., 2017; Erdogan, 2018; Erdogan, 2019).

As was clarified in the earlier theoretical discussion, under uncertainty, banks are unable to distinguish the quality of the loan applicants or to control borrowers' level of commitment to the contract agreement in order to ensure that they will repay the loan (Stiglitz and Weiss, 1981). Therefore, banks choose to take the approach of credit rationing as a response to the risks of moral hazard and adverse selection by applying high interest rates (Akerlof, 1970; Spence, 1973; Deakins and Hussain, 1994). However, interest rates cannot adjust the situation fully, even in a perfect market (Fraser, 2019), because with the existing issue of imperfect information the misallocation and misuse of loans may occur (Mac an Bhaird et al., 2016). Thus, the financial constraint remains among younger and smaller firms, even in advanced and developed credit markets (e.g. Mason and Stark, 2004; Deakins et al., 2010; Canton et al; 2013; Cenni et al., 2015), despite the wide range of lending technologies available (Berger and Udell, 2006). The financing constraints also may be more pronounced

with collateral terms of loan contracts for small businesses. Berger et al. (2011) found that small businesses are more likely to be asked for collateral to secure loan transactions, offered a shorter duration for loan payment, and obtain smaller amounts of loans. This is consistent with Rahaman et al. (2017) and indicates that the collateral of a loan contract may affect entrepreneurs' decision to seek a loan (Fraser, 2019).

Ferrando and Mulier (2015) observed that among constrained firms, there are cases of firms that have refused offers of bank loans because of the high interest rate associated with the transaction. In this context of imperfect markets, the borrowing decision inherently includes some degree of uncertainty about the lender's decision in terms of costs and the size of loan they will receive. This indicates that the perceptions of business owners about external borrowing and its relevant factors depend on the extent of their cognition. Data from the European Central Bank's (ECB) survey of Access to Finance of Enterprises (SAFE) for the period between 2009 and 2015 discloses that financing constraints hinder SMEs' growth, but the impact of this is stronger for firms that simply perceive financing constraints compared to firms that have actual financing constraints (Moscalu et al., 2020). This supports Ferrando and Mulier's (2015) study. It is implied that business owners may refrain from seeking bank credit when their unfavourable perception of borrowing exceeds their need for funding for their ventures. Empirical evidence indicates that firms transition between internal and external finance is based on financial constraints, where this behaviour more pronounced in small unquoted firms (Rahaman, 2011). Mac an Bhaird et al. (2016) pointed out that under conditions of uncertainty, the most significant obstacle to investment is the decision of business owner not to apply for loans when they need the capital. In some cases, the firm owners may decide to rely on internal funds for financial growth (Rahaman, 2011; Carpenter and Petersen, 2002) or to borrow less (Ferrando and Mulier, 2015; Fraser, 2019), which may subject the business to cash flow pressure, and hence the possibility of bankruptcy.

A further major issue that may exist among non-applicants is financially discouraged business owners. Previous empirical studies in the US (Levenson and Willard, 2000; Han et al., 2009; Cole and Sokolyk 2016) and the United Kingdom (Freel et al., 2012) have documented that the proportion of small business owners who were discouraged from borrowing because of the fear of bank rejection was almost twice as high as the proportion that had their loan application rejected. This suggests that borrowers' perceptions influence the nature of their decision making over borrowing. Thus, what does credit discouragement among firms mean? This question is examined in the next section.

### 2.2.3 SMEs' Credit Discouragement: Conceptual Issues

Due to the concerns over the consequences of firms' discouragement for economic growth and sustainability, it is worth providing some clarifications regarding definitions. According to the Cambridge Dictionary, the term discouragement describes the state where someone has lost his/her confidence or enthusiasm for something (Cambridge Dictionary, 2020). The term has gained researchers' interest regarding identifying and addressing certain phenomena in various scientific domains. For example, the term has been used in the labour market to describe unemployed individuals as "discouraged workers" – the situation where people do not apply for a job because they feel they would be rejected (Finegan, 1981). Then, the term was associated with household borrowing, where consumers were described as "discouraged borrowers" when they held the perception that their loan applications were likely to be turned down due to the cost of applying and so they may be discouraged from borrowing (Jappelli, 1990).

With regard to credit discouragement amongst SMEs, researchers argue that the concept of discouraged firms in the relevant literature seems to have a level of ambiguity (Brown et al., 2018b). The first acknowledged definition was the one that Kon and Storey (2003) mentioned as self-selection of discouragement resulting from the fear of being rejected for a loan. The authors explained that the main factors creating this apprehension among small business owners were imperfect screening by banks (i.e. screening errors) and the application costs. The latter comprised the physical costs of an application (e.g. the costs of completing the application document, travelling, and communication with the loan officer) and the psychological costs (e.g. psychological feelings of discomfort when revealing personal or business information to their firm's stakeholders). However, many of the prior empirical studies have broadened the conventional definition to include all non-applicants for bank credit who are discouraged from borrowing – see Table 2.1 This is because the construction of the concept in some secondary surveys is broader and more inclusive (Brown et al., 2018a; 2018b). For instance, Rostamkalaei et al. (2017: 398) defined discouraged firms as ones that "thought they would be turned down, that it was not the right time to borrow, or that banks were not lending". Another study defined discouraged borrowers as those who decided not to borrow because of loan procedures such as hassle, high interest rates, high collateral requirements or corruption of loan allocations (Chakravarty and Xiang, 2013). Some other researchers have extended the concept to include discouraged seekers of debt and equity finance (Xiang et al., 2014). This variation would suggest that the form of

financially discouraged firms may vary from one entrepreneur to another in one specific context.

Previous studies that have employed secondary surveys faced difficulties with differentiating between those firms that needed credit and those that did not. Freel et al. (2012) therefore applied the Heckman Selection Model (HSM) to avoid selection bias in differentiating between firms that had a desire for credit but were discouraged from borrowing, and those who had no need for credit. Since fear is the core sensation of the original concept of non-applicants, i.e. firms that needed a bank loan but did not apply for one, it is a concern that some studies may not have covered the issue in a convincing manner. In other words, the researchers were not clear enough about whether the attitudes of those who had not applied because of collateral, corruption or high interest rates were embedded in the fear of rejection or not. This suggests that this approach could undermine the original definition (Gama et al., 2017). Therefore, the concept of discouragement must be well articulated before embarking on investigations (Brown et al., 2018b).

Overall, the cognitive and psychological (i.e. misperceived credit outcome) factors of firm owners may impact their confidence towards making decision for borrowing when there is a lack of perfect information and a lack of collateral. Thus, business owners' assessment towards seeking bank financing varies across SMEs – as the following section clarifies.

Table 2.1: Discouragement Definition as Constructed from Secondary Survey of Previous Studies

Study	Data Source	Technical Definition of Discouraged Borrowers
Gama et al 2017	EDRB and World Bank Group's Business Environment and Enterprise Performance survey (2008/09 BEEPS)	"if it does not apply for a loan for different reasons, such as tough loan prices or loan contract procedures or fear of rationing, that is, the scale of discouragement as a function of bank screening errors, application costs, and the difference in interest rates between the bank and other money lenders" (p.35)
Moro et al 2017	ECB Survey on the access to finance of SMES (SAFE)	"did not apply due to anticipated rejection" (p.122)
Neville et al 2017	US Federal Reserve Board's Survey of Small Business Finances (SSBF)	"During the last three years, were there times when the firm needed credit, but did not apply because it thought the application would be turned down" (p.21)
Tang et al 2017	Bespoke Survey in Hanan and Guangdong province, china	"Have you decided not to apply for a loan anticipating a bank rejection" (p.529)
Rostamkalaei 2017	UK SME Finance Monitor	"thought they would be turned down, that is was not the right time to borrow, or that banks were not lending" (p.398)
Cole and Sokolyk 2016	US Federal Reserve Board's Survey of Small Business Finance (SSBF)	"is a firm that did not apply for a loan during the previous 3 years because the firm feared rejection, even though it needed credit" (p.47)
Cowling et al 2016	UK SME Business Barometer Surveys	"demand for but not applying for any finance either because the firm feared rejection, or the owner thought the finance was too expensive" (p.1054)
Mac an Bhaird et al 2016	ECB Survey on the access to Finance of SMES (SAFE)	"With respect to banks' loans (either new or renewal): did you apply for them over the past months, or not? 1. Applied. 2: No, because of possible rejection" (p.49)
Chakravarty and Xiang 2013	World Bank Enterprise Surveys	"as firms with a need for a loan who nevertheless choose to not apply for a bank loan because (1) the loan procedure was too complicated; (2) interest rates were too high; (3) collateral requirements were too high; and (4) there was corruption in allocation" (p.67)
Freel et al 2012	UK biennial survey by the Federation of Small Businesses	"in the past two years has the fear of rejection stopped you from seeking a bank loan for your business" (p.407)

Source: Brown et al. (2018a)

#### 2.2.4 Empirical Studies of Credit Discouragement: Self-credit Rationing among SMEs

It is important to study the financial discouragement problem that may be present within the SME sector because if it has not been well considered, then the market might miss the

opportunity of expanding investments in this sector and at the same time bank funders may lose the opportunity of making profit from the loan portfolios (Freel et al., 2012). Nonetheless, compared to the growing literature on SMEs' access to banks, to date only a few studies have investigated the existence of the credit discouragement issue in the market. Because of the greater availability of secondary datasets on SMEs in developed economies, most of the research aiming to identify the nature of small business discouragement and to estimate its prevalence within the sector has been based on the EU and the US (e.g. Han et al., 2009; Freel et al., 2012; Mac an Bhaird et al., 2016). Most of these studies have employed financial information from banking and economic factors to identify their relationship with the discouragement incidents.

Using US data for small businesses, Han et al. (2009) noted that cases of discouragement exist among risky borrowers, which is considered to be an efficient form of self-rationing. However, the authors found that these risky borrowers are less likely to be discouraged in a uncompetitive market than in competitive markets. The international study conducted by Chakravarty and Xiang (2013) affirmed that the determinants of discouragement vary among firms, depending on the level of competitiveness in the market. In developed economies, the factors that determine discouragement are firm size, the number of banking relationships and total liabilities (which are negatively related with discouragement), while in less-developed economies, firm age and competition are statistically significant in determining the likelihood of encountering discouragement (ibid).

Mac an Bhaird et al. (2016) examined the effect of the macroeconomic factors (GDP, scale of financial distress and private sector credit) and regulatory and banking industry factors on discouragement, using SAFE surveys from 2009 to 2011. The empirical findings provide evidence that small and young firms are more likely to be discouraged (which is consistent with other empirical studies: Freel et al., 2012; Chakravarty and Xiang 2013; Cowling et al., 2016; Rostamkalaei, 2017), while high-quality regulation is positively related with the likelihood of businesses discouragement. However, the empirical analysis revealed that macroeconomic development is statistically insignificant, indicating that there is no relationship between GDP per capita and the probability of being discouraged from borrowing. Similarly, Cole and Sokolyk (2016) found that 33% of discouraged firms successfully obtained funds when they reapplied for credit. The results show that discouraged firms are different from rejected firms in terms of size, profitability, owner age, and the number of financial sources that were used obtain financial services. Cowling et al.

(2016) tested the incidents of discouraged firms during the global financial crisis, and the findings indicated that 55.6% of discouraged entrepreneurs could have obtained funding if they had applied for it. The analysis showed that the rate of loan rejection was high, at 30% to 40% of total loan applications; however, the rate of discouragement was low in stable economies and increased during the recession. Similarly, Rostamkalaei (2017) reported that the levels of discouragement in the aftermath of the financial crisis (since 2013) have decreased. In addition, Gama et al. (2017) studied the discouragement determinants in Eastern Europe and Central Asia and revealed that the opacity of firms, their characteristics, and the distance between funders and borrowers, better explain the discouragement that results from tough loan prices and application procedures. On the other hand, the authors found that the discouragement that arises from fear of bank rejection is better explained by firm risk and banking concentration. The authors also stated that discouragement can be explained in a transversal manner through the factors of innovation, the legal protection for loan contracts in the case of default, and the usage of information-sharing instruments.

### ***Transactional versus relational banking***

There are two different ways of lending that are deployed to address the problems that may cause credit rationing: transactions-based lending and relationship lending (Berger and Udell, 2006). Transactional lending is generally where a bank loan manager-officer relies on hard information to process the loan contract. The audited financial statements and credit scoring (where the history of loan payments are recorded by a credit bureau) are based on quantity information. This hard information enhances lenders' ability to assess business creditworthiness. Through their assessment, elements of a loan contract may arise such as borrowing and collateral costs, and the extent and types of financing. However, this type of lending technology is more likely to be feasible for large firms than small firms, particularly in the developing countries context. Collateral that is pledged by firms and account receivables is another form of hard information that can be provided through asset-based lending and factoring respectively. However, this type of financing may remain difficult for SMEs that are not able to provide clear and sufficient information for the banks. Also, lenders may offer financing through trade credit which helps business owners to purchase goods or services in credit. However, this type of transactional lending might not be popular with lenders as they are at risk of not receiving the payments (when less creditworthy firms have an informational advantage over the financial suppliers) (Berger and Udell, 2006).

In contrast, the relational lending model is designed as an alternative method to solve the issue of SMEs' opacity, particularly when there is a lack of financial records, collateral and quality accounts receivables i.e. credit scoring, asset-based lending, or factoring are not feasible or costly (Berger and Udell, 2006). Thus, relationship lending is associated with the use of the soft information available during the time of dealing with the bankers with respect to the provision of loans (Petersen and Rajan, 1994; Berger and Udell, 1995). Using bank financial and non-financial services such as business banking accounts (i.e. current accounts, saving or deposit accounts) would help to build and maintain a strong relationship with the bankers. This in turn will enhance business owners' confidence toward seeking for finance when there is need through existing bank accounts and loan officers might be more able to collect good quality and accurate information about their clients' trustworthiness and creditworthiness. The loan officers will be able to evaluate a firm's business performance and monitor their banking transactions, as they can track business cash inflow and outflow from the existing accounts. Thereby, a good firm-banking relationship can be expected to play great role in reducing financial discouragement among SMEs.

### **2.3 Research Hypotheses and Model Development**

The present study draws on previous empirical and theoretical studies on financing SMEs, particularly credit rationing from the demand-side perspective. Thus, the testable assumptions that are proposed to have an influence on the non-oil-related SME business owners' decisions over borrowing in Oman are whether firms had apply for bank credit or not. The model is developed by including firm strategy characteristics, banking relationship, primary owner characteristics and business industry type, while it is controlled by firm age and size. Previous studies suggest that export intensity, business innovation and development, orientation to grow, business planning, and seeking financial advice to develop a banking relationship are part of the business strategy that would impact on a business owner's decision whether to apply for bank credit or not (Bruns and Fletcher, 2008; Freel et al., 2012; Love and Roper, 2015). In parallel to their business plan, when the firms' owners plan to expand their businesses, they need to prepare a solid and quality financial report that will strengthen their financial decision toward borrowing from banks. Previous studies suggested that having a quality audited financial report (e.g. Mutluer Kurul and Tiryaki, 2016; Palazuelos et al., 2018) and in particular those certified by the Big 4 audit firms (Van Caneghem and Van Campenhout, 2012) would reduce financial constraints among SMEs. In Freel et al. (2012), the financial advice from the bank manager is used to measure the

banking relationship. The current study uses firms' satisfaction levels and the length of relationship with their main bank which are driven from previous research (e.g. Rostamkalaei et al., 2020). The firms and primary owners (i.e. the owners with the highest share of the business) characteristics are included because this study has been influenced by previous studies that demonstrate how these variables impact on firms' financial demand, but in very limited cases such as in the UK and US (e.g. Freel et al., 2012; Cole and Sokolyk, 2016; Rostamkalaei et al., 2020).

The sections below explain in detail the variables of each of the testable assumptions and the reasons for including them in the current study model. Table 5.1 in Chapter Five shows the research variables measurement.

### **2.3.1 Firm-level Strategy**

#### **2.3.1.1 Export Performance Intensity**

To enhance economic growth and sustainability, policymakers tend to encourage private businesses to expand their export activities into foreign markets. Thus, export-oriented SMEs often have an increasing demand for financing as they need to meet an increasing expenditure caused by the fixed costs required to make sales in an international market, such as marketing and branding, translation, and meeting foreign market regulations and other criteria (Storey, 2004; Abor et al., 2014; Bartoli et al., 2014; Manova 2012; McCarthy et al., 2017). Bartoli et al. (2014) stated that in order to achieve export orientation, exporter firms should have enough liquidity because most of the costs to entry foreign market need to be paid in advance. Therefore, the business strategy of expanding export performance may impact business owners' decision to seek bank funding and hence, influence the business's capital structure. Thereby, it is evident that internationalization is much more appear to be the orientation of large companies than small business in the market (Bartoli et al., 2014). This is because large firms are more capable to reach market resources compared to small firms.

By studying developed economies such as Germany, France, Italy and Spain, Altomonte et al. (2016) found that the manufacturing firms with better access to credit tended to have higher productivity and a higher probability of internationalising (i.e. exporting). Their results also confirm that these firms are less likely to be constrained. In Germany, Goldbach

and Nitsch (2014) found that approximately 15% of bank lending is offered to export-oriented firms rather than non-exporting firms, which supports their internalisation activities. In addition, an Australian study found that SMEs which export 40% or more of their sales have a lower incidence of credit rationing (McCarthy et al., 2017). The analysis of data from several countries – Chile, Israel, Korea, Thailand, Mexico and Turkey – illustrated that the availability of overdraft services for SMEs increases the share of exports in total turnover, as well as international activities, especially for firms that need credit (Jinjarak and Wignaraja, 2016).

In contrast, other studies found that internationalised SMEs are more likely to face financing constraints, despite having higher labour productivity than constrained businesses that export less (Motta, 2008). In Pakistan, the market recorded a significant decline in the exports of private-owned companies due to the credit constraints experienced when the subsidised credit was removed, while large and quoted firms (i.e. listed firms in securities market) were not affected (Zia, 2008). In GCC, the World Bank reported that SME owners with export orientation are more likely to face obstacles to obtaining bank finance as a result of banks' concentration on deposits of oil sector revenues (Rocha et al., 2011; IMF, 2016). Other studies found that in Oman, non-oil export firms suffer of lack of support in fostering export (e.g. financing, connecting to market, and strategic intervention by the policy makers) (Al-Maskari et al., 2019).

Another study conducted by Rostamkalaei et al. (2020) reported that British exporting SMEs were discouraged from applying for credit. However, in Eastern Europe and Central Asia, it was found that credit discouragement incidents significantly declined among SMEs with export orientation (Gama et al., 2017). Nonetheless, there is unclear evidence on whether having a high proportion of export revenue in total sales affects owners' decision about borrowing, i.e., whether they face credit discouragement or not, in particular during oil economy crisis. Therefore, the present study postulates the following hypotheses:

*H1a:* Non-oil-related SMEs with a higher ratio of internationalised sales (i.e. 50% or more) are more likely to apply for bank credit than non-exporting firms.

*H1b:* Non-oil-related SMEs that perform with a higher ratio of internationalised sales (i.e. 50% or more) are more likely to be discouraged from applying for bank credit than non-export firms.

*H1c*: Non-oil-related SMEs with a high ratio of internationalised sales are more likely to be credit constrained than non-export firms.

### **2.3.1.2 Past Sales Growth Performance**

Banks tend to use historical (recorded) information about firm performance to assess the potential risks and the extent of their capability to make loan and interest repayments (Cowling, 2010; Cowling et al., 2012). In the banking sector this is known as ‘serviceability’ and it reflects the loan officer/manager’s judgements about a firm’s capability or revenues and their assessment of the extent to which it can afford to borrow (Cowling et al., 2012). Thus, past growth performance can be utilised as a potential signal to enhance bank lending for SMEs. Cowling et al. (2012) found that there is a positive relationship between firms that can show increases in their prior sales growth and lenders’ decision to supply finance to them. This indicates that finance providers might consider prior growth as a good predictor of suitability for credit, leading to enhanced future business performance (Storey, 2004).

However, it is still unclear whether firms’ sale growth performance impacts on the business owners’ decision to seek finance (Cowling et al., 2012; Erdogan, 2019). Previous studies point out that firms’ growth has a positive effect on their demand for external credit (Canton et al., 2013). It has also been shown in Kosovo that the likelihood of seeking credit increases with well-performing SMEs because they deliver better signals about their potential to the market (Krasniqi, 2010). Similarly, it has been found that in Australia, SMEs with past growth are more likely to seek finance (McCarthy et al., 2017). These studies confirm the POT that growing firms have a greater demand for external finance than non-growing firms (Frank and Goyal, 2009; Freel, 2007).

Nonetheless, it has been shown that European SMEs that record declines in their sales growth are more likely to be discouraged from borrowing during an economic crisis (e.g. Mac an Bhaird et al., 2016). However, Freel et al. (2012) did not find a significant relationship between firms’ growth and the probability of them being discouraged. The present study suggests that when firms’ prior sales performance has improved, this will encourage the business owners to seek the required finance from banks, especially during an economic turndown. Therefore, the following hypotheses are posited:

*H2a:* Non-oil-related SMEs that have increased their sales growth are more likely to apply for bank credit compared to firms whose sales growth has remained unchanged.

*H2b:* Non-oil-related SMEs that have increased their sales growth are less likely to be discouraged from applying for bank credit compared to firms with unchanged sales growth.

*H2c:* Non-oil-related SMEs with increased sales growth are less likely to be credit constrained compared to firms with unchanged sales growth.

### **2.3.1.3 Formal Comprehensive Business Plan**

Researchers have linked the alleviation of asymmetric information with the provision of information (Pretorius and Shaw, 2004; Mason and Stark, 2004; Chen et al., 2009; Fatoki and Ash, 2011; McCarthy et al., 2017). Thus, a formal comprehensive written business plan is one of the critical information sources that banks require for decision making (Richbell et al., 2006; Abdesamed and Wahab, 2014; Erdogan, 2018) as they enable financial suppliers to understand the firm's project and its aims (Chen et al., 2009; Mason and Kwok, 2010; Fernández-Guerrero et al., 2012; Osiyevskyy et al., 2016). For instance, funders may use the business plan to evaluate borrowers' creditworthiness, whereas investors would ask for this document to ensure the project's credibility, reality and prospective profitability (Barrow et al., 2001; Mason and Kwok, 2010). It could also be used by investors to gauge the entrepreneur's desire to improve the business performance and raise capital for investment (Mason and Stark, 2004; Abdesamed and Wahab, 2014).

Researchers have found that having a formal business plan is positively correlated with SMEs' performance (Mazzarol, 2001; Osiyevskyy et al., 2016). With regard to SME funding, prior empirical studies have revealed that firms with written business plans have more opportunities to obtain financial support compared to those that do not have formal plans (Hopp, 2015). Furthermore, Rostamkalaei et al. (2020) found that the incidence of informal rejection increases with firms that have a formal business plan. The authors speculated that the increases in informal rejection may occur when business owners substitute a formal document with an informal one for their loan application. In other words, those who use an informal business plan could be rejected by lenders, even informally. This is consistent with Pretorius and Shaw (2004) and Erdogan (2018), who reported that firms with an unclear business plan are more likely to face credit rationing.

Other studies have affirmed that there is a positive correlation between maintaining a formal developed business plan and firms' access to bank funding in Libya (e.g. Libya: Abdesamed and Wahab, 2014; and Turkey market: Erdogan, 2018). McCarthy et al. (2017) reported that Australian SMEs with a clear business plan are significantly more likely to seek bank funding; nonetheless, this is not significantly related to credit constraints. However, another study found that firms which have a formal business plan are less likely to be discouraged from borrowing (Rostamkalaei et al., 2020). This suggests that the presence of a viable business plan may enhance self-confidence among SME owners in making a borrowing decision. However, there is still a lack of information about whether firms that have a formal comprehensive business plan are encountering financial constraints due to the fear of bank rejection, in particular during an economic downturn (such as an oil price crisis). Therefore, the following hypotheses are proposed:

*H3a:* Non-oil-related SMEs with a strategic formal comprehensive business plan are more likely to apply for bank credit compared to firms that do not keep a formal comprehensive business plan.

*H3b:* Non-oil-related SMEs with a strategic formal comprehensive business plan are less likely to be discouraged from applying for bank credit compared to firms that do not keep a formal comprehensive business plan.

*H3c:* Non-oil-related SMEs with a strategic formal comprehensive business plan are less likely to be credit constrained than firms that do not keep a formal comprehensive business plan.

#### **2.3.1.4 Quality Audited Financial Report**

Banks consider audited financial reports as an important document in their decision over whether or not to make finance available to firms to enable them to pursue their operations in the market. This is because the financial report is a comprehensive explanation of a firm's financial position, income (Kitching et al., 2011; Van Caneghem and Van Campenhout, 2012) and liquidity (Schneider and Church, 2008). Through this information, bank lenders are able to identify firms' properties, determine their value, and assess their capability to survive and their potential riskiness (Chen et al., 2011), all of which reduces the potential screening error.

However, it is not unusual for SMEs to have abbreviated accounting information that contains a lower quantity and quality of information (Bruns et al., 2008; Van Tendeloo, and Vanstraelen, 2008; Chen et al., 2011; Kitching et al., 2011; Van Caneghem and Van Campenhout, 2012), which contains poorer quantity and quality of information. For instance, in a study conducted by the Institute of Chartered Accountants of Scotland to explore the point of view of small firm owners about preparing and using abbreviated accounts, some of the respondents stated that they avoided disclosing the full details of their business for the reasons of competition, tax obligations and wishing to keep income information and remunerations confidential and thus unavailable to their employees (Kitching et al., 2011). Another study found that British firms which are exempt from audit (the exemption is based on company size because small firms may incur unnecessary and useless auditing costs) tend to purchase voluntary audits when they experience high agency costs, or are exposed to risks, for borrowing purposes and other reasons (Dedman et al., 2014).

Moreover, using high-quality and reputable external auditing firms such as the famous Big 4 audit firms is argued to be another indicator of high-quality financial reporting (Van Tendeloo, and Vanstraelen, 2008; Van Caneghem and Van Campenhout, 2012). Eshleman and Guo (2014) affirmed that Big 4 audit firms provide higher-quality auditing than non-Big 4 audit firms do. This is because they are not willing to lose their reputation in the market. To ensure the quality of their auditing services, these firms tend to exert effort to attain a high level of audit due diligence and independence (Van Tendeloo, and Vanstraelen, 2008; Eshleman and Guo, 2014).

Palazuelos et al. (2018) carried out an empirical study to investigate the perceptions of 471 bank loan officers of the use of accounting information quality and SME trustworthiness when making decisions about financing. It showed that lenders are more likely to support firms that have quality audited accounting information, whilst for firms with non-audited accounts they seek corroborating information from other trusted sources. Turkish SMEs that possess audited information from independent audit firms are more likely to apply for bank loans (Mutluer Kurul and Tiryaki, 2016). This could be evidence that the presence of quality audited information by competent audit firms influences business owners' willingness to seek finance when required. Previous studies found that in developing countries, SMEs with audited financial reports are less likely to be discouraged from borrowing (Chakravarty and Xiang, 2013; Gama et al., 2017). However, these studies measured the audit factor without

considering the quality of the report. With a high-quality audit, SME owners become more confident about borrowing because lenders are likely to trust quality audited reports. Therefore, the following hypotheses are considered for this study:

*H4a:* Non-oil-related SMEs that have financial reports audited by the Big 4 audit firms are more likely to apply for bank credit than firms that have not hired external audit firms.

*H4b:* Non-oil-related SMEs that have a financial report audited by the Big 4 audit firms are less likely to be discouraged from applying for bank credit compared with firms that have not hired external audit firms.

*H4c:* Non-oil-related SMEs that have their financial reports audited by the Big 4 audit firms are less likely to be credit constrained compared to firms that do not hire external audit firms.

### **2.3.1.5 Sources of Financial Advice**

Many prior studies argued that significant decisions cannot be made individually (Kerr and Tindale, 2004; Bonaccio and Dalal, 2006), therefore it is important to seek advice from experts. For instance, new graduates are likely to consult their parents or peers before making a decision about the best job offer to accept (Bonaccio and Dalal, 2006), while in the organisational context, employees may consult the Top Management Team (TMT) for any business enquiries (Alexiev et al., 2010). With respect to SMEs, it is acknowledged that these businesses lack recorded information and experts (North et al., 2001; Berry et al., 2006; Carey, 2015; Rostamkalaei and Freel, 2017) Thus, seeking external advice is an important factor that can help business owners to make decisions about approaching banks for a loan. Scott and Irwin (2007) stated that advice and information can be obtained from either formal (private and public advisory organisations) or informal sources (family, friends or other social networks). Advice is a mechanism of exchanging information and knowledge, resulting in recommendations (Bonaccio and Dalal, 2006) and support (Smallbone et al., 1993; North et al., 2001; Bennett and Rabson, 2004) from advisors to advice seekers. Prior studies argued that advice contributes significantly to reducing the risks within a firm (Hanlon and Saunders, 2007; Alexiev et al., 2010; Rostamkalaei and Freel, 2017), in particular reducing the information asymmetries between the lenders and borrowers (Bennett and Robson, 2004).

Rostamkalaei and Freel (2017) used the UK SMFE Finance Monitor (2011–2014) to determine the correlation between firm owners' diligence, business risk and financial advice seeking, and applying for a bank loan or overdraft. Their study affirmed the effectiveness and usefulness of advice in improving the potential of making successful loan applications as well as improving business risk and strategies. This result supports previous studies (e.g. Scott and Irwin, 2007; 2009) by identifying for SMEs a positive relationship between seeking external advice and the possibility of raising bank finance. This suggests that business owners who use financial advice are better prepared for borrowing and more confident about making a successful loan application. An earlier study found that the likelihood of discouragement tended to decrease among Ethnic Minority Businesses (EMB) when the business owners used financial advice sources such as public and private sources (Fraser, 2009). Nonetheless, there is limited understanding about the influence of advice source on the decision of a business to apply for borrowing when it is needed. Therefore, this study postulates the following hypotheses:

*H5a*: Non-oil-related SMEs that use sources of financial advice are more likely to apply for bank credit compared to firms that have not used sources of financial advice.

*H5b*: Non-oil-related SMEs that use sources of financial advice are less likely to be discouraged from applying for bank credit compared to firms that have not used sources of financial advice.

*H5c*: Non-oil-related SMEs that use sources of financial advice are less likely to be credit constrained compared to firms that have not used sources of financial advice.

### **2.3.2 Relationship Banking Characteristics**

#### **2.3.2.1 Duration of SME-Banking Relationship**

Prior studies have identified the SME-bank relationship as an important mechanism to support funding for small firms because it helps to overcome the issue of asymmetric information (Petersen and Rajan, 1994; Berger and Udell, 1995; Freel et al., 2012; Erdogan, 2019). A longer relationship reflects well on the credibility and trustworthiness of the entrepreneurs (Diamond, 1989; 1991), and they are less likely to be credit constrained, as shown in studies of Spanish SMEs (Madrid-Guijarro et al., 2016), Turkish SMEs (Erdogan, 2019) and Italian firms (Cenni et al., 2015). Through a sustainable long-term relationship,

banks will be able to collect adequate information and monitor clients' transactions over time to reduce moral hazard and adverse selection risks (Fraser et al., 2015; Gama et al., 2017). During a financial crisis, a study conducted in Turkey found that existing relationships contributed to reducing the risk-adjusted financial costs of firms (Bakiciol, 2017). In addition, lending relationships may provide the opportunity for owners to obtain loans without collateral requirements. This may enhance owners' self-confidence in making borrowing decisions because they feel that they are known to their bank.

Prior studies that were conducted in developed economies such as the UK and the US (e.g. Freel et al., 2012; Altin et al., 2018) found that the likelihood of credit discouragement decreases among small businesses that have (long) banking relationships. The financial markets of these countries are advanced and well regulated, which helps to facilitate financing for SMEs through banks' soft information (e.g. from banking accounts or other non-loan deals). Chakravarty and Xiang (2013) commented that evidence from the World Bank Enterprises survey of less-developed countries showed that small businesses which have a long relationship with their banks are less likely to be discouraged. However, another study found that in some less-developed countries, banks granted SMEs finance without need to processing and assessing on the existed relationship information amongst them (De la Torre et al., 2010). Therefore, the present study predicates the following hypotheses:

*H6a*: Non-oil-related SMEs that have a long relationship with their bank are more likely to apply for bank credit than firms with a shorter banking relationship.

*H6b*: Non-oil-related SMEs that have a long banking relationship are less likely to be discouraged from applying for bank credit compared to firms with a shorter banking relationship.

*H6c*: Non-oil-related SMEs that have a long banking relationship are less likely to be financially constrained by banks than firms with a shorter banking relationship.

### **2.3.2.2 Satisfaction Level of Banking Relationship**

Fraser (2019) stated that improving the rates of satisfaction with banking would help SMEs to access credit, thus lowering the discouragement rate. An existing long relationship with their main bank may play a role in enhancing the satisfaction level of firms; in turn, this will

develop business owners' confidence in making the decision to borrow when needed. Rostamkalaei et al. (2020) pointed out that based on business owners' decisions, those who have no banking relationship or a poor banking relationship either would directly and formally apply for a bank loan or discourage themselves from borrowing. The authors argued that those who made a formal application might risk their reputation and that self-discouragement may cause a reduction in the investment rate in the market. Thus, the authors predicted that it is easier for firms that are satisfied with their relationship with their bank to make informal enquiries about a loan application before processing the formal request.

Accordingly, owners with a satisfactory banking relationship are expected to be more willing to seek finance. Previous studies indicate that having good relationships with banks reduces the probability of discouragement among small firms (Chakravarty and Yilmazer, 2009; Freel et al., 2012). Nonetheless, there is other empirical evidence to show that the likelihood of discouragement increases among firms that have built up a good banking relationship, even during stable economic conditions (Cowling et al., 2016). Rostamkalaei et al. (2020) also found that the level of SMEs' satisfaction is a statistically significant differentiator between informally rejected firms and discouragement, implying that firms satisfied with their banking relationship are more likely to be discouraged. Notably, the authors affirmed that their restriction on borrowing is based on their own judgement (i.e. self-assessment) not because of lender refusal or experiencing difficulties with gathering information. However, when comparing discouraged firms with those that sought bank loans, the empirical evidence does not provide proof that this factor is significant in the UK context (ibid).

Notwithstanding, there remains limited understanding of the impact of the level of satisfaction with banking on SMEs owners' decisions over borrowing, especially in an oil-based economic context. Therefore, the present study presents the following hypotheses:

*H7a:* Non-oil-related SMEs that have a satisfactory bank relationship are more likely to apply for bank credit compared to firms that have an unsatisfactory bank relationship.

*H7b:* Non-oil-related SMEs that have a satisfactory bank relationship are less likely to be discouraged from applying for bank credit compared to firms that have an unsatisfactory bank relationship.

*H7c*: Non-oil-related SMEs that have a satisfactory bank relationship are less likely to be credit constrained than firms with an unsatisfactory bank relationship.

### **2.3.3 SMEs Primary Owners' Characteristics**

#### **2.3.3.1 Gender**

The debate regarding the gender bias remains critically pervasive and evident in the extant literature. One of the major gender bias issues is that female-owned firms may have lower chances of obtaining bank credit than their male counterparts, as found in GCC regions (Rocha et al., 2011; Belwal et al., 2014; Faisal et al., 2017) and European regions (Treichel and Scott, 2006; Muravyev et al., 2009; Wilson et al., 2007; Wilson, 2016). As a result, many female business owners often rely on self-financed or informal sources such as family or friend networks (Coleman, 2000; Treichel and Scott, 2006; Orser et al, 2006; Wilson et al., 2007). This may account for the small size and low growth of investments in female-owned firms in the market.

Some of the females tend to operate a business at home, based on their interests and hobbies, sometimes to generate a secondary income source because of their commitment towards their family responsibilities (Wilson et al., 2007). Thus, the dissimilarities in the structure and demographics of firms are reflected in the variations in financing awarded to firms with male and female founders. Unlike male-owned SMEs, Abor and Biekpe (2006) found that in Ghana female-owned firms tended to be formed as sole-proprietorship businesses. This may indicate that they lack the collateral to secure loan transactions, thus they are less likely to use debt finance. In addition, banks may perceive female-owned SMEs as having a riskier profile for lending than their counterpart male-owned firms. This is because female-owned firms are younger, smaller and less profitable than male-owned firms (Coleman, 2000; Wilson, 2016). To compensate for the greater risk of default, in the UK, the policy of banks is to charge women a higher interest rate on principal loans by around 1%, compared to male-owned firms' cost burden (Fraser, 2005). This was found to be consistent with other studies conducted in different contexts such as in the US (Muravyev et al., 2009; Treichel and Scott, 2006) and Italy (Alesina et al., 2013). However, several other studies have not found any evidence that banks intentionally discriminate against women entrepreneurs (Coleman, 2000; Orser et al., 2006; Watson et al., 2009; Van Hulten, 2012; Eddleston et al., 2014).

Nonetheless, Wilson (2016) contended that although no differences have been shown in UK bank lending to business owners of different gender, the process and standards of lending may conceal potential opportunities for discrimination, since ‘gut feeling’ is utilised for decision making in the absence of clear bank lending guidelines. The higher costs could create a serious barrier for female entrepreneurs’ borrowing, which may discourage them from applying for bank credit, either to avoid the risks that might be associated with high borrowing costs or because they feel less confident about making a successful loan application (Moro et al., 2017). Bellucci et al. (2010) stated that increases in the bank rejection rate of financing for female-led firms may lead to increases in credit discouragement incidents among these firms. The descriptive statistics of UK SMEs from the small business survey of the Federation of Small Businesses (FSB) showed that 24% of female business owners were discouraged, compared with 14% of male business owners (Freel et al., 2012). However, the empirical analysis of the study did not provide evidence for a relationship between gender and the likelihood of being financially discouraged. This finding is supported by another study conducted in the US, which clarified that there is no significant relationship between the factor of female-owned SMEs and the likelihood of discouragement (Altin et al., 2018).

Internal barriers, such as the fear of being in a failing position or a risk aversion attitude, restrict Emirati women’s ability to excel in their businesses and they impede their willingness to participate in business ventures (Itani et al., 2011); more so than for Emirati men (Sokari et al., 2013). This suggests that the attitude of female business founders may restrict their willingness to approach banks for financing for business growth. Because of the lack of clear evidence on whether female SME owners avoid borrowing due to the fear of rejection, the following hypotheses are considered by the present study:

*H8a:* Female-owned non-oil-related SMEs are less likely to apply for bank credit compared to male-owned non-oil-related SMEs.

*H8b:* Female-owned non-oil-related SMEs are more likely to be discouraged from applying for bank credit compared to male-owned non-oil-related SMEs.

*H8c:* Female-owned non-oil-related SMEs are more likely to be constrained for bank credit compared to male-owned non-oil-related SMEs.

### **2.3.3.2 Ethnicity and Citizenship**

A significant focus of prior studies has been whether or not the access to bank finance is affected by the ethnicity of the owner of the SME (e.g. Ram et al., 2003; Fraser, 2009; Ram et al., 2011; Bruder et al., 2011; Bates, 2011; Carter et al, 2015). Empirical evidence presented by Fraser (2009) showed no evidence of discrimination among EMBs in terms of rates of loan rejection and interest rates. This was explained by the risk factors of non-ethnic firms (e.g. missed loan repayments and overdraft excesses). However, another empirical investigation in Germany documented that entrepreneurs who were foreign citizens (i.e. those who were not born in Germany) were significantly more likely to encounter loan denial or to receive a small amount of the finance request, compared to native entrepreneurs (Bruder et al., 2011).

In the Omani context, the situation of SME ownership is different. The domestic SME sector in Oman, just like in its neighbouring GCC countries, encounters negative practices known as the ‘hidden trade phenomenon’, which has an impact on sector growth and the labour market (Al-Lawati, 2018). The Omani government describes this issue as when the firm is registered as an Omani SME, but in fact it is owned and managed by foreigners (i.e. principals), who use the commercial registration in exchange for paying regular fees to the Omani (agent) (Times of Oman, 2018; Al-Nasser 2018). A descriptive report conducted by the Central Bank of Oman (CBO) disclosed that around 60% of SMEs were considered to be Omani-fronted businesses since the owners had a full-time job and other sources of income (Al-Barwani et al., 2014).

Despite existing and flexible foreign direct investment policies, an increasing number of domestic firms are operated as Omani-fronted businesses. This issue has slowed down the contribution of SMEs to GDP and adversely affected their viability. Thus, it becomes of interest to policymakers to measure their existence and to address the policies and regulations governing business operations in Oman. The CBO study affirmed that “this loophole in the current system amounts to rent-seeking behaviour by some nationals and has a number of financial and economic ramifications among which are rising remittances, pressure in the labour market among nationals [...]” (Al-Barwani et al., 2014:11). The government also documented that most of the money (e.g. net incomes/profits) resulting from these domestic firms is being transferred out of the country, which leads to unfair competition among the nation’s SMEs, as well as increasing cases of commercial fraud and

commercial exploitation (Al-Barwani et al., 2014; Al-Lawati, 2018). For instance, the United Nations Conference on Trade and Development (UNCTAD) (2014) reported that the outflows of remittances by foreigners increased from 2.8 to 3.1 billion Omani Rial in 2011 and 2012 respectively. The annual report of the CBO showed that expatriate workers' remittances increased to OMR 4 billion in 2016 (CBO, 2016).

Since the reduction in oil revenues, Omani policy makers have been concerned about the diversity, sustainability and growth of the SME sector, which are necessary to compensate for the diminishing role of the oil sector in the Sultanate's economy. To enhance this vision, the availability of adequate finance is the main element for business growth. However, it has been suggested that Omani-fronted firms face difficulties with raising business capital. Business owners might not be confident enough to seek bank loans because of the higher presence of information asymmetries. Thus, these businesses may tend to rely on internal financing or personal savings, which would not be sufficient for business development and growth, resulting reduction on investment rates. Therefore, the present study posits the following hypotheses:

*H9a*: Omani-fronted businesses in the non-oil-related sector are less likely to apply for bank credit compared to Omani-owned businesses in the same sector.

*H9b*: Omani-fronted businesses in the non-oil-related sector are more likely to be discouraged from applying for bank credit compared to Omani-owned businesses in the same sector.

*H9c*: Omani-fronted SMEs in the non-oil-related sector are more likely to be credit constrained than firms owned by a registered Omani.

### **2.3.3.3 Prior Relevant Business Experience**

The prior literature provides evidence of the existence of a positive relationship between entrepreneurs' experience and firms' performance (Burke et al., 2018; Zarutskie 2010; Al-Harthi, 2017). This is in line with the HCT, which assumes that higher-quality human capital drives improvement and accomplishes the higher performance of relevant tasks (Becker, 1975 as cited in Bruns and Fletcher, 2008). Thus, the attribute of the prior relevant business experience of the entrepreneurs is suggested to be one of the primary signals for high-quality

human capital, and it may influence the availability of bank credit for businesses (Bruns and Fletcher, 2008; Cowling et al, 2012; Sena et al, 2012; Robson et al, 2013). It has been found that entrepreneurs with a longer prior experience are less likely to experience credit rationing (Robson et al., 2013). Furthermore, other studies have identified that there is a negative correlation between the level of owner experience and difficulties in approaching external funding (e.g. Blumberg and Letterie, 2008; del-Palacio et al., 2010).

Acquiring experience over a long period of time is likely to enhance business owners' knowledge and reputation in the market, which in turn will enhance their confidence in their borrowing decision. This is because experienced owners are more able and willing to provide sufficient information for the lender than inexperienced business owners. However, there remains limited understanding about the impact of the primary owner's prior experience on firms' level of demand for bank credit, i.e., whether or not firms refrain from applying for loans because of the fear of bank rejection. Previous research found that discouragement increased among experienced UK SME entrepreneurs (Freel et al., 2012). This may suggest that these experienced business owners are old, which may impact their self-confidence and willingness to seek finance. When owners are close to the age of retirement or have concerns about obtaining loans with a short repayment duration, they might be less willing to borrow from banks. On the other hand, Gama et al. (2017) revealed that experienced SME owner-managers in Eastern Europe and Central Asia are less likely to be discouraged, confirming that this factor is significant for predicting discouragement in developing economies. This is in line with the investigation conducted by Chakravarty and Xiang (2013), which documented the significant effect of experience on discouragement in less-developed economies. Moreover, experienced owners of firms in the US are less likely to be discouraged from borrowing (Han et al., 2009). Therefore, the present study postulates the following hypotheses:

*H10a*: Experienced non-oil-related SME primary owners are more likely to apply for bank credit compared to primary owners with no prior relevant business experience.

*H10b*: Experienced non-oil-related SME primary owners are less likely to be discouraged from applying for bank credit compared to primary owners with no prior relevant business experience.

*H10c*: Experienced non-oil-related SME primary owners are less likely to be credit constrained than primary owners with no prior relevant business experience.

#### **2.3.3.4 Degree of Formal Education**

A high level of education supports economic success (Mason, 2006), business expansion (Bruns and Fletcher, 2008; Hansen and Hamilton, 2011) and the performance of SMEs (Bowen et al., 2009). Thus, much of the extant literature has considered education as a signal of entrepreneurs' credibility and creditworthiness to banks and an indication of whether or not the owners will be able to commit to the loan obligations (Krasinqi, 2010; Eddleston et al., 2016). Parker and Praag (2006) found that a higher education level among Dutch entrepreneurs helped to enhance business performance both directly and indirectly. The study explained that each extra year in education would reduce capital obstacles by 1.18 percentage points.

Highly educated business owners are likely to be able to prepare business plans and disclose sufficient financial information, which will facilitate the bank screening process (Krasinqi, 2010). This factor is therefore one of the major attributes of owners that is expected to impact borrowing decisions within the SME sector. Rossi et al. (2016) found that in Italy, SME owners' decision to seek bank finance varied with different levels of education. For instance, the study revealed that business owners with a high school diploma used bank credit or an overdraft more than those who had formal training. In contrast, by employing data from 'Business Barometer' surveys to analyse UK SMEs' demand for bank loans during a financial crisis, Cowling et al. (2016) found that the relationship between owners' level of education and the likelihood of accessing credit is negative. The authors argued that well-educated business owners are able to predict whether their application will be rejected or not, especially during an economic crisis. This result is consistent with another study conducted among SMEs in Libya (Abdesamed. and Wahab, 2014).

A good level of education plays a role in enhancing knowledge about loan application requirements and the process, thus raising the self-confidence of SME owners and encouraging them to approach banks when they need financial support. This will therefore reduce the incidents of financially discouraged firms. However, little is known about the influence of education level on the probability of being discouraged from borrowing because of the fear of bank rejection. The Small Business Finance Survey by the US foodservice industry reported that education reduces discouragement incidences (Altin et al., 2018). This

supports the results of another study conducted in the US by Cole and Sokolyk (2016). However, Freel et al. (2012) did not find any evidence that education has a negative relationship with discouragement incidents among UK SMEs. Therefore, this research posits the following hypotheses:

*H11a:* Well-educated primary owners of non-oil-related SMEs are more likely to apply for bank credit compared to business owners who have no academic qualifications.

*H12b:* Well-educated primary owners of non-oil-related SMEs are less likely to be discouraged from applying for bank credit than business owners who have no academic qualifications.

### **2.3.4 Industry Sector**

Freel et al. (2012) stated that industry characteristics with regard to assets, capital structure and business competition might create funding differences among firms. Abor and Biekpe (2007) argued that the higher-value tangible assets an SME industry has, the more it is able to enjoy opportunities to raise capital for its investments, since the value of the assets should compensate for the potential risk involved in the loan contract. A recent empirical study affirmed that in Europe, SMEs in the manufacturing sector have greater prospects of gaining bank loans than non-manufacturing firms (Andrieu et al, 2018). Rahman et al. (2017) provided evidence that the manufacturing sector, which has sufficient tangible assets, can commit to a loan contract with lower collateral due to the high information transparency that can be shown by these firms. The authors argued that the availability of tangible assets can enhance banks' efficiency in evaluating loan applications as it is easier for them to liquidate these assets if the contract encounters default. Therefore, lenders ask for less collateral from manufacturing firms.

On the contrary, Krasniqi (2010) observed that the attitudes of Kosovan commercial banks are no different for manufacturing and other business sectors, but they still depend on collateral availability when deciding whether to proceed with the loan application or not. Other prior studies argued that manufacturing firms are more likely to face credit rationing compared to non-manufacturing firms in developing countries (Beck et al., 2006 and in the UK (North et al., 2010), due to their higher need for financing (Westhead and Storey, 1997). However, firms operated in manufacturing industry less likely to exit the market (Watson and Everett, 1999). This may be because manufacturing firms are more likely to have assets

that can be used for securing their business transactions in the market. There is evidence that in India, tangibility is the main determinant of capital structure, indicating that manufacturing firms with tangible assets can access bank loans easily (Kumar and Rao, 2016).

The owners of firms that have high levels of tangible assets could be more confident about seeking finance when required because these businesses are less opaque in the market. SMEs in the service industry are correlated positively with accessing bank finance compared to firms in the manufacturing and other industries (Erdogan, 2019). This contradicts the findings of Dong and Men (2014), who found that in the non-manufacturing sector, young and small firms face severe difficulties with obtaining funds in emerging markets. In addition, Freel et al. (2012) found that knowledge-intensive service sector firms have a greater tendency to experience discouragement from banks as a result of their lack of collateral. This is consistent with Brown et al. (2018a). Cowling et al. (2012) found that during the global financial crisis, UK business services and other sectors were less likely to apply for credit. According to the UK Survey of SMEs Finances (UKSMEF), the highest discouragement incidences appear in real estate and social services, while the lowest are in the manufacturing and agricultural industries (Fraser, 2014), perhaps because the latter are tangible-based activities.

Nonetheless, little is known about the impact of different industry sectors on financing demand in oil-based economies. Therefore, the following hypotheses are considered for the empirical investigation of the current study:

*H12a:* Non-oil-related SMEs operating in the trade and service sectors are less likely to apply for bank credit compared to those in the manufacturing industry.

*H12b:* Non-oil-related SMEs operating in the trade and service sectors are more likely to be discouraged from applying for bank credit compared to those in the manufacturing industry.

*H12c:* Non-oil-related SMEs operating in the trade and service sectors are more likely to be credit constrained by lenders decision compared to those in the manufacturing industry.

## **2.4 SUMMARY OF THE CHAPTER**

The chapter began with a discussion of the theories that are relevant to SMEs' finance concerning the decision of SMEs to seek bank finance. It then proceeded to a discussion of empirical studies that examine the demand-side constraints on SMEs' access to banks for finance. In particular, it offered explanations for firms' self-credit rationing, which is referred to as credit discouragement among viable SMEs. The final part of the chapter outlined the conceptual framework that has been constructed to identify the main factors that may influence business owners' decision about whether or not to apply for a bank loan. Specifically, the constructed framework of the research model has been developed to test the determinants of being discouraged from borrowing, seeking finance and being rejected by the lender.

## **CHAPTER THREE**

### **3. OMAN'S ECONOMY CONTEXT: BANKING AND SME SECTOR**

*"The National Economy of a country is in fact based on small and medium industries [...] these are the fundamentals, the foundations of all national economies [...]"*  
*Sultan Qaboos Bin Said – the Sultan of Oman, 2013*

Since the interest of this study is to examine the non-oil related SME accessibility bank funding in Oman, this chapter intends to provide background regarding the context of Oman's economy in which these businesses operate. Therefore, a general background of the main nine aspects of Oman's economy is discussed. Section 3.2 presents Oman's geographical profile, while section 3.3 discusses Oman's demographics and labour market. Then, the discussion about Oman's economy status expands to section 3.4 to include some substantial aspects of the country's history, economic growth, fiscal status, and economic austerity. It is followed by a brief discussion about the SME sector and its definition in section 3.5. Section 3.6 considers the position of the banking sector in Oman by providing information about its profitability and growth, and banks ownership. The next section 3.7 discusses the main institutional support to enhance the SMEs funding and growth. Section 3.8 provides details on the status of export industries in Oman whereas the final section 3.9 offers clarification on the performance and role of the market in financing investments capital between 2014 and 2017.

#### **3.1 Oman Geography**

The Sultanate of Oman is an Arab country which is located on the eastern side of the Middle East. The Sultanate borders with the United Arab Emirates, the Kingdom of Saudi Arabia, and Yemen. The regions of the country are classified administratively into eleven governorates - Ad Dakhiliyah North, Ad Dhakhiliyah South, Ad Dhahirah, Al Batinah North, Al Batinah South, Al Buraimi, Al Wusta, Al Sharqiyah North, Al Sharqiyah South, Dofar, Musandam, and Muscat which are divided into sixty wilayats.



Figure 3.1: Description of Oman official map shows international and province boundary  
 Source: World Map Website, 2020.

### 3.2 Oman Human Capital in Labour Market

As of 2019, the population of the Sultanate was 4,641,058 people where the percentage of the nationals constituted 58.10% (i.e., 2,698,211) of the total population while the expatriates represented 41.90% of the general public (i.e., 1,942,847) (NCSI, 2019). In terms of market labour force participation, Oman, similarly to its neighbouring Gulf Cooperation Countries (GCC), showed an abnormal balance in the employment of labour in the private sector in the market. In response to that, the first Omanisation program was released in 1988 to nationalize both government and private institutions but the program was still underway in 2015 (Oxford Business Group, 2015).

However, the report National Centre for Statistics and Information (NCSI) (2019) documented that the total workforce in the government and private sectors was 1,933,736 and 2,219,244 in 2014 and 2018, respectively, increasing by 6.9% over the four years. Whilst the Omani labour force in the private sector represented only 11.6%, the foreign manpower dominated the sector at 88.4% in 2014 (Al-Maimani and Johari, 2015) as shown in Figure 3.3 and Table 3.1. In contrast, there were 140,886 job seekers at the end of the same year.

Although the participation of the national labour in the private sector has increased by 2.7% of the total private workforce since the 2014 (i.e. represented 12.7% in 2018), the expatriate workforce still occupied the sector at a significant rate of 87% of the total workforce in the private sector in 2018 as illustrated in Table 3.1.

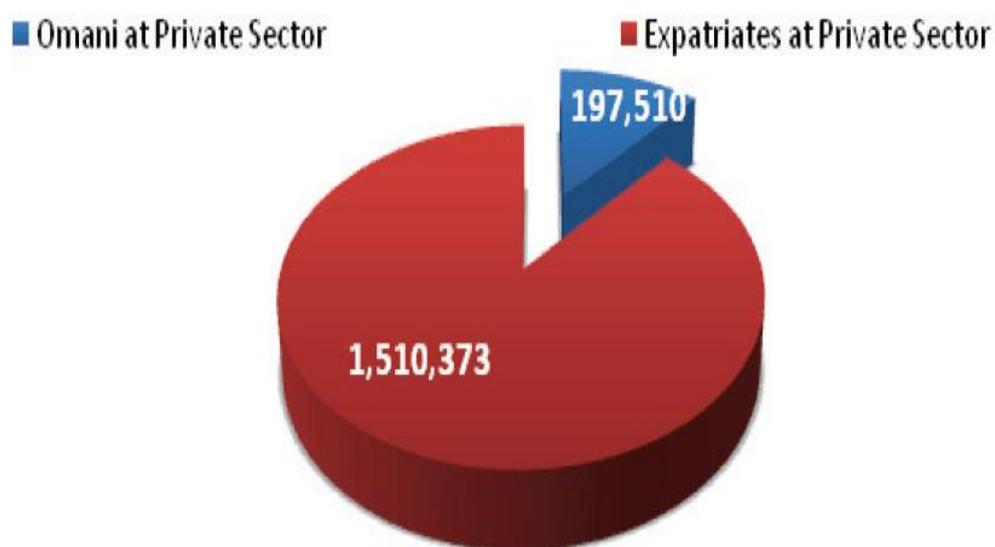


Figure 3.2: Work force Distribution in Private Sector in 2014

Source: Al-Maimani and Johari, 2015

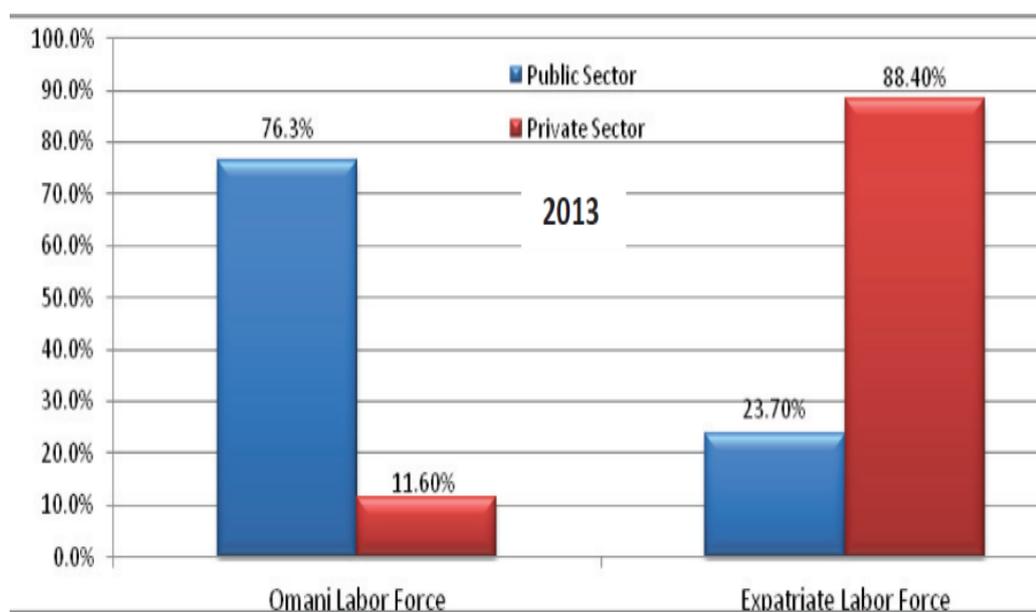


Figure 3.3: Work force Distribution in Government and Private Sector in 2013

Source: Al-Maimani and Johari, 2015

Table 3.1: Distribution of the Labour Market between 2013 and 2018 in Oman

<b>Descriptor</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Total Workers	1,864,125	1,933,736	2,075,125	2,255,409	2,266,440	2,219,244
Omani	362,597	389,732	403,585	429,806	434,368	454,045
Expatriate	1,501,528	1,544,004	1,671,540	1,825,603	1,832,072	1,765,199
Government Sector	211,129	225,833	229,467	233,561	232,063	237,399
Omani	180,737	192,222	193,965	195,937	195,680	201,913
Expatriate	30,392	33,611	35,502	37,624	36,383	35,486
Private Sector	1,652,996	1,707,903	1,845,658	2,021,848	2,034,377	1,981,845
Omani	181,860	197,510	209,620	233,869	238,688	252,132
Expatriate	1,471,136	1,510,393	1,636,038	1,787,979	1,795,689	1,729,713

Source: National Centre for Statistics and Information (NCSI), 2019

For instance, Callen et al, (2014) revealed that between 2000 and 2001, Gulf Cooperation Countries (excluding UAE) generated jobs vacancies of approximately 7 million where the maximum shares of vacancies allocated for the private sector was about 5.4 million. Foreign labour captures opportunities in 85% of private jobs, while nationals fill 70% of public jobs since they abandoned the private sector jobs. As the policymakers explain, one of the reasons behind Omanis workforce seeking government jobs and abandoning private sector vacancies (Hvidt, 2013; Callen et al, 2014) is higher secured income that can be obtained from the government sector. In addition, the private sector faces the problem of lack of capital investment which may discourage job seekers to enter the market (Al-Barwani et al, 2014). However, taking the course of action to address the rate of job seekers in the government sector is very expensive (Callen et al, 2014) and unsustainable. This is because under the modest increase of the state budget revenues the employment costs might be viewed as a considerable burden.

According to the yearly report of the Central Bank of Oman (CBO) (2018), the government has implemented a quasi-freeze strategy on its employment. It has tried to alleviate the imbalance between demand and supply of jobs by providing the necessary required training for the market labour and encouraging Omanis to accept all kinds of job opportunities in the market. In addition, in November 2017, the Omani Council of Ministers offered 25, 000 job

vacancies in both but with more participation expected from the private sector due to limited offers available in government institutions.

Therefore, expanding and developing the private sector would be the most recent appropriate strategy to accommodate the seekers for the jobs in future (Miniaoui and Schiliro, 2016; CBO, 2018b) via creating opportunities to start more businesses in Oman's market (Callen et al, 2014; Al-Bulushi, and Bagum, 2017).

### **3.3 Overview of Oman's Economy Status**

The economy of Oman is heavily dominated by depletable oil resource which can be traded at very expensive prices (World Bank, 1994). According to Deutsch Bank, the petroleum sector makes up 90% of the government revenues and contributes more than 50% of the GDP (Oxford Business Group, 2015). In turn, this has provided the opportunity to promote the Sultanate's socioeconomic development for the past four decades and enhance the state budget revenue to be used for public expenditures. However, non-renewable energy as oil commodity no longer can grant promises for economic sustainability and development. This is because the sector is subject to two major issues that would undermine economic stability. The first problem is the price volatilities of oil commodity that are influenced by external shocks and unstable politics.

The second concern is the 'Dutch Disease.' To clarify, it is associated with a negative consequence that can arise due to the appreciation of the real exchange rate when the economy relies on one primary natural resource (Carneiro, 2007). The consequences include a reduction in non-oil manufacturing activities competitiveness in exports and local performance, an increase in the rate of job seekers, and an increase in imports (Van der Ploeg, 2011; Frnakel, 2010; UNCTAD, 2014). In Oman, between 1970 and 1980, the appreciation of the oil exchange rate caused a reduction in agriculture and fisheries production and an increase in services production due to increases in public expenditures. The depreciation exchange showed an adverse trend by contrast (World Bank, 1994). With respect to manufacturing activities, they did not show any response to the appreciation and depreciation of the real exchange rate. The reaction could be quite slow due to their heavy fixed investment in factory and apparatus that contributed to manufacturing and the high investment costs, once made (ibid).

### **3.3.1 Historical Background**

Historically, Oman's economy was the most diversified and developed compared to the other regions of the Arab Gulf side, with settled agriculture and fisheries, and a long marine coast commercial tradition, wherein the resident foreigners dominated the economy (Allen and Rigsbee II, 2014). It was in the early 1960s when the first oil field was discovered at Yibal.

This was then followed by the discovery of the Natih and Fahud fields in 1962 and 1963, respectively, resulting in selling the first production of around half a million barrels per year for less than US \$2 per barrel in 1967 (Oxford Business Group, 2015). Before the Sultan Qaboos came to the throne, there had been only three schools, 12 hospital beds, 10 km of paved roads, 557 telephone lines, and the population was about 666,000 with an estimated income per capita of less than US \$400 (Al-Yousef 1995: 22-3 cited in Loony, 2013). In 1970, the production of the oil sector and the global market price increased dramatically (Allen and Rigsbee II, 2014). During that period Oman was a critical producer of crude. Thus, the Sultanate entered a new age of prosperity regarding the socioeconomic aspects. However, in 1980s Oman's economy witnessed a drop in the oil commodity price which has led to a decrease in the level of production in line with the reduction in oil production strategy taken by the Organization of Oil Exporting Countries (OPEC), despite Oman not being a member of OPEC (Oxford Business Group, 2015).

### **3.3.2 Economic Growth**

Therefore, in 1976 the Sultan concentrated the government efforts on developing a new strategy and policies that would help to improve the condition of the economy (Hvidt, 2013); hence, promoting the social affair services for the citizens. This was to be achieved through a Five-Year Development Plan for each period rendered, and approved by a Royal Decree. Since then eight plans have been realised with each of them nested within long term strategy (Looney, 2013; Hvidt, 2013). The first strategy was covered between 1970 and 1995 whereas the second one known as Vision 2020 covered the period between 2016 and 2020 (Hvidt, 2013). The current plan called the 9<sup>th</sup> Five-Year Development Plan is the last stage of Vision 2020 for Oman's economy development. It is important to highlight that these nine plans have intensified the focus on diversifying the economy away from the oil to increase its stability and growth; considering oil wealth to be invested in a wise manner for the benefit

of the generations to come. The following are the main objectives of Vision 2020 (Hvidt, 2013; Supreme Council for Planning Website, 2020):

- The Ninth Five-Year Development Plan (2016-2020)
  1. Develop human resources by upgrading Omani nationals' capabilities in alignment with technical development.
  2. Boost the existence of effective and competitive private sector.
  3. Create stable economic climate focused on developing operation efficiency and capability of the private sector.
  4. Enhance the standard of living of nationals by ensuring equality and balance all over the country.
  5. Enhance and pave the way towards sustainable economic diversification.
  6. Preserve the gains achieved during previous decades since the beginning of the Renaissance in 1970.

Going forward, the government of Oman is in the process of preparing for and formulating the next national insight called Oman 2040 Vision. The preparation process of this project relies on various Oman's economic milestones including the National Program for Enhancing Economic Diversification "Tanfeedh" that stems from Vision 2020, National Priorities, Report on Main Directives to Formulate Oman 2040, outcomes of the 2040 committees and task forces, achievements of Vision 2020 and the Ninth Five-Year Development Plan and the lessons learned, existing national and international studies, reports and indicators on relevant subject, United Nation Sustainable Development Objectives 2030, National Strategy for Urban Development, sectoral strategies and outcomes of Oman Vision Office (CBO, 2018b; Al Markazi, 2018; Supreme Council for Planning, 2019). Moreover, the development plan for 2040 emphasizes enhancing the contribution of the non-oil sector to the economic growth and private sector performance such as agriculture, fisheries, tourism and manufacturing (CBO, 2018b).

According to the annual report of the Central Bank of Oman (2015), GDP declined by 14.1% in 2015 compared to a strong average growth of 11.3% during the five-year period between 2010 and 2014. However, hydrocarbon production rose by 4% but the sector contribution to GDP dropped by 38.2% in 2015. The non-hydrocarbon sector showed a modest increase to 2.3% in the same year.

The oil sector is still the fundamental resource for the Sultanate economy although the contraction of the commodity price has affected export, government revenues and the entire economic performance unfavorably (CBO, 2018b). At constant prices, the real GDP contracted by 9% due to a reduction in oil production with an acute contraction in building and construction performance during 2017 (ibid). The declining oil production levels resulted from the voluntary implementation of OPEC and Non-OPEC oil producers' agreement. The share of the oil sector in GDP was 41.7% and 40.9% in 2016 and 2017, respectively. In the non- hydrocarbon industries the output declined by 1.5% during 2017 while the share of the sector rose to 65.8% during this period. In 2019, the annual growth of GDP was OMR 29,349.5 million, down by 4.3% from the previous year (NCSI, 2020).

### **3.3.3 Fiscal Status**

In recent years, government expenditures and subsidies have increased significantly, as reported in the 2014 Statistical Year-Book (NCSI, 2014). Public financial records indicate budget surpluses from 2006 to 2008, and then a deficit from 2009 to 2012, followed by a surplus of around OMR 267.4 million in 2013. In 2011, the total budget expenditures reached OMR 5.1 billion, which then increased to OMR 5.2 billion and OMR 5.6 billion in 2012 and 2013, respectively. Budget spending on education services has grown by around OMR 1.5 billion since 2011. In 2013, the government spent about OMR 580.4 million on social security and welfare. In the same year OMR 542.5 million was spent on securities and public order and OMR 122.7 million on general services. Moreover, social and welfare expenditures increased by 8% in 2014 while housing and health expenditures rose by 10% and 16%, respectively.

The annual statistical report of NCSI (2016) indicated that the decrease of the total government expenditures was 9.7% with an estimated total of OMR 13.7 billion in 2015 as the current expenditures decline was OMR 442 million compared with 2014. The pronounced reduction in the public expenditures could be a result of the reduction in government subsidies implementation, which contributed with only 8.9% compared to previous years before the oil crisis.

Since 2006, the total public revenue has increased by OMR 9.2 billion, of which oil revenue has risen by OMR 8.4 billion and non-oil revenue has risen by OMR 842.2 million. Tax revenue from companies and establishments (Omani companies, mixed and foreign and non-

resident companies) reached OMR 281,952.2, OMR 353,283.3 and OMR 394,464.4 in 2011, 2012 and 2013, respectively. Additionally, since 2011, revenue from property taxes, domestic taxes on goods and services, and custom duties has increased by OMR 11,318.5, OMR 30,857 and OMR 56,115, respectively. However, the total of tax revenues declined by 104% in 2015 compared to the rise of 17.5% in 2014. Thus, the total government revenues decreased by 35.7% representing OMR 9.1 billion in 2015 as the annual statistical results declared (NCSI, 2016).

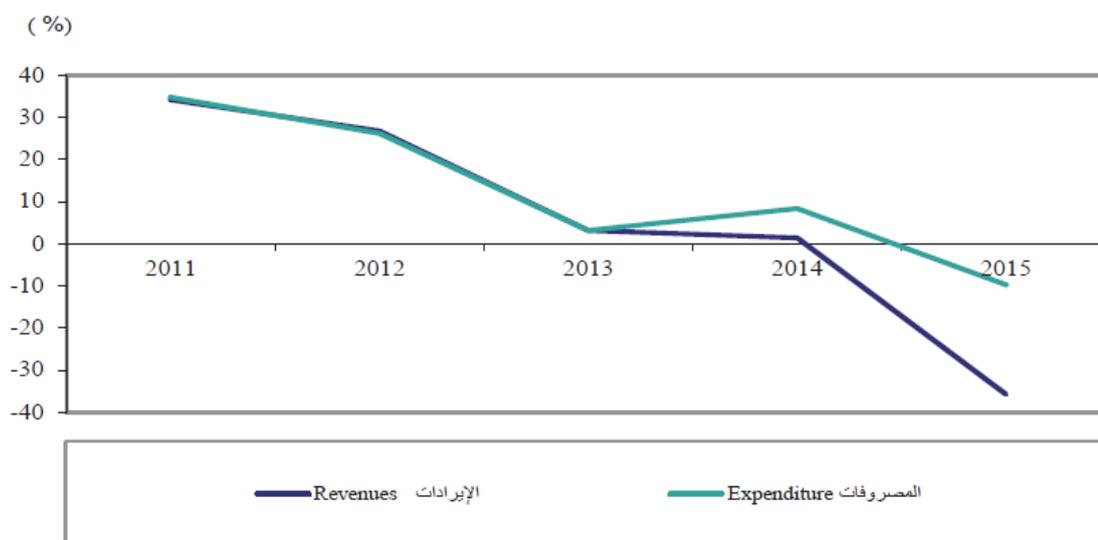


Figure 3.4: Growth Rates of Government Revenues and Expenditures Between 2011 and 2015

Source: National Center for Statistics and Information (NCSI), 2016

As a result of continued decline in the main fiscal revenues (petroleum sector) between 2017 and 2019, the national accounts witnessed a reduction in the state budget revenues and increases in expenditures accounts. The budget deficit of public finances reached to OMR 1058 million at the end of 2019 (CBO, 2020). The fiscal deficit of the Sultanate's budget continued until the second quarter of the year 2020, estimated at OMR 863.1 million. This is attributed to the global COVID 19 pandemic along with the oil economy recession (ibid).

### 3.3.4 Economic Austerity

Since the dramatic drop in the oil global price, the Omani government has been keen to seek for alternatives to alleviate public expenditure and opportunities to enhance economic performance (IMF, 2016) including: (1) the government subsidies have been reduced to approximately 64 percent- including car fuel, water and electricity- through using automatic

pricing mechanisms, (2) the government plans to privatize-some of the government-owned companies in order to boost the development of education, health, and public transportation services, (3) the corporation tax has been increased from 12% to 15% together with eliminating the corporation exemptions for the first taxable income of OMR 30,000, and (4) strengthening the SME sector through facilitating funding for the already existing and new businesses.

Taking into account the current grave situation of oil threat depletion and a dramatic drop in the hydrocarbon international commodity price, economic diversification is an urgency and should be the priority for Oman context to solve the issue of the state budget revenues and create jobs for the unemployed (Hvidt, 2013; Callen et al, 2014). There are many examples of oil-based countries which have successfully diversified their economies away from oil dependency such as the United Arab Emirates, Malaysia, and Norway (Van der Ploeg, 2011; Callen et al, 2014). Thus, Oman can have the opportunities to do so.

### **3.4 SMEs a Crucial Alternative to Oman long-term economic Development**

The SME sector is in its infancy stage where the sector generates only 16% of the GDP (Al-Barwani et al, 2014). However, SMEs in Oman have contributed significantly to the reduction in the rate of job seekers in the region of 70% (Al-Bulushi, and Bagum, 2017) and they represent 90% of the economic activities (Al-Barwani et al, 2014). The low level of the SME sector's contribution to the GDP can be attributed to the intense focus on oil as an economic engine and the lack of resource availability for the SMEs growth by the government. The first entity that has taken the tasks to administer the SME sector in Oman economy was the Directorate General for Development of SMEs of the Ministry of Commerce and Industry (MoCI) by the rule of Royal Decree No.19/2007 (Christina et al, 2014).

Under the threat of oil depletion, His Majesty Sultan Qaboos Bin Said directed to conduct the national level symposium on the SMEs which took place in the city of Bahla on 21-23 January, 2013. The forum summarized several important aspects of the SMEs development such as business entrepreneurship culture, available support and opportunities, legislations, rules and procedures, and financing support. Furthermore, reinforcing financing sources for the SME sector was an essential part of the agenda during the forum. The main focus was to make capital available for the youth to run their business through the government and private

sectors (Al-Maimani, and Johari, 2015). Thus, the symposium concluded to facilitate financial resource for the SMEs under the government bodies by establishing AlRaffd Fund. In addition, the symposium concluded to establish the Al Ajyal College that would contribute in providing training and granting essential qualifications to the SME entrepreneurs. In order to establish a solid basis for the SMEs Public Authority for the Development of Small and Medium Enterprises (Al Riyada) was established in 2013 by Royal Decree No.36/2013. In essence, this authority was formed to achieve the following objectives:

- Assist in developing the sector through helping companies approach their required resources in the private and public sector upon collaboration between those.
- Encourage Omani youth and graduates to establish their own businesses in the market in order to reduce the rate of unemployment.
- Enhance the competition in the market that would add value to the national economy.

### 3.4.1 SME Definition

Understanding the description of the SMEs is the essential point to distinguish these enterprises and determine their needs, opportunities, and challenges in the market to pave the way toward enhancing their diversification, growth, and sustainability. Until 2013 the definition of SMEs was not clear and did not have a robust criterion. This could have been the reason behind absence of the government and private sector support for these enterprises in the Sultanate. The Ministry of Commerce and Industry (MoCI) has classified the firms based to the criteria of employee size (Oman Daily Observer, June 20, 2012, cited in Al-Barwani et al, 2014) wherein the definition of the registered firms included micro-enterprises if the firms had up to 10 employees, small-sized enterprises up to 50 employees and medium-sized enterprises up to 150 employees (Al-Maimani, and Johari, 2015). Today Al Riyada together with the Central Bank of Oman classify the SMEs depending not only on the employee numbers but also the sales turnover as Table 3.2 illustrates.

Table 3.2: Definition of SME sector based on firm employee size and sales magnitude

<b>Enterprise Size</b>	<b>Micro</b>	<b>Small</b>	<b>Medium</b>
<b>Number of employees</b>	1-5 workers	6-25 workers	26-99 workers
<b>Sales size</b>	> OMR 100,000	OMR 100,000-500,000	OMR 500,000-3000,000

Source: CBO Annual Report, 2015

### **3.4.2 SME Ownership Issue: Omani-Fronted Firms**

One of the important issues that needs to be addressed by policymakers and researchers is the issue of the enterprise ownership. It is a practice that a business is owned and run by the fully non-Omani investor but in reality it is declared as Omani ownership (Times of Oman, 2018; Al-Nasseri, 2018) and registered under a domestic SME instead of Foreign Direct Investment (FDI). This sort of misleading practice is expected to affect the contribution of SMEs to the GDP where the Central Bank of Oman has recorded large amounts of money being transferred outside the country. “This loophole in the current system amounts to rent-seeking behaviour by some nationals and has a number of financial and economic ramifications among which are rising remittances, pressure in the labour market among nationals, and incentives that are meant to assist nationals in their efforts to start or grow businesses being channelled to expatriates instead.” (Al-Barwani et al, 2014:11). Furthermore, policymakers argue that this issue of a hidden trade can hinder the objective of the SMEs policy of promoting social and entrepreneurship development via enhancing new businesses entrance or expanding the established investments in the market. Thus, the investors need to be fully committed to starting new businesses and developing them in order to strengthen the SME sector toward the country’s economic growth and sustainability (Al-Bawani et al, 2014).

In response to His Majesty’s Sultan Qaboos Bin Said commands, one significant outcome of encouraging youth to operate their own businesses is that the government has allocated 10% of its tender and purchase for the SMEs (Oxford Business Group, 2015). Through the process of government reforms and a transition to diversity many new businesses, start-ups have been on the increase since 2013. The number of commercial SMEs registered continued to increase and reached more than 30,000 firms in 2017 (Riyada report, 2013). However, the access to required finance was the major challenge reported by most of the SME owners, whereas only 13% reported that they received financial help from either a bank or a non-bank finance source (Al-Barwani et al, 2014; Oxford Business Group, 2016). Thus, the government has decided to collaborate with the financial sector to facilitate the needs of financing investments for firms through the increased allocation of finance, which will be explained in the next section.

### **3.5 Banking a Key Pillar to Scale-up SMEs Growth**

The banking sector is considered to be the most important factor in promoting and maintaining economy growth and sustainability through rendering the needed financing for potential investment. The Central Bank of Oman (CBO) is the solid foundation of the banking system. The CBO was founded by the Banking Law 1974, further amended by Royal Decree No.11/2000. It acts as a banking system regulator and monetary authority in the country (CBO, 2000; Faiyaz, 2011), which has helped to pave the way toward improving the financial system and controlling the market against threats or industry shocks. Mainly, the CBO is responsible for promoting and maintaining financial stability and monetary stability and strengthening the banking system progress in the Sultanate.

According to the CBO (2000) there are further a set of specific functions that are legislated by the Banking Law 1974 and its subsequent amendments for the CBO. The bank supplies the government with needed funds for any issue of fiscal deficit, accepts its deposits, manages debt and reserves of foreign exchange. Furthermore, the CBO works as a banker to banks through lending them and involving in their investment activities such as purchasing and selling financial instruments. The CBO also accepts deposits from banks locally and internationally as well as the deposit that comes from foreign central banks and monetary agencies. It works in providing license, regulation and supervision over the banking sector, financial and leasing companies, and money exchange companies. In addition, it formulates and manages national currency policy and reserves of foreign exchange in order to meet economic goals such as growth, employment and price stability.

The gradual expansion and development of the banking sector has led to build a strong and resilient banking system over the years. During 2007 and 2016 the banking sector represented 94% of the Omani financial system (Kasturi, 2018). As shown in Table 3.3, the number of banks has increased gradually to about 26 banks to meet the demand of the market, associated with 564 branches have emerged across the country (CBO, 2020). There are seven local banks, nine foreign banks, eight Islamic banks, and two specialized banks (NCSI, 2016) while there are six finance and leasing companies (CBO, 2018a).

The banking sector still dominated and covered the large proportion of the financial sector, while other financial institutions remained in their initial stage (CBO, 2018a) as illustrated in Figure 3.5. The size of the domestic banks asset in the financial market was estimated at

OMR 29.7 billion, while in foreign banks at only OMR 18 billion during 2017. Furthermore, the foreign assets and bullion of the banking sector was OMR 6630.4 million in the mid-year of 2020, higher than the year of 2019 which was around OMR 6406.6 million.

Table 3.3: The Banks Operated and Certified in Oman at the end of 2019

	<b>Commercial Banks</b>	<b>Authorized Branches</b>	<b>Year of Establishment</b>
<b>A</b>	<b>Domestic Banks</b>		
1	National Bank of Oman	61	1973
2	Oman Arab Bank	58	1973
3	HSBC Bank Oman	47	1975
4	Bank Muscat	145	1981
5	Bank Dhofar	61	1990
6	Bank Sohar	31	2007
7	Al Ahli Bank	16	1997
<b>B</b>	<b>Foreign Banks</b>		
8	Standard Chartered Bank	1	1968
9	Habib Bank Ltd	7	1972
10	Bank Melli Iran	1	1974
11	First Abu Dhabi Bank	7	1976
12	Bank Saderat Iran	1	1976
13	Bank of Baroda	3	1976
14	State Bank of India	1	2004
15	Bank of Beirut	5	2006
16	Qatar National Bank	6	2007
<b>C</b>	<b>Specialized Banks</b>		
17	Oman Development Bank	20	1977
18	Oman Housing Bank	9	1977
<b>D</b>	<b>Islamic Banks</b>		
19	Bank Nizwa	14	2012
20	Al Izz Islamic Bank	10	2013
21	BM- Meethaq	20	2013
22	NBO-Muzn	6	2013
23	BD-Misara	10	2013
24	OAB- Al yusr	7	2013
25	AHB-Al hilal	9	2013
26	BS-Sohar Islamic	8	2013
	<b>Total Banks</b>	<b>564</b>	

Source: CBO Quarterly Bulletins, June 2020: 38

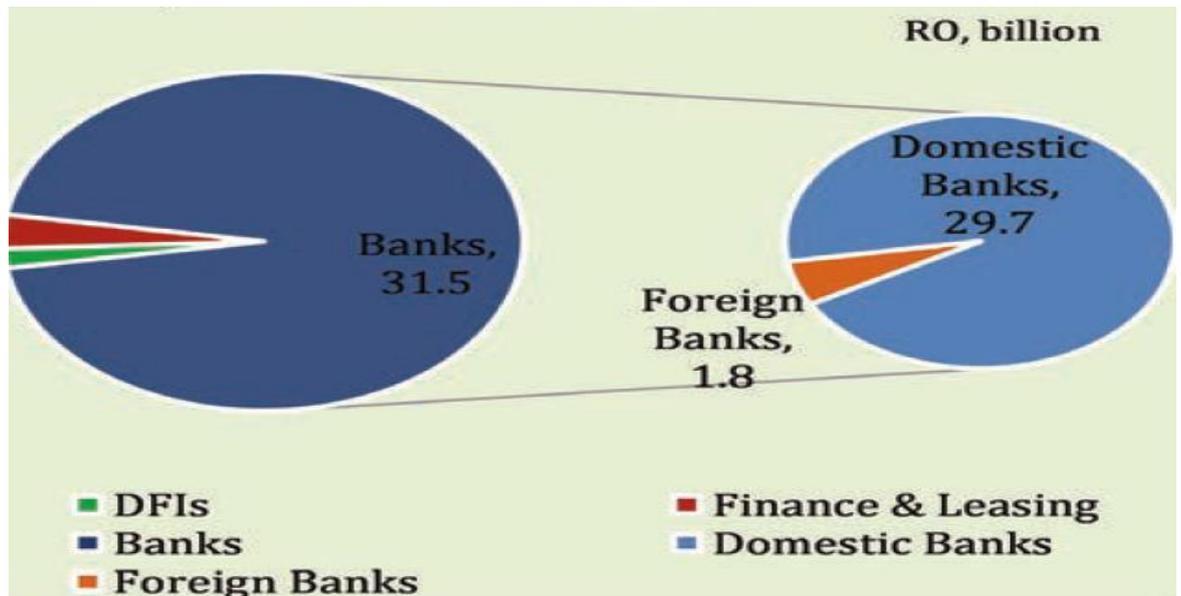


Figure 3.5: Shows Type of Banks Ownership Domination Over the Financial Sector  
Source: CBO, 2018a

The National Centre for Statistics and Information (NCSI) (2014) reveals that, in 2013, domestic liquidity (M2) reached OMR 11.8 billion. Total commercial bank loans amounted to OMR 15.2 billion in 2013, while loans made by the Oman Development Bank amounted to OMR 51.3 billion, as can be seen in Figure 3.6. The total lending to the private and government sectors amounted to OMR 13.2 billion and OMR 1.8 billion, respectively.

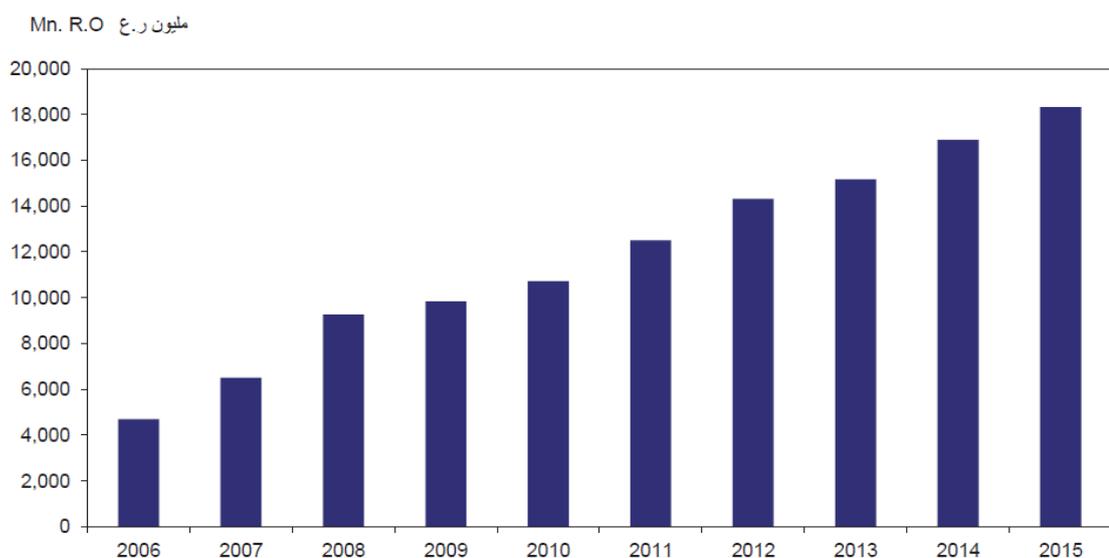


Figure 3.6: Total of Bank Lending from 2006 till end of 2015  
Source: National Center for Statistics and Information, 2016

Despite the challenges Oman's economy has been encountering in the current situation of the oil price reduction, the banking sector remains strong and supportive for the vision of economic diversification and the credit needs of a growing young population (CBO, 2015). The outcomes of the banking sector in 2015 show that the overall capital adequacy ratio remained comfortable at 16.1% higher than the minimum regulatory requirement.

The ratio of delinquency and Non-performing Loans (NPL) remained at 2% at the end of 2015. The annual report of CBO (2015) pointed out that despite the slowdown in the economic performance, the commercial banks preserved a healthy scale of profit of about OMR 393.4 million in 2015 versus OMR 362.9 million in 2014. As illustrated in Figure 3.7, the increase in the total domestic liquidity (M2) in the Sultanate was of 10% (i.e. about OMR 15.1 billion) in the same year compared to 2014 (NCSI, 2016). The narrow money supply (M1) in 2015 raised by 11.6%, that is around OMR 5.4 billion.

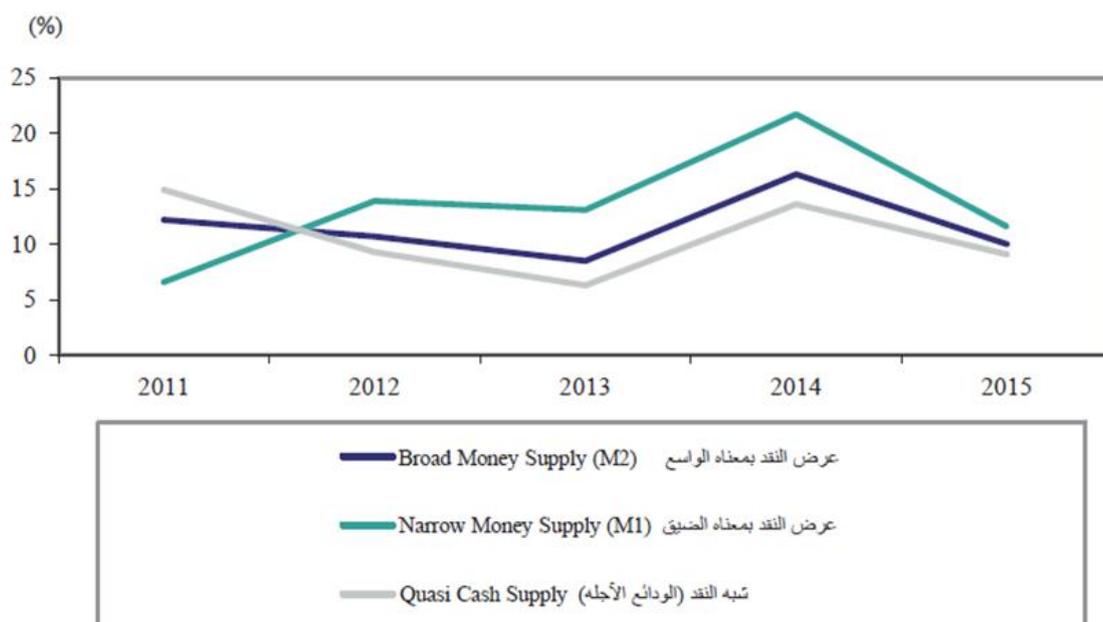


Figure 3.7: Illustrates Change Rates for Narrow and Broad Money Supply and Quasi Cash Supply (M1 and M2) between 2011 and 2015 in the Sultanate

Source: National Center for Statistics and Information, 2016

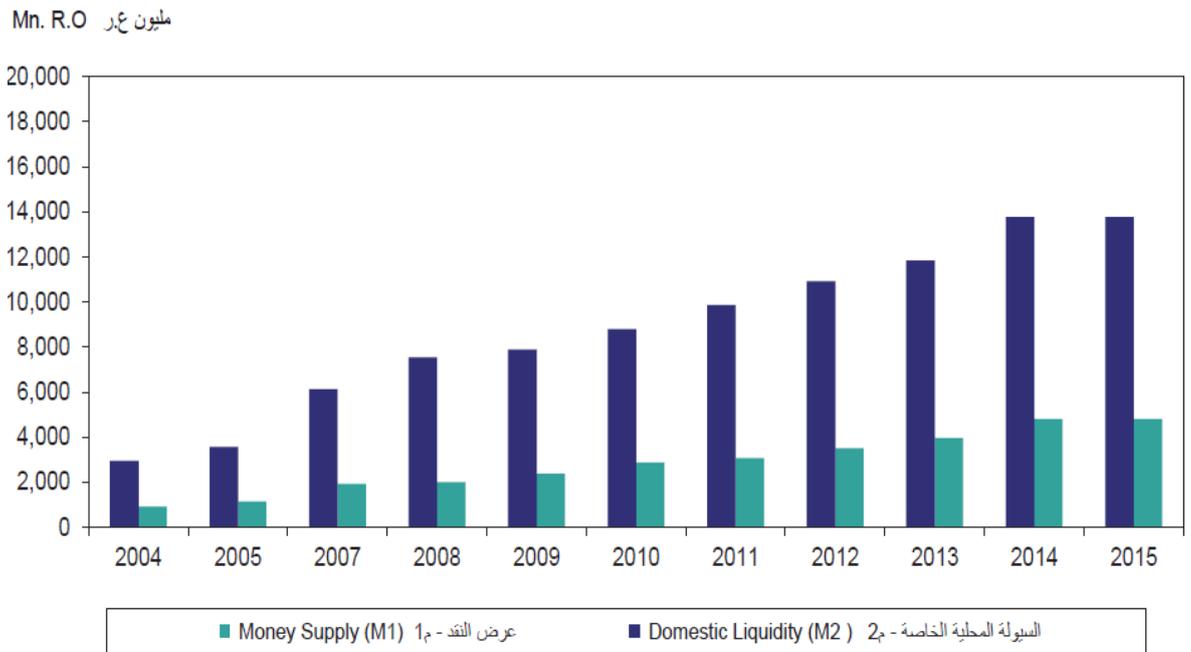


Figure 3.8: Illustrate the Quantity of Money Supply and Liquidity of Banking Sector in the Sultanate (2004-2015)

Source: National Center for Statistics and Information, 2016

In June 2019, the total of the NPL increased to 4% but was lower at 3.4% in December 2019. In the second quarter of the year 2020, the money supply (M1) was OMR 5574.5 million increased by 6%, whereas the money supply (M2) increased by 9% to reach OMR 18838.2 million (CBO, 2020). The growth rate of the banking total credit was 1.5% slightly lower than first quarter of the same year (ibid). This may attribute to the reduction of oil revenues deposits in the banking sector and the adverse impact of Covid-19 in economic performance.

Moreover, in Oman the banking sector heavily concentrated on supplying personal loans which represents 41% of the total loan profile in 2018 as shown in Figure 3.9 (CBO, 2018a), while it represented 45.4% of the total bank loans at end of December 2015 (CBO, 2015). The proportion of the Non-Performing Loans (NPLs) of a personal loan (i.e. borrower defaults in making loan payments) decreased by 1.87% in 2018. Kasturi (2018) found that the majority of bank loans are supplied in the form of personal loans, which include loans for small private businesses in Oman. In other words, some of the private firms use personal loans to finance their business ventures. The high quantum of the banks' concentration on increasing their share of the personal loan segment than other various segments of the loan portfolio is because this type of credit performs higher profits with low risks (Al-Barwani et al., 2014). Nevertheless, this intensive reliance to channel the majority of the lending share

to personal loans, “having potential performance volatile, could be a source of concern as it might spell a situation of debt overhang and likely onset of default during economic downturns” (CBO, 2018a:37). The household or personal loan may deteriorate rapidly in the credit market, in particular during the adverse condition the economy such as interest rate hike, reduction in growth rates, increases unemployment rates or inflation (ibid). Despite that manufacturing is part of economy diversification for the sultanate, the proportion of lending share for this sector is very low i.e. about 6.8% compared to the total of loan portfolio – as shown in Figure 3.9. This emphasizes the necessity of the policymakers to take the action of encouraging banking involvement within non-oil private sectors.

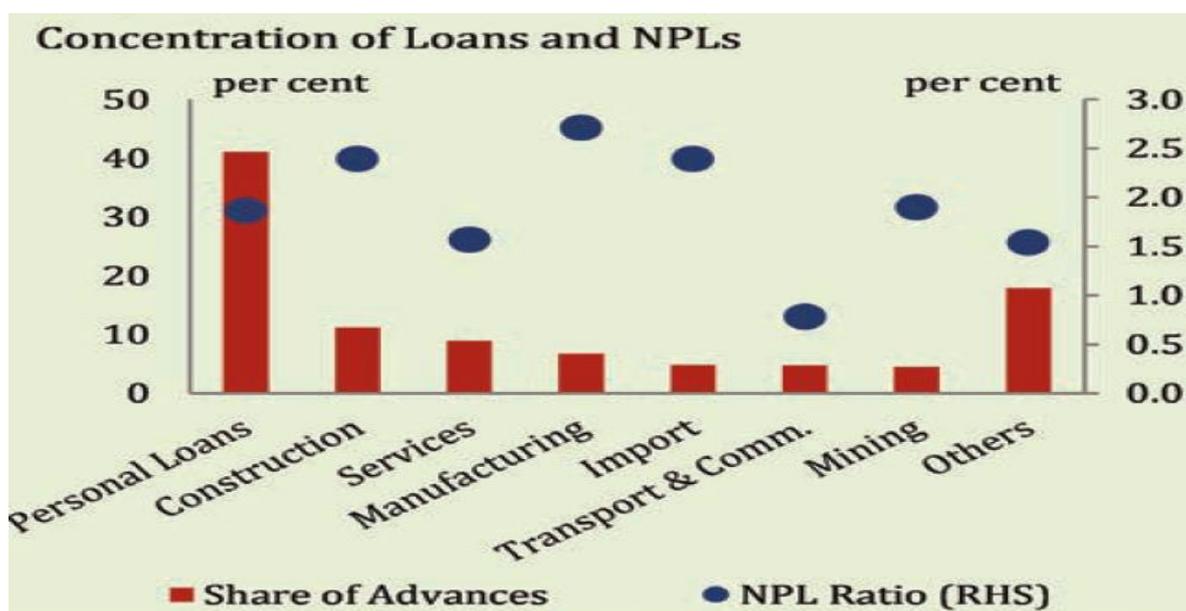


Figure 3.9: Illustrates Banking Sector Concentration of Loans and Non-Performing Loans Ratio

Source: Central Bank of Oman, 2018a

To appreciate the significance of SMEs in contributing to the country’s economic diversification, the Central Bank of Oman increased the share of banking loan to 5% of their total credit portfolio (CBO, 2014). The CBO mandated the banks to start implementing its decision before the end of December 2014 and encouraged them to strive to increase this minimum share as well as to enhance their involvement with the SME sector. According to Al-Maimani, and Johari (2015) a set of recommendations was outlined by the Central Bank of Oman to facilitate the SMEs growth and contribution to the economy:

1. Banks should exert more effort in making credit available for SMEs.

2. Banks should dedicate a specialized department for SMEs headed by senior management staff to render and satisfy SMEs needs.
3. Banks should provide relevant training to make their staff able to exchange insights with the SME sector and help meet the requirements.
4. Banks should make the process of approving SME loan proposals well defined and completed in a timely manner.
5. Banks should facilitate an efficient loan application process for SMEs.
6. Banks should collaborate with SMEs in project formulation, business administration, technical support, sourcing of raw material, and marketing process.

### **3.6 Institutional Support for SME Sector Funding**

In order to fulfil the insight of His Majesty Sultan Qaboos Bin Said, the governmental and private sectors have cooperated to promote and support diversity and growth of the SME sector through initiating a series of programs. These are discussed below.

#### **3.6.1 Public Establishment for Industrial Estate (PEIE)**

The Public Establishment for Industrial Estate, known today as Madayn, was founded in 1983. The main provision of the PEIE is to attract investments and provide support regionally and internationally, boost investment technologies, contribute in human resource development, encourage exports and stimulate private sector for economic and social development.

In 2013, the National Business Centre emanated from the PEIE in order to encourage SMEs growth and development (Ravikumar and Viswanathan, 2018). The center provides various types of support for the entrepreneurs such as financial services, legal services, business consultations, training and mentoring services, and grants support in business administration (Ali, 2013 cited in Ravikumar and Viswanathan, 2018).

#### **3.6.2 Al Raffd Fund**

*“We decided to gather all these resources under one fund called ‘Al Raffd Fund’ entrusted with a specific task in this case, Al Raffd shall be for these young men and women youth to*

*help them develop their own small and medium sized projects.*” His Majesty Sultan Qaboos Bin Said (Oxford Business Group, 2015).

The Al Raffd Fund was established under Royal Decree No.6/2013 in order to encourage graduates to run their business as a mean to reduce the job seeker rate (Mohammed et al, 2016). The government and the Oman Development Bank administer the fund to support rural women, professionals, home businesses and social security beneficiaries. The fund also offers various financial programs to support the SMEs as following (Al-Maimani, and Johari, 2015; Mohammed et al, 2016):

- Mawred (Resources) aims to provide loans of US \$26,000 for up to 7 years for individuals who are physically disabled or those under government program of social security.
- Tasees (Establishment) provides loans of up to US \$52,000 for maximum 12 years for unemployed people.
- Riyada (Entrepreneur) aims to offer loans at different schemes; US \$260,000 through 3 loan categories: 2.6-52 k; 53k- 130k; 130k- 182k; 182k- 260k payment period up to 15 years; targeting female and male entrepreneurs and craftsmen.
- Tazeez (Enforcement) aims to grant loans in US \$ through three loan categories 2.6- 52 k; 53k- 130k; 130k- 182k with a payment period up to 12 years; as additional support for the Fund beneficiaries who are intending to expand their projects.

### **3.6.3 Oman Development Bank (ODB)**

Oman Development Bank was established in 1997 and since then has been managed by the government to support all industries in the private sector in terms of financing. The bank offers loans up to 50% of the total project costs with the interest rate charges at about 3% and principle loans reaching up to US \$2.6 million. For the SMEs, the bank offers to provide term loans with a free fixed interest rate for the enterprises' owners who are fully devoted to their ventures (A-IMaimani, and Johari, 2015). The loan application with a longer repayment scheme of 10 years can be approved provided there is adequate collateral. (Al-Maimani, and Johari, 2015; Ravikumar and Viswanathan, 2018).

### **3.6.4 SANAD Program**

It is a funding opportunity released by the Ministry of Manpower for those who are searching for a job through an entrepreneurship program of SMEs development (Al-Maimani, and

Johari, 2015). This program provides loans of approximately US \$13,000 (i.e. OMR 5000) with an interest rate of 2% and seven years for the payment duration (Mohammed et al, 2016). The grant covers the cost of the tools and equipment or facilitates the purchase of land that is required for the project (Al-Maimani, and Johari, 2015) where the funding is allocated through the ODB administration (Mohammed et al, 2016). Through this program the government has released another program called Enjaz Oman for encouraging IT projects (Al-Maimani, and Johari, 2015).

### **3.6.5 Zubair Small Enterprises Centre (SEC)**

The initiative of the centre was released as part of the strategic vision of the Zubair Corporations Social Responsibility in 2013. Its purpose is to enhance the SMEs contribution to Oman's national economy (Al-Maimani, and Johari, 2015; Ravikumar and Viswanathan, 2018). The SEC provides a wide range of services for the Omani enterprises' development such as advisory services, capacity building, and facilitating network and communication with other institutions and reputable business corporations in the market. Furthermore, the Zubair centre launches a yearly program aiming to select ten projects of the applicants who would get opportunities of receiving financial grant of about OMR 10,000 including a package of the centre services that would help the entrepreneur to develop their business and survive in the market.

### **3.6.6 Domestic and Foreign Commercial Banks Programs**

Banks in Oman have played a significant role through their competition in providing different types of initiatives to facilitate the needs of the SMEs. Bank Muscat released a program called Al-Wathibha which provides support in the form of financing equipment, offering a letter of guarantee as well as training and business advisory services (Al-Maimani, and Johari, 2015). In addition, the bank offers support of lending money and providing services according to the rules of Al-Sharyia (Islamic based support via Meethaq) to meet the desire of other segments of the entrepreneurs in the market. The HSBC banks in Oman support Omani SMEs through allocating US \$52 million in the International Growth Fund program. The program targets firms that generate US \$2.6 million and above of the annual turnover. The Islamic banking products and services such as Alizz Islamic bank (SAOG), which was established in November 2012 by Royal Decree No.69/2012, is expected to foster the banking competition and involvement within SMEs market growth.

### **3.6.7 Loan Guarantee Scheme**

The Ministry of Commerce and Industry, ODB, Bank Muscat and the Oman Arab Bank have released a loan guarantee program as a response to the perception of credit rationing among SMEs (Riyada, 2013). The program facilitates the financial support essential to a project, offering a maximum loan of OMR 250,000. The government guarantees 50% of the bank loan after the banks evaluate the project and approve the application (ibid). The main terms for the loan guarantee application are as follows:

1. The project should be owned and managed by Omanis on a full-time basis.
2. If the venture is a company, the share of the full-time administrator ownership should not be less than 51%.
3. The borrowers should contribute to the project a minimum of 20% in the form of cash or new in-kind assets that are in the borrowers' possession, including documents proving that.
4. The project should be based within Oman's territory.

Such funding support is adopted in many economies such as in the US and UK (Kon and Storey, 2003; Cowling, 2010; Freel et al., 2012). Through the facility of the LGS the government encourages lenders to finance firms that are unable to meet banks requirements such as a high interest rate or a lack of or insufficient collateral security. The LGS facilitates loans via sharing certain proportion of loan contracts. Thus, the scheme attempts to reduce the risks involved in the credit given to the lenders by shifting the default risk to the government. Therefore, the government needs to ascertain that this scheme is well-managed and properly applied to avoid default risks that may affect its budget.

### **3.7 Export and Foreign Trade**

The main export trade that Oman's economy relies heavily on is the hydrocarbon production. In 2015, the Omani export and import witnessed a drop by 34.5% and 41.1%, respectively (CBO, 2015). The contribution of oil and gas to the total export was 58.4% in 2015, which was a reduction of 41.5% compared to 2014. Non-oil export industries activities declined by approximately 27.2% in 2015, despite their increase by 8.4% in 2014. Chemicals and allied industries constituted 23.3% of the total non-hydrocarbon exports of Oman origin in 2015. It was followed by base metals and articles thereof at almost 22%, mineral products at roughly 19%, and plastic, rubber and articles made of these at around 9%. The export of live

animals and animal products in 2015 constituted 13% of all the non-oil exports of Omani origin in 2015. Textiles and their products contributed the least (i.e. at not even 0.3%) to the overall non-oil exports mentioned in Table 3.4.

Table 3.4 Shows Value of Non-Oil Exports of Omani Origin from 2011 to 2015

Classification	2011	2012	2013	2014	2015	% Change 2015/14
Live animals and animal products	173.4	175.6	176.0	210.0	211.5	0.7
Vegetable products	35.9	43.2	98.2	59.2	58.5	-1.2
Animal or vegetable fats & oil	76.2	52.3	70.8	81.2	82.2	1.2
Foodstuffs, beverages, tobacco & related products	80.1	98.8	96.5	115.0	120.1	4.4
Mineral products	422.1	1,001.8	1,277.8	1,256.4	572.8	-54.4
Products of chemicals & allied industries	1,181.4	1,076.3	800.5	945.9	700.2	-26.0
Plastic, rubber, & articles thereof	300.8	252.4	288.8	356.3	277.7	-22.1
Textiles & articles thereof	5.9	8.0	7.9	9.9	8.1	-18.2
Base metals & articles thereof	542.0	671.2	724.6	765.8	650.5	-15.1
Others	215.4	214.5	265.8	325.8	322.3	-1.1
<b>Total</b>	<b>3,033.2</b>	<b>3,594.1</b>	<b>3,806.9</b>	<b>4,125.5</b>	<b>3,003.9</b>	<b>-27.2</b>

Source: Directorate General of Customs and National Center for Statistics and Information, cited in CBO, 2015

During 2018, the export industries (oil and natural gas, non-oil industries) witnessed a rapid increase. The hydrocarbon production value rose by 41.5% because of a steep upturn in oil prices. It eventually contributed with 75.6% to the economy growth; yet the production declined by 1.7% as agreed with OPEC. The natural gas contributed with 16.2% to the GDP as the export grew to about 47.2% (CBO, 2018b). In terms of the non-oil export, the sectors showed a satisfactory year in its contribution to the economic growth which exemplifies the policy efforts in attempting to promote the strategy of economic diversification since the oil price crisis. The economy indicator of the year 2018 shows that this sector persists to grow at a robust pace; documenting increase by 17.3% with the contribution of 16.2% to the growth. The Sultanate of Oman re-exports 51.1% of the non-oil commodity to Arab countries.

The main five importers of Omani non-oil exports are the UAE, India, China, Saudi Arabia, and Qatar which received more than half of this industry productions during 2018 (CBO,

2018b). In the last decade these countries have been the major trading partner for Oman export performance. Table 3.5 depicts the export shares of each country importing Oman non-oil productions between 2015 and 2018.

Table 3.5: Destination of Non-oil International Trades of Oman Origin

Country	2015		2016		2017		2018 Prov.	
	Non-Oil Exports	% Share						
UAE	626.2	20.8	604.6	25.2	711.1	22.4	687.4	18.4
India	274.1	9.1	251.7	10.5	310.7	9.8	381.2	10.2
China	215.6	7.2	197.5	8.2	244.0	7.7	269.3	7.2
Saudi Arabia	375.0	12.5	253.5	10.6	487.2	15.3	611.7	16.4
S.Korea	41.0	1.4	42.7	1.8	44.1	1.4	61.7	1.7
Qatar	94.4	3.1	80.8	3.4	210.3	6.6	348.8	9.4
U.S.A	180.0	6.0	105.1	4.4	101.6	3.2	219.1	5.9
Iraq	47.9	1.6	34.5	1.4	32.1	1.0	34.2	0.9
Pakistan	75.4	2.5	40.2	1.7	41.6	1.3	36.5	1.0
Indonesia	31.8	1.1	15.0	0.6	61.9	1.9	49.4	1.3
Netherlands	51.9	1.7	18.8	0.8	25.8	0.8	77.3	2.1
Somalia	51.6	1.7	38.7	1.6	60.2	1.9	42.9	1.2
Malaysia	98.5	3.3	46.9	2.0	76.6	2.4	76.5	2.1
Kuwait	62.1	2.1	62.7	2.6	118.1	3.7	115.8	3.1
Taiwan	43.3	1.4	31.5	1.3	45.5	1.4	30.1	0.8
Others	735.1	24.5	574.5	24.0	605.6	19.1	684.8	18.4
<b>Total</b>	<b>3,003.9</b>	<b>100.0</b>	<b>2,398.7</b>	<b>100.0</b>	<b>3,176.4</b>	<b>100.0</b>	<b>3,727.0</b>	<b>100.0</b>

Source: CBO, 2018b:94

### 3.8 Capital Market

The capital market can provide an alternative source of financial support where the direct capital exchange interface between the supplier and the seekers can enhance the availability of debt and equity at lower rates (CBO, 2018b). However, the Omani capital market is not well-developed and still in its initial stage (Al-Hadi et al., 2017; CBO, 2018a, CBO, 2018b). Therefore, the banking sector remains the only available source of financing investments that play a bigger role in economic development. Muscat Securities Market (MSM) is an entity that has been organized and regulated by the Capital Market Authority (CMA) since the introduction of the amendments to Article (3) by Royal Decree No.80/98 which abolished Royal Decree No.53/88 (Muscat Securities Market, 2020). The MSM's main focus is to perform the securities trading in Oman.

The severe reduction in economic activities-between 2015 and 2016 persisted to impact the equity market in the Sultanate in 2017 in spite of the rebounding of the economy (CBO, 2018a). As National Centre for Statistics and Information (2016) documented, the MSM 30

index witnessed a drop by 14.8% and closed at 5406.2 points in 2015 while in 2014 it closed at 6343.2 points as presented in Figure 3.10. Furthermore, the total of stock and bonds trading value decrease by 38.7% which reached OMR 1.4 billion in 2015 compared to OMR 2.3 billion at the end of the previous year.

The MSM 30 index indicated a yearly decline of 11.8% in 2017 as a result of oil price that reached below break-even, lack of liquidity condition due to the issuance of government bonds and bills, government funding concerns and political strains in the region (CBO, 2018a). However, the increase in the number of listed firms has improved the growth of MSM market capitalization, the total trading turnover and a daily trading turnover by 3.8%, 3.5%, and 3.1%, respectively in 2017 – Figure 3.10 (ibid). This implies an increase in the market liquidity.

Last but not least, the CMA has issued the Real Estate Investment Funds Regulation as a contribution to the National Economic Diversification Programme ‘Tanfeedh.’ (CBO, 2018a). The objective of this regulation is to create alternative methods of funding for large segment and to attract more foreign funds by stimulating the real estate sector. The sector will be available for the public as the capital will be traded on the MSM.

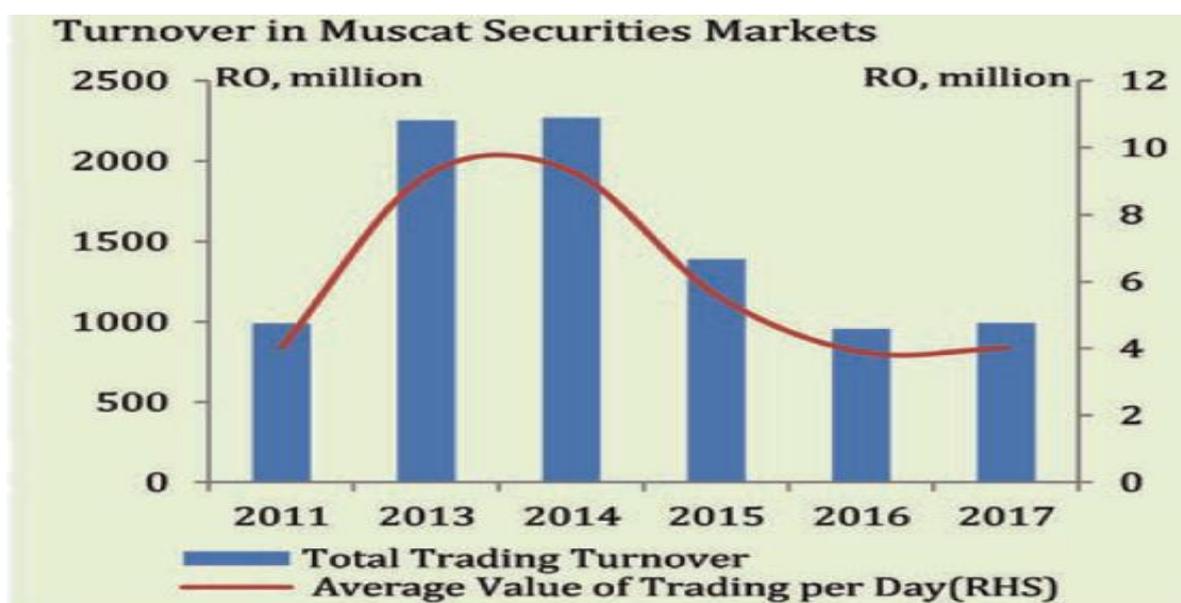


Figure 3.10: Performance of Muscat Securities Market Trade Between 2011 and 2017

Source: CBO, 2018a

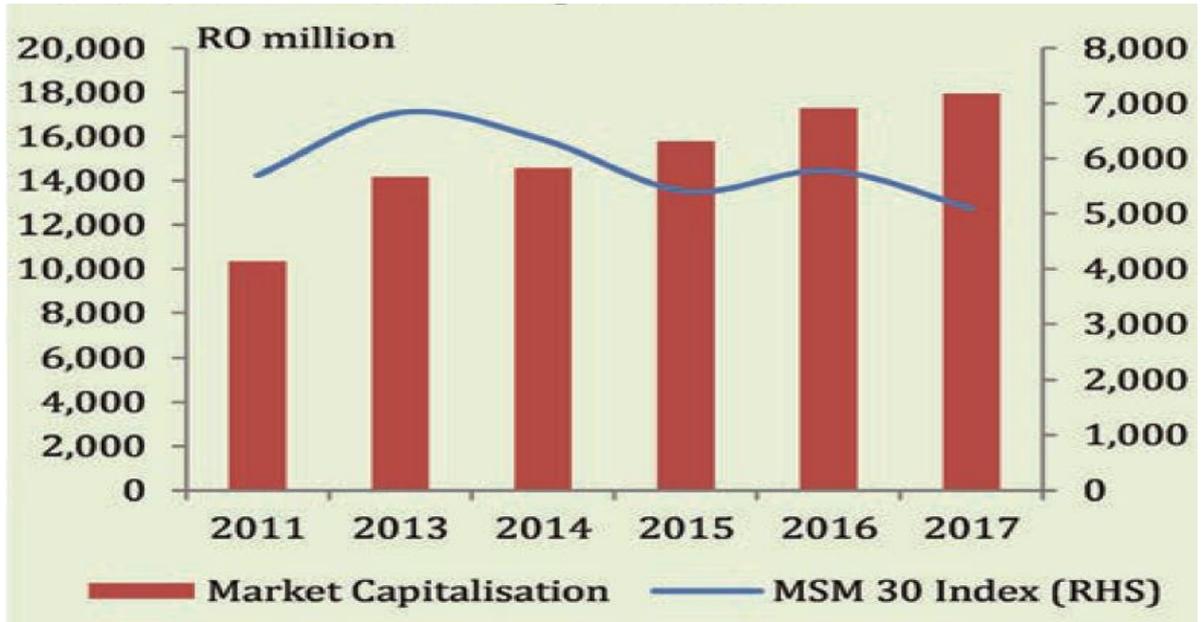


Figure 3.11: Market Capitalization and Muscat Securities Market (MSM) 30 Index

Source: CBO, 2018a

### 3.9 SUMMARY OF THE CHAPTER

This chapter has covered the modern history and the present status of the Sultanate of Oman's economy. It presented a background about Oman's labour market. In addition, the chapter discussed the economy status (yearly national accounts of revenues and expenditures) which is dominated by the petroleum sector. The current dramatic reduction in global oil price market has affected the Sultanate's expenditures. This forced the government to take the action of economic austerity and promoting SMEs contribution to the GDP. Thus, this chapter presented a background about this sector as an alternative engine for the Sultanate's long-term economic development. Banking sector and capital market contribution to the development of the economy are discussed in this chapter. The Oman Development Bank (ODB) reflects its vision regarding the entrepreneurship role in contributing to job creation for Omanis and overcoming the issue of expat-owned Omani-fronted businesses. Despite the low share of bank lending for SMEs, estimated at about 2% of the total bank credit portfolio, the robust position of the banking sector's liquidity and profitability can grant opportunities to expand its contribution to SMEs via enhancing financing initiatives and methods. Furthermore, the chapter presented the role of the government and private sector in supporting the SME sector financially and non-financially.

## **CHAPTER FOUR**

### **4. RESEARCH PARADIGM AND DESIGN**

This chapter presents and justifies the framework and design of the research methodology that has been implemented for this study to achieve the research objectives. The chapter is organized into nine sections. Section 4.2 discusses the foundations of the research philosophy. Section 4.3 provides clarification and justification of the research design for the methodological approach and coherence. Section 4.4 explains the significance and limitations of questionnaire surveying as a technique for data collection. Section 4.5 provides a brief discussion of the methodology in previous relevant studies. The process of constructing a questionnaire for this study is explained in section 4.6. The assessment of the reliability and validity of the research data collection instrument including describing the piloting test for this study questionnaire is discussed in section 4.7. Section 4.8 presents a discussion of the population and the sampling process. The approach to administering the questionnaire in the field is discussed in section 4.9. Finally, section 4.10 considers the ethical issues of this research.

#### **4.1 Research Objectives**

Using the Oman context, the present study intends to fill the research gap that concerns demand-side constraints on SME access to bank credit, namely, credit discouragement. This is achieved by investigating the following research objectives:

- Q1: Among non-oil-related SMEs that needed finance, which firms that had applied for bank loans and which had not?
- Q2: If exist, what are the determinants of discouraged non-oil-related SMEs (i.e. characteristics)?
- Q3: Does the Omani banking sector reduce or exacerbate the discouragement issue in the market?
- Q4: Do discouraged borrowers differ from credit constrained firms?
- Q5: What are the reasons for being financially constrained and not approaching banks?
- Q6: How do financial constraints impact non-oil-related SMEs' growth?

## 4.2 Research Paradigms: Philosophical Foundations

A research paradigm reflects the research philosophy that directs researchers towards how scientific projects should be fulfilled (Collis and Hussey, 2009). “Research philosophy” is a framework of beliefs and assumptions regarding the development of knowledge in a particular field (Saunders et al., 2019), by connecting the information on a particular subject to existing theory (Easterby-Smith et al., 2015). For several decades, there has been controversy regarding the connection between data and theories, because philosophers were concerned how to conduct appropriate research design to be aligned with existing theories in the literature (Easterby-Smith et al., 2015). Thus, understanding research philosophy seems a profound concept (Easterby-Smith et al., 2015); it is a significant means to help researchers shape their questions, quantify the best methods for research implementation, and develop a good understanding of research outcomes and interpretations (Saunders et al., 2019).

Saunders et al. (2019) suggests that the process of understanding research knowledge starts from the wide outer layer – as onion layers - that is the philosophy before reaching the central point of the narrow layer i.e. that is data collection (Figure 4.1).

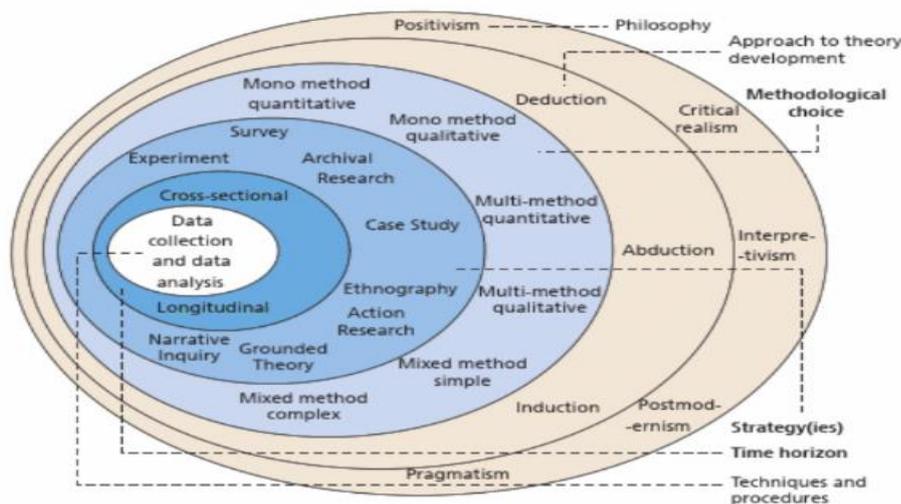


Figure 4.1: The Research Onion, illustrating the serial order of the research methodology  
Source: Saunders et al. (2019)

### 4.2.1 Research Philosophy Assumptions

The research philosophy is intrinsically involved with three assumptions: ontological, epistemological and axiological (Wahyuni, 2012) by which the chosen assumption would

reflect the importance of the researcher's perspective, beliefs or opinions in developing knowledge, and their way of understanding the world. Each of the research assumptions is underpinned by either one of the two main approaches: positivism or interpretivism orientation (Collis and Hussey, 2009). According to Newman et al. (1998), these different approaches have created ongoing conflict between the different views of philosophers. While phenomenological researchers emphasize their subjectivity in developing knowledge, they do not object that there is a fact that ought to be considered (Blumer, 1980). Other scholars argue that there are no certain optimal paradigms (Sogunro, 2002). However, scholars believe that the best research paradigms are ones that align with the research objective and can enhance it with the needed knowledge (e.g. Collis and Hussey, 2009; Saunders et al., 2019). Each assumption for the paradigm is considered to be complementary to the other (Collis and Hussey, 2009).

**Ontological assumptions** concern the nature of social reality: whether it should be considered as a set of objects or regarded as a set of constructions reinforced by researchers' perceptions, beliefs, feelings and attitudes (Bryman and Bell, 2015). The former refers to the position called *objectivism*, the belief that there exists only one reality in the world, and the researchers' reactions do not affect research objects (Saunders et al., 2012: 131). In contrast, the latter position is known as *subjectivism*, which implies that social reality can be explained by various subjective bases where each researcher has different insights and perceptions about that reality of how they understand facts (Saunders et al., 2012; Creswell, 2013).

**Epistemological assumptions** are complementary to the previous assumptions in terms of the researcher's orientation toward explaining and perceiving the social reality. This philosophy concerns "what we accept as valid knowledge" (Collis and Hussey, 2009:59) through determining the sort of the relationship and boundary between the researcher and the knowledge that is researched (Saunders et al., 2012). In positivist research, the researchers develop their research stance by exploring and measuring social reality, without influencing or being influenced by the subject of the research (Collis and Hussey, 2009; Saunders et al., 2012; Creswell, 2013) or by their own sensations and reflections (Easterby-Smith et al., 2015). The principle of positivism is underpinned by the deductivist approach, examining and developing explanations of existing theory, through postulating hypotheses or propositions for the research problem that are assessed and analysed using quantitative methods (Bryman and Bell, 2015). These explanations are provided through establishing causal relationships between variables and research phenomena and linking them to the

theory. Thus, researchers of the positivism orientation tend to search for any regularities and observations through the instruments of quantitative data collection to explain causal relationships that manifest within the data to generate a law-like generalisation (Saunders et al., 2012). Moreover, with an adequately large sample size, the inferences coming from such a research orientation tend to create significant generalisations about what is being inferred (Saunders et al., 2012; Creswell, 2013).

Interpretivism is the contrary orientation to epistemological positivism, where the stance of the researchers regarding social reality is subjective because it is shaped by their perceptions and beliefs (Bryman and Bell, 2015). The interpretivists engage within research subject and interact closely with the research sample (i.e. participants) in order to understand the variations between them. It is acknowledged that it would not be easy for such researchers to detach what is in their mind (e.g. beliefs, values, perceptions, sensations) from the social world of the research (Collis and Hussey, 2009), which may cause some challenges in justifying the reliability and validity of every stage of their research (Saunders et al, 2012). The approach of this paradigm is known as inductivism, which means that researchers start with data collection to explore research subjects, which helps them to construct and develop a theory (Lee and Lings, 2008; Saunders et al., 2012).

**The assumption of axiology** refers to researchers' justifications of the role of values and ethics in their research and in how they have undertaken their research (Heron, 1996 cited in Saunders et al., 2019). The assumption is a reflection of how the researcher deals with their own values and with the participants in their study simultaneously (Saunders et al., 2019). Thus, the role of the values of researchers has great significance in the whole process of conducting the study, in terms of verifying the credibility of the findings and inferences. For instance, the methods of positivists in observing, measuring, and analysing research phenomena will lead to attaining precise, credible and valid data outcomes, as well as enhancing generalizability. This is because the investigation and analysis are relatively structured and controlled, where the methodology is based on describing, predicting and verifying correlations (Tolley et al, 2016) so that it keeps the researcher independent from the research subject. Thus, the positivist research design is acknowledged to be value-free of researcher's interventions, while the interpretivist research design is considered to be value-bound and not independent from their research subject (Collis and Hussey, 2009; Saunders et al., 2019).

### **4.3 Research Design: Methodological Selection and Coherence**

The concept of research design is the process that integrates every relevant element of the research phases in a coherent and logical manner, in order to achieve research objectives (Bryman and Bell, 2015; Saunders et al., 2019). It covers the whole methodology in terms of types of philosophy (i.e. epistemological and ontological) and approaches (deductivism and inductivism), which leads to the identification of a particular research process (Collis and Hussey, 2009).

There are two main methodological choices - quantitative and qualitative - that respectively align with the distinct perspectives positivism and of interpretivism (O’Gorman and MacIntosh., 2014; Bryman and Bell, 2015). Some philosophers combine both paradigms in order to avoid the dispute that they may encounter in the research field and enhance research validity and reliability. However, creating this combination of research designs may weaken focus on the research objectives, since each paradigm has a different purpose. Besides that, employing a combination of these methods is time-consuming, especially under a constrained research budget and time, which may result in restricting the scale and quantity of data collection (McCusker, and Gunaydin, 2015).

Qualitative methodology is used for interpretivism research when there is little knowledge about the research phenomenon (Collis and Hussey, 2009; Cooper and Schindler, 2011). The researchers tend to explore knowledge by making sense of the subjective and socially constructed concepts, without interactions with existing theories (i.e. exploring beyond the topic theories) Bryman and Bell, 2015; Easter-Smith et al., 2015). This is referred to as contextualisation or naturalistic because the research is employed within natural setting or research context (Saunders et al., 2019; Bryman and Bell, 2015). Interpretivists depend on particular types of data collection instruments to emphasise participants’ subjective opinions, such as unstructured interviews, case studies, focus groups, ethnography, grounded theory and action research (Saunders et al., 2019).

These methods can be applied using tools such as cameras, tablets and tape recorders (Collis and Hussey, 2009). However, qualitative methodology entails a number of limitations, such as the impossibility of generalising findings due to the small sample size, which is inherent in qualitative study. Using qualitative methodology is very expensive and requires a skilful

researcher. For instance, ethnographic studies can occur over long periods (Saunders et al., 2019) and may be restricted by time and monetary budget constraints.

Whilst the interpretivism paradigm allows exploration of the small domain of research reality, the positivist paradigm allows one to become considerably grounded in the investigations through quantitative methods (Quick and Hall., 2015). Therefore, the quantitative research design dominates socio-economic studies (McCusker and Gunaydin, 2015). O’Gorman and MacIntosh (2014: 153) defined quantitative studies as follows:

*“quantifying the problem and understanding how widespread it is by seeking projectable outcomes for a larger population, and which are associated with the interpretation and presentation of numerical information.”*

This methodological strategy applies a numerical style of data collection and analysis (Bryman and Bell, 2015). Therefore, commonly used tools to collect quantitative data are questionnaires or experimental techniques (Cooper and Schindler, 2011), which help to collect large research samples (Bryman and Bell, 2015). Thus, the objectivity of quantifiable research tends to relate to more schematic, focused, and controlled research contexts (Sogunro, 2002; Wahyuni, 2012; McCusker and Gunaydin, 2015). According to Barnham (2015) the critical part of the quantitative approach is detaching human beings from social reality. The positivists tend to understand social science by verifying the facts that are examined based on the existing theories in the research field (McCusker and Gunaydin, 2015). Thereby, this approach enhances the objectivity of the research. However, this is deemed to be an intrinsic limitation by interpretivists; believing that objects beyond the world domain are passive and not 'animistic', the quantitative approach therefore does not explain individual experience directly through their perception toward individuals’ attitudes (Barnham, 2015).

Positivists commence their research through developing hypotheses or propositions regarding the research phenomenon, based on the existing theories - this is known as a deductive approach (Saunders et al., 2019). This is for the purpose of developing an understanding about what causes or affects the research phenomenon, whether something (i.e. dependent variables) does or does not occur, measuring when it does so, and the degree to which this occurs (Jonker et al., 2010). In other words, this involves discovering the

correlation between a set of variables (i.e. dependent and independent variables), to validate, reject or improve hypotheses (Walliman, 2017).

In addition, the neutral stance of positivists allows the quantitative research design to alleviate the effect of researcher opinions on research findings, which thereby reinforces reliability and reduces research bias (McCusker and Gunaydin, 2015). Therefore, the research analysis helps to approach the ultimate inferences and results - which are often illustrated in the form of graphs or mathematical equations - without subjectivity or emotional influence (McCusker and Gunaydin, 2015).

#### **4.3.1 Justification for Selected Design**

A quantitative approach has been chosen for this study as it aims to investigate the facts concerning the variations in non-oil-related SME demands for bank credit. It should be noted that this approach is adopted in accordance to the existing literature subject, where most of the facts presented regarding SME demand for external finance are related to the context of developed countries (e.g. Freel et al., 2012; Mac an Bhaird et al., 2016; Rostamkalaei et al., 2020), while there is lack of understanding about the facts regarding limited finance for small firms and credit discouragement amongst them in contexts like Oman. Therefore, this research design offers the potential for exploring and understanding the main research objectives concerned with investigating the existence of financial discouragement incidents within the non-oil-related SME sector, as well as firms that had accessed finance from banks, and those which had had difficulty in approaching banks. In turn, it will enhance the literature on different SME cultures and perceptions toward bank lending.

Thus, the quantitative methodology of this study will allow the identification and measurement of the research factors that are hypothesized to have different impact on the various statuses of companies' financial demands in Oman. In addition, the research design will use questionnaire surveys to present descriptive statistics and an explanatory and analytical examination of the dependent and independent variables concerning the research subject. Stockemer (2019) stated that in social science statistics help scholars and research stakeholders to get a sense of the whole world. This is because quantitative methods of data collection help researchers collect large samples to study the research problem and develop clear and accurate information about the subject. Thus, this research methodology will enrich the present study with the possibility of exploring and understanding the contextual factors

that may impact on business owners' decisions on whether to proceed with bank loan applications or not. For instance, this study was able to collect information about firms that are owned and managed by non-registered owners known by the Omani government as those involved in 'hidden trade' - that is, Omani-fronted non-oil-related SMEs and their demands for bank credit.

A further reason behind selecting the quantitative design is that it makes it possible to ensure a neutral position between the research subject and people involved in this study, hence, making the research findings robust and free from bias. This is because the knowledge acquired through the positivism philosophy can be supplied with rational justifications that are verified scientifically through mathematical and statistical presentations (Collis and Hussey, 2009). It is important to highlight that the primary structured questions of the data collection tool would help this study to avoid the issue of selection bias.

Finally, using a quantitative methodology and statistical analysis for this study can allow a meta-analysis in the further studies, to combine outcomes of multiple scientific studies addressing SME demand for bank finance in Oman, in order to achieve a rigorous understanding of the research problem. Meta analytical review from the aggregated information will allow the correction of statistical errors that may have been made by previous studies, such as sampling errors (Unger et al., 2011).

#### **4.4 Research Survey Strategy**

Saunders's Onion research strategy refers to a method or set of methods of collecting data (e.g. survey, archival research, case study, ethnography, action research, grounded theory, narrative inquiry) that should help to approach research objectives. With positivism, the quantitative research design relies on standardized techniques to collect statistical information (Saunders et al, 2019). According to Adams et al. (2007) a survey is the common methodological design used to collect quantitative and qualitative information. Typically, researchers use the terms "questionnaire" and "survey" interchangeably (O'Gorman and MacIntosh, 2014:158).

Because of its advantages compared to other surveying techniques (i.e. structured observation and interviews), the questionnaire is the most widely utilised data collection instrument for surveying used by positivist researchers, as a result of its various benefits

(Bryman and Bell, 2015). Surveying via questionnaire allows achieving generalisation of findings when the research sample is representative of the entire population (Collis and Hussey, 2009; Gill and Johnson, 2010). In addition, according to the research purpose, the questionnaire can be designed as a descriptive survey design or an analytical survey design, which allows the providing of a large and various quantity of information (Saunders et al., 2019). In other words, through the different questionnaire designs, the researcher will be able to provide descriptive statistics of the research subject or perform a correlation analysis of the research variables.

By utilizing a descriptive questionnaire survey, the research will be able to generate an accurate presentation of the research phenomenon within a particular time or at multiple times. An analytical survey aims to examine and identify the cause-and-effect relationship between a set of research variables, which should be underpinned by a clear theoretical framework from the literature (O’Gorman and MacIntosh, 2014). Through the theoretical framework, the researchers are able to specify and measure the extraneous variables (i.e. dependent variable and independent variables) of their research phenomenon using statistical analysis methods (Ghauri and Grongaug, 2005; Collis and Hussey, 2009). Thus, it is necessary to ensure the inclusion of all relevant variables in a questionnaire design in order to meet the research objectives (Gill and Johnson, 2010).

Accordingly, survey research is formatted based on the deductive research orientation, because the questions tend to describe specific characteristics at a particular point of time (Gill and Johnson, 2010; Saunders et al., 2012). This can be achieved by answering structured questions in the form of what, where, how much and how many. In addition, a questionnaire is recommended as an ideal instrument to enhance research objectivity, ensuring that it is free of human values and interests (Sahu, 2013). The common methods for delivering questionnaires are telephone interviews, face-to-face questioning, postal questionnaires and web questionnaires (Walliman, 2017).

#### **4.4.1 Survey Questionnaire Disadvantages**

In view of the aforementioned survey advantages, the questionnaire method was deemed to be the most suitable in collecting the required data from the primary owners of the non-oil-related SME sector in Oman, in accordance with the current research objectives. However,

there are some problems that may result from using the questionnaire technique that the researcher of this study has considered in the process of constructing and employing it.

The questionnaire has been constructed in way that ensures simplicity, readability, clarity, and standardised layout and length of questions. This is important, because the researcher will not be able to return to collect more information from respondents (Saunders et al., 2012). The research objectives and purpose, guidance notes, and required business sector participation were clearly included within the questionnaire information sheet to avoid the problem of excessive time and money being spent, as recommended by Ghauri and Grongaug (2005).

A survey using a questionnaire allows large amounts of information to be obtained, since it requires less application of skills, and is manageable, straightforward and realisable (Bryman and Bell, 2015). Nonetheless, there is the risk that responses to the questionnaire may be made in a perfunctory manner (O’Gorman and MacIntosh, 2014). Furthermore, some respondents may tend to provide dishonest or untruthful information in order to protect their privacy, or as a result of social desirability bias (Saunders et al., 2012). However, in order to mitigate this problem respondents were assured that their personal information will be anonymous and strictly confidential, according to the research ethics principles and codes of the University of Glasgow. Moreover, clear and adequate explanations were provided to participants regarding the importance of this research in providing recommendations to policymakers to enhance sustainability and development within the community. This may enhance the credibility of their answers, particularly if the research subject affects a participant’s life advantageously.

#### **4.5 Previous Relevant Studies Methodology**

In the literature review, the questionnaire survey was the most frequently used tool to measure small firms’ need for credit, whether they faced credit constraints, or were discouraged by lenders. These measurements were done by specifying the correlation between firms’ demand for credit and the factors that might affect credit availability in the market (e.g. Beck et al., 2006; Freel et al., 2012; Ferrando and Mulier, 2015; Cole and Sokolyk, 2016; Gama et al., 2017; Rostamkalaei et al., 2020). This has helped different insights to develop in the literature about the phenomenon of the lack of capital for SMEs. Nonetheless, the vast majority of these studies have drawn their empirical analysis from old and analogous secondary databases, which have been developed by national and

international agencies, and are mainly focused on the context of developed countries. This, one can argue that previous studies are not comprehensive and limited in scope. Cooper and Schindler (2011) noted that in spite of the rich and sufficient information that would be gained from secondary databases, duplicates in results may occur among studies. Thus, the researcher must be careful and should avoid repetition in resolving a particular problem in their relevant research field or context.

For instance, the small Business Finance Survey for 1993, 1998, and 2003 from the Federal Reserve was used by Cole and Sokolyk (2016) to investigate various demand from small private firms for finance in the US. Cowling et al. (2012) employed the Annual Small Business Survey for the period of 2007/2008, which involves a pre-recession and recessionary (i.e. global financial crisis) dataset for the firms. Other sources, including the UK Survey of SME Finances conducted by the Centre for Small and Medium Enterprises at the Warwick Business School (UKSMEF), and the SME Finance Monitor (SMEFM) developed by BDRC Continental on behalf of the British Bankers Association (BBA), were employed by Fraser (2014), Carter and Mwaura (2014), and Rostamkalaei et al. (2020).

In the case of developing countries, Krasniqi (2010) employed the Kosovo SME data-level survey conducted by the Riinvest Institute for Development Research at the end of 2006. Similarly, the empirical analysis of Abor and Biekpe's (2014) study was drawn from secondary resources of firm-level data developed by the Association of Ghanaian Industries and the National Board for Small-Scale Industries. Other studies have used the Business Environment and Enterprises Performance Survey (dataset from 2007 to 2009) to examine discouragement in Eastern Europe and Central Asia.

Secondary data sources help researchers to collect contextual data on a large scale and with fewer resource requirements (Saunders et al., 2019). However, this type of data collection technique is often developed for specific social and political purposes (O'Gorman and MacIntosh, 2014) that might not match other research questions (Saunders et al., 2019). Therefore, many of the previous studies that have used secondary data were worried about the existence of the selection bias issue when estimating the determinants of the various levels of financial demands for firms (e.g. Freel et al., 2012). In addition, using secondary data does not provide the exact and sufficient information that is needed to answer other research questions; the researcher has to fit their research question to the questions that are asked in these official surveys and the data that are available. For instance, it is observed that

the definition of credit discouragement for small business has been expanded to include high costs of collateral or interest rates, and corruption (e.g. Chakravarty and Xiang, 2013; Gama et al., 2017), instead of focusing on understanding whether SMEs make self-credit constraints because of fear of bank rejection. Consequently, such an existing issue may undermine the original definition of discouraged firms from Jappelli (1990), Levenson and Willard (2000) and Kon and Storey (2003).

#### **4.6 Research Questionnaire Construction**

Before deciding whether to use a primary or secondary database, the researcher searched and reviewed many previous studies and questionnaires relevant to the topic of financing SMEs, in order to understand how methods were correlated with the research objective. This process also helped to highlight the limitations of past studies, with a view to improving the proposed study's methodology. Accordingly, the decision was made to develop a survey that would meet the research objectives and match with the context of the case study, as a primary source of data for the research. This was due to the lack of relevant research that covers the context of the Sultanate of Oman or one that is closely related to its context.

The primary data collection technique is designed for the purpose of matching the research objectives and eliciting the required variables to test correlations (Saunders et al., 2012). Thus, the structure of the survey questions in the current study was developed in way that helps to identify the different needs of non-oil-related SMEs for bank credit. Furthermore, the questionnaire will help to provide up-to-date descriptive and analytical information about the demographics of this SME sector and the primary business owners in the country. This could be an incentive for policy makers to take appropriate action in reforming the current situation pertaining to bank lending in the sector.

Furthermore, the research questionnaire was constructed in such a way as to attract the attention and interest of non-oil-related SME business owners, in order to ensure and enhance their enthusiasm in providing the required credible and useful information. The survey questions have taken the style of categorical answers (i.e. nominal) in order to allow the participant to choose the best answers relative to their case. This type of question format is conducive to gaining more insights in the form of subjective data through the beliefs, opinions, perceptions, and attitudes of primary firm owners towards bank lending in Oman.

## 4.7 Enhancing the Reliability and Validity of the Questionnaire Technique

In quantitative research design, reliability, validity and generalisability are the main criteria required to enhance the accuracy of research inferences for business management (Adams et al., 2007; Heale and Twycross, 2015; Mahajan, 2017). The concept of quality research commences with the accuracy and stability of input and ends with the truthfulness of the output (Bryman and Bell, 2015; Gill and Johnson, 2010). The following sections explain the approaches to enhancing research reliability and validity for the present study.

### 4.7.1 Evaluation of Reliability

Reliability concerns the verification of whether the research findings are consistent and repeatable or not (Wahyuni, 2012). Verifying research reliability depends on the construction of the variables: whether the researcher is measuring what is expecting to be measured (Adams et al., 2007) and if the research measurement is stable or not (Bryman and Bell, 2015). This means ensuring consistency of research measures (consistency of constructed questions to measure variables, consistency of results, and responses) (Heale and Twycross, 2015). Thus, well-constructed models of quantitative research facilitate understanding and measuring data and its relevant correlations. However, there are several challenges that a researcher may face, such as participant and researcher errors and bias Table 4.1.

Table 4.1: Threats to reliability

<b>Threat</b>	<b>Definition and Explanation</b>
Participant error	Any factor which adversely alters the way in which a participant performs. For examples, asking a participant to complete a questionnaire just before a lunch break may affect the way they respond compared to choosing a less sensitive time.
Participant bias	Any factor which induces a false response. For example, conducting an interview in an open space may lead participants to provide falsely positive answers where they fear they are being overheard, rather than retaining their anonymity.
Researcher error	Any factor which alters the researcher's interpretation. For example, a researcher may be tired or not sufficiently prepared and misunderstand some of the more subtle meanings of his or her interviewees.
Researcher bias	Any factor which induces bias in the researchers' recording of responses. For example, a researcher may allow her or his own subjective view or disposition to get in the way of fairly recording and interpreting participants' responses.

Source: Saunders et al. (2012)

To avoid these errors prior studies suggest using methods of ‘a test–re-test’ or ‘alternative form’ when assessing the research reliability of the findings and conclusion (Heale and Twycross, 2015; Saunders et al., 2019). These methods are a significant task that can assist researchers to address reliability threats before conducting surveys (Heale and Twycross, 2015; Easterby-Smith et al., 2015). The test-re-test approach involves conducting the questionnaire test twice with the same respondents, where the measures and conditions are the same, but at different times. The alternative method proceeds by using the same sample of participants to answer two different scales or sets of questions at different times (Saunders et al., 2019). From the obtained responses the researcher would be able to determine the correlation between the two sets of data in the same questionnaire conducted at two separate times under equivalent conditions. However, it is not easy to convince the same respondents to participate in these sorts of pilot questionnaires twice, as an effectively double-length questionnaire may increase their stress and may be too time-consuming for them (ibid). Under such conditions the likelihood of obtaining reliable answers is low (Collis and Hussey, 2009).

For the present research, neither test methods was ideal, because the questionnaire targets the primary owners of Omani non-oil-related enterprises. This study population of research participants is known to be very busy, and it is not likely to be possible to persuade them to participate for a second time - unlike a student sample, for instance, which would be easy to group and manage at a certain school. However, pilot tests have been conducted randomly among a limited number of non-oil-related SME primary owners. More details on this are provided in the next section.

#### **4.7.2 Evaluation of Validity**

Validity also needs to be considered in developing the research quality of the employed data collection instruments. Research validity reflects the integrity and truthfulness of the research conclusions or findings, indicating whether the instrument, such as a questionnaire, measured the concepts it was intended to measure properly or not (Saunders et al., 2019; Mahajan, 2017). Adams et al. (2007) pointed out that achieving research reliability without considering its validity does not make sense if the questionnaire does not precisely measure what is required to be measured in the research. Scientific business research in this respect concerns assessing validity internally and externally (Easterby-Smith et al., 2015). Internal validity, sometimes called measurement validity, concerns evaluating the causal relationship

between the variables in order to ensure that the results of the questionnaire are valid with regard to the research design and analysis (Saunders et al., 2019; Mahajan, 2017), and therefore reflect reality. To assess research validity, three main criteria should be considered: content validity, criterion-related validity and construct validity (O’Gorman and MacIntosh, 2014; Saunders et al., 2019).

**Content validity** concerns the extent to which the questions in the questionnaire sufficiently measure or investigate the relevant subject (Saunders et al., 2019; Heale and Twycross, 2015). In particular, the validity of questionnaire content means assessing the measurement of each concept (i.e. variable) in order to ensure that the questionnaire contains adequate coverage of the questions that need to be investigated. Sekaran and Bougie (2010) affirmed that the more scale items (e.g. strongly agree, agree, neutral, disagree, and strongly disagree) used to measure the concept, the higher the content validity. However, previous studies argued that no statistical method could be employed to assess the adequacy of the instrument content, and this could only be done by subjecting it to expert judgement within the research field (Mahajan, 2017).

To provide sufficient quality in the present research questionnaire content, a host of previous published studies and other relevant information were extensively reviewed. The research proposal was designed from the inferences of extant theories and concepts, while considering the research objectives and hypotheses that align with the research problem. In addition, the present research questionnaire was sent to several experts in the same field in Oman, after gaining research approval from research supervisors. This sort of approach is known as face validity, which is a subset of content validity, where experts judge the credibility of the instrument of measurement, and whether it measures concepts adequately or not (Mahajan, 2017). The reviewers provide clarification regarding questions that require amendments, and invalid questions that should be eliminated from the questionnaire.

**Criterion-related validity** tests the ability of the questions to provide precise predictions (Mahajan, 2017). Thus, this method is sometimes known as predictive validity (Saunders et al., 2019). This method compares the data collected (i.e. responses) from the research instrument such as the questionnaire to future criterion (i.e. performance) or to other instrument that gauging the same variables (Heale and Twycross, 2015). By using correlation statistical analysis can be identify the extent of differences between the data collection instruments that are measuring the same variables (ibid). A high correlation

between the measure of the criteria and the predictor indicates that predictive validity is perfect (Mahajan, 2017). In the present research, the researcher measured the attitudes of primary SME owners towards accessing the banks for loans in Oman. Thus, the measures (i.e. questions) were constructed in such a way as to attain validity with regard to the context and existing theories.

**Construct validity**, in particular, is an important evaluation method for empirical research measures and propositions that are developed under theoretical constructs to analyse and predict attitudes (Saunders et al., 2019; Heale and Twycross, 2015). It indicates the extent to which the measurement questions reflect the research construct, and the ability to achieve generalisation from the findings (Adams et al., 2007; Saunders et al., 2012). This can be done via statistical analysis, which will be explained and determined in the data analysis section.

#### **4.7.3 Generalisability Criterion Evaluation**

Research generalisability concerns attaining external validity for the research findings (Gorman et al., 2014). Researching a particular phenomenon not only involves updating knowledge, but also concerns the generalisation of research findings, to be able to apply them to other particular samples in terms of culture, geography and context (ibid). The quality of the theoretical constructs in the research helps to establish a research design that can generate findings applicable to other research contexts involving similar phenomena, thereby allowing interpretation in another context (Adams et al., 2007). The research design of the present study focused on studying the existing fact of banks limiting funding for the non-oil-related SME sector, using the Omani context as an example of oil-based economies. The study attempts to assess the issue during the sensitive period of shifting the Sultanate's economic development from being oil-based to diversification through non-oil SMEs due to the dramatic reduction in international oil prices in 2014. It is believed that the frame of the research design allows the interpretation and application of findings in other similar oil-based economies, in particular the GCC countries.

#### **4.7.4 Piloting the Research Survey**

After finalising the draft of the questionnaire, it is important to test the credibility and validity of each question used to collect information. Saunders et al. (2012: 451) stated that

pilot testing is used to “refine the questionnaire so that respondents will have no problems in answering the questions and there will be no problem in recording the data”. Several objectives can be fulfilled by pre-testing the questionnaire with an adequate, limited sample size. Firstly, the process of testing the questionnaire ensures that respondents are able to understand and complete the questions (Collis and Hussey, 2009). Secondly, the pilot study helps to audit and improve the questionnaire language with clear and simple wording. Thirdly, the feedback that the researcher receives from validators helps to enhance the quality and quantity of questions, and hence, amendments can be made accordingly (Saunders et al., 2012). For instance, the researcher can measure and address the time required to complete the questionnaire during piloting test.

Initially, the pre-testing of the research questionnaire started by submitting the questionnaire draft to the research supervisors for a discussion, in order to ascertain whether it aligned with the research objectives and the rules for designing a questionnaire. This resulted in constructive comments that helped to improve and develop the questionnaire. These comments pertained to questionnaire content, layout and language. The final draft of the questionnaire was translated into Arabic, in order to be subjected to the examination process. As Saunders et al. (2012) suggested, the content of the questionnaire draft must be examined by experts in the field of interest and in the context of the case study. From 26/12/2017–18/01/2018, the Arabic and English versions of the questionnaire were sent to seven experts from Sultan Qaboos University to ensure that it was valid and compatible with the country’s context. The validators also checked and proofread the Arabic version in order to verify the accuracy of the language, terminology and interpretation. Furthermore, a specialist from the Public Authority for Small and Medium Enterprise Development (PASMED) revised the content of the questions to ensure their comprehensive nature and relevance to the sector, with regard to the SME definition, legal status and sector.

A set of face-to-face interviews were conducted with five loan officers from commercial banks with different types of ownership (i.e. Nizwa Islamic Bank, Oman National Bank, Oman Al Arab Bank, Oman Development Bank) as well as the Al Rahffid Fund (Government financial institution to support the entrepreneurial growth and development among the citizens of the Sultanate) to discuss with them the processes and procedures for financing SMEs in the Sultanate. This was done to gain in-depth-knowledge and information about financing SMEs and enhance the development of the survey questions. The questionnaire was distributed randomly among 15 SMEs to verify its validity and reliability. The

participants were asked to give their opinions regarding the wording of the language, the survey format alignment and organization, the relevancy of the content and the length.

Based on the feedback received from academic validators, bank loan officers and SME owners, some questions and categories were excluded. The layout was changed to enhance respondents' attention to the questions. The wording of the questions was rephrased to improve its simplicity and clarity. In addition, the signposts were well-developed to guide and manage the respondents carefully, as well as save time. After the amendments to the questionnaire were made, it was tested twice among another 12 SMEs on 22 July 2018. The researcher found that time spent on the questionnaire was reasonable, ranging from 15 to 20 minutes. For some questions, an option of "Other, please specify" was added in order to give the participants a chance to state the accurate and suitable answer that is relevant to their business's situation. In addition, three questions in section B2.2 (concerning primary owners' characteristics) were modified based on the Omani context. Finally, the final drafts of the Arabic and English questionnaires were developed and constructed on the online survey tool SurveyMonkey to be delivered to participants.

#### **4.8 Research Data Sampling Techniques**

This section explains the sampling technique that is applied to the collection of research data. Put simply, a sample is "a subset of a population" (Collis and Hussey, 2009: 209), which is part of the information-gathering phase. Specifying sample size is a key aspect of ensuring that the generalisation and truthfulness of outcomes are representative of the aggregate population, since it is not possible to access and analyse the entire population (Easterby-Smith et al., 2015) due to time and budget restrictions.

Previous literature has suggested two types of sampling techniques: probability sampling and non-probability sampling (Saunders et al., 2019) – Figure 4.2. Probability sampling is a method of selecting a representative sample of the population randomly. The larger the sample size, the more accurate it will be in the data analysis phase (Gill and Johnson, 2010; O'Gorman and MacIntosh, 2014). This method is suitable for the positivist approach, since the size of the sample allows the generalisation of the research results (Collis and Hussey, 2009). The random selection for the subset of the sample allows an equal chance for every individual in the population to be selected. According to Gill and Johnson (2010), when the sample is well constructed, and each of the sample members is easily accessible, simple

random sampling is an effective method to use in probability sampling. Non-probability sampling involves the sample selection being underpinned by particular attributes and features that are relevant to the study, however, such a technique might not allow the extent of the problem to be identified (Saunders et al., 2019).

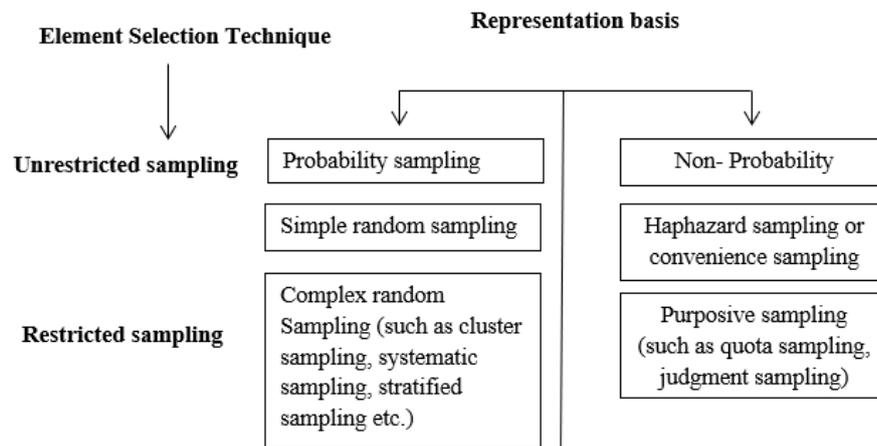


Figure 4.2: Types of Research Sampling Techniques

Source: Kothari (2004)

However, it is arguable that possible by chance, to gather a sample that is not relevant to the research purpose (i.e. different in some characteristics of the population) – this is known as a sampling error (Adams et al., 2007; O’Gorman and MacIntosh, 2014). Bias may exist during the sampling process, and awareness of this is required when making the choice of representative sampling (Easter-Smith et al., 2015), which may impact on research findings and distort data validity (O’Gorman and MacIntosh, 2014). One of these issues involves the exclusion of a group of participants, where researchers’ interest may be concentrated on easily accessible relevant networks or groups of the research. Furthermore, methods of distributing the questionnaire may affect the sampling technique. Ignoring or not considering the participants’ first language, for instance, in a research questionnaire would lead to obtaining a biased subset of the population. Nonetheless, the credibility of sampling can be ensured by examining whether the entire subset of the population has the same parameters and considerations (Easter-Smith et al., 2015). It is generally agreed that a large sample size is always preferable and ideal for research, since this enhances the generation of outcomes and, thereby, increases their generalisability across the population (Collis and Hussey, 2009; Saunders et al., 2019; O’Gorman and MacIntosh, 2014).

The non-oil-related SMEs taking part in this study are those registered under Royal Decree No. 19/2007 in the Directorate-General for Development of SMEs of the Ministry of Commerce and Industry (MoCI), and Royal Decree No. 36/2013 for the Public Authority for SME Development (PASMED) – also known as Riyada - (Christina et al, 2014; Al-Maimani, & Johari, 2015).

Simple random sampling was applied in this research, where every company within the sector across Oman had an equal chance of selection. The sampling frame unit was constructed from the dataset lists that are obtained from MoCI, PASMED, and through visiting industry regions, because not all of the companies' contact details are available on the lists. The participant firms were selected according to the following standards. First, the non-oil-related SMEs across Oman were selected in accordance with PASMED policy, which concerns the following activities: (a) manufacturing, (b) extraction/processing of natural resources (e.g. fishing, agriculture, electricity, gas, water), (c) transport, (d) wholesale and retail, (e) business services, (f) consumer services, and (g) other relevant activities. Second, the research selected firms that are established in the market, which have been trading for five years or more, and excluded start-up companies. The companies were chosen based on their employment size, as defined by PASMED (as illustrated in Table 2), instead of their total sales size because not all firms were willing to reveal the exact amount of their total sales. Furthermore, this research excluded SMEs operating under the scheme of foreign direct investment (FDI) because these firms are more eligible for external finance. Although this study has used Arabic and English languages for the survey to alleviate bias of sample selection, some of the firms whose owners do not speak Arabic or English were excluded from the study as well. In order to ensure that the research sample was free of bias, this research confirmed that no incentives, such as money, were used to entice the respondents to take part in this research.

#### **4.9 Administering Questionnaire Distribution**

Saunders et al. (2012) asserted that once the proposed research design of data collection has been determined and finalized, the questionnaire is ready to collect the main data. The primary data collection in the current research phase commenced in mid-September and ran to the 20th of January 2019, using the questionnaire instrument. In many prior studies, two types of questionnaire techniques are recommended for data collection: self-administered questionnaires and interviewer-administered questionnaires (Gill and Johnson, 2010;

Saunders et al., 2012; O’Gorman and MacIntosh, 2014). The self-administered technique can be undertaken using various methods, such as a web-based survey, postal survey, or delivery and collection survey (Cooper and Schindler, 2011; Saunders et al., 2019). The interviewer-administered survey is conducted over the telephone or through face-to-face interviews (ibid).

For the present study the information on non-oil-related SMEs was collected from three sources: MoCI, PASMED and the Ithraa website. Given that there is a lack of non-oil-related SME databases in the market, data collection was conducted in three steps to reach a large number of these firms:

- **Step 1: Telephone Survey**

In the first step, using the firm dataset obtained from the MoCI and the Ithraa website, approximately 450 firms were selected randomly for conducting the telephone questionnaires. This is because the dataset for these companies contains their contact numbers, which eased communication with the firms. The researcher used this method without any assistance. In addition, during each phone call, the researcher used hard copies of the questionnaire, completing a separate one for each participant. The researcher also documented whether the interview had been completed successfully or not. The advantage gained by using this method was that it enabled one to one surveying of companies throughout the Omani governorates without the considerable travel cost and time. In addition, interviewing over the telephone would help to lower bias (Cooper and Schindler, 2011), as participants feel more comfortable revealing their opinions regarding the subject without being face to face.

With postal questionnaires, once the hard copies are received, participants might be embarrassed to reject it or return it unfilled. With a telephone survey the participants had more space to decide whether to agree to participating in this study or not, without feeling embarrassed, and therefore the likelihood of obtaining unreliable or perfunctory information through such a method of questionnaire delivery would be very low. In addition, from this experience, the researcher found that completing the questionnaire over the phone was faster and easier. The discussion over the phone about the issue of limited finance for firms offered the opportunity to the researcher to document some important notes from the participants. However, some researchers may deem the phone questionnaire to be an impractical method

for data collection when the listed phone numbers sometimes do not work (Cooper and Schindler, 2011). At this stage in the research about 150 completed surveys were successfully collected.

- **Step 2: Conducting Fieldwork**

The second step in collecting data was conducted by the researcher and a qualified research assistant. The assistant was trained in the process of collecting data from 50 non-oil-related SME primary owners from the Ministry of Finance (MoF) through the taxation department in the ministry. These companies visit the taxation department to submit documents that the government request for their tax claim, and so this central point had provided a chance for the trained assistant to meet representatives of a number of firms. Notably, the training was comprehensive in the use of procedures, in terms of explaining the subject to the participants, administering the questionnaire questions, and checking the completeness of the questionnaire. In total, the assistant was able to collect only 19 completed surveys.

At this stage, the researcher of the study used the dataset obtained from the PASMED dataset of non-oil SMEs. However, the list from PASMED did not include the telephone numbers of the companies. Therefore, the researcher travelled to all the industrial estate of the city of Muscat (e.g. Al Mabyalla Industry, Public Establishment for Industrial Estates and Rusayl Industrial Estate) using the addresses and company names. In addition, the researcher visited two national exhibitions conducted by PASMED and another exhibition for SME agricultural trade held by the Ministry of Agriculture. The companies participating in these exhibitions came from different regions and governorates of Oman. These exhibitions have not only helped to collect more data across the Omani governorates but were also effective in decreasing the amount of travel and time spent. Thus, the total number of completed questionnaires came to 127 collected by the researcher in this phase, including 51 participants from the SME exhibitions.

The presence of an interviewer would have enhanced participant cooperation in this research and presented an opportunity to write down observations directly. This is because the respondents would have sufficient explanation of the research subject and its significance (Gill and Johnson, 2010). However, surveying by personal interview is very costly, particularly with regard to the geographical distance that must be covered (Cooper and Schindler, 2011). Another problem that this research faced was that some of the participating

primary firm owners were not available in their head offices, which in several instances resulted in time and money being spent visiting them. Out of 45 distributed surveys among non-oil-related SMEs, only 11 were returned fully completed, whilst others were not returned - apparently indirect rejection. Thus, the telephone questionnaire was found to be the best method by which to reach participants in Oman, especially considering that the period for collecting data was limited.

### ▪ **Step 3: Online Surveys**

In order to increase the response rate, an online SurveyMonkey was used as a further method to collect data. Using the contact lists obtained from the Omani government, the online surveys (Arabic and English versions) were sent using the mobile phone numbers of 140 firms' owner-managers. There were several reasons for sending the electronic survey via mobile phone numbers instead of email or postal channels. In recent years, the world has witnessed an extreme proliferation of social media applications through cell phones (e.g. WhatsApp, Instagram, Facebook, and Twitter) since the introduction of the internet, which has helped to effectively shrink distances, and facilitate communication. In the Hasan and Hasan article from the Times of Oman press (2016) it was stated that 92% of SMEs in GCC countries use social media to promote their business (Times of Oman Press, 2016). In Oman, SMEs depend heavily on social media platforms. Therefore, the researcher used SurveyMonkey for this study in order to distribute the questionnaire to firms via LinkedIn and WhatsApp, to attract SME primary owners attention.

The major advantage of an online survey is its ease of access and distribution to numerous participants at a particular time (Cooper and Schindler, 2011). The participants would feel more relaxed in answering the questions, hence increasing the probability that they will provide accurate information, especially regarding sensitive questions (Collis and Hussey, 2009; Saunders et al., 2012). Additionally, using an electronic method provides the possibility to link the results of the survey directly with technical analytical software (e.g. SPSS) (Collis and Hussey, 2009; Gill and Johnson, 2010). An online survey is less costly than face-to-face interviews (Cooper and Schindler, 2011), but difficulties may be encountered in constructing the questionnaire, such as design costs, required technical skills for designing it (Saunders et al., 2012), and the time required to complete the construction. Using this type of questionnaire greatly relies upon the respondents understanding the subject purpose and reading the instructions and guidelines of the questionnaire (i.e.

understanding the participant sheet attached). Therefore, before sending the link to the participants via the mobile phone, a set of e-survey principles suggested by Adams et al. (2007) were considered. These include clarifying the purpose of the survey and its significance, providing instructions, specifying a time limit for answering the questions, introducing the questionnaire in a conventional format with automatic signposts, and allowing ease of movement between questions. The challenge of this task is in attracting participants' attention so that they take part in the study. Despite the significant potential and advantages that this technique of collecting data can deliver for the current study, a small, modest number of responses i.e. 12 firms, have been recorded (only 8 completed it successfully and 4 were incomplete questionnaires).

### ***Challenges Faced During Data Collection Phase***

The following are the challenges that were encountered during data collection steps:

- Data collection duration very limited where it was conducted within four months.
- Lack of an accurate database for the enterprises in the market
- Difficulty in finding contact information for the firms' primary owners (such as emails, or phone numbers).
- A good number of primary owners of Omani-fronted firms were excluded from participating in this study because they do not speak Arabic or English well.
- Lack of awareness and motivation regarding the significance of the research survey of SME owners, particularly in the electronic survey. This is clearly obvious from the number of rejected surveys.
- A further challenge faced was as a female researcher visiting the field where respondent were mainly men based by businessmen. It might be perceived as not aligning with social customs and beliefs where women should not be working in a male(-dominated) business environment. Ayman Elnaggar (2007:7), citing Belwal et al. (2014:136) stated that "Omani socio-cultural norms trap and chain women's thinking and ability, and limit their mobility, whether they are living in an urban center or a remote rural village."

Although previous studies noted that incentives - monetary incentives in particular - can increase the response rate (Collis and Hussey, 2009; Saunders et al., 2012), the participants in this research were the primary owners of the firms, thus monetary incentives were not crucial in enhancing the response rate of the questionnaire. It was noticeable that the

participants appreciated the subject, as it links to the daily needs of their business operations. Table 4.2 shows the number of successfully completed surveys, rejections (direct and indirect), and incomplete surveys. Moreover, the sample of 315 firms in this study was deemed reasonable and adequate compared to the previous studies on SMEs in Oman - see Table 4.3.

Table 4.2: Data collection techniques: distribution and successful completion

<b>Survey Status</b>				
<b>Method of data collection</b>	<b>Distribution size</b>	<b>Completed</b>	<b>Incomplete</b>	<b>Rejection</b>
1. SurveyMonkey	140	8	4	-
2. Trained assistant	50	19	-	-
3. Telephone interviewing	450	150	-	30 Indirect rejection
4. Delivered questionnaires	45	11	-	34 never returned
5. Interviewer-administered	230	127	-	38
<b>Total</b>	<b>915</b>	<b>315</b>	<b>4</b>	<b>107</b>

Table 4.3: Sample size of previous studies conducted in the relevant sector of this study in Oman and other countries with an oil-based economy

<b>Prior literature</b>	<b>Author/year published</b>	<b>Sample size</b>
Financing small business in Oman	Al-Kharusi (2003)	397
CBO report: Toward a growing competitive and dynamic small and medium-sized enterprises sector in Oman	Al-Barwani et al. (2014)	120
Challenges and barriers encountered by SME owners in Muscat	Christina et al. (2014)	35
Bank loan application: A profile of discouraged Malaysian SMEs	Omar and Hussin (2016)	110
Access to finance by Saudi SMEs: Constraints and the impact on their performance	Waked (2016)	290
Factors influencing small, medium and micro-sized enterprises' borrowing from banks: The case of the Botswana manufacturing sector	Mutoko and Kapunda (2017)	100
Finance and technology: Key challenges faced by Small and Medium Enterprises in Oman	Al-Buraiki and Khan (2018)	257
Insight on sustainability of small and medium enterprises in Oman: A conceptual framework	Al-Qassabi (2020)	390

#### **4.10 Ethical Considerations of the Research**

Understanding and clarifying research ethics is an important aspect to be addressed before commencing the data collection phase. O’Gorman and MacIntosh (2014) outlined the significance of ethics principles for business management research in three succinct points: simplifying and enhancing the ability to conduct a sensitive research subject, improving research findings, and enhancing researcher commitments for organisational standards. In order to consider these points and be able to obtain ethical approval from the research organisation (e.g. universities), initially, several principles of ethical research need to be considered (Collis and Hussey, 2009; Saunders et al., 2012; O’Gorman and MacIntosh, 2014). These are summarized in Table 4.4 below.

Table 4.4: Summary of principles of research ethics to be considered before data collection

<b>Principles of Research Ethics</b>	
<b>1</b>	The right of participants to anonymity must be established, so as to prevent harming them. This can be ensured during the pilot study stage by checking for signs of harm to participants, or by debriefing them.
<b>2</b>	Using a research consent form provides details about the research to help participants decide whether to take part in the research or not.
<b>3</b>	Participant information privacy and confidentiality must be ensured
<b>4</b>	The participants' right to safety must be ensured

Source from (Collis and Hussey, 2009; Saunders et al., 2012; O’Gorman and MacIntosh, 2014)

As the present research was developed to reflect non-oil-related SME issues regarding bank lending availability, and the attitudes of primary owners who are over 18 years old in the Oman credit market, it is evident that the nature of this study was not risky or was of minimal risk. However, to ensure research ethics and rights, a host of measures were considered in compliance with the University of Glasgow’s principles and rules to reduce potential risks. During all phases of data collection (i.e. telephone survey, interviewer-administered survey and online survey) the significant element in this research was upholding the rights of the participants in terms of keeping them anonymous and their information confidential. Thus, their personal information (e.g. name, address, contact details) was not required for this research, except the email addresses and contact number of the company, if they wished to know the final results of the empirical analysis. The participants were informed of the subject’s purpose and significance, and they had the right to discontinue the questionnaire at any time without giving any justification. The participants were informed that their refusal would not result in any adverse ramifications.

In order to ensure research integrity and credibility, the questionnaire was designed in the English and Arabic languages to provide participants with the choice of their preferred language. Attached to the questionnaire was the participant information sheet, containing clear details and guidelines for the questionnaires. A plain language statement was included within the information sheet, clarifying consent to participate in this research. Furthermore, the contact details of the researcher, principle supervisor and university ethics department were provided for any further issues that might be raised by the participants. All, the research

meets the requirements of the Ethics Committee Department of the University of Glasgow, and notably, the data collection was successfully completed without recording any ethical concerns.

#### **4.11 SUMMARY OF THE CHAPTER**

This chapter has presented the research philosophy, paradigm, and methodology of sampling the research population and collecting data from the primary owners of non-oil-related SMEs. It has also discussed the criteria of validity, reliability, and generalisability for constructing the research questionnaire survey. In addition, it has reflected on the significance of research ethics and meeting the requirements of the ethics committee at the University of Glasgow. This research has taken a positivist approach in conducting the study through employing the research survey strategy. The questionnaire as an instrument enabled the collection of responses from sample of 315 firms. The descriptive statistics and examination of the correlation between research variables will be discussed in the next chapters.

## **CHAPTER FIVE**

### **5. RESEARCH METHODS AND STATISTICAL ANALYSIS**

This chapter aims to discuss the methods and variable measurements of the research models. Model specifications are presented in Section 5.2, and Section 5.3 discusses the main statistical tests that are required to meet the regression analysis conditions. These tests are assumptions of normality, outliers and collinearity. In Section 5.4, the robustness checks for the issues of endogenous variables and sample selection bias are debated. Finally, Section 5.5 summarises the chapter.

#### **5.1 Research Data Measurement**

Data measurement is about identifying the data characteristics that underpin the research objectives (Ghuri and Gronhaug, 2005), which are referred to as the dependent and independent variables (O’Gorman and MacIntosh, 2014). The following section explains the definition of the research variables - see Table 5.1.

##### **5.1.1 Dependent Variables**

Following Rostamkalaei et al. (2020), the first step of the research analysis is comparing the characteristics of firms that have applied for bank loans (applicants) with those who have not applied (non-applicants). The categories of the first dependent variable are classified and measured according to the survey questions A2.1 and A3.1 in Section A – whether they have applied for bank credit or not. The dichotomous variable of applicants is measured as ‘1’, with the group of non-applicants’ firms equalling ‘0’.

As illustrated in Figure 5.1, the applicants’ firms are reported as (1) firms who applied and got the full amount of the loan successfully, (2) those who applied but got partial funding, (3) those who applied but refused bank offer, and (4) those who applied but were rejected. In contrast, ‘non-applicants’ firms’ are the businesses that need finance but have not applied, either because they were discouraged, are proceeding with informal enquiries about loan proposals but banks seem unwilling to finance them, or for any other reasons.

The second step is comparing the profiles of discouraged non-applicant firms (i.e. those who reported that they thought their loan application would not be successful) against those who had applied for bank loans.

The third step is estimating the determinants facing finance constraints by the lenders' decision. There is still no clear definition regarding credit rationing among non-oil-related SMEs. Prior studies used rates of unsuccessful loan applications (e.g. Cieply and Dejardin, 2010; Bellier et al. 2012) and others included rates of firms that did apply but was unsuccessful versus firms that had successfully applied and firms that did not apply for loan application (Altomonte et al., 2016). Freel (2007) employed successful loan application rates, while Ferrando and Mulier (2015) defined it through estimating the rates of loan rejection, bank offer refusal and partial funding. However, the current study describes the credit-constrained firms as those which have approached the banks for loans formally or informally but were unsuccessful (i.e. they rejected loan applications or refused bank offers for any reason, including those obtained informal bank rejection) as equal to '1' versus firms that had obtained a full or partial loan as equal to '0'.

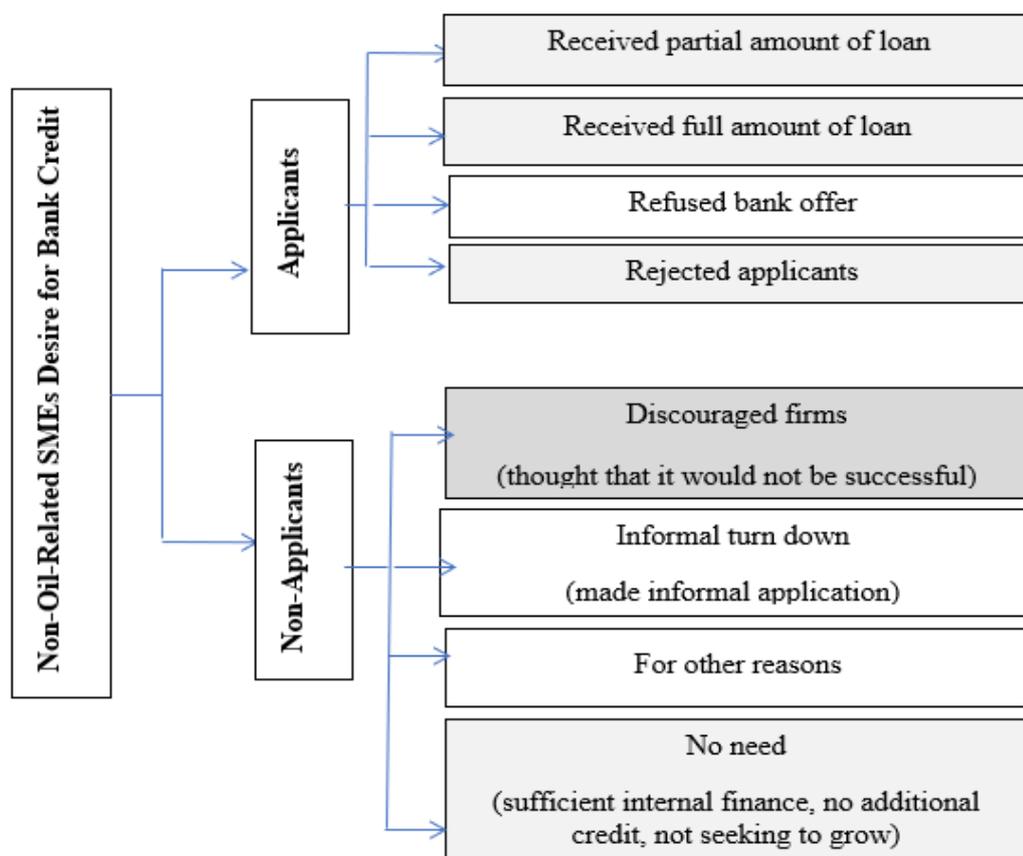


Figure 5.1: Non-oil-related SMEs Desiring Bank Credit, Constructed from the Primary Survey of this Research

Source: Adopted and modified from Freel et al. (2012).

Table 5.1: Definition of the Variables

<b>Variables</b>	<b>Definition</b>
<b>Dependent Variables</b>	
Applicants firm	Dummy variable = 1 if firms' owner applied for bank credit, while 0 if firms did not apply, despite their need for finance.
Discouraged non-applicants	Dummy variable = 1 if firms' owners need loans but did not apply because they thought it would not be successful, while 0 if firms apply for firm credit.
Credit-constrained firms	Dummy variable firms unsuccessful with bank applications, formally or informally = 1, while 0 if firms applied and obtained full or part of the loan.
<b>Explanatory Variables</b>	
<b>Firm Strategy Characteristics</b>	
Export performance intensity	Categorical variable of export ratios: did not export (reference group), less than 50% of total sales, more than 50% of total sales.
Past sales growth performance	Categorical variables for sales growth performance: Remain unchanged (reference group), decreased, and increased
Formal comprehensive business plan	Dummy variable if firm owners keep formal comprehensive business plan = 1, otherwise = 0.
Quality of audited financial report	Categorical variables for firms not hiring external audit (reference group), audited annual financial report by Big4 audit firms, and non-Big4 audit firms.
Source of financial advice	Dummy variable if firm owners use financial advice sources = 1, otherwise = 0.
<b>Banking Relationship</b>	
Length of relationship banking	Categorical variables for Length of relationship with main bank in years if more than six equal 1, otherwise equal 0.
Satisfied with banking relationship	Categorical variables if firms' owners reported dissatisfied (reference group), satisfied, and neutral
<b>Firms' Primary Owner Characteristics</b>	
Gender	Dummy variable = 1 if female; otherwise = 0 if male (a reference group).
Citizenship	Dummy variable = 1 if Omani-fronted firms; otherwise = 0 (a reference group: Omani firms).
Prior relevant business experience	Categorical variable of owners' prior relevant experience: No prior relevant business experience (a reference group), 1-5 years, 6-10 years, or more than 11 years.
Formal educational degree	Categorical variable of firms' owners of highest education degree that owner primary obtained: No formal education (reference group), high school diploma and diploma degree, and postgraduate degree (PhD, MSc).
Non-oil SME industry types	Categorical variables for manufacturing (reference group), trade and service.
<b>Control Variables</b>	
Firm age	Categorical variables of firms trading age: 1-5 year (reference group), 6-10 years, 11-15 years, and over 15 years.
Firm size	Categorical variable of firms' number of employees including owners: self-employed (reference group), 2-5 workers, 6-25 workers and 26-99 workers.

### 5.1.2 Independent Variables

To capture the effects of bank lending for non-oil-related SMEs, a set of variables has been measured by considering the theoretical and empirical basis of the literature and their validity to Oman context, which is discussed in Section 2.3. This research has expanded the investigation of the factors that would impact on the borrowing decision of the firms' primary owners- Table 5.1. The explanatory factors are firm strategy characteristics, banking relationship, primary owners and the industry sector. The firm-level strategy characteristics include export intensity (*FST\_EXP\_INTS*), past sales growth performance (*FST\_GRWT*), formal comprehensive business plan (*FST\_BP*), quality audited financial report (*FST\_AUDFR*) and using sources of financial advice (*FST-ADV*). The banking relationship is defined by the variable of duration of a firm's existing relationships with a main bank (*RE\_LEN*) and a firm's satisfaction level with their main bank (*RE\_SAT*). The characteristics of primary owners of the non-oil-related SMEs are gender (*PO\_GEN*), citizenship (*PO\_CIT*), prior relevant business experience (*PO\_EXP*) and formal educational degree (*PO\_EDU*). The industry sector type is another explanatory variable that is expected to have an influence on firms' ability to access the banks for credit (*F\_SEC*).

### 5.1.3 Control Variables

The three models' specification is controlled by firm age and/or size, because there is mostly consensus in the existing literatures about the impact of these variables on an SMEs ability to access the banks for loans. The firm age (*F\_AGE*) is measured by the categorical variables of trading years as 1-5 years, 6-10 years, 11-15 years and over 15 years. The size of the firms (*F\_SIZE*) is a categorical variable of the number of employees, including the firms' owners.

## 5.2 Models Specification

One widely-used regression analysis is the linear probability model (e.g. Ordinal Least Square model (OLS)) (Nabavi and Olson, 2019), however, there are some limitations that would violate the analysis findings. One of the fundamental problems is that the analysis may lead to predicting probabilities outside the limit 0 and 1 (i.e.  $\hat{y} < 0$  or  $\hat{y} > 1$ ) (Heeringa et al., 2017). The regression of the linear probability model is subject to serious heteroskedastic consequences when the error variances are not constant, which would lead

to bias and violate the estimation of standard error (Welc and Esquerdo, 2018). Thus, OLS would not be the appropriate regression for this research because the estimation will be given only for those who have applied for bank credit; hence, the results are biased.

An alternative regression analysis is the probit or logit regression analysis, which predicts binary outcomes for the non-linear response probability (Wooldridge, 2013; Heeringa et al., 2017). The non-linear regression is appropriate when dealing with dichotomous dependent variables where the probability outcome is bound between the range of 0 and 1 (Heeringa et al., 2017). The probit and logit models conclude with similar inferences despite their difference in terms of error distribution (ibid). Greene (2000: 815) as cited in Borooah (2002: 7) stated that, ‘it is difficult to justify the choice of one distribution over the other on theoretical grounds [...] in most applications, it seems not to make much difference.’ Therefore, prior studies pointed out that researchers can choose between one estimate or another, unless there is no substantial difference in inferences; then, it is important to consider the appropriate model for the analysis (Liao, 1994). Furthermore, previous studies, such as Cowling et al. (2012) and Gama et al. (2017), chose probit over logit estimates because there was no significant difference in inferences. Compared to logit estimates, it is ‘stated that the loss of nuance from using the binary probit model is relatively minor’ (Freel et al., 2012:408).

Similarly, to estimate the correlation and impact between the dependent variable and the characteristics of firm-level strategy, banking relationship and primary owner characteristics, after controlling for general firm age and size, the following formal probit equation is considered in this study since the empirical findings were almost similar:

$$\Pr(Y_i=1| X_i) = \Phi (\beta_0 + \beta_1 X_1)$$

$$\Phi(z) = P(Z \leq z), Z \sim N (0,1)$$

$$P(Y=1| X_1, X_2, \dots, X_k) = \Phi (\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_k X_k)$$

$$P(Y) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots + \beta_k X_k + \varepsilon$$

$$Y_i = \begin{cases} 1 & \text{if } Y_i^* > 0 \\ 0 & \text{if } Y_i^* \leq 0 \end{cases}$$

Where  $\Phi$  is the cumulative standard normal distribution function, a change in  $z$  attributed to one unit change in  $X$ . Thus, the equations of this study are written as the following:

$$App\_Bnk = \beta_0 + \beta_1 FST_{i,k} + \beta_2 REB_{i,k} + \beta_3 PO_{i,k} + \beta_4 SEC + Control + \varepsilon \dots\dots\dots(E1)$$

The probability ( $p$ ) of  $y$  is the dependent variable of limited value which equals ‘1’ if the primary owners of the non-oil-related SMEs have applied for bank loans and equals ‘0’ if they have not applied (i.e. Applicants Firms versus non-applicants Firms). The binary outcome is  $Y_i = 1$  if  $Y_i^* > 0$ , and  $Y_i = 0$  if  $Y_i^* \leq 0$ .

$$Disc\_Non = \beta_0 + \beta_1 FST_{i,k} + \beta_2 REB_{i,k} + \beta_3 PO_{i,k} + \beta_4 SEC + Control + \varepsilon \dots\dots\dots(E2)$$

The probability ( $p$ ) of  $y$  is the dependent variable of limited value which equals ‘1’ if the primary owners of the non-oil related SMEs have not applied for bank loans because of fear of rejection and equals ‘0’ if they have applied (i.e. discouraged non-applicants versus applicants). The binary outcome is  $y_i = 1$  if  $Y_i^* > 0$ , and  $Y_i = 0$  if  $Y_i^* \leq 0$ .

$$Cred\_Const = \beta_0 + \beta_1 FST_{i,k} + \beta_2 REB_{i,k} + \beta_3 PO_{i,k} + \beta_4 SEC + Control + \varepsilon \dots\dots\dots(E3)$$

The probability ( $p$ ) of  $y$  is the dependent variable of limited value which equals ‘1’ if the primary owners of the non-oil related SMEs have applied for bank loans but were not successful and equals ‘0’ if firms applied and obtained full or part of their finance. The binary outcome is  $Y_i = 1$  if  $Y_i^* > 0$ , and  $Y_i = 0$  if  $Y_i^* \leq 0$ .

Where:

Subscript $i$	Denotes firms
$App\_Bnk$	Applied for bank credit
$Disc\_Non$	Discouraged non-applicants’ firms
$Cred\_Const$	Credit constrained Firms
$\beta_0$	Constant term
$FST$	Set of firm-level strategy characteristics
$BRE$	Banking relationship characteristics
$PO$	Set of primary owners’ characteristics
$SEC$	Industry sector
$Controls$	Firm age and/or size

### **5.3 Statistical Analysis**

Statistical analysis is about describing the research data through measuring central tendency, dispersion and asymmetry by employing univariate analysis (testing one variable at a time), bivariate analysis (testing two variables at a time) or multivariate analysis (testing multiple variables at a time) (Sahu, 2013). Before performing these analyses, the following assumptions were examined to verify and ascertain the reliability of the findings, hence, ensure that the nonlinear regression is the suitable method of analysis for this study. The Stata software is used to perform the statistical tests.

#### **5.3.1 Diagnosing Normality**

Normal distribution refers to the nature of the data frequency distribution (Sahu, 2013), explained by standard deviation and the mean of the data, and which indicates a perfectly symmetrical bell-shaped distribution (Collis and Hussey, 2009). Along with the normal quantile plot (Appendix I), the nature of the collected data confirms that none of the data meets the assumption of normal distribution. Therefore, the conclusion is that, since the research data does not show a clear normal distribution state, the analysis of the study will proceed with non-parametric statistical tests. This statistical test aligns with the standards of the non-linear regression analysis (Field, 2009), which is suggested to be employed for this study.

#### **5.3.2 Diagnosing Dataset Outliers**

A further test that is required for probit model development and validation is to detect the presence of influential outliers within the dataset. Outliers are observations (i.e. respondents' information) that are significantly different from most or all other cases in the sample data (Zhang, 2016). As a result, a significant impact on model fit may distort the estimation of the parameters (Pereira et al., 2018). To detect potential influential observations there are sets of statistical graphics and numerical methods applied to predict three types of residual measures: (1) Pearson residual – similar to Studentized residual, (2) Deviance residual measures the difference between the observed log likelihood and the fitted log likelihood in purpose to minimize the total of the deviance residual, and (3) Pregibon leverage - sometimes refer it to as hat diagonal leverage – estimates the leverage of observations influence on model fit and regression coefficient (Field, 2009; Field, 2013; Zhang, 2016). However, since

the nature of the current research data is categorical variables (i.e. limited by codes of 0 to 1 or 0, 1, 2 ...), a test of normal quantile plot was used to examine whether the data disperses away from its normal base as suggested by Meloun et al. (2010) and Cox (2012) and (2013). The outcomes of the graphs conclude that there is no evidence of existing outliers within the dataset of the model see Appendix I.

### **5.3.3 Diagnosing Multicollinearity of Explanatory Variables**

Multicollinearity is one major issue that would violate the inference outcomes (Sahu, 2013; Becker et al., 2015; Stockemer, 2018). Welc and Esquerdo (2018: 120) defined multicollinearity as, ‘at least one of the explanatory variables showing a statistically significant linear relationship with at least one of the remaining explanatory variables.’ The problem with multicollinearity is that it severely understates the *t*- statistics of the independent variables, causing contradictory and violating inferences (Welc and Esquerdo, 2018). Correlation coefficient matrix (K-Pearson and Spearman) and Variance Inflation Factor (VIF) tests are widely used to examine the issue of multicollinearity (O’Gorman and MacIntosh, 2014; Hair et al., 2019). The VIF measures the size of the variance inflation of the regression coefficient, which may point to multicollinearity within the econometric model. It is argued that critical collinearity issues are recorded when VIF values are five or more (Welc and Esquerdo, 2018; Hair et al., 2019). Nevertheless, Becker et al. (2015) stated that collinearity problems could even exist with a VIF value of three. Therefore, the statisticians agreed that the ideal VIF value should be three or less (Hair et al., 2019), while the tolerance value should be greater than zero (Gujrati, 2003).

For the present study, the VIF and Tolerance values are calculated by using the syntax command on Stata software: ‘collin.’ As shown in Tables 5.2, the total mean of VIF values reflects an optimistic expectation about the VIF values of each explanatory variable for the three models. Also, for those models, the results of the maximum VIF values are less than three and Tolerance values are greater than zero, indicating that there is no evidence of an existing serious problem of multicollinearity within the models.

Table 5.2: Evaluating VIF and Tolerance values

Loan Applicant Firms Model (1)			Discouraged Nonapplicants Model (2)		Credit Constrained Firms Model (3)	
Variable	VIF	Tolerance	VIF	Tolerance	VIF	Tolerance
Y	1.18	0.848	1.21	0.826	1.30	0.771
FST_EXP	1.36	0.736	1.42	0.702	1.54	0.649
FST_GRWT	1.18	0.845	1.16	0.861	1.19	0.837
FST_BP	1.38	0.725	1.31	0.763	1.27	0.787
FST_AUD	1.65	0.606	1.67	0.598	1.56	0.641
FST_ADV	1.17	0.857	1.15	0.871	1.30	0.769
RE_LEN	1.52	0.658	1.49	0.672	1.39	0.716
RE_SAT	1.05	0.947	1.07	0.935	1.16	0.863
PO_GEN	1.25	0.802	1.26	0.796	1.20	0.831
PO_CIT	1.32	0.758	1.29	0.778	1.23	0.813
PO_EXP	1.2	0.833	1.22	0.817	1.31	0.766
PO_EDU	1.22	0.820	1.19	0.841	1.41	NA
F_SEC	1.36	0.737	1.37	0.728	1.65	0.709
F_SIZE	1.85	0.541	1.9	0.527	1.30	0.604
F_AGE	1.7	0.589	1.64	0.608	1.54	NA
<b>Mean VIF</b>	<b>1.36</b>		<b>1.36</b>		<b>1.36</b>	

**Note:** See the next page for the definition of the variables.

Furthermore, Spearman's rank correlation is used to measure the association among the categorical variables. Collis and Hussey (2009) reported that when the correlation coefficient is less than 0.7, it is suggesting that there are no concerns of multicollinearity issues. Previous studies, such as Freel et al. (2012) and Gama et al. (2017), have applied a correlation matrix to assess the presence of multicollinearity. For the models of financially discouraged firms and firms applying for a bank loan, the Spearman's correlation matrix indicates that the highest correlation value of coefficient is 0.519 and 0.549, respectively, as displayed in Tables 5.3 and 5.4. For the credit constraint model, Table 5.6 shows that the highest value of variable correlation coefficient is 0.437. These results are all less than 0.7, confirming that there is no multicollinearity existing among the variables. Thus, the present study can conclude that there is no major violation of multicollinearity over the probit assumptions.

Table 5.3: Spearman Correlation Matrix among Independent Variables, Firms Applied for Bank Loan Model

	APP_NAP	1	2	3	4	5	6	7	8	9	10	11	12	13	14
APP_NAP	1.000														
FST_EXP	-0.001	1.000													
FST_GRWT	0.022	0.140**	1.000												
FST_BP	0.153**	0.169**	0.272*	1.000											
FST_AUD	0.094	0.365*	-0.093	0.067	1.000										
FST_ADV	0.199*	0.030	0.038	0.066	0.009	1.000									
RE_LEN	-0.058	0.186*	-0.119	-0.067	0.253*	-0.079	1.000								
RE_SAT	-0.054	0.004	0.107	-0.038	-0.096	0.109	-0.076	1.000							
PO_GEN	-0.034	-0.088	0.110	0.045	-0.230*	0.084	0.079	0.065	1.000						
PO_CIT	-0.149**	-0.053	-0.148**	-0.258*	0.157**	-0.062	0.154**	0.047	-0.240*	1.000					
PO_EXP	0.017	0.106	-0.176*	-0.126	0.172*	-0.058	0.278*	-0.057	0.021	0.227*	1.000				
PO_EDU	0.044	0.001	0.105	0.305*	0.112	0.002	-0.118	0.034	-0.026	-0.045	-0.121	1.000			
F_SEC	-0.054	-0.325*	0.165**	0.043	-0.317*	0.198*	-0.199*	0.047	0.146**	-0.183*	-0.156**	0.027	1.000		
F_SIZE	0.201*	0.296*	-0.041	0.213*	0.534*	-0.119	0.225*	-0.145**	-0.297*	0.149**	0.130**	0.120	-0.395*	1.000	
F_AGE	0.076	0.228*	-0.178*	-0.127	0.371*	-0.081	<b>0.549*</b>	-0.097	-0.056	0.088	0.249*	-0.205*	-0.233*	0.285*	1.000

**Notes:** The variables are denoted as follows: *FST\_EXP* export intensity, *FST\_GRWT* sales growth, *FST\_BP* business plan, *FST\_AUD* audited financial report by Big4 or non-Big4 audit firms, *FST\_ADV* using financial advice source, *RE\_LEN* duration of bank-firm relationship, *RE\_SAT* level of stratification with main bank, *PO\_GEN* primary owner gender, *PO\_CITZ* primary owner citizenship (i.e. Omani and Omani-fronted firm), *PO\_EXP* primary owner prior experience of relevant business, *PO\_EDU* primary owner highest formal education degree, *F\_SEC* firms sector, *F\_AGE* firm age and *F\_SIZE* firm employees number including the owners. \* denotes the significance level at 1% and \*\* the significance level at 5%.

Table 5.4: Spearman Correlation Matrix among Independent Variables, Discouragement Model

	DIS_F	1	2	3	4	5	6	7	8	9	10	11	12	13	14
DIS_F	1.000														
FST_EXP	0.008	1.000													
FST_GRWT	-0.035	0.137**	1.000												
FST_BP	-0.165**	0.176**	0.232*	1.000											
FST_AUD	-0.089	0.408*	-0.080	0.076	1.000										
FST_ADV	-0.196*	0.054	0.036	0.073	0.001	1.000									
RE_LEN	0.079	0.232*	-0.107	-0.045	0.269*	-0.111	1.000								
RE_SAT	0.057	-0.011	0.124	-0.033	-0.130	0.082	-0.045	1.000							
PO_GEN	0.035	-0.083	0.116	0.038	-0.215*	0.053	0.077	0.088	1.000						
PO_CIT	0.158**	-0.044	-0.133	-0.226*	0.126	-0.037	0.136	0.061	-0.234*	1.000					
PO_EXP	-0.054	0.147**	-0.161**	-0.122	0.197*	-0.076	0.274*	-0.024	-0.018	0.231*	1.000				
PO_EDU	-0.053	-0.014	0.049	0.269*	0.131	0.035	-0.092	0.044	0.006	-0.016	-0.099	1.000			
F_SEC	0.067	-0.329*	0.162**	0.030	-0.346*	0.146**	-0.228*	0.018	0.150**	-0.163**	-0.171**	0.013	1.000		
F_SIZE	-0.212*	0.347*	-0.038	0.218*	0.511*	-0.122	0.234*	-0.165*	-0.308*	0.107	0.144**	0.130	-0.428*	1.000	
F_AGE	-0.062	0.258*	-0.148**	-0.094	0.392*	-0.103	<b>0.519*</b>	-0.075	-0.057	0.053	0.253*	-0.163**	-0.244*	0.297*	1.000

Table 5.5: Spearman Correlation Matrix among Independent Variables, Credit Constraint Model

	CD_CONST	1	2	3	4	5	6	7	8	9	10	11	12
CD_CONST	1.000												
FST_EXP	-0.141	1.000											
FST_GRWT	-0.145	-0.003	1.000										
FST_BP	-0.221**	0.113	0.190*	1.000									
FST_AUD	-0.070	0.411*	-0.207*	-0.121	1.000								
FST_ADV	-0.038	0.005	-0.021	-0.045	-0.117	1.000							
RE_LEN	-0.083	0.335*	0.101	-0.046	0.365*	-0.224**	1.000						
RE_SAT	-0.090	0.064	0.183	0.064	-0.032	0.265*	-0.078	1.000					
PO_GEN	0.213**	-0.096	0.135	0.158	-0.221*	0.065	0.002	0.005	1.000				
PO_CIT	0.107	-0.009	-0.164	-0.261*	0.254*	-0.017	0.150	-0.059	-0.142	1.000			
PO_EXP	0.204**	0.237**	-0.112	-0.133	0.272*	-0.036	0.242**	-0.093	-0.048	0.219**	1.000		
F_SEC	0.139	-0.421*	0.129	0.035	-0.402*	0.206**	-0.268*	0.129	0.109	-0.109	-0.252*	1.000	
F_SIZE	-0.150	<b>0.437*</b>	-0.056	0.135	0.408*	-0.266*	0.307*	-0.064	-0.194**	0.183	0.270*	-0.419*	1.000

## 5.4 Robustness Checks

Besides the statistical tests mentioned above for verifying analysis robustness, sample selection bias and endogeneity among variables are major concerns of empirical analysis that need to be checked before performing the non-linear regression. The interest of this research is in distinguishing between a non-oil-related SMEs desire for bank credit, whether they had access to credit or not, and those who have not accessed the banks, either because they were discouraged from borrowing, or had not accessed the banks for another reason or they did not need credit. This scenario may cause the issue of self-selection bias (e.g. a firm owner's selection) or sample selection bias (Woodridge, 2002). Thus, many prior studies of the relevant subject were concerned about the existence of selection bias (e.g. Krasniqi, 2010; Freel et al., 2012; Cowling et al., 2016). Krasniqi (2010) argued that the only observable cases for the binary probit analysis are those who have applied for bank funding, while the demand pool includes an unobservable group of discouraged firms that need finance but did not apply. By ignoring this group, it is implied that the analysis outcomes of the credit demand do not represent the population. Another study revealed that a sub-sample of those desiring credit comprises other unobservable cases of firms that do not need credit, which should be distinguished before performing the analysis (Freel et al., 2012).

To avoid this issue, the primary survey of this study was constructed in a way that helps to distinguish a firm's status for bank credit. The questionnaire was divided into sections, which identify each different group of non-oil-related SMEs and their desire for bank credit separately and distinctly – see Figure 5.1. Furthermore, following previous studies (e.g. Freel et al., 2012) the Heckman Selection Model (HSM) is employed to assess the potential of the selectivity problem by examining the correlation between research interest models of discouragement, credit constraint, applying to bank credit (first equations) and credit desire (selection equation).

The selection equation of the HSM should include at least one valid and strong Instrument Variable (IV) (known also as exclusion restriction) that is not in the first part of the equation. The appropriate IV should be strongly correlated with endogenous variables but not correlated with exogeneous variables; otherwise, the results are biased (Cowling et al., 2016). Previous studies used employment growth and growth intention as instrument variables (e.g. Freel et al., 2012; Rostamkhalaei et al., 2020). The current study considered employment growth, asset and

cashflow growth as instrument variables. The correlation means that firms' growth in their employment, assets or cash flow may stimulate firms' financial needs to expand their investments, but it does not impact on their decision whether to apply for bank loans or not. Firms might apply when there is need to finance their ventures, or they might not either because of fear of bank rejection or for other reasons.

To ensure the use of appropriate exclusion variables, Sargan (1958) suggested an over-identifying instruments test to evaluate their validity for the instrument variables. The test of weak instruments is proposed by Stock and Yogo (2005), based on Cragg and Donald's (1993) *F*-statistic. The test is applied after performing the regression of the Pseudo- two-Stage Least Square (2SLS).

As shown on Table 5.6, the Cragg–Donald *F*-statistics are greater than the critical value of 10 (Stock and Yogo, 2005) and the null hypothesis of weak instruments is rejected. This indicates that the instrument variables of employment growth are not weak. For all of the regressed models, the Sargan tests of over-identifying with *P*-value > 0 indicate that the null hypothesis that the instruments are valid cannot be rejected.

Table 5.6: *F*-statistics Value of the Research Models

	<b>Loan Applicant Firms Model (1)</b>	<b>Discouraged Non-applicants Model (2)</b>	<b>Credit Constrained Firms Model (3)</b>
Cragg-Donald <i>F</i> -statistics	39.80	80.8	24.6

To estimate the HSM, two equations are employed for the research models, as illustrated below:

**Main Regression Equation:**

$$App\_Bnk (y) = \beta_0 + \beta_1 FST_{i,k} + \beta_2 REB_{i,k} + \beta_3 PO_{i,k} + \beta_4 SEC + Control + \varepsilon_{ji}, \dots \dots \dots (E4)$$

**Selection Equation: Assuming that *App\_Bnk* is observed only if**

$$CD\_DRD (y_{i2}) = \delta FST\_GRWT + \delta FC\beta + \alpha INS\_VARS + \varepsilon_{2i}, > 0 \text{ i.e. } y = 1 \text{ if } y_{i2}^* > 0, \text{ and } y_i = 0 \text{ otherwise} \dots\dots\dots (E4.1)$$

$$Disc\_Non = \beta_0 + \beta_1 FST_{i,k} + \beta_2 REB_{i,k} + \beta_3 PO_{i,k} + \beta_4 SEC + Control + \varepsilon_{ji} \dots\dots\dots (E5)$$

$$CD\_DRD (y_{i2}) = \delta FST\_GRWT + \delta FC\beta + \alpha INS\_VARS + \varepsilon_{2i} \dots\dots\dots (E5.1)$$

$$Cred\_Const = \beta_0 + \beta_1 FST_{i,k} + \beta_2 REB_{i,k} + \beta_3 PO_{i,k} + \beta_4 SEC + Control + \varepsilon_{2i} \dots\dots\dots (E6)$$

$$CD\_DRD (y_{i2}) = \beta_0 + \beta_1 FST_{i,k} + \beta_2 REB_{i,k} + \beta_3 PO_{i,k} + \beta_4 SEC + Control + \varepsilon_{ji} \dots\dots\dots (E6.1)$$

Where the first equations E4, E5 and E6 indicate main regression to estimate the probability outcome ‘ $y_i$ ’. The vector of exogenous variables  $x_i$  for the equation are firm-level strategy, relationship banking, primary owner characteristics and firm characteristics including control variables. The second equations E4.1, E5.1, and E6.1 are the sample selection, where  $y_{i2}^*$  is the latent groups of whether firms need a loan or not for bank credit, which is observed only if  $y_{i2}^* = 1$ . In other words, the equations of the sample selection are modelled as a function of sales growth performance and firm characteristics ( $FC\beta$ ), involving instrumental variables ( $INS\_VARS$ ) of employment growth, asset growth, and cashflow growth that are correlated with a firm’s desire for loans ( $CD\_DRD$ ) but does not influence the firm’s decision of whether to apply for bank credit or not.

As shown in Table 5.7, the model is correctly specified. The estimates of the inverse Mill’s ratio (reported as  $\lambda_i$ ) of the three models’ analysis are not a significant (P-value > 0.05), implying that the data consistent with no selection (i.e. selection bias is not a significant issue). This indicates that it is possible employing binary probit regression for the analysis.

Table 5.7: Shows Results of Heckman Selection Model Analysis

	<b>Loan Applicant Firms Model (1)</b>	<b>Discouraged Non-applicants Model (2)</b>	<b>Credit Constrained Firms Model (3)</b>
<b>Lambda</b>	-0.080	0.105	0.064
<b>P-value</b>	0.652	0.583	0.702
<b>Z</b>	-0.45	0.55	0.38
<b>Rho</b>	0.251	-0.192	0.169
<b>Sigma</b>	0.420	0.420	0.384
<b>Observations (n)</b>	315	293	197
<b>Selected</b>	228	206	110
<b>Non-selected</b>	87	87	87
<b>Wald chi2(26)</b>	97.43	94.48	47.34
<b>Prob &gt; chi2</b>	0.00	0.00	0.00

Moreover, the 2SLS was applied to test for endogeneity issues with the binary responses, as suggested by Angrist (2001). It is important to point out that the HSM and probit model also provide notes when any existing correlations within the regression are omitted, and they fit the model on the remaining data (Stata Base Reference Manual, 2019). Previous empirical studies considered the effect of credit rationing on exporter firms (Manova, 2012; Altomonte et al., 2016), while other studies have used various financial ratios of firms to estimate their financial constraints (e.g. Jinjarak. and Wignaraja, 2016; McCarthy et al., 2017). Thus, there was a concern that there may be an endogeneity problem between exporting and financial constraints. With respect to the current study, there is a lack of evidence on the impact of financial constraints on the proposed factors of non-oil-related SMEs in Oman. However, as a robustness check, the current study suggests examining the variables of export intensity, formal business plan, audited financial report, use of financial advice, duration of the firm-banking relationship, and formal education level of the business owner, as these are may be susceptible to endogeneity issues when studying financial constraints for the SME sector. The results of the Durbin-Wu-Hausman Endogeneity Test confirm that there is no evidence of existing endogeneity among the variables, as shown in Table 5.8. Since there is no problem of endogeneity or sample selection bias, the current study will apply the standard probit regression, as recommended by the Stata Base Reference Manual (2019)

Table 5.8: Results of Endogeneity Tests

Variables	The Durbin-Wu-Hausman test	The Sargan tests of overidentifying instruments
<b>Model 1: Loan Applicants</b>		
Export Intensity	Durbin (score) $\chi^2(1) = 0.294$ ( $p = 0.961$ ) Wu-Hausman $F(3,198) = 0.085$ ( $p = 0.968$ )	Sargan (score) $\chi^2(3) = 1.557$ ( $p = 0.191$ ) Basmann $\chi^2(3) = 1.368$ ( $p = 0.504$ )
Past Sales Growth	Durbin (score) $\chi^2(1) = 2.677$ ( $p = 0.633$ ) Wu-Hausman $F(3,198) = 0.500$ ( $p = 0.682$ )	Sargan (score) $\chi^2(3) = 1.541$ ( $p = 0.910$ ) Basmann $\chi^2(3) = 0.162$ ( $p = 0.921$ )
Formal Business Plan	Durbin (score) $\chi^2(1) = 0.023$ ( $p = 0.988$ ) Wu-Hausman $F(2,199) = 0.01$ ( $p = 0.989$ )	Sargan (score) $\chi^2(3) = 1.868$ ( $p = 0.494$ ) Basmann $\chi^2(3) = 1.636$ ( $p = 0.651$ )
Audited Financial Report	Durbin (score) $\chi^2(1) = 0.225$ ( $p = 0.973$ ) Wu-Hausman $F(2,199) = 0.065$ ( $p = 0.978$ )	Sargan (score) $\chi^2(3) = 1.656$ ( $p = 0.436$ ) Basmann $\chi^2(3) = 1.456$ ( $p = 0.651$ )
Financial Advice	Durbin (score) $\chi^2(1) = 0.033$ ( $p = 0.983$ ) Wu-Hausman $F(2,199) = 0.014$ ( $p = 0.985$ )	Sargan (score) $\chi^2(3) = 1.871$ ( $p = 0.599$ ) Basmann $\chi^2(3) = 1.638$ ( $p = 0.650$ )
Firm-Banking Relationship Length	Durbin (score) $\chi^2(1) = 0.041$ ( $p = 0.979$ ) Wu-Hausman $F(2,199) = 0.017$ ( $p = 0.982$ )	Sargan (score) $\chi^2(3) = 1.860$ ( $p = 0.601$ ) Basmann $\chi^2(3) = 1.628$ ( $p = 0.652$ )
Formal Education Level	Durbin (score) $\chi^2(1) = 1.855$ ( $p = 0.602$ ) Wu-Hausman $F(2,199) = 0.541$ ( $p = 0.654$ )	Sargan (score) $\chi^2(3) = 0.020$ ( $p = 0.989$ ) Basmann $\chi^2(3) = 0.017$ ( $p = 0.991$ )
<b>Model 2: Discouraged Non-applicants</b>		
Export Intensity	Durbin (score) $\chi^2(1) = 1.653$ ( $p = 0.647$ ) Wu-Hausman $F(3,176) = 0.474$ ( $p = 0.7$ )	Sargan (score) $\chi^2(3) = 0.623$ ( $p = 0.732$ ) Basmann $\chi^2(3) = 0.537$ ( $p = 0.764$ )
Sales Growth	Durbin (score) $\chi^2(1) = 2.237$ ( $p = 0.524$ ) Wu-Hausman $F(3,176) = 0.644$ ( $p = 0.587$ )	Sargan (score) $\chi^2(3) = 0.173$ ( $p = 0.917$ ) Basmann $\chi^2(3) = 0.149$ ( $p = 0.928$ )

Table 5.8 (Continued)

Formal Business Plan	Durbin (score) $\chi^2(1) = 0.809$ ( $p = 0.667$ ) Wu-Hausman F (2,177) = 0.349 ( $p = 0.705$ )	Sargan (score) $\chi^2(3) = 1.1244$ ( $p = 0.742$ ) Basmann $\chi^2(3) = 1.069$ ( $p = 0.784$ )
Audited Financial Report	Durbin (score) $\chi^2(1) = 0.354$ ( $p = 0.949$ ) Wu-Hausman F (3,176) = 0.101 ( $p = 0.959$ )	Sargan (score) $\chi^2(3) = 1.904$ ( $p = 0.385$ ) Basmann $\chi^2(3) = 1.651$ ( $p = 0.437$ )
Financial Advice	Durbin (score) $\chi^2(1) = 0.041$ ( $p = 0.979$ ) Wu-Hausman F (2,177) = 0.017 ( $p = 0.982$ )	Sargan (score) $\chi^2(3) = 2.367$ ( $p = 0.499$ ) Basmann $\chi^2(3) = 2.046$ ( $p = 0.562$ )
Firm-Banking Relationship Length	Durbin (score) $\chi^2(1) = 0.036$ ( $p = 0.981$ ) Wu-Hausman F (2,177) = 0.015 ( $p = 0.984$ )	Sargan (score) $\chi^2(3) = 2.369$ ( $p = 0.499$ ) Basmann $\chi^2(3) = 2.048$ ( $p = 0.562$ )
Formal Education Level	Durbin (score) $\chi^2(1) = 1.290$ ( $p = 0.731$ ) Wu-Hausman F (3,176) = 0.369 ( $p = 0.774$ )	Sargan (score) $\chi^2(3) = 0.778$ ( $p = 0.677$ ) Basmann $\chi^2(3) = 0.671$ ( $p = 0.714$ )
<b>Model 3: Credit constrained Firms</b>		
Export Intensity	Durbin (score) $\chi^2(1) = 0.422$ ( $p = 0.935$ ) Wu-Hausman F (3,85) = 0.109 ( $p = 0.954$ )	Sargan (score) $\chi^2(3) = 3.306$ ( $p = 0.191$ ) Basmann $\chi^2(3) = 2.664$ ( $p = 0.263$ )
Past Sales Growth	Durbin (score) $\chi^2(1) = 2.677$ ( $p = 0.444$ ) Wu-Hausman F (2,85) = 0.706 ( $p = 0.550$ )	Sargan (score) $\chi^2(3) = 1.541$ ( $p = 0.462$ ) Basmann $\chi^2(3) = 1.222$ ( $p = 0.542$ )
Formal Business Plan	Durbin (score) $\chi^2(1) = 1.557$ ( $p = 0.458$ ) Wu-Hausman F (2,86) = 0.617 ( $p = 0.541$ )	Sargan (score) $\chi^2(3) = 2.396$ ( $p = 0.494$ ) Basmann $\chi^2(3) = 1.893$ ( $p = 0.594$ )
Audited Financial Report	Durbin (score) $\chi^2(1) = 0.354$ ( $p = 0.949$ ) Wu-Hausman F (3,176) = 0.101 ( $p = 0.959$ )	Sargan (score) $\chi^2(3) = 1.904$ ( $p = 0.385$ ) Basmann $\chi^2(3) = 1.651$ ( $p = 0.437$ )
Financial Advice	Durbin (score) $\chi^2(1) = 0.450$ ( $p = 0.798$ ) Wu-Hausman F (2,86) = 0.176 ( $p = 0.838$ )	Sargan (score) $\chi^2(3) = 3.582$ ( $p = 0.310$ ) Basmann $\chi^2(3) = 2.861$ ( $p = 0.413$ )
Firm-Banking Relationship Length	Durbin (score) $\chi^2(1) = 0.696$ ( $p = 0.706$ ) Wu-Hausman F (2,86) = 0.273 ( $p = 0.761$ )	Sargan (score) $\chi^2(3) = 3.319$ ( $p = 0.345$ ) Basmann $\chi^2(3) = 2.644$ ( $p = 0.449$ )

## **5.5 SUMMARY OF THE CHAPTER**

This chapter presented definition of the independent and control variables that are employed to estimate three probit models: Discouraged non-applicants, firms access to credit and credit-constrained firms. Then, the chapter discussed the findings of testing assumptions of outliers and collinearity among the variables. Additionally, to verify the possibility of existing endogenous variables and sample selection bias issues in the research models, HSM and 2SLS were employed. Detailed discussions on the descriptive statistics and probit models findings will be presented in Chapter 7 and Chapter 8. Respectively.

## **CHAPTER SIX**

### **6. DESCRIPTIVE STATISTICS AND ANALYSIS OF RESEARCH DATA**

This chapter covers three main research objectives. First, this chapter presents the descriptive statistics about non-oil-related SMEs' demands for bank credit in Oman, regardless of whether or not firms sought finance when they needed it. Sub-section 6.1.2 discusses the status of firms that had approached the bank for loans, including explanations about the types of finance, the reasons for seeking funding, the types of banks they approached, the borrowing costs and the loan payment duration.

The following section discusses the reasons why firms refused bank offers or were rejected by banks and how this impacted their business growth. Second, sub-section 6.1.3 presents a discussion of firms that desired bank credit but did not apply for it and the impact of this decision on their business growth. Third, the chapter presents a description of the research explanatory variables (i.e. firm strategy characteristics, firm banking relationship, and demographics of firms and primary owners) that are predicted to influence firms' demand for credit (see Section 6.2). The chapter provides descriptive statistics to compare discouragement incidents with credit constraints among firms – Section 6.4.

Before initiating the descriptive analysis, it is important to clarify that this study's questionnaire targeted only SMEs that were not part of or did not trade in the oil sector in the Sultanate. Examples of other sectors that were excluded are large private companies, government companies and small and medium FDI companies, because these firms have more opportunities to successfully access channels of external financing, such as the stock market or banks. Moreover, out of the 915 questionnaires distributed, this study was able to collect 315 that were successfully completed. These responses represented 45.1% of micro-sized firms, 33.9% of small firms, and 21% of medium firms. The following sections provide background information about these firms' different demands for bank finance and the factors that impacted this demand.

Table 6.1: Completed Questionnaires by Firm Size

<b>Firm Size</b>	<b>Freq.(n)</b>	<b>Per. (%)</b>
Micro firms	142	45.1
Small firms	107	33.9
Medium firms	66	21.0

### 6.1 Firms' Demand for Bank Credit

The following sub-sections provide background information about the various demands for bank finance. The respondents were asked whether or not they had experienced a need for bank finance over the last 4 years. If they had, they were categorised according to their actions into 'Applicants' or 'Non-applicants', as shown in Table 6.2.

Table 6.2: Firms' Demand for Bank Credit

<b>Bank Credit Desire Categories</b>		<b>Freq. (n)</b>	<b>Per. (%)</b>
<b>No Need for Credit</b>		87	27.6
<b>Applicants (n=103)</b>	Received full amount of funding	57	18.1
	Received partial funding	20	6.3
	Refused bank offer	6	1.9
	Denied	20	6.3
<b>Non-applicants (n=125)</b>	Discouraged non-applicants	103	32.7
	Informal turndown (direct discouragement)	7	2.0
	Non-applicants for another reasons	15	4.7
<b>Total</b>		<b>315</b>	<b>100</b>

### 6.1.1 Non-oil-related SMEs That Did Not Need Credit

Question A3.1 helped to identify firms that have not applied for credit simply because they have no need for it. This has helped to avoid the bias that some previous studies were not able to verify. For instance, this may be because they used secondary data, which does not differentiate firms that had no desire for credit from those that needed credit. Freel et al. (2012) employed the Heckman Selection Model (HSM) to correct the selection bias that existed within the research sample. The survey in the present study disclosed that 87 firms (27.6% of the total sample) reported that they had no need for bank finance since they were not seeking growth (n = 19), they did not need additional credit (n= 10), or they had sufficient internal finance (n= 58). As displayed in Table 6.3, 43.7% of micro-sized firms reported having no need to access bank finance, as did 28.7% of small firms and 27.6% of medium-sized firms.

Table 6.3: No Need for Bank Credit Sample by Firm size

Non-Applicants Firms	Firm Size – Per. (%)		
	Micro	Small	Medium
No Need	43.7	28.7	27.6

### 6.1.2 Non-Oil-Related SMEs Needing Credit: Access to Banks

This section presents the data on non-oil-related SMEs that sought bank loans between 2014 and 2017. The survey disclosed that within the total sample of 315 firms, 103 had applied for loans, representing 32.6% of all firms. Among the applicant firms, the majority (74.7%) documented that they had received finance from bank: 55.3% of applicant firms had obtained a full loan successfully, and 19.4% of applicant firms obtained partial funding. On the other hand, the descriptive statistics showed that 6% of applicant firms refused the offer they were given for certain reasons and 19.4% of applicant firms had their loan applications rejected.

The following sub-sections present a comparison between applicant firms that sought bank loans and obtained all or part of the funding (Received Credit) and those that applied but were not successful (rejected firms and those that refused the bank's offer – Did Not Receive Credit), means they faced credit rationing. This comparison is based on the type of loan sought, the

reason for seeking a loan, the types of banks that the non-hydrocarbon SMEs approached for loans and the variations in borrowing costs.

### 6.1.2.1 Types of Finance Sought from Banks

The business owners sought different types of bank finance required for their businesses. Thus, the respondents were asked about the type of loan they had applied for: *QA2.2 If you applied for bank financing, what kind of finance?* The descriptive analysis shows that the majority of applicant firms sought long-term debt (64.9%) or short-term debt (26.9%), as illustrated in Figure 6.1. Furthermore, a few approved firms sought overdrafts (7.7%) and only one micro-sized firm (i.e. 1.2%) had successfully applied for a loan through asset-based finance. The descriptive analysis of the credit constrained applicants indicates that 50% of firms had sought long-term debt, 46.1% had applied for short-term debt and only 3.8% had applied for an overdraft.

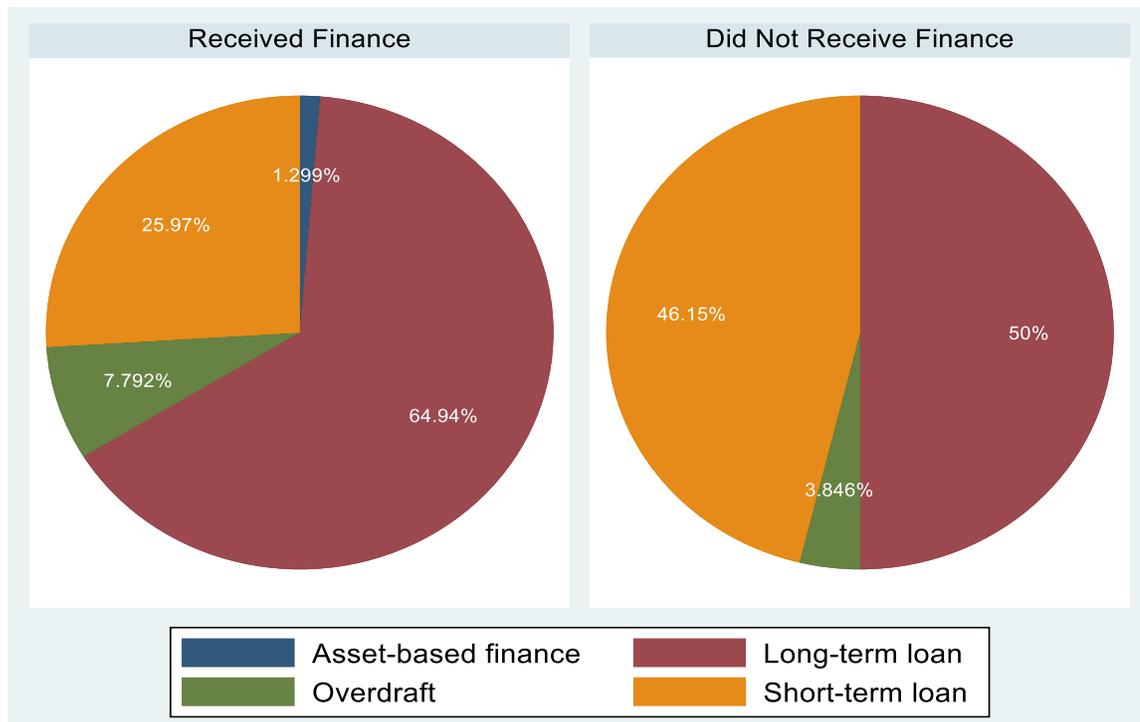


Figure 6.1: Type of Bank Finance Applied for by Firms Who Received Credit Versus Those Who Did Not Receive Credit

### 6.1.2.2 Purpose of Seeking Bank Funding

In this section, the analysis describes the various reasons why non-oil-related SMEs applied for bank financing. As illustrated in Table 6.4, most of the firms that successfully received finance needed it for non-fixed assets (e.g. purchasing automobiles, tools or equipment) (53.2%), expanding the business (25.95%), working capital (25.9%), Research and Development (R&D) (18.2%), fixed assets (e.g. buildings) (18.2%), exporting (7.8%) starting a business (2.5%) and other purposes (14.3%). The other purposes of funding were for Letters of Credit (L/C), bids and performance bonds. Similarly, the largest proportion of firms that have not received credit was for the purpose of purchasing non-fixed assets and working capital, representing 53.8% and 38.5% respectively. This was followed by requiring funding for fixed assets (26.9%), expanding (19.2%), exporting (3.8%) and starting a business (3.8%). A few unsuccessful firms reported that their application was for the funding of Research and Development (R&D) (15.4%) or other reasons (11.5%).

Table 6.4: Reasons for Seeking Bank Finance by Non-oil-related SMEs

<b>QA2.3 Why did you apply for finance? (Multiple response question)</b>				
	<b>Firms Received Credit n=77</b>		<b>Firms Not Received Credit (Constrained) n=26</b>	
	<b>Obs. (n)</b>	<b>Per. (%)</b>	<b>Obs. (n)</b>	<b>Per. (%)</b>
Starting business	2	2.5	1	3.8
Working capital	20	25.9	10	38.5
Non-fixed assets (e.g. Automobiles, equipment)	41	53.2	14	53.8
Fixed assets (e.g. Buildings)	14	18.2	7	26.9
Research and Development (R&D)	14	18.2	4	15.4
Expanding business	20	25.9	5	19.2
Exporting	6	7.8	1	3.8
Other reasons (L/C, Bid and Performance Bonds, employee salary)	11	14.3	3	11.5

### 6.1.2.3 Types of Banks Accessed for Loan Application

As explained in Chapter Three, Oman's credit market consists of 24 commercial banks and 2 specialised banks such as the Oman Development Banks (ODB), which is administrated by the government to assist private sector growth. The analysis of this section presents the statistics regarding the type of bank ownership that SMEs applied to for finance. Figure 6.2 shows the percentages of firms that accessed banks for finance by type of bank ownership. The analysis indicates that 59.7% of firms raised funding from a governmental bank, while 33.7% received bank funding from a domestic bank. Only 5.1% and 1.2% of firms were supplied funds by foreign and Islamic banks, respectively. In contrast, in the case of unsuccessful loan applications, 57.6% of firms applied to domestic banks, 30.7% applied to a government bank, 7.6% applied to an Islamic bank, and 3.8% sought finance from foreign banks. This indicates that SMEs find it more difficult to be granted credit by commercial banks than by banks managed by the government. In addition, the results reflect the fact that foreign and Islamic banks are less involved in funding the SME sector than domestic banks and Oman Development Bank (ODB) may be due to the acute information asymmetries and weak relationships between the banks and their SME clients.

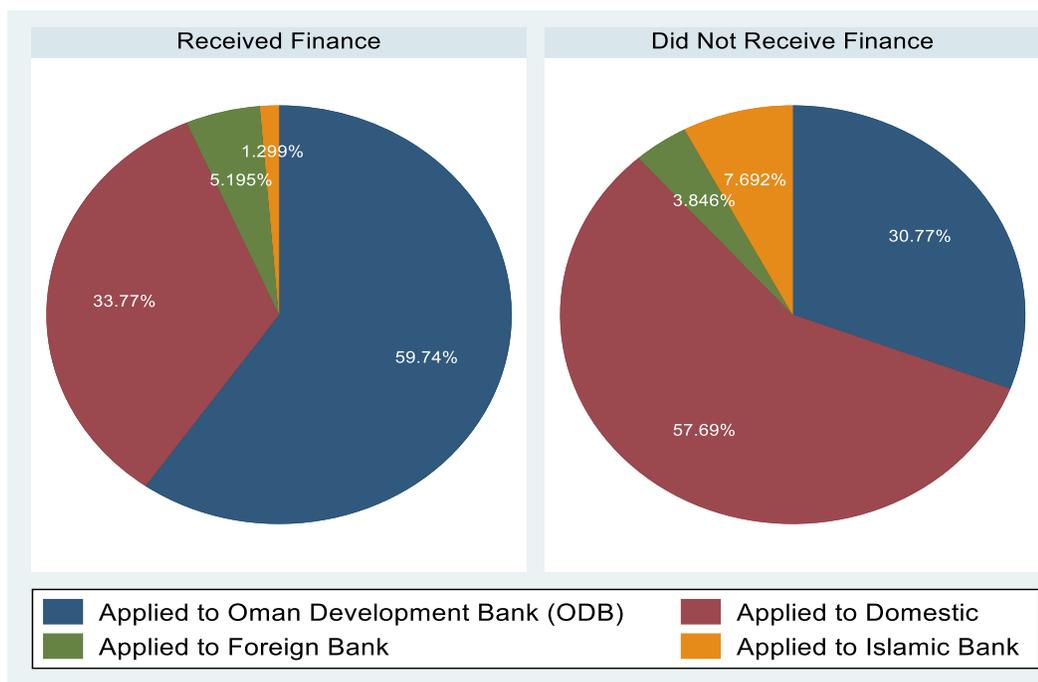


Figure 6.2: Types of Bank Approached by Non-oil-related SMEs for Loans

#### **6.1.2.4 Costs of Borrowing**

This section presents the descriptive statistics that compare firms supplied with finance and those who refused the bank's offer for any reasons based on the borrowing costs.

##### **a) Collateral Requirements and Value Costs**

This section explains the collateral requirements that firms with approved applications had to provide between 2014 and 2017. The respondents were asked about the type of bank collateral that was required for their loan application – see Table 6.5. The statistics show that 39.8% of approved firms reported that the banks did not ask for collateral to secure the loan contracts. This may be because most of these firms obtained funding from the Oman Development Banks (ODB); this bank has made efforts to fund these firms in order to increase state budget revenues in that period. As explained earlier in Chapter 3, the government provides non-secured loans for non-oil-related SMEs, in contrast to commercial banks, but only under certain terms. For example, the business should be owned and operated by the registered owners, who should be committed to the project without illegally delegating the trade registry to foreigners (i.e. Omani-fronted businesses). Furthermore, some of the commercial banks have released into the market different types of financial and non-financial products and services for SMEs in order to fulfil relevant government policies.

In contrast, other firms reported that their loan contract was secured by collateral. The largest proportion of these firms, 39%, had their credit applications approved with other types of requirements other than those specified in Question A2.5, as follows:

1. 27.7% of firms reported that the banks had requested a business mortgage.
2. 31.3% of firms informed that the banks had asked for financial reports.
3. 10.8% of firms stated that their loan application had to be secured by a personal guarantor.
4. 6% of firms were asked to be committed to the project and to not be occupied with a full-time job.
5. 8.4% of firms were asked to provide a cheque book for loan instalments.
6. 3.6% of firms were asked to provide a salary report.

As shown in Table 6.5, it was not only audited financial reports that were used by the bankers to approve loan applications; business and personal assets were also used to secure loan contracts, as reported by 35.1% and 27.3% of approved firms that were supplied with bank finance, respectively. Further types of bank loan securities used to secure the applications were personal savings (12.9%), business stocks (11.7%) and business debtors such as account receivables (7.8%). On the other hand, in terms of firms that had refused the bank’s offer, 33% of them had been asked to secure their contract with personal assets or business assets. Around 17% of firms were asked to provide a financial report or business mortgage, or to provide proof of their commitment to the project by not occupying any full-time job in order to overcome the issue of Omani-fronted businesses.

Table 6.5: Collateral Requirement Types by Firms that Received Bank Credit and Firms that Refused the Bank’s Offer

<b>QA2.5 What type of collateral was required to obtain the finance? (Multiple response question)</b>				
	<b>Firms that Received Credit n=77</b>		<b>Firms that Did Not Receive Credit (only those that Refused Bank Offer) n=6</b>	
	<b>Obs. (n)</b>	<b>Per. (%)</b>	<b>Obs. (n)</b>	<b>Per. (%)</b>
Nothing was required	16	20.7	3	50.0
Business stocks	9	11.7	-	-
Business debtors	6	7.8	-	-
Business assets	27	35.1	2	33.0
Personal savings	10	12.9	-	-
Personal assets	21	27.3	2	33.0
Other types of collateral	39	50.6	1	17.0

Moreover, the collateral cost values vary among the firms that successfully obtained funds and those who had refused a bank offer – as shown in Figure 6.3. Thus, this study was interested in

understanding this variation by asking the respondents about the cost of the required collateral: *QA2.6 What was the estimated value of the collateral required to obtain the finance?* The descriptive statistics show that 28.5% of firms that obtained bank loans reported that the lenders requested collateral costs valued at between 175% and 200%. Sixteen per cent of other firms that received funding from banks reported that the lenders had requested collateral valued at over 200% of the loan value. Only 11.6% and 3.8% of the approved firms were requested collateral with values of 100%, and 125% to 150% of the loan value, respectively.

In contrast, the same percentage of firms that refused the bank’s offer (16.6%) were asked to provide collateral between 175 and 200%, 175% and 200%, and over 200% of the total of loan value.

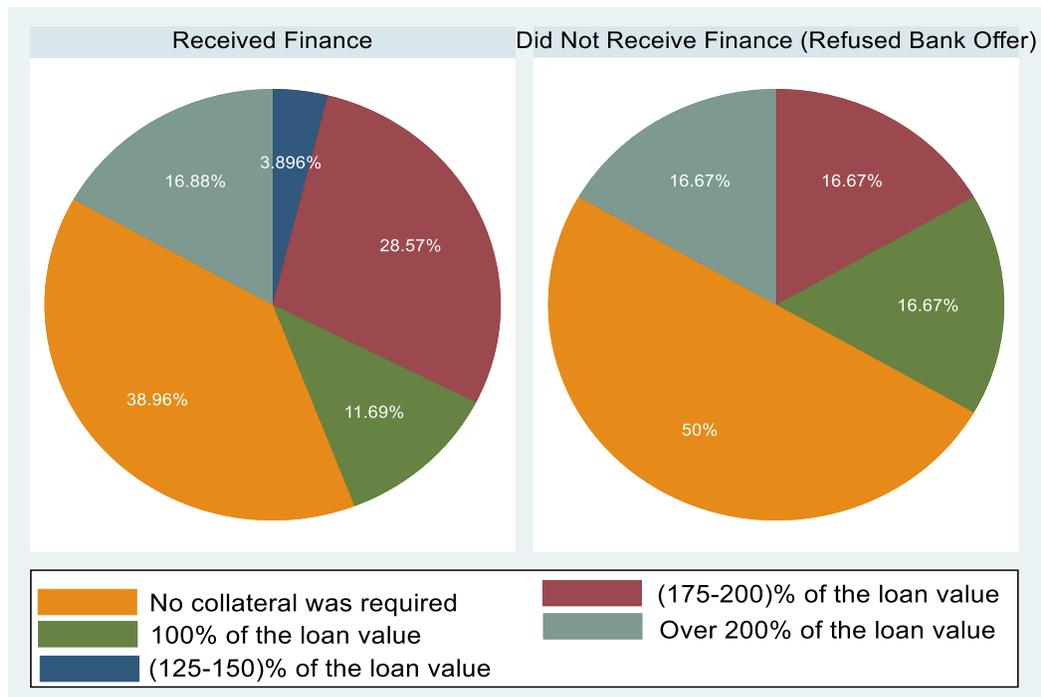


Figure 6.3 Collateral Value Requested from Firms that Received Credit and Firms that Refused the Bank’s Offer

## b) Interest Rate Costs

Interest rate is a further device that bank loan officers or managers use to reduce the risk of default that may occur with the borrower. Through the question *QA2.7 what was the average interest rate you paid for the loan?* this research was able to specify the interest rate costs that non-oil-related SMEs were obliged to pay. Out of the firms that were successful with their loan applications (Figure 6.4), the analysis shows that 59.7% paid an interest rate of 0% to 3% of the loan. Furthermore, the results indicate that 16.8% and 15.5% of the firms that obtained credit were contracted to pay interest rates of 6–7% and 8–9%, respectively. In addition, 7.7% of firms obtained funds with an interest rate of 4–5%. In contrast, out of the firms that had refused the bank’s offer, 83.3% were asked to pay 0-3% and 16.6% were asked to pay interest of 4–5%.

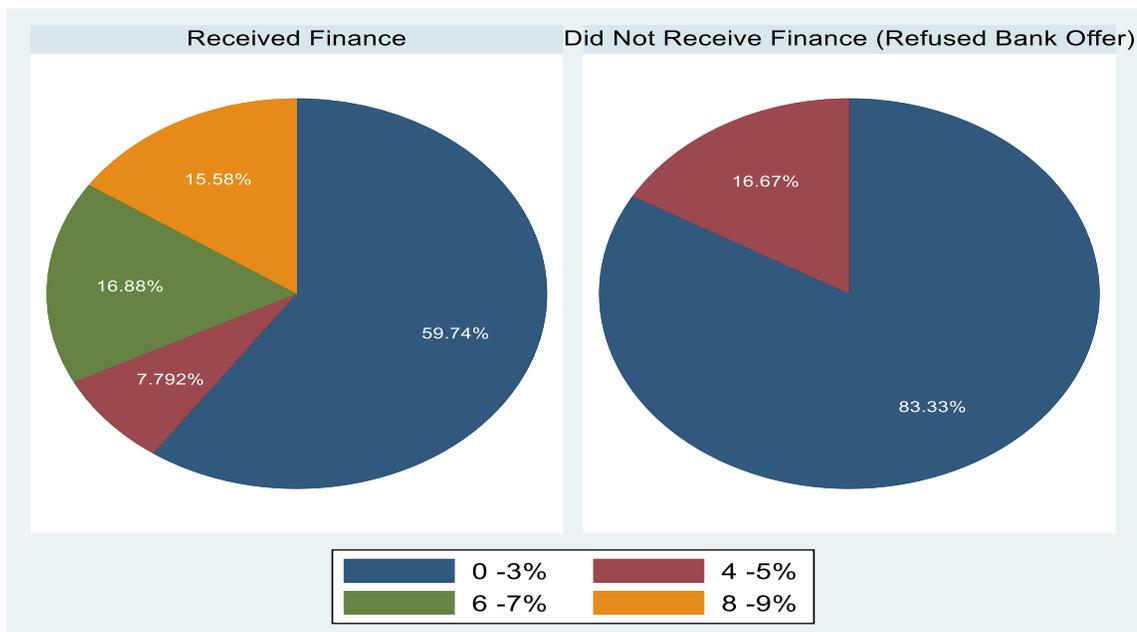


Figure 6.4: Interest Rate Differences by Firms that Received Credit and Firms that Refused the Bank’s Offer

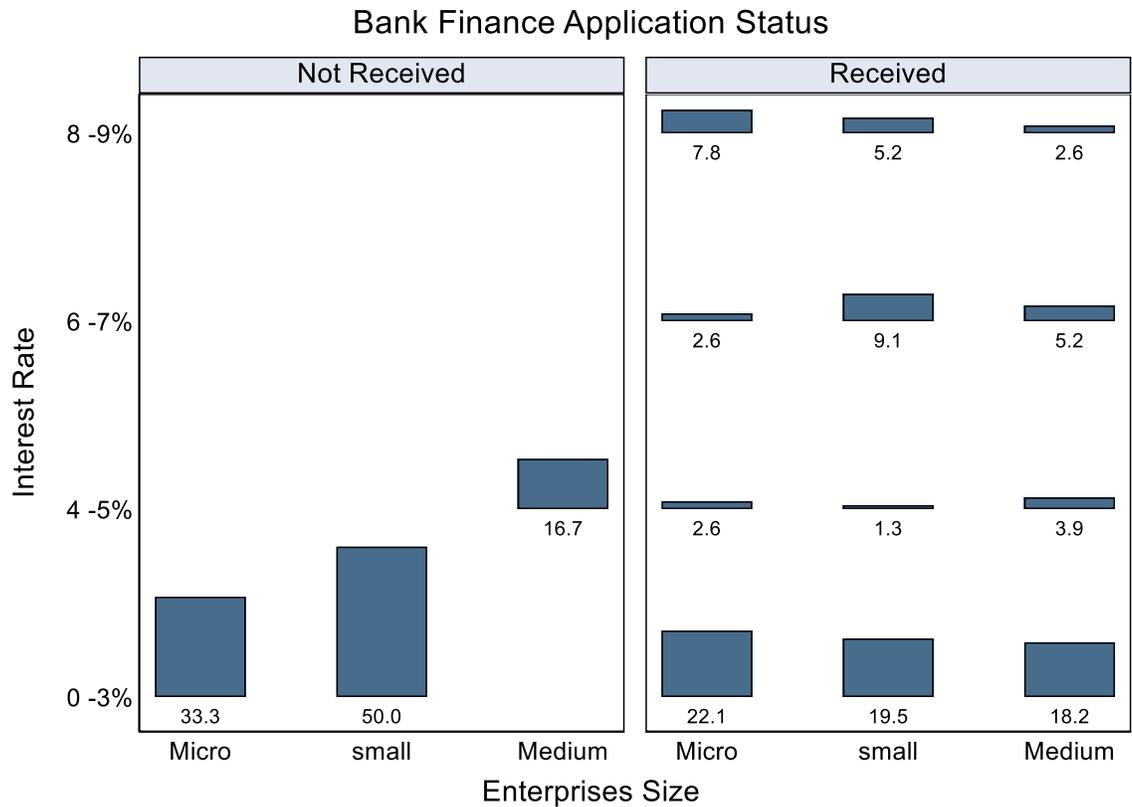


Figure 6.5: Interest Rates Associated with Loans by Firm Size and Loan Application Status

Figure 6.5 shows there is a large proportion of SMEs whose loan applications were associated with a loan interest rate of only zero to 3%. 22.1% of micro, 19.5% of small, and 18.2% of medium firms have received finance from banks at an interest rate of 0 to 3%. Nevertheless, the figures disclosed that 33.3% of micro firms and 50% of small firms have not received bank finance that is associated with interest rate of 0 to 3% because they refused the lending offer. This is perhaps because their loan applications were associated with other costly requirements such as loan terms and conditions or a high cost of collateral. A percentage of 16.7% of the total firms that have not received bank finance would have been obliged to pay an interest rate between 4% and 5%.

In contrast, from Figure 6.5 one can deduce that SME loan applicants – who received the finance – were still subjected to higher interest rates because these firms are known to be more opaque and less secure than large firms. 7.8% of micro firms, 5.2% of small firms and 2.6% of medium firms were contracted to pay an interest rate of 8 to 9%. Other firms (i.e. 2.6% of small, 9.1%

of medium and 5.2% of micro) reported that the banks had asked for an interest rate between 6% and 7%. The findings also show that 2.6% of micro firms, 1.3% of small firms, and 3.9% of medium firms obtained bank finance at an interest rate of between 4% to 5%.

Overall, despite the intensive policies to support banking sector involvement within SMEs in the non-oil sector, the statistical analysis of the borrowing costs provides evidence that lenders are still cautious about financing these firms given the information asymmetries and imperfect and unregulated banking relationship. Thus, collateral requirements and higher interest rates were employed at the time of an oil economic crisis as a means to avoid the default risks that may occur with these businesses. This finding is in line with previous studies. For example, Krasniqi (2010) affirmed that banks rely on collateral tools to allocate loans to even profitable small firms in Kosovo.

#### **6.1.2.5 Loan Payment Duration**

In the current study's questionnaire, the respondents were asked about the length of loan payment *QA2.8 What was the loan repayment duration?* The descriptive analysis of this section clarifies the duration of loan repayment. Figure 6.6 shows that there are significant differences in terms of loan payment duration based on enterprise size and ability to access bank credit. The statistics show that most of the approved loan proposals had a long-term payment duration. In detail, 35 %, 28.6% and 24.7% of these firms obtained terms of more than 8 years, between 3 to 5 years, and 6 to 8 years for repayment of the loan, respectively. Smaller percentages of approved firms, 7.8% and 3.9%, obtained a contract that obliged them to repay the loan within less than a year or between 1 and 2 years respectively. Moreover, 50% of firms that had refused the bank's offer reported that the suggested loan duration was between 3 and 5 years, 33% reported a loan repayment period of more than 8 years, and 16.6% reported 6 to 8 years for repayment of the loan.

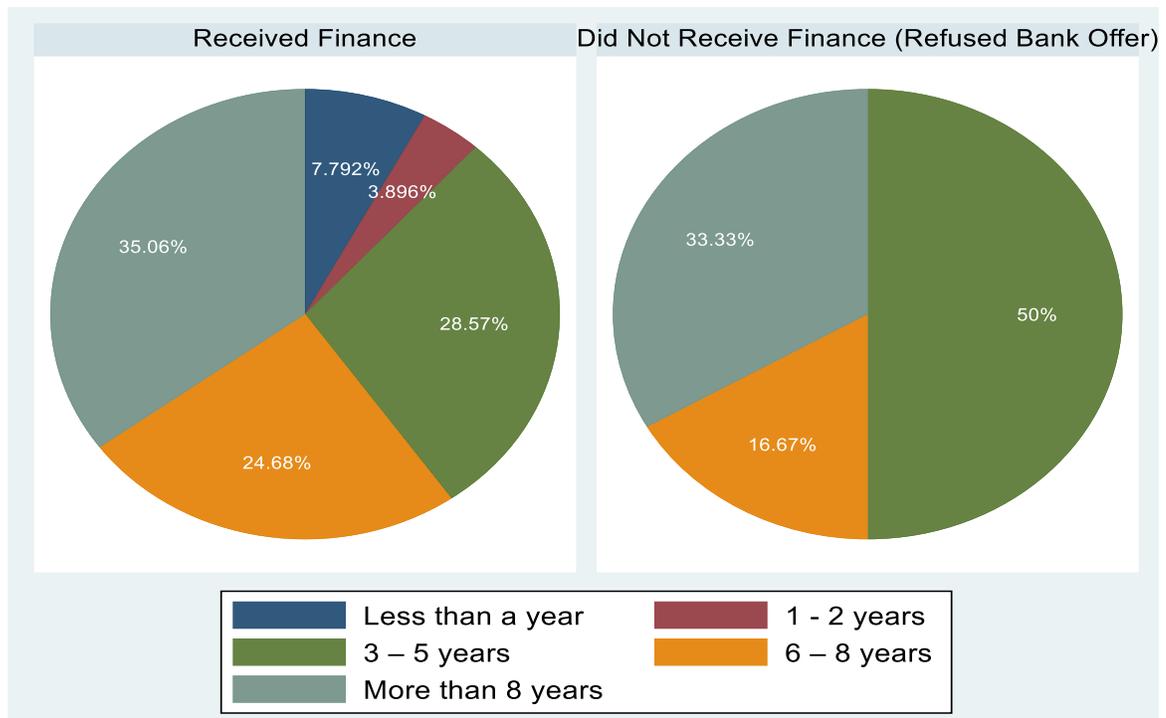


Figure 6.6: Loan Payment Duration for Firms that Received Credit and Firms that Refused the Bank's Offer

### 6.1.2.6 Grounds of Unsuccessful SME Loan Applications

The survey allowed the researcher to investigate the reasons for unsuccessful loan applications and their impact on business growth – as discussed in the following sections.

#### a) Bank Loan Rejection

When the borrowing applications of the firms do not meet the bank's loan terms and conditions, it is expected that the loan officer or manager decision will refuse the application. Therefore, respondents were asked *QA2.9 If your application was not successful, what were the reasons given by the banks?* Thus, the descriptive statistics present evidence of several reasons that led the loan manager/officer to refuse loan applications in the Omani credit market. As illustrated in Table 6.6, 65% of the firm sample in this study had experienced unsuccessful loan applications due to a lack of collateral. In addition, 30% of firms were unsuccessful because the

bank considered the project proposal to be too risky. Other reasons for unsuccessful loan proposals were lack of personal credit records and a lack of business credit records – reported by 20% and 25% of denied firms respectively. Another 30% of the firms that had been denied loans reported other reasons for not succeeding with the bank loan contract. One of these was the issue of sponsorship where the bank asked for documents that could not be provided by the real primary owner, as reported by 15% of rejected firms. A further 15% of these firms did not succeed because the firm’s profits, revenues or cash flow did not meet the banks’ requirements. Only one firm that did not know the reason for the bank rejection.

Table 6.6: Reasons for Bank Rejecting Loan Application

<b>QA2.9 If your application was not successful, what were the reasons given by the bank for this status? (Multiple response question)</b>	<b>Freq. (n)</b>	<b>Per. (%)</b>
Lack of collateral	13	65.0
Project is too risky	6	30.0
Lack of personal credit records	4	20.0
Lack of business credit records	5	25.0
Have too many debts	1	5.0
No reason was given	1	5.0
Other, please specify (business ownership issue, profits did not meet lending terms)	6	30.0

Moreover, the descriptive analysis discloses the following impacts of unsuccessful loan applications on business growth (see Table 6.7). Twenty-five per cent of firms obtained the required finance from family and friends, while 15% of the rejected firms obtained finance from non-bank financial institutions. Another 15% of rejected firms cancelled their business plans. Furthermore, 35% of firms reported that were unable to expand their business as fast as they had planned for. Half of the firms reported that they suffered from pressure on the business’s cash flow, and 30% and 25% of rejected loan applicants postponed their business investment plan and experienced a reduction in business productivity, respectively.

Table 6.7: Impact of Rejected Loan Application on Business Growth

<b>QA2.11 How did the application rejection affect your business growth? (Multiple response question)</b>	<b>Freq. (n)</b>	<b>Per. (%)</b>
Obtained funds from friends and family	5	25.0
Obtained funds from non-bank financial institution	3	15.0
Plan was cancelled	3	15.0
Unable to expand as fast as planned for	7	35.0
Pressure on cashflow	10	50.0
Postponed investment plans	6	30.0
Reduction in firm's productivity	5	25.0
Other please specify (not being able to furnish the firm well)	1	5.0

#### **b) Firms Refusing Bank Loan Offers**

The primary survey has enriched the current research with information about cases where firms refused the bank's offer. Despite the small number of these firms, it is worthwhile examining their justifications for refusing the offers and the impact of this on their businesses. Thus, respondents were asked this question: *QA2.12 If you applied but refused the bank offer, what were the reasons?* As shown in Table 6.8, the refusals were reported to be due to a high interest rate (16.7% of firms), the offered amount being insufficient (33.3% of firms), the duration of the loan payment being too short (16.7% of firms) or the collateral requirements being too costly (33.3% of firms). Furthermore, 50% of the firms refused the bank's offer for other reasons such as the founders were working in the government or private sector (i.e. temporarily employed in the enterprises), which conflicts with the Oman Development Bank (ODB) loan terms and conditions, or they felt that the banks' procedures were too much hassle.

Table 6.8: Reasons for Refusing Bank Offer

<b>QA2.12 If applied but refused the bank offer, what were the reasons? (Multiple response question)</b>	<b>Freq. (n)</b>	<b>Per. (%)</b>
Interest rate was too high	1	16.7
Amount offered was insufficient	2	33.3
Duration of loan payment was too short and stressful	1	16.7
Collateral requirements were too costly	2	33.3
Other, please specify: Unable to meet loans terms and difficulty of bank procedures	3	50.0

The small number of these cases give affirmation that credit remains the important element for SMEs' development, which means that it is not easy for them to reject the offered loans from the banks. In fact, in order to be able to grow, firms need to develop their business strategy (e.g. innovation and operational) and rivalry in the market. As the firms get older and larger, the business owners are having to spend more on their expenditures. Therefore, they will need to secure the required capital to incur business expenditures and enhance business growth. Given that banks are the main source for finance in the Oman financial market, many business owners tend to borrow from them. This is because banks are less costly than using financial equities (e.g. cost of contracting and process of issuing the securities). In addition, SME owners who borrow from banks tend to have less concerns about losing their business control or about ensuring greater business transparency that needs to be shared regularly in the public market. However, under a situation of uncertainty and an imperfect financial market, the loan officers-managers apply high costs of lending and monitoring among these firms. This seems to have disappointed some of the business owners who are unable to afford borrowing costs or terms; hence, they had refused a bank offer despite their necessity for the bank loan.

Moreover, the business growth of these firms was affected by the lack of finance – see Table 6.9. The descriptive analysis revealed that 50% of firms obtained the required funds from informal sources, while 16.7% obtained them from non-bank financial institutions. One third (33.3%) of firms reported that difficulties with raising business capital led them to cancel their business plan, reduced the firms' productivity or put considerable pressure on business

cashflow. Besides that, refusing the bank’s offer led to the postponement of investment plans for 16.7% of these firms and 50% were unable to grow as fast as they had planned for.

Table 6.9: Impact of Refusing Bank’s Offer on Business Growth

<b>QA2.13 How did your rejection of the bank’s offer affect your business growth? (Multiple response question)</b>	<b>Freq. (n)</b>	<b>Per. (%)</b>
Obtained funds from friends and family	3	50.0
Obtained funds from non-bank financial institution	1	16.7
Plan was cancelled	2	33.3
Unable to expand as fast as planned for	3	50.0
Pressure on cashflow	2	33.3
Postponed investment plans	1	16.7
Reduction in firm’s productivity	2	33.3

### **c) Supplied with Partial Bank Funding**

Not all of the approved bank applications satisfied the firms’ needs as some of the non-oil-related SMEs (n=20) obtained partial funding from the banks. Thus, this study asked two important questions in this regard. Firstly, the respondents were asked about the reasons for obtaining partial funding. The descriptive analysis revealed that the largest proportions of the firms, 45% and 35% of the approved firms, stated that the bank considered their project to be too risky or that the firms lacked the collateral required to secure the full loan application, respectively. Following this, 25% of the approved firms had obtained partial funding because they were already committed to too much debt. Another 15% and 5% of the approved firms had received partial funding due to a lack of personal and business credit records respectively. A small percentage (1.2%) of the approved firms received partial funding because they submitted an insufficient business plan, whilst other firms revealed that the banks did not give them a reason for granting only a part of the requested funding.

Table 6.10: Reasons for Obtaining Part of the Needed Loan Amount

<b>QA2.9 If you only received part of the funding, what were the reasons given by the bank for this? (Multiple response question)</b>	<b>Freq. (n)</b>	<b>Per. (%)</b>
Lack of collateral	7	35.0
Project too risky	9	45.0
Unclear or insufficient business plan	1	5.0
Lack of personal credit records	3	15.0
Lack of business credit records	1	5.0
Have too many debts	5	25.0
No reason was given	2	10.0

Secondly, the respondents were asked about the impact on business growth of obtaining limited funding, as shown in Table 6.11. Although 10% of firms reported that obtaining partial funding did not affect their business growth, other firms were unable to grow as planned for (45%), faced pressure on cash flow (65%) or postponed investment plans (20%). A few firms cancelled their business plans or experienced a reduction in business productivity. Only one firm encountered bankruptcy. Equal percentages (15%) of firms acquired their finance from family or friends and from non-bank financial institutions.

Table 6.11: Impacts on Business Growth of Supplying Firms with Partial Financing

<b>QA2.11 How did obtaining part of the finance affect your business growth? (Multiple response question)</b>	<b>Freq. (n)</b>	<b>Per. (%)</b>
No effects	2	10
Obtained funds from friends and family	3	15
Obtained funds from non-bank financial institutions	2	10
Plan was cancelled	1	5
Unable to expand as fast as planned for	9	45
Bankruptcy status	1	5
Pressure on cashflow	13	65
Postponed investment plans	4	20
Reduction in firm's productivity	1	5

### **6.1.3 Non-oil-related SMEs that Required Credit but Did Not Apply for a Loan**

Although this study has shown that many firms approached banks for loans, 125 firms needed financing but did not approach the banks. The survey revealed that these firms were discouraged non-applicants, informally rejected firms or those that had not applied for other reasons. The following sub-sections discuss these types of demand-side constraints.

#### **6.1.3.1 Credit Discouragement Pervasiveness Among Firms**

This study focuses on the conventional definition of discouragement: “a good firm, requiring finance, that chooses not to apply to the bank because it feels its application will be rejected” (Kon and Storey 2003, p. 47) in order to avoid the contradictions that exist in the literature over this term. Brown et al. (2018b) argued that there is still a lack of consensus in the literature over an accurate definition of borrower discouragement, as summarised in Table 6.12 in the literature review chapter. This is because some previous studies have used secondary data that was collected from either national or international surveys that were not constructed for the purpose of examining credit discouragement among SMEs. This type of secondary data has therefore led researchers to expand the definition of firms discouraged from applying for credit with regardless whether SMEs impose self - credit constraints for fear of disapproval. Implying that the feeling of discouragement was not consider in a clear form. For example, Chakravarty and Xiang (2013) defined discouragement as the incident that occurs due to high interest rates, collateral or corruption in loan allocations.

The descriptive statistics revealed that 103 non-oil-related SMEs (i.e. 34% of total firms) were in need of a loan but they were discouraged from applying due to the fear of rejection. Out of this group, the discouragement incidences are shown to be higher with micro- and small-sized firms, representing approximately 53.4% and 35.9%% of the total discouraged non-applicants sample respectively. On the other hand, only 10.7% of firms discouraged from applying for bank funding were medium-sized firms.

Table 6.12: Variations in Size of Discouraged Non-applicant Firms for Bank Credit

Non-Applicants Firms	Firm Size – Per. (%)		
	Micro	Small	Medium
Discouraged Non-applicants	53.4	35.9	10.7

The results of the descriptive analysis show that the prevalence of discouragement incidents within non-oil industries in Oman is almost five times higher than loan denial incidences. This would indicate that the degree of SME discouragement within the Omani credit market does not differ from that reported by previous studies such as Levenson and Willard (2000) and Freel et al. (2012). However, the higher proportion of credit discouragement incidents among these firms may reflect the fact that demand-side constraint in the Sultanate is more severe than in developed economies. Therefore, it is important to examine and understand the reasons behind entrepreneurs' discouragement. These are explained in the next section, and implications and recommendations are considered in Chapter 8 to enhance entrepreneurs' confidence in borrowing.

#### a) Grounds for Credit Discouragement Pervasiveness

This primary survey not only contributes to the conventional discouragement concept, but it also helps to detect the reasons behind the apprehension of non-oil related SMEs with regard to applying for bank finance. The respondents were asked about the reasons why they thought that their application would be turned down – see Table 6.13. Just under one third (30.1%) of the discouraged firms revealed that they thought their loan application would not be successful because the company did not have enough collateral to secure the contract. Twice as many (67.9%) thought their loan application might be turned down by lenders due to a lack of business credit records. This may reflect the tendency among most private businesses to seek personal loans to support their businesses in Oman (Kasturi, 2018). Similar proportion of firms revealed that they are discouraged from borrowing because of high borrowing costs. Fifty-three per cent

of the discouraged firms had not applied because they knew that they did not meet the loan's terms and conditions. For instance, 26 of these firms stated that one of the difficult terms of ODB is that they only supply firm owners who are committed to managing their own firms, i.e. they do not have another job in the private or government sectors. As aforementioned, the government has strongly emphasised this condition in bank lending to private companies in order to combat the problem of Omani-fronted businesses, which is known by the Omani policy makers as 'hidden trade' (Al-Maimani and Johari, 2015). Out of these 26 firms, 21 confirmed that they were owned and managed by owners (i.e. foreigners) who were not registered with the Ministry of Commerce and Industry. This indicates that this is one of the main reasons for business owners' reduced confidence in borrowing and the fear of bank rejection. A further 18.4% of firms were discouraged for other reasons. For example, 2.9% of firms thought that their application would not succeed because of their counterpart experiences of borrowing.

Table 6.13: Reasons for Credit Discouragement Incidents

<b>QA3.2 What made you think the bank was unwilling to finance your business? (Multiple response question)</b>	<b>Freq.(n)</b>	<b>Per. (%)</b>
Lack of collateral	31	30.1
Lack of business credit records	70	67.9
Not fulfil banks terms (26 firms did not meet loan conditions of ODB)	55	53.3
Peers' borrowing experience (3=2.9%)	19	18.4
Borrowing costs (i.e., high interest rate)	70	67.9

### **b) Impact of Credit Discouragement on Business Growth**

The survey provides information about the impact of financial discouragement on the growth of non-oil-related SMEs – see Figure 6.7. It shows that 19.1% of the total of financially discouraged businesses reported that they were not affected by credit discouragement. This may be because some of them had sought for an alternative source to finance their ventures (e.g. two firms used informal sources and another two firms approached non-bank financial institutions). The characteristics of this group firms are old (age of trading 6 years and above) and they operate

in the manufacturing and trading sectors. In addition, the descriptive analysis disclosed that 60% of these firms have recorded increases in their sales growth which would explain their reason for not been affected by the credit discouragement, and implying that they are stable and capable of sustaining themselves in the market.

In contrast, the findings shows that 26.2% and 9.7% of discouraged firms had sought funding from informal sources (e.g. friends, and family) or obtained it from non-bank financial institutions, respectively -to fulfil their needs of finance for their businesses. Other discouraged firms reported that their business growth performance had been adversely affected: they were unable to expand as fast as planned for (n=39, 37.8%), experienced pressure on business cashflow (n=37, 35.9%), postponed business investment planning (n=23, 22.3%), witnessed a reduction in productivity (n=20, 19.4%) or their business plan was cancelled (n=8, 7.7%). Only 2.9% of the discouraged firms reported other impacts on their businesses: one of the firm owners had sold his/her house to raise the required funds for their business; the primary owners of two firms used their own money to proceed with business growth; and another firm extended its supply chain under a different brand ‘called Gazalla’ in order to pursue business growth.

Table 6.14: Impacts of Credit Discouragement on Business Growth

<b>QA3.5 How did not applying for bank finance affect your business growth? (Multiple response question)</b>	<b>Freq. (n)</b>	<b>Per. (%)</b>
No effects	20	19.4
Obtained funds from friends and family	27	26.2
Obtained funds from non-bank financial institution	10	9.7
Plan was cancelled	8	7.7
Unable to expand as fast as planned for	39	37.8
Bankruptcy status	2	1.9
Pressure on cashflow	37	35.9
Postponed investment plans	23	22.3
Reduction in firm’s productivity	20	19.4
Other, please specify (sell my house, use my savings, add additional supply chain - Gazala)	3	2.9

### Impacts of Credit Discouragement on Business Growth

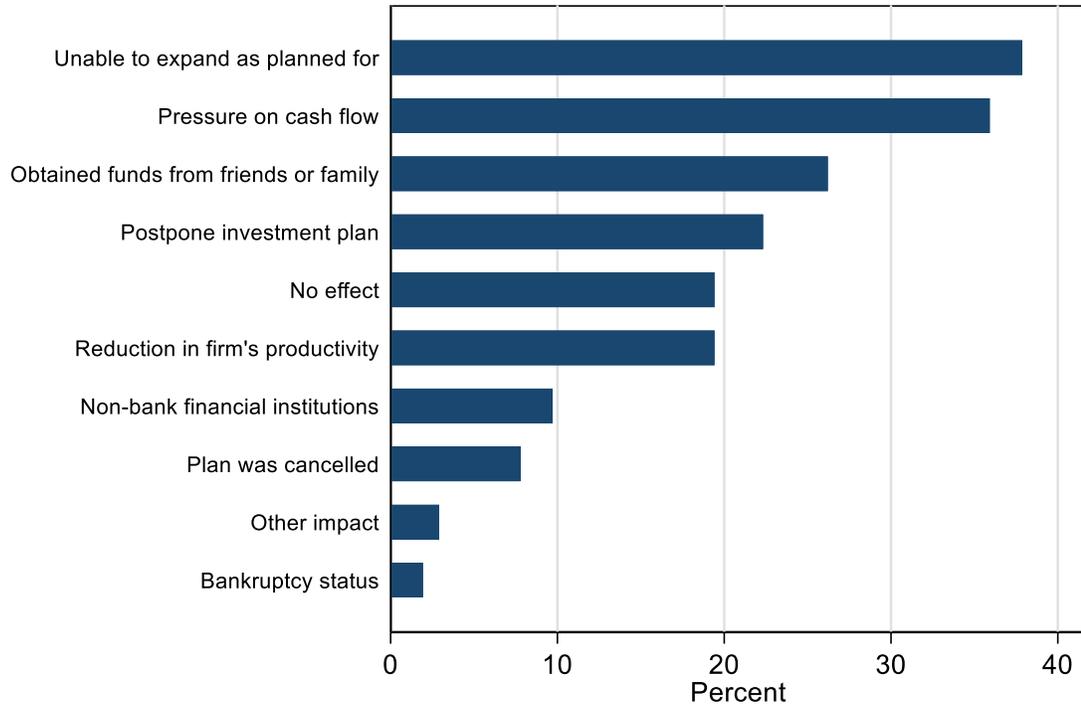


Figure 6.7: Impacts of Credit Discouragement on Business Growth

#### 6.1.3.2 Informal Bank Turndown among Non-oil-related SMEs

The survey in the current study has helped to estimate the prevalence of informal rejection by banks of loan applications in Oman through question *QA2.1*. Among the non-applicants in the dataset sample, a small proportion of firms (3.6% of the total sample) had sent informal enquiries to bank loan officers or managers regarding borrowing, but the lender seemed unwilling to lend to them.

In addition, unlike prior studies (e.g. Rostamkalaei et al., 2020), the survey of the current study was able to highlight the reasons behind firms' informal rejection by banks (see Table 6.15). Fifty-seven per cent of the firms were rejected informally due to a lack of collateral, 42.9% of firms reported that the project seemed too risky for the lender and 14.3% of firms lacked business credit records. Another reason is that 14.3% of firms had a full-time job, which is not compatible with the ODB loan terms and conditions.

Table 6.15: Reasons for Informal Bank Rejection

<b>QA3.4 What made you think the bank was unwilling to finance your business? (Multiple response question)</b>	<b>Freq.(n)</b>	<b>Per. (%)</b>
Lack of collateral	4	57.0
Bank considered the project application too risky	3	42.9
Lack of business credit records	1	14.3
Not fulfil bank terms	1	14.3

Moreover, the inability of these firms' owners to raise business capital is expected to affect business growth – see Table 6.16. In the aggregate of non-applicant firms (excluding no need cases) the descriptive analysis disclosed that 42.9% of the informally rejected firms obtained the required funds from non-bank institutions. Furthermore, 42.9% of firms were unable to expand as fast as they had planned for. Other firms encountered pressure in their business's cash flow (5% of the total sample size of firms that needed finance but did not access the banks). Twenty-eight per cent of informally rejected firms postponed their business investment plans, while another firm cancelled its investment plan due to the banks' reluctance to lend to them. In addition, 28.6% of the firms faced a reduction in their productivity. Only one firm used a personal loan to enhance and proceed with business growth, whilst another firm was funded by the Al Zubair programme for SMEs Development, due to the informal rejection from the bank loan officer or manager.

Table 6.16: Impact of Informally Rejected Application on Business Growth

<b>QA3.5 How did not applying for bank finance affect your business growth? (Multiple response question)</b>	<b>Freq. (n)</b>	<b>Per. (%)</b>
Obtained funds from friends and family	3	42.9
Unable to expand as fast as planned for	3	42.9
Pressure on cashflow	5	71.4
Postponed investment plans	2	28.6
Reduction in firm's productivity	2	28.6
Other, please specify apply for personal loan, Al Zubair programme	2	28.9

### 6.1.3.3 Other Cases of Firms that Did Not Apply for Credit

The primary survey of this study has helped to identify other reasons why firms did not access bank finance – see Table 6.17. These cases account for 4.7% of the total sample. The descriptive statistics show that 33.3% of firms did not apply for bank despite their need for finance because they wished to avoid borrowing risks. A further 13.3% of firms reported that high of borrowing costs was the reason for not accessing the banks for loans. The descriptive statistics also revealed that there are 33.3% of firms have not applied because of difficulty to fulfill loan applications terms. For instance, three of these firms were in need of finance but could not apply due to the legal deficiency of the business ownership. Another 20% of firms reported that concerns about the validity of loans with regard to Islamic financial rules were one of the reasons that prevented them from accessing bank financing.

Table 6.17: Other Reasons for Not Applying for Bank Finance

<b>QA3.3 What were the reasons for not applying? (Multiple response question)</b>	<b>Freq.(n)</b>	<b>Per.(%)</b>
Avoid borrowing risks	5	33.3
Borrowing costs (high interest rate)	2	13.3
Not fill banks terms (3 firm do not meet ODB terms)	5	33.3
Other, please specify (Islamic financial rules, another firm reported that the agent refused external finance because of concerns about the financing rules conflicting with religious rules)	3	20.0

Moreover, as illustrated in Table 6.18, the firms reported that difficulties with raising business capital affected their business growth. Over one quarter (26.7%) pointed out that the lack of financing meant that they were unable to expand as fast as planned for. In addition, some firms reported that they obtained the required funds from non-bank financial institutions (representing 13.3%), while a few firms used informal financing sources (e.g. family or friends) or personal loans. On the other hand, 13.3% of firms encountered pressure on the business cash flow. One firm postponed its business investment plan and another recorded declines in business productivity.

Table 6.18: Impact of Firms Not Applying for Bank Credit on Business Growth

<b>QA3.5 How did not applying for bank finance affect your business growth? (Multiple response question)</b>	<b>Freq. (n)</b>	<b>Per. (%)</b>
No effects	1	6.7
Obtained funds from friends and family	1	6.7
Obtained funds from non-bank financial institution	2	13.3
Unable to expand as fast as planned for	4	26.7
Pressure on cashflow	2	13.3
Postponed investment plans	1	6.7
Reduction in firm's productivity	1	6.7
Other, please specify: applied for personal loan	1	6.7

## 6.2 Descriptive Explanatory Variables

This section presents and discusses the descriptive statistics of the independent variables that are hypothesised to be the determinants of firms' ability to access the banks, by examining the status of credit discouragement and credit constraints. These variables are divided into firm-level strategy, firm banking relationship, primary owners' characteristics and the character of business industry types, while the firm size and age are specified to control the research model.

### 6.2.1 Non-oil-related SME-Level Strategy Characteristics

The following sections describe the characteristics of firms' strategy as shown in Table 6.19 below.

#### 1) *Export Performance Intensity*

Since the Government of Oman's Vision 2040 aims to enhance the export activities of the non-hydrocarbon sector, increase export activities performance could be a potential approach of SMEs strategy for expanding their growth. Thus, the respondents were asked *QB1.6: What percentage of the firm's sales turnover is derived from exporting?* For the regression analysis,

the categories of the responses were developed into: 1) did not export; 2) less than 50% of turnover; and 3) 50% or more of turnover.

The statistics indicate that the majority of non-oil-related SMEs (63.5%) were not export-oriented. Out of the total sample size, 83 firms (i.e. 26.4%) reported that less than 50% of their sales revenue came from their export activities, demonstrating the low intensity of their export participation. In contrast, 10.1% of firms noted that their international sales represented about 50% or more of their business's total sales revenue, indicating high export intensity. Moreover, the proportion of discouraged non-applicant firms was higher in firms that had no export orientation, representing 66%, while firms with low export intensity and high export intensity represented 28.2% and 5.8% respectively. There are no significant differences in the responses between discouraged firms and those who applied for bank finance. Out of the firms that applied for bank finance but were unsuccessful (i.e. credit constrained), 78.8% did not export, 15.2% recorded a low export share and for 6% of firms, 50% or more of their sales came from export activities. There was no significant difference between firms that obtained all or part of the loan application.

## *2) Past Sales Growth Performance*

Past sales growth performance is one of the major firm strategy factors that is hypothesised to influence firms' ability to access bank credit; hence it may influence the discouragement model. However, there are limited studies on the impact of past sales growth on credit discouragement within SMEs (e.g. Cowling et al., 2012; Erdogan, 2019). To measure this factor, the respondents were asked about whether their sales growth had increased, decreased or remained the same over the last 4 years (2014 - 2017). As shown in Table 6.19, the descriptive analysis illustrates that 41.9% of firms had experienced a decline in sales growth. Some participants attributed this reduction to the economic austerity policy that the government has implemented since the oil price crisis – as explained in Chapter 3 – as well as the unstable politics in the region (e.g. the Yemen war). In contrast, the analysis shows that 40.9% of firms had achieved increases in their sales performance during the last four years. The other 17.1% of non-oil-related SMEs reported that their sales growth had remained unchanged between 2014 and 2017.

Furthermore, the descriptive statistics show that out of the firms that had sought bank finance, 41.8% had recorded a decline in their sales growth, 44.7% had achieved increases in their past sales growth, and 13.6% reported a steady past sales growth performance. In contrast, among firms that needed finance but were discouraged from applying because they thought that their application would not be successful, 34.9% experienced a decline in past sales growth performance, 44.7% witnessed increases in sales growth and 20.4% firms documented an unchanged past sales growth. By comparing the group of firms that were discouraged with those that had applied for bank credit through univariate analysis, we see that the factor is statistically insignificant as the  $p$ -value is greater than the conventional significance level – as shown in Column 7 of Table 6.19.

Among other constrained firms that reported unsuccessful bank loan applications, 18.1% recorded unchanged sales growth, 45.5% faced a decline in sales growth, while 36.4% achieved increases in sales growth performance. There are no significant differences between the percentages of constrained firms and firms that had obtained loans.

### *3) Formal Comprehensive Business Plan*

A business plan is another firm strategy factor that could be required by lenders to evaluate a potential project plan (Bruns and Fletcher, 2008; Saparito et al., 2013; Rostamkalaei et al., 2020). Having a business plan would enhance credit availability for firms. Therefore, this study asked non-oil-related SME primary owners whether or not they kept a documented formal comprehensive business plan. The survey shows that half of the firms were using such a plan. This may indicate that some firms were aware of the importance of a written formal complete business plan. In addition, this reflects the ratio of firms in the sample that had approached lenders (60.2%) as some lenders – such as the Oman Development Bank – request a business plan in order to assess the solidity and robustness of the potential project and other aspects of the business's financial and management performance. This is consistent with the literature as the financial data contained in this document could be another target for finance suppliers - as stated by Mason and Kowk (2010). The outcome is also consistent with another study conducted in the Omani context (Al-Kharusi, 2003), which found that 56.7% of the SME sample did not have a business plan. In Saudi Arabia, 42.5% of Saudi SMEs had developed a business plan (Waked, 2016).

In contrast, the descriptive statistics show that 43.7% and 45.5% of firms used a viable business plan but were discouraged and constrained by the lenders. This result is in line with Fraser (2009: 587), who stated that there is proportion of “[...] entrepreneurs who decide not to apply for loans in the first place, despite having viable business plans, because they believe they will be turned down by the bank.” However, based on the univariate analysis, non-oil-related SMEs with a formal business plan were less likely to be discouraged from applying for funding. This is in line with the preliminary results of Rostamkalaei et al. (2020).

#### 4) *Quality Audited Financial Report*

Previous studies contended that the quality of audited firms’ information could play a great signalling role in favour of banks financing SMEs (Van Caneghem and Van Campenhout, 2012). Thus, this research measured the variable of firms using a quality external auditing company such as Big 4 auditors (Deloitte, KPMG, PricewaterhouseCoopers, Ernst and Young) to review and certify their reports. The respondents were asked: *B1.12 is the audited financial report certified by external auditors?* They could reply: (1) *No, did not hire external auditors;* 2) *Yes, but non-Big 4 audit companies;* or 3) *Yes, Big 4 audit companies*). The outcomes show that the majority of firms, i.e. 57% of the total sample, did not hire external auditors to review and certify their regular financial statements. However, 7.9% attempted to enhance the quality of their financial information by hiring one of the Big 4 audit firms, while 34.9% of the sample hired non-Big 4 audit firms to check and approve their information.

The descriptive statistics show that among the 103 firms that had applied for bank loans, 56.3% did not use independent external auditors for their business financial reports, 32% employed non-Big 4 audit firms, and only 11.7% hired one of the Big 4 audit firms. With respect to discouraged firms, the proportion of firms that did not hire external audit firms represented 62.1%, compared to 34.9% and 2.9% of firms that had hired non-Big 4 audit firms and Big4 audit firms respectively. The univariate comparison shown in Column 7 Table 6.19, implies that financial discouragement within non-oil-related SMEs is significantly less likely to occur when entrepreneurs have their financial reports audited by Big 4 audit firms.

Moreover, 60.6% of credit constrained firms reported that they had not employed external audit companies, 36.4% had hired non-Big 4 audit firms, and 3% had hired Big 4 audit firms. These

outcomes do not seem unusual as in less-developed economies such as Oman few firms have used external auditing services, especially the reputable and famous audit companies (e.g. Big4 auditors) – the following chapter explains the reasons for this. The findings are in line with Gama et al. (2017) and they could be explained by the reasoning that using famous quality external auditors is too expensive for SMEs. In addition, these firms may use audited reports only when needed by stakeholders such as for government tax.

##### *5) Sources of Financial Advice*

Since some SMEs have poor levels of management skills and the knowledge that is needed to alleviate their risks and the complexities in the market, Bennett and Robson (2004) suggested that these firms need to use sources of advice to make the optimal decision and reduce information asymmetries. Thus, in the present study, the type of financial advice source is considered as a further firm strategy factor. The survey disclosed that around 50% of the firms were using external sources of advice, while the other half were not. Interestingly, 66.9% of the firms that had used financial advice had access to the banks. However, among firms that needed finance and used financial advice, 51.5% were discouraged and 63.6% were constrained by the lenders. In addition, the descriptive analysis shows that this factor is statistically significant (at a level of 5%). This indicates that this variable could be important for discriminating between firms that are in need of bank finance but have not applied due to the fear of rejection and those who were able to access bank loans. In Table 6.19 Column 7, the univariate comparison demonstrates that the likelihood of credit discouragement declines within firms that use a source of advice.

From the survey, we were also able to collect information about the types of advice sources that the entrepreneurs accessed for their business financial needs. Twenty-eight firms (8.8%) had obtained financial business advice from their main bank manager. Other firms (26.8%) relied on informal sources such as friends and family. Furthermore, the descriptive analysis shows that 14.9% and 7.9% of the firms sought advice from a professional accountants and lawyers in the market respectively. 14.3% of the firms sought for financial advice from government sector (e.g. Riyadh and the Al Raffd Fund). Sixteen (5.1%) of non-oil-related SMEs had obtained advice from other sources in the private sector such as Zubair Small Enterprises Centre and industry clusters. Other firms (8.3%) reported that they prefer to rely on their own internal experts and

management. These outcomes seem in line with the survey of the CBO (Al-Barwani et al., 2014). Notably, there were various reasons why some of the firms had not sought an external source of advice:

- 41% of firms reported that they did not know the right person or institution to ask for advice.
- 64% of firms noted that applying for external advice is too costly.
- 28% of firms reported that a lack of time had hindered them from seeking external consultations.
- 6% of firms concern about the quality of external advice.
- 24% of firms thought that external advice would not be useful.
- 40% of firms revealed other reasons for not using external advice (22 firms had not sought external funding and other preferred to use their own internal source of expert management and auditing).

Table 6.19: Descriptive Statistics Firms-Level Strategy Variables by Different Firms' Demand Status for Bank Credit

<b>Explanatory Variables</b>	<b>Per. (%) Full Sample (1)</b>	<b>Per. (%) Applicants (2)</b>	<b>Per. (%) Non-applicants (3)</b>	<b>Per. (%) Discouraged (4)</b>	<b>Per. (%) Credit Constrained (5)</b>	<b>Per. (%) Received Credit (6)</b>	<b>Sig. level (4) vs. (2) (7)</b>	<b>Sig. level (4) vs. (5) (8)</b>
<b>Export Intensity</b>							0.15	0.29
Not Exporting	63.5	68.9	66.4	66.02	78.8	64.9	Reference	Reference
Low Export Share <50	26.4	19.4	28.8	28.2	15.2	22.1	0,26	0.46
High Export Share >=50	10.1	11.7	4.8	5.8	6	12.9	0.4	0.08
<b>Past Sales Growth Performance</b>							0.36	0.56
Remained Unchanged	17.1	13.6	19.2	20.4	18.1	10.4	Reference	Reference
Decreased	41.9	41.7	35.2	34.9	45.5	39	0.36	-0.22
Increased	40.9	44.7	45.6	44.7	36.4	50.6	0.25	0.05

**Table 6.19 (Continued)**

<b>Formal Comprehensive Business Plan</b>							**0.02	0.85
Do Not Keep a Business Plan	50.8	39.8	55.2	56.3	54.5	31.2	Reference	Reference
Have a Business Plan	49.2	60.2	44.8	43.7	45.5	68.9	-0.42**.	-0.04
<b>Quality Audited Financial Report</b>							0.04**	0.99
Do Not Use External Audit Firm	57.1	56.3	63.2	62.1	60.6	57.1	Reference	Reference
Non-Big 4 Audit Firms	34.9	32	32.8	34.9	36.4	28.6	- 0.01	-0.03
Big 4 Audit Firms	7.9	11.7	4	2.9	3	14.3	- 0.9****	-0.03
<b>Source of Financial Advice</b>							0.005**	0.1*
Do Not Use	50.5	33.01	34	48.5	36.4	32.5	Reference	Reference
Use Source of Financial Advice	49.5	66.9	69	51.5	63.6	67.5	0.5**	-0.38*

**Note:** Credit constrained refers to firms that were constrained by the creditors (rejected firms, refused bank's offer, informal rejection). Received credit refers to firms that obtained full or at least part of their request for a bank loan. Reference (analysis outcome base). Significant at level (\*) 10%, (\*\*) 5%, and (\*\*\*) 1%

### 6.2.2 Non-oil-related SMEs' relationships with banks

This section presents a descriptive analysis of the factor of firm banking relationship. This factor is predicted to reduce the information asymmetry between them, and thereby enhance credit availability for the SMEs in the non-oil sector. Thus, the respondents of the present study were asked about the length of their relationship with their main bank and their level of satisfaction with the bank – more details were explained in Chapter 5. The descriptive statistics of the banking relationship variables show no significant differences in rates of different demand status for bank loans. As illustrated in Table 6.20, within the dataset sample, 42.5% of firms had a relationship with their main bank of 6 years or less, while 57.5% had a relationship of more than 6 years with their main bank.

The descriptive analysis reveals that businesses with banking relationships of 6 years or less and those with banking relationships of more than 6 years represented 46.6% and 53.3% of firms that had approached banks for finance, respectively. On the other hand, 38.8% of firms with a banking relationship of 6 years or less were discouraged from applying for bank credit. In addition, 61.2% of firms with a banking relationship of more than 6 years had not approached lenders because they thought that their loan application would not be approved. Furthermore, 54.5% of credit constrained firms had a banking relationship of less than 6 years whereas 45.5% had a longer relationship with their main bank.

In terms of satisfaction levels with their main bank, 74.9% of non-oil-related SMEs reported that they were satisfied with the relationship with their main bank. This was followed by 14.6% of firms that reported being dissatisfied with their banking relationship, while 10.5% of firms had a neutral relationship with their main bank. Among discouraged non-applicants, 73.8% were satisfied with their main bank while 12.6% were dissatisfied. This is consistent with the findings of Rostamkalaei et al. (2020). In contrast, among applicant firms, 69.9% had a satisfactory relationship with their bank. Among those firms that obtained a loan, 72% were satisfied with their banking relationship whereas 63.6% who were credit constrained had a satisfactory banking relationship.

Through the survey of the present study found that there are variations in the financial products or services that the firms used (*multiple response question*): 57.5% had personal current

accounts, 66.1% had business current accounts, 5.7% used an overdraft, 53% had deposits accounts, 7.3% used bank loans 32.1% used a personal credit card, and 15.6% used business credit cards. Thirty-five per cent reported that they had used other banking products and services (L/C, guarantee letter for exporting activities, employees' salaries, online banking services, government contracting for tender).

It is interesting that both variables of the firm banking relationship show that this relationship is not significant for the decision over whether or not to approach bank funders. This may be because the sample may be embedded with certain characteristics relevant to the Omani business context and culture that could hinder the firms from seeking their required funds. For instance, women-led businesses and firms that are owned and managed by unregistered owners (i.e. Omani-fronted firms) are less likely to have a clear and robust relationship with their banks. The following chapter will explain in detail the effect of the factor on the discouragement model.

Table 6.20: Descriptive Statistics of Banking Relationship Variables by Different Firms' Demand Status for Bank Credit

<b>Explanatory Variables</b>	<b>Per. (%) Full Sample (1)</b>	<b>Per. (%) Applicants (2)</b>	<b>Per. (%) Non-applicants (3)</b>	<b>Per. (%) Discouraged (4)</b>	<b>Per. (%) Credit Constrained (5)</b>	<b>Per. (%) Received Credit (6)</b>	<b>Sig. level (4) vs. (2) (7)</b>	<b>Sig. level (4) vs. (5) (8)</b>
<b>Banking Relationship Length</b>								
=<6 years	42.5	46.6	40.8	38.8	54.5	45.5	0.26	0.11
> 6 years	57.5	53.3	59.2	61.2	45.5	54.5	Reference	Reference
<b>Satisfaction Levels with Main Bank</b>							0.37	0.30
Dissatisfied with relationship	14.6	19.4	12.8	12.6	24.2	18.2	Reference	Reference
Neutral	10.5	10.7	13.6	13.6	12.1	9.1	0.42	0.46
Satisfied with relationship	74.9	69.9	73.6	73.8	63.6	72.7	0.30	0.48

**Note:** Credit constrained refers to firms that were constrained by the creditors (rejected firms, refused bank's offer, informal rejection). Received credit refers to firms that obtained full or at least part of their request for a bank loan. Reference (analysis outcome base)

- Significant at level (\*) 10%, (\*\*) 5%, (\*\*\*) and 1%

### 6.2.3 Non-oil-related SME Primary Owners' Characteristics

This section presents the descriptive analysis of the characteristics of firms' primary owners. These are assumed to have an influence on their decision over whether or not to approach banks for finance. The analysis is summarised in Table 6.21.

In the Omani government's efforts to enhance SME growth and diversification, the national contribution of business ownership and gender is one of the major factors attracting policymakers' attention, as they try to identify whether or not it has an impact on sector growth (Al-Barwani et al., 2014). Nonetheless, the descriptive statistics of the present study show that the sample size of female-led businesses (21.3%) is small compared to male-led businesses (78.7%). This may reflect the fact that the market is dominated by males due to religion, culture and the customs of the community, as stated by Belwal et al. (2014). With reference to female-owned businesses, 20.3% had sought bank loans, 23.3% were financially discouraged, and 36.3% were constrained by bank lenders. This compares to 79.6%, 76.7% and 63.6% of their male business counterparts, respectively.

In addition, the citizenship factor (Omani-fronted firms and Omani firms) is not balanced (i.e. only 20.9% were Omani fronted, with the remaining 79.1% being Omani). This is because the Omani-fronted firm issue is a very sensitive subject in Oman because it contradicts the government's policies or laws. Thus, both the Omanis (sponsors) and foreigners (agent) of businesses show considerable caution about revealing information about the real registered owners. Therefore, only a few of these firms agreed to participate in this study. However, the ratio of the gender and citizenship variables has helped to provide evidence about their nature and existence in Oman's market, which contributes to the existing knowledge about the impact of different contexts and cultures on SMEs' ability to access credit. The statistics of the Omani-fronted firms variable show that 13.6% had applied for bank loans, 26.2% were discouraged from seeking a loan and 18.2% experienced unsuccessful bank loan applications.

The mechanism of this type of business ownership contract is made under agreed regular fees that are paid to the sponsor (kafeel) by the foreign business owners. Thus, the survey disclosed the amount of regular fees that the agents gained from this invalid business ownership: 40.9% of firms paid 1000 OMR and above; 34.9% agreed to pay between 100 and 499 OMR; 16.7%

agreed to pay less than 100 OMR, while only 7.6% firms agreed to pay between 500 and 999 OMR. To the researcher's best knowledge, this study was the first to collect in-depth information about Omani-fronted firms. Using Stata tabulation analysis, the findings indicate that Omani-fronted firms (rely on alternative funding source instead of banking sources: 65.5% used informal financial sources (65.6%), 18.8% used non-bank institutions, 9.4% used a personal loan to raise the business capital and 6.2% of firms did not seek external finance. The lack of finance placed pressure on the business cash flow and caused the firm to postpone its investment plan or to cancel a business plan.

Acquiring prior relevant experience is another important factor that is expected to affect firms' accessibility to financial suppliers. This factor was measured by asking the respondents about their years of experience in relevant business. In this sample of non-oil-related SMEs, 23.7% of primary owners had no prior relevant business experience, 32% of primary owners had 1 to 5 years' prior relevant business experience, 19% had 6 to 10 years' prior relevant business experience and 25.3% had more than 11 years of prior relevant experience. The outcomes may reflect the findings of the CBO report which found that in Oman most business owners had relevant prior experience of at least one year (Al-Barwani et al., 2014). The outcome is also consistent with a similar context such as Saudi Arabia, where Binzomah (2008) reported that 30% of the sample reported no experience, 28.8% had 1 to 5 years' experience, 29.7% had between 6 and 10 years of experience, and 10.9% had prior experience of more than 10 years.

A further variable that is critical to the Omani SME context is the level of primary owners' education. Although most of the Oman population is educated and has acquired a higher level of education, there remains a small proportion of illiteracy among the citizens. The National Center for Statistics and Information (NCSI) disclosed that the illiteracy rate was only 3.8% of the total population aged 10 and above, while those who are able to read but do not have academic qualification (i.e. literacy) and work in private and family sector represent 28.9% in 2019. Therefore, this study categorised the sample as follows: no academic qualification; a lower level of formal education (diploma degree and lower); and a higher level of formal education (Bachelor and Postgraduate degree). The descriptive analysis manifested that 53.7% of primary owners possessed a postgraduate degree (PhD, MSc), 38.7% had a high school diploma and a diploma degree and 7.7% had no academic qualifications. This result supports Al-Barwani et al.'s (2014) report of the CBO outcomes.

When comparing firms that were financially discouraged with firms that had accessed banks, the univariate analysis indicates that citizenship and formal education are statistically significantly related to borrowing decisions, as illustrated in Column 7 of Table 6.21. The outcomes disclose that well-educated primary business owners of non-oil related -SMEs are less likely to be discouraged compared to non-educated entrepreneurs. In addition, the univariate analysis pointed out that Omani-fronted businesses are more likely to be discouraged than their counterpart Omani businesses.

Table 6.21: Descriptive Statistics of Firms' Primary Owner-Level Characteristics by Different Firms' Demand Status for Bank Credit

<b>Explanatory Variables</b>	<b>Per. (%) Full sample (1)</b>	<b>Per. (%) Applicants (2)</b>	<b>Per. (%) Non-applicants (3)</b>	<b>Per. (%) Discouraged (4)</b>	<b>Per. (%) Credit Constrained (5)</b>	<b>Per. (%) Received Credit (6)</b>	<b>Sig. level (4) vs. (2) (7)</b>	<b>Sig. level (4) vs. (5) (8)</b>
<b>Gender</b>							0.61	0.14
Male	78.7	79.6	76.8	76.7	63.6	83.1	Reference	Reference
Female	21.3	20.3	23.2	23.3	36.3	16.9	0.11	-0.37
<b>Citizenship</b>							0.02**	0.58
Omani Businesses	79.1	86.4	74.4	73.8	81.8	89.6	Reference	Reference
Omani-Fronted Businesses	20.9	13.6	25.6	26.2	18.2	10.4	0.51	0.09
<b>Prior Relevant Business Experience</b>							0.14	0.08***
No prior experience	23.8	19.4	23.2	24.3	12.1	20.8	Reference	Reference
1–5 years	31.1	38.8	29.6	33	27.3	41.6	-0.24	-0.28
6–10 years	19.4	12.6	24.0	22.3	18.2	12.9	-0.22	-0.27
More than 10 years	25.7	29.1	23.2	20.3	42.4	24.7	-0.36	-0.83**

**Table 6.21 (Continued)**

<b>Formal Education Degree</b>							0.04**	0.39
No Academic qualification	8.6	1.9	12	9.7	3	2.6	Reference	Reference
High school and diploma degree	37.5	43.7	33.6	37.9	42.4	41.6	-1.06	-0.70
Bachelor and Postgraduate degree (PhD, MSc)	53.9	54.4	54.4	52.4	54.5	55.8	-0.99	-0.66

**Note:** Credit constrained refers to firms that were constrained by the creditors (rejected firms, refused bank's offer, informal rejection). Received credit refers to firms that obtained full or at least part of their request for a bank loan. Reference (analysis outcome base).

- Significant at level (\*) 10%, (\*\*) 5%, (\*\*\*) and 1%

## 6.2.4 Non-oil-related SME Industry Sector

The present study has adopted the Public Authority for Small and Medium Enterprises Development of Oman (PASMED) classification for the SME sector. The sector is defined as shown in Table 6.22.

Table 6.22: Business Sector Types

<b>B1.1 which of the following describe your business activity field?</b>	<b>Freq. (n)</b>	<b>Per. (%)</b>
Manufacturing	96	30.4
Extract/processing of natural resources (non-oil mining, fishing, agriculture, electricity, gas, water)	51	16.1
Wholesale and retail	68	21.5
Business service	31	9.8
Customer service	27	8.5
Other, please specify	42	13.3

Due to the small sample size and scope, the regression (e.g. multinomial probit, three-step sequential logit) encountered problems with estimating the probability for all the parameters, in particular for the group that had a very small number of observations, such as the rejected loan application cases. Therefore, for the analysis, the researcher combined business and customer services under variable service sectors whereas wholesale, retail and extract/processing of natural resources are within the trade sector. A further reason for this classification was that these SMEs are mostly concentrated in these sectors. This classification has been used in many studies (e.g. Al-Kharusi, 2003).

According to the descriptive analysis of this study, the industry sector represents 30.7% of manufacturing activities, 50.7% of trade activities and 18.7% of service activities – as illustrated in Table 6.23. The analysis shows that most of the manufacturing sector firms (i.e. 39.8%) were loan seekers compared to the trade and service sector, as shown in Column 2 Table 6.23. We can see that 11.3%, 27.2% and 9.9% of the manufacturing, trade and service sectors respectively did not apply for bank credit because their business owners thought that the application would

not be successful. The preliminary univariate analysis indicates that sector type is statistically significant in determining the incidence of discouragement among firms – as described in Table 6.23 Column 7. Moreover, 33.3% of manufacturing industries, 27.3% of the trade sector and 39.4% of the service sector were credit constrained.

### **6.3 Control Variables**

Table 6.23 below presents the descriptive analysis of the control variables related to firm characteristics, which are the age and size of the business. With respect to firm age, the variable was defined by the number of years the business had been trading. The survey statistics show that the largest proportion (42.2%) of firms had been trading for 6 to 10 years. This is followed by firms that had been trading for 1 to 5 years and over 15 years – 27.6% and 19.1% of the total sample size respectively. Only 11.7% of the sample had been trading for between 11 and 15 years. Furthermore, the descriptive results show that firm age is not significant for distinguishing between discouraged non-applicants and applicants. Most of the sample's credit demand was high among non-oil-related SMEs that had been trading for 1 to 5 years or 6 to 10 years as 29.1% and 39.8% of these firms had applied for bank loans. This may be because these firms were attracted by government financing policies and the increase in financial and non-financial banking products and services, which have supported the growth of SMEs since the oil price crisis.

In this study, the firm size was measured by the number of employees, including business owners. Within the sample dataset, 9.5% of sole proprietorship and 35.6% of firms had between 2 and 5 employees, representing micro-sized firms; 34% were small-sized firms with 6 to 25 employees, and 20.9% were medium-sized firms (26 to 99 employees). In addition, the analysis shows that enterprise size has no significant impact on whether or not firms seek funds. In the study's sample, 36.9% of small-sized firms, 31.1% of micro-sized firms and 26.2% of medium-sized firms were loan seekers. On the other hand, Column 4 in Table 6.23 presents evidence that the largest proportion of firms that needed funding but were discouraged by the fear of rejection were micro-sized firms (41.7%), followed by small-sized firms (35.9%). The majority of firms that were not successful in their loan bank applications were small (42.4%), followed by micro (30.3%) and large-sized firms (15.2%). The univariate analysis shows that larger firms were less likely to be discouraged than sole-ownership firms.

Table 6.23: Descriptive Statistics of Firms' industry and Control Variable by Different Firms Demand status for Bank Credit

<b>Explanatory Variables</b>	<b>Per. (%) Full Sample (1)</b>	<b>Per. (%) Applicants (2)</b>	<b>Per. (%) Non-applicants (3)</b>	<b>Per. (%) Discouraged (4)</b>	<b>Per. (%) Credit Constrained (5)</b>	<b>Per. (%) Received Credit (6)</b>	<b>Sig. level (4) vs. (2) (7)</b>	<b>Sig. level (4) vs. (5) (8)</b>
<b>Firms' Industry Type</b>							0.002**	0.1*
Manufacturing	30.5	39.8	24.8	23.3	33.3	42.9	Reference	Reference
Trade	51.1	32.0	55.2	56.3	27.3	33.8	0.69	0.62**
Services	18.4	28.2	20.0	20.3	39.4	23.4	20.13	-0.18
<b>Control Variables</b>								
<b>Firm Age</b>							0.62	0.96
1–5 years	27.6	29.1	34.4	33.0	30.3	31.2	Reference	Reference
6–10 years	42.2	39.8	41.6	42.7	42.4	39.0	-0.03	-0.05
11–15 years	11.1	11.7	8.0	6.8	6.1	12.9	-0.41	-0.02
Over 15 years	19.1	19.4	16.0	17.5	21.2	16.9	-0.14	-0.16
<b>Firm size</b>							0.003 **	0.66
Self-employed	9.5	5.8	12.0	11.7	12.1	2.6	Reference	Reference
2 to 5 employees	35.6	31.1	40.8	41.7	30.3	32.5	-0.25	0.21
6 to 25 employees	34	36.9	35.2	35.9	42.4	35.1	-0.45	-0.07
26 to 99 employees	20.9	26.2	12.0	10.7	15.2	29.8	-0.99*	-0.19

## **6.4 Credit Discouraged Firms Versus Credit Constrained Firms**

Compared to credit constrained firms, the univariate analysis indicates that discouraged non-applicants are significantly more likely to exist within the trade sector (56.3% vs. 27%). Furthermore, discouragement declines with firms that use sources of financial advice (51.5% vs. 63.6%) and that they are less likely to be firms owned by individuals with prior relevant business experience (20.3% vs. 42.4%). The other variables of firm business strategy, banking relationship, primary owners and firms' characteristics seem do not have a significant effect on the likelihood of being credit discouraged in this study's sample.

## **6.5 SUMMARY OF THE CHAPTER**

This chapter provided rich evidence about the variations in non-oil-related SMEs applications for bank credit in Oman between 2014 and 2017. The descriptive statistics manifest that demand for credit varies among this sector: some firms do not need credit and others do. In particular, this chapter achieved three main objectives. First, it examined whether or not firms that need finance have approached banks. In detail, it presented a discussion about firms that had applied for and received a loan, compared to firms that had unsuccessful bank loan applications. The comparison was developed based on type of finance, the purpose of the financing, type of bank that had been approached, borrowing costs (i.e. collateral and interest rates) and length of loan payment duration. The chapter provided a discussion about the reasons for credit constraints and their impact on business growth. Second, it presented a detailed discussion of firms who needed loans but were unable to access banks and how this affected business growth.

Third, the chapter provided the descriptive statistics of the independent variables employed in order to examine their impact on the likelihood of applying for a bank loan, the likelihood of being discouraged from borrowing, and the likelihood of being constrained by lenders. The discussed variables comprised firm-level strategy, banking relationship, primary owners, and type of industry sector. The chapter presented the descriptive statistics for comparison between discouraged non-applicant firms and firms were constrained by an unsuccessful loan application, in order to examine the extent of the differences between them.

## CHAPTER SEVEN

### 7. DEMAND-SIDE CONSTRAINTS ON ACCESS TO BANK FINANCE AMONG NON-OIL-RELATED SMEs

This chapter provides a discussion about non-oil-related SMEs' demand for bank credit in Oman. The structure of the chapter is organised into two sections. The first section discusses the factors that are hypothesised to influence primary business owners' decisions over borrowing. The second section discusses the determinants of credit constraint based on their influence on lenders' decisions from the perspective of business owners. Moreover, the chapter discusses the comparison between credit-discouraged firms and those had unsuccessful loan applications.

#### 7.1 Applying for Bank Finance and Discouragement Incidents

This section discusses the results of the hypotheses in terms of examining the influence of firm-level strategy, banking relationships, and firms' and primary owners' characteristics on the probability of firms being able to access finance. The findings of this section reflect the business owners' decisions to apply for bank finance which is considered to be an essential indicator to obtain the needed funds for supporting business growth. Nonetheless, the present study found that there are discouraged firms that needed finance but thought that banks would reject their application for various reasons that were discussed in Chapter 6. They represent 32.69% of the total sample.

Therefore, the aim of this section is to estimate the likelihood that firms will seek bank loans and the likelihood that firms will encounter financial discouragement using Probit regression – see Table 7.2. Model 1 presents the goodness-of-fit statistics, which indicate that the model explains the relationships between the variables better than a model with no variables at significance level  $\alpha = 0.05$  (see Table 7.2). The Hosmer-Lemeshow ( $Prob > Chi2 = 0.801$ ) demonstrates that the estimated model is reasonable and adequately fits the research sample's data.

The credit discouragement Model 2 illustrates a Likelihood Ratio Chi-squared of 83.86 with P-value  $<0.05$ , indicating that the fit of 14 predictors explains the probability of discouragement better than a model with no predictors. The Pearson chi-square ( $Prob > chi2$

= 0.1149) and Hosmer-Lemeshow (Prob > Chi2 = 0.895) are greater than zero, implying that the estimations of the model reasonably and adequately fit the dataset of the present research. Table 7.1 presents a summary of the tested hypotheses and empirical findings: 1) SMEs' access to bank financing (Ha); 2) financial discouragement occurrences among firms (Hb); and 3) firms financially constrained by lenders (Hc).

Table 7.1 Summary of Hypotheses and Empirical Findings: Factors influencing Firms Ability to Access bank for Financing

Hypotheses	Loan Applicants		Discouraged Non-applicants		Credit Constrained Firms	
	Hypothesis (Ha)	Result	Hypothesis (Hb)	Result	Hypothesis (Hc)	Result
<b>Non-oil-related SME-Level Characteristics</b>						
H1: Export Performance Intensity ( $\geq 50\%$ of turnover)	Positive	No relation	Positive	No relation	Positive	No Relation
H2: Past Sales Growth Performance (increased)	Positive	Support	Negative	Support	Negative	No Relation
H3: Formal Comprehensive Business Plan	Positive	No relation	Negative	No Relation	Negative	Support
H4: Quality Audited Financial Report (Hiring Big4 Audit companies)	Positive	No relation	Negative	No Relation	Negative	Support
H5: Sources of Financial Advice	Positive	Support	Negative	Support	Negative	No Relation
<b>Banking Relationship</b>						
H6: Length of Relationship Banking (higher than 6 years)	Negative	Reject	Positive	Reject	Negative	No Relation
H7: Satisfied with Banking Relationship	Positive	No Relation	Negative	No Relation	Negative	No Relation
<b>Firms' Primary Owner Characteristics</b>						
H8: Gender (Female-owned Businesses)	Negative	Relation	Positive	No Relation	Positive	Support
H9: Citizenship (Omani-fronted Non-oil SMEs)	Negative	Support	Positive	Support	Negative	No Relation
H10: Prior Relevant Business Experience (Well-experienced Firms)	Positive	Support	Negative	Support	NA	NA
H11: Formal Educational Degree	Positive	Support	Negative	Support	NA	NA
<b>Firm Characteristics</b>						
H12: Non-oil SME Industry Types						
▪ Trade Sector	Negative	Support	Positive	Support	Positive	No Relation
▪ Service Sector	Negative	Support	Positive	Support	Positive	Support

Note:

- (NA) Not Applicable

Table 7.2 Probit Regression Models of Applicants, Discouraged Non-applicants, and Credit Constrained Firms

<b>Model (1)</b> Applicants = 1 Vs. Non-applicants = 0 (discouraged firms, informally turned down firms, other non- applicants)	<b>Model (2)</b> Discouraged Non- applicants = 1 Vs. Applicants = 0	<b>Model (3)</b> Credit Constrained Firms= 1 (rejected, informally turned down and refused offer) Vs. Firms obtained bank loan=0	<b>Model (4)</b> Discouraged Non-applicants = 1 Vs. Credit constrained Firms = 0 (rejected, informally turned down and refused offer)	
<b>Marginal Effect (dy/dx)</b>	<b>Marginal Effect (dy/dx)</b>	<b>Marginal Effect (dy/dx)</b>	<b>Marginal Effect (dy/dx)</b>	
<b>Explanatory Variables</b>				
<b>Non-oil-related SME-level Strategy:</b>				
FST_EXP_INTS (Ref: Not exporting)				
Low export intensity (< 50% of turnover)	-0.223** (0.067)	0.23** (0.072)	-0.081 (0.126)	0.046 (0.102)
High export intensity (≥ 50% of turnover)	-0.061 (0.122)	0.08 (0.126)	-0.1 (0.158)	0.015 (0.160)
FST_GRWT (Ref: Remained Unchanged)				
Decreased	0.188** (0.079)	-0.195** (0.082)	0.043 (0.146)	-0.181** (0.093)
Increased	0.183** (0.079)	-0.209** (0.082)	-0.108 (0.132)	0.038 (0.101)
FST_BP (Ref: Not keep business plan)				
Yes	0.055 (0.065)	-0.08 (0.066)	0.162* (0.093)	-0.006 (0.073)
FST_AUD (Not hire external Auditor)				
Yes, Non-Big 4 companies	-0.086 (0.071)	0.113 (0.074)	0.1 (0.114)	0.046 (0.095)
Yes, Big 4 companies	-0.105 (0.120)	0.04 (0.142)	-0.178* (0.105)	0.203** (0.097)

FST_ADV (Ref: Not use)				
Use source of financial advice	0.255** (0.057)	-0.253** (0.06)	-0.144* (0.092)	-0.114 (0.079)
<b>Banking Relationship</b>				
RE_LEN (Ref: ≤6 years)				
> 6 years	-0.147** (0.07)	0.163** (0.072)	-0.033 (0.089)	0.319*** (0.071)
RE_SAT (Ref: Dissatisfied)				
Neutral	-0.176* (0.104)	-0.216** (0.107)	0.101 (0.154)	0.220** (0.101)
Satisfied	-0.084 (0.073)	-0.089 (0.078)	0.046 (0.095)	0.082 (0.091)
<b>Non-oil-related SME Primary Owners' Characteristics:</b>				
PO_GEN (Ref: Male)				
Female	-0.004 (0.073)	0.01 (0.078)	0.309** (0.098)	-0.160* (0.097)
PO_CIT (Ref: Omani)				
Omani-fronted business	-0.208** (0.071)	0.256** (0.071)	0.113 (0.149)	0.153** (0.074)
PO_EXP (Ref: No prior experience)				
1–5 years	0.225** (0.71)	-0.21** (0.073)	0.107 (0.905)	-0.058 (0.071)
6–10 years	-0.017 (0.081)	-0.02 (0.88)	0.290 (0.124)	-0.105 (0.078)
More than 10 years	0.245**	-0.31*** (0.078)	0.314*** (0.103)	-0.398*** (0.081)

PO_EDU (Ref: No formal education)				
High school diploma and diploma degree	0.436** (0.076)	-0.436*** (0.088)	NA	-0.237*** (0.066)
Bachelor and Postgraduate degree (PhD, MSc)	0.317** (0.078)	-0.336*** (0.091)	NA	-0.232*** (0.069)
<b>Non-oil-related SME Characteristics:</b>				
F_SEC (Ref: Manufacturing sector)				
Trade	-0.251** (0.076)	0.273*** (0.078)	-0.051 (0.099)	0.269*** (0.098)
Service	-0.174** (0.086)	0.198** (0.089)	0.239*** (0.118)	0.038 (0.126)
<b>Control Variables:</b>				
F_AGE (Ref: 1-5 years)				
6–10 years	0.112* (0.066)	-0.099 (0.071)	NA	-0.161*** (0.063)
11–15 years	0.418** (0.1)	-0.386*** (0.104)	NA	-0.192 (0.171)
Over 15 years	0.254** (0.099)	-0.195* (0.105)	NA	-0.273*** (0.102)
F_SIZE (Ref: sole ownership)				
2–5 employees	0.202** (0.088)	-0.203** (0.098)	-0.337* (0.192)	-0.074 (0.086)
6–25 employees	0.23** (0.096)	-0.226** (0.107)	-0.335* (0.193)	-0.122 (0.092)
26–99 employees	0.454** (120)	-0.475*** (0.125)	-0.449*** (0.204)	-0.291*** (0.145)

Constant	0	0	0.928	0.012
Observations	228	206	110	136
Log likelihood	-113.582	-100.86	-46.774	-48.486
Pseudo R2	0.276	0.293	0.303	0.356
LR chi2(26)	86.78	83.86	40.84	53.74
Prob > chi2	0	0	0.005	0.001
Pearson chi2	0.089	0.115	0.495	0.231
Hosmer-Lemeshow chi2	0.801	0.895	0.851	0.991
Cragg & Uhler's R2	0.423	0.450	0.440	0.487
Sensitivity	67.96%	72.82%	51.52%	90.29%
Specificity	76.00%	73.79%	90.91%	51.52%
Correctly classified	72.37%	73.30%	79.09%	80.88%

**Notes:** These variables denote the following: *FST\_EXP\_INTS* export intensity, *FST\_GRWT* sales growth, *FST\_BP* business plan, *FST\_AUD* quality of audited financial report, *E\_ADV* using source of external advice, *RE\_LEN* duration of bank relationship, *RE\_SAT* level of satisfaction with main bank, *PO\_GEN* primary owner gender, *PO\_CITZ* primary owner citizenship, *PO\_EXP* primary owner prior experience of relevant business, *PO\_EDU* primary owner highest formal education degree, *F\_SEC* firm's sector, and controlled by *F\_AGE* firm age, *F\_SIZE* number of employees in firm including the owners. The marginal effects at means (dy/dx) report the predicted probability outcome of each explanatory variable's effects: any changes in the probability y given a unit change in an explanatory variable x. The standard error reported in parentheses. The model includes diagnostics of log likelihood, P-value, and chi-squared statistic of the regression. One asterisk (\*) denotes the significance level at 10% level, two asterisks (\*\*) denote the significance level at 5% and (\*\*\*) denotes the significance level at 1%. (NA) Not Applicable: variables excluded from the model to improve the model's significance level. 95% confidence interval. For Model (4) there is no evidence of existing multicollinearity  $VIF < 3$  and the highest correlation of the spearman test is 0.534.

### 7.1.1 Non-oil-related SME Strategy Characteristics

This section discusses the empirical findings of firms' business strategy characteristics, as shown in Table 7.2.

- **Export Performance Intensity**

Expanding the SME export strategy of performance into the foreign market would provide an essential vehicle for economic growth and create new opportunities for firms in other countries (OECD, 2017), as well as contributing to economic diversification. However, the empirical evidence reported in the study conducted by Zia (2008) showed that eliminating subsidised credit from the exports of privately owned firms caused a decline in their share of exports in the Pakistani market, compared to large and quoted firms. Therefore, this study posits that:

*H1a:* Non-oil-related SMEs with a higher ratio of internationalised sales (i.e. 50% or more) are more likely to apply for bank credit than non-exporting firms.

The empirical findings from Model 1 demonstrate that there is no significant relationship between a higher ratio of internationalised sales (i.e. 50% or more exports) and firms' access to bank finance. This implies that an export intensity of 50% or more of total sales has no influence on business owners' decision to apply for funding or not. This finding is consistent with Storey (2004), where there is no relationship between exporting and firms' ability to apply for bank credit.

In contrast, a prior study found that the probability of accessing credit is positively related to increases in export intensity in Germany, France, Italy and Spain (Altomonte et al., 2016), indicating that export industry performance improved after the firms received their required funds. The results also contradict with another study conducted by Goldbach and Nitsch (2014). However, these studies were conducted in the European context. In these regions, the opportunities of exporting firms to access bank lenders are greater than in developing economies. This is because these contexts have strong advanced financial markets and stock market, a regulated market, plus strict regulations and policies that maintain and sustain their economies. Consequently, these countries have a higher ratio of export and trade industries, which utilise more external funding – as stated by Beck et al. (2003) and (2004). The study of Altomonte et al. (2016) also has used firm with 10 employees, however firms with more than 250 employees were over sampled for statistical analysis purpose.

Furthermore, the empirical analysis revealed that firms with less than 50% export intensity are less likely to approach banks in Oman. This may be because these firms have a problem with a lack of business information, weak credit information, and lack of collateral. For these firms to be able to internationalize their outputs, business owners need to provide enough information about export activity, dealers and distribution lines in foreign markets to bank lenders. However, this information is considered costly for SMEs where a bank might require high lending costs in terms of interest rates and collateral. This could impact negatively on firm owners' confidence toward seeking for bank financing. For the current study, the descriptive analysis shows that 65% of the firms with a low ratio of export are trading at an age of between one to 10 years, while only 34% of the firms with a low ratio of export have been trading for 11 years and above. The majority of these firms are micro and small businesses, whereas the medium size of low export firms represents only 27% of the total of low export intensity firms. This data implies that as the firms become older and larger they are better able to access banks for credit – as an example, this is the case for Ghanaian SMEs (Abor et al., 2014). Additionally, as explained earlier in Chapter One, the nature of banking sector liquidity in the country is greatly supported by oil businesses revenues. This increases oil-related crediting which would lessen non-oil-related SMEs' financial opportunities that are needed to expand their export growth.

Moreover, this study posits that:

*H1b*: Non-oil-related SMEs that perform with a higher ratio of internationalised sales (i.e. 50% or more) are more likely to be discouraged from applying for bank credit than non-export firms.

However, the outcomes of the marginal effect ( $dx/dy= 8.3\%$ ) and the statistical significant level ( $p\text{-value}>0.1$ ) indicate that there is no clear evidence to support the hypothesis that the strategy of performing export intensity of 50% or more has an influence on owners' borrowing decision, i.e. whether to apply for bank credit or not (*H1b*). Rather, it is found that firms exporting less than 50% of their total sales are more likely to be discouraged; this difference is statistically significant compared to non-exporting firms.

The result of *H1b* contradicts Rostamkalaei et al. (2020), who found that the probability of being credit discouraged was positively related to SMEs with an export orientation in the UK. In addition, it contradicts Gama et al. (2017), who found that in less-developed countries

in Eastern Europe and Central Asia, the likelihood of being financially discouraged declined among SMEs with an export-focused strategy. However, these focused on European and Asian regions, which have a good export industry environment, and lending technologies (transaction lending and relationship lending) and processes that developing countries do not have.

The findings reflect the Omani government's extensive reliance on increasing its share of the oil sector. During the boom period for oil prices, the large revenues earned from oil enhanced the state's revenue, which in turn expanded the liquidity, assets and deposit base of the banking sector (IMF, 2016). In turn, this has led the financial market to increase its focus on hydrocarbon activities. Consequently, this intensive attention and reliance on the oil sector has negatively affected the export performance of non-oil-related businesses in Gulf Cooperation Council (GCC) countries (Callen et al., 2014), which has in turn led to an underestimation of their creditworthiness among lenders. The problem of lack of finance for these firms seems to be more severe in the current decline of oil price because this situation leads to tight liquidity of the banking sector and government spending due to reduction in oil revenues. Therefore, the business owners of non-oil-related SMEs are less optimistic about accessing bank funding successfully compared to large firms and oil companies (Rocha et al., 2011; Al-Barwani et al., 2014).

#### ▪ **Past Sales Growth Performance**

Past sales growth performance is a further factor that is assumed to affect business owners' decision to seek a loan. Canton et al. (2013) argued that the high growth performance of a firm can optimistically enhance its perception of the likelihood of accessing bank lending.

Therefore, this study posits that:

*H2a*: Non-oil-related SMEs that have increased their sales growth are more likely to apply for bank credit compared to firms whose sales growth has remained unchanged.

The empirical finding is consistent with *H2a*, the p-value <0.05 indicates that prior growth in firms' sales has a significant positive effect on their demand for finance. The outcome is consistent with the Pecking Order Theory (POT) (Frank and Goyal, 2009), where the demand for external funding increases in growing firms compared to non-growing firms. In

addition, the finding is in line with another study conducted in Kosovo, which disclosed that the relationship between SMEs that have performed well (i.e. in their growth and profitability) and access to external finance is positive and significant at the conventional level of statistical significance (Krasniqi, 2010). Furthermore, McCarthy et al. (2017) found that in Australia, SMEs with past growth performance more likely to seek bank finance. On the other hand, other existing studies have found that the relationship between sales growth performance and owners' decision to borrow from a bank is not statistically significant (e.g. Binks and Ennew, 1997; Cowling et al., 2012; Erdogan, 2019).

Moreover, the present study hypothesised that:

*H2b*: Non-oil-related SMEs that have increased their sales growth are less likely to be discouraged from applying for bank credit compared to firms with unchanged sales growth.

The outcome of the marginal effect ( $dy/dx = -20.9\%$ ) confirms Hypothesis *H2a*. The variable is statistically significant at a conventional significance level for bank-borrowing decisions made by business owners. Mac an Bhaird et al. (2016) found that European SMEs with a declining turnover are more likely to be discouraged, arguing that this situation became more obvious during the economic recession due to a turn down in the business conditions. However, prior empirical evidence presented by Freel et al. (2012) did not support the argument that sales growth performance influences the credit discouragement incidence rate for UK SMEs. The authors of this study employed secondary data designed to deduce the attitudes and opinions of UK small businesses about a wide range of contemporary issues.

The findings of the present study indicate that the positive attitude of the banking sector towards enhancing credit availability (e.g. through the Loan Guarantee Scheme (LGS) and other financial products and services) during the transition period from an oil-based economy to a more diversified one played a major role in reducing the levels of financial discouragement among non-oil-related SMEs in the Sultanate. This may encourage SMEs to seek external finance, which will enhance their growth and performance in the future (Storey, 2004) as policymakers will plan for these enterprises to be key contributors to the state budget. This is evident with the interesting current empirical findings of this study, which found that the probability of discouragement among non-oil-related SMEs decreases with firms that have reported a dampening of their sales growth performance in the past.

This factor is statistically significantly related to firms' opportunities to access bank funding and obtain loan approval.

- **Formal Comprehensive Business Plan**

Drawing up a formal comprehensive business plan is considered to be one of the business strategies that could help business owners to achieve and sustain business success (Richbell et al., 2006). Through high-quality, clear and sufficient information (e.g. past and current performance and future plans), the documented business plan can help to overcome a firm's opacity, thereby enhancing owners confidence in making optimal borrowing decisions (Richbell et al., 2006; Erdogan, 2018). Thus, the current study posits that:

*H3a:* Non-oil related SMEs with a strategic formal comprehensive business plan are more likely to apply for bank credit compared to firms that do not keep a formal comprehensive business plan.

In addition, the study postulates that:

*H3b:* Non-oil related SMEs with a strategic formal comprehensive business plan are less likely to be discouraged from applying for bank credit compared to firms that do not keep a formal comprehensive business plan.

However, the outcomes of Model 1 and Model 2 indicate that there is no clear evidence that keeping a formal comprehensive business plan has an influence on owners' borrowing decisions in Oman. McCarthy et al. (2017) and Rostamkalaei et al. (2020) found that SME owners that have formal business plan are more willing to apply for bank loans. However, these studies were conducted in developed countries where SMEs owners likely to be more prepared and committed to prepare viable clear business plan than SMEs in developing countries. In addition, Abdesamed and Wahab (2014), provided evidence that Libyan SMEs that have a business plan are more likely to access bank financing. This study defined Libyan SMEs as firms with between only 1 and 50 employees which are less than the number of employees of non-oil-related SME of the current study sample. In addition, the authors did not clarify whether this business plan was officially documented because some entrepreneurs may record their business plan but use informal documentation with a lack of information. The current study focused on those who had an interest in keeping a formal and

comprehensive documented business plan in order to fulfil any potential business requirements such as borrowing.

The reason why there is no clear evidence about the impact of a business plan on owners' decision to seek finance is that the descriptive statistics showed no major difference between discouraged firms that had a formal comprehensive business plan (43.7%) and those who accessed bank loans and possessed a formal comprehensive business plan (60.1% firms).

- **Quality Audited Financial Report**

It is important for non-oil-related SMEs to have a quality strategy for maintaining transparent information in order to fulfil their desire for business investments. A periodic financial report is one of the instruments that business owners should consider to enhance the provision of their business information and to allow the exchange of information (Kitching et al., 2011; Van Caneghem and Van Campenhout, 2012). As highlighted by Kuffmann (2005), clear and complete of independent, competent, and credible accounting practices would enhance quality of the information and help firms to make borrowing decision. This would also increase bank lenders' willingness to supply small firms with the required capital. Chen et al. (2011) point out that using high-quality financial statements helps bank lenders to identify a firm's properties and values, and to evaluate their survival capabilities. Thus, the hypothesis of the present study posits that:

*H4a:* Non-oil-related SMEs that have financial reports audited by the Big 4 audit are more likely to apply for bank credit than firms that have not hired external audit firms.

However, the empirical findings show no evidence for the argument that using quality audit firms (e.g. Big 4 audit companies) influences firms' access to bank loans in Oman; this is because the factor is insignificant for entrepreneurs' borrowing decisions. The finding contradicts Mutluer Kurul and Tiryaki (2016), who found that using independent audit firms was positively related with the number of Turkish SMEs that applied for bank funding. However, the limitation of this study is that the utilized dataset of Turkish SMEs is old belong for 2008 from the Business Environment and Enterprise Performance Survey (BEEPS) of Turkish SMEs. In addition, the variable for being audited was defined as a

dummy variable if firms being audited by independent audit firms or not without differentiating the quality of the hired external auditors.

With respect to the credit discouragement model, the present study's Hypothesis stated that: *H4b*: Non-oil-related SMEs that have a financial report audited by the Big 4 audit firms are less likely to be discouraged from applying for bank credit than firms that have not hired external audit firms.

The outcome of the empirical analysis shows that there is no evidence supporting the existence of a significant negative relationship between the use of quality audited financial reports (e.g. Big 4 audit companies) and the probability of credit discouragement incidents among non-oil related SMEs in Oman during economic recession.

Prior studies (Chakravarty and Xiang, 2013; Gama et al., 2017) found that firms with unaudited financial reports were more likely to be discouraged from applying for loans. These studies measured the audit factor according to whether the financial statement was checked and certified by external audit firms, without specifying the quality of the external audit firms. On the contrary, the present study has differentiated between the quality of the audit firms hired by SMEs owners. This is because the independence and competence of audit companies vary based on their capability to apply auditing standards and practices and to perform auditing with due diligence, in order to detect potential risks or fraud. Firms that use high-quality auditors may be more motivated to seek finance when it is required, hence reducing the probability of being discouraged from applying for bank finance.

Compared to discouraged firms (62.1%) that have not used an external auditor, 34.9% of firms have employed a non-Big 4 audit company, while only 2.9% of firms have hired a Big 4 audit company. The low proportion of firms that employed a well-known auditing firm would explain why this is not a significant factor for the likelihood of discouragement. In addition, this statistic may indicate that non-oil SMEs in Oman prefer to use non-Big 4 audit companies because these firms offer auditing services with lower charges than famous external audit firms. This may also explain why small firms tend to use an external auditor only when it has been requested, for instance in order to meet the requirements of the tax authority if they are not under an exemption, or for financing purposes, because keeping audited business reports is not mandatory for these firms in Oman.

- **Sources of Financial Advice**

Making optimal decisions regarding raising business capital is often difficult, thus it is necessary for business owners to seek an appropriate advisor to help them fulfil their business needs in an appropriate manner. Prior studies argue that using sources of external advice helps to reduce existing complex and risk issues within a firm (Hanlon and Saunders, 2007; Rostamkalaei and Freel, 2017). In addition, it helps to alleviate information asymmetries among firms and lenders during the loan contracting process (Bennett and Rabson, 2004; Bonaccio and Dalal, 2006). Thus, the present study hypothesised that:

*H5a:* Non-oil related SMEs that use sources of financial advice are more likely to apply for banks credit compared to firms that have not used the sources of financial advice.

*H5b:* Non-oil-related SMEs that use sources of financial advice are less likely to be discouraged from applying for bank credit compared to firms that have not used a source of financial advice.

The findings of the marginal effect and level of significance are consistent with both Hypotheses *H5a* and *H5b*. The results imply that using a source of financial advice has an impact on entrepreneurs' decisions over borrowing. The outcomes of the two hypotheses are in line with the empirical analysis of Fraser (2009), who showed that using public and private sources of financial advice reduced the occurrences of firms encountering discouragement or financial delinquency, suggesting that these sources can help firms to reduce their financial and non-financial loan application costs. However, this research was investigating the existence of ethnic discrimination in the UK credit market by estimating the determinants of financial delinquency and loan denial among small businesses. The outcome of the current study also consistent with Scott and Irwin (2009; 2007) studies.

With regard to firms in Oman that accessed bank credit, the descriptive statistics of the current study show that 66.9% used a source of financial advice before they proceeded with their loan application, compared to 33% of firms that did not use financial advice. In contrast, among firms that were discouraged from accessing banks for loans, only 47.5% used sources of financial advice, compared to 52.4% firms that did not use external advice. The findings suggest that the self-confidence of these business owners increases when they obtain

assistance from an advisor on the best way to develop and document their business information and plan and loan application, which should align with lenders requests in order avoid potential lending complexities and risks.

### **7.1.2 Non-oil-related SMEs' Relationships with their Main Bank**

This section discusses the empirical findings on the firm-banking relationship as shown in Table 7.2.

- **Duration of Firms' Existing Relationships with Main Bank**

Developing an ongoing relationship with the main bank is argued to be a vital tactic tool to enhance information exchange between borrowers and lenders. This is because it aids lenders to acquire in-depth soft information about the firms' characteristics and their potential projects (Berger and Udell, 1995). Therefore, a strong existing relationship is expected to simplify and facilitate SMEs approaching banks and making successful loan applications.

Given this, *H6a* in the present study states that non-oil-related SMEs that have a long relationship with their bank are more likely to apply for bank credit than firms with a shorter banking relationship.

This hypothesis is rejected, because the factor has a significant negative influence on the likelihood of firms applying for bank loans, contradicting a previous study that found a positive relationship between the probability of accessing banks and the length of the firm-banking relationship in Turkey (Erdogan, 2019). However, Erdogan measured the length of the relationship between firms and banks by the highest number of years that firms had a credit relationship with a bank in Turkey. This measurement of the firm-banking relationship explains the duration of the loan payment, but the current study has defined this relationship by the number of years that firms have actually had an account with their main bank. This is because not all SMEs are able to obtain credit to develop their relationships with banks. Another assumption in the current research is that:

*H6b*: Non-oil-related SMEs that have a long banking relationship are less likely to be discouraged from applying for bank credit compared to firms with a shorter banking relationship.

However, the result of the empirical analysis rejects this hypothesis. It is found that in Oman, firms that have a long banking relationship are more likely to face financial discouragement. This outcome contradicts Chakravarty and Xiang (2013), who found that in less-developed economies, businesses' relationships with banks significantly impacted their borrowing decisions by alleviating the likelihood of discouragement among small firms. However, the authors used a secondary dataset from a World Bank survey that comprised government-owned firms, foreign-owned firms and multinational companies. These firms are acknowledged as being less risky for creditors than small domestic privately owned firms, therefore they are more likely to be awarded the required funds. Thereby, this increases their self-confidence toward proceeding loan application for banks when need it.

Another study found that UK SMEs with an established banking relationship are less likely to be discouraged (Freel et al., 2012). However, the authors used whether or not firms had approached their bank to seek for business advice or preserve good relationship as proxy for relationship banking. As banks aim to maximise their profit through their loan portfolio, it is rational that the bank advisor would assist loan applicants by advising them on how to proceed in a way that matches both their interests. Through the advice relationship, the bank advisor can obtain more information about the strengths and weaknesses of the company and is thus able to advise clients to improve their business conditions or offer financial products that align with their status of creditworthiness. Therefore, it is not surprising that the advice mechanism provides opportunities to gain banks' support financially, compared to a relationship that is based on the numbers of years of credit, as explained in the previous section.

In addition, the current empirical result contradicts previous studies conducted in developed economies such as those of the UK and the US (e.g. Cole and Sokolyk, 2016; Cowling et al. 2016; Altin et al., 2018). However, these contexts have wide range advanced of lending products and system compared to developing countries, hence, this is increasing opportunities of relationship lending for small firms even during economy crisis. Gama et al. (2017) confirmed that a pre-existing relationship through banking facilities can help loan

officers/managers to use the borrower's private information when making a decision over a loan. This will decrease costs and screening errors, thereby reducing discouragement events among firms. The banking relationship was defined in that study by only one factor which is the utilization of overdraft facility.

The descriptive analysis in Chapter 6 provides evidence that could justify the existing contradiction between the literature and Omani context, as reported in this study. First, the analysis shows that among the discouraged non-applicant firms, 61.2% had a long banking relationship (i.e. more than 6 years), while 38.8% did not. Second, firms that lack a history of bank records or do not use business bank accounts might be less confident about accessing bank credit. This may be because through existing banking accounts, the loan officer can collect quality and accurate information that reflects the client's trustworthiness and creditworthiness. This in turn facilitates the decision about whether or not to fund them (Berger and Udell, 2006; Han et al., 2009). The data from the current study show that around 35% of firms (35 applicants, 44 discouraged non-applicants/n=228) that need finance did not have a business bank account, but they rather relied on personal bank accounts. However, with only personal accounts, the lender cannot obtain enough information about the business performance or monitor its relevant banking transactions because these accounts do not reflect the actual financial status of the business. Rather, they are just personal records of the withdrawal of money as debits or savings and deposits as credits. Petersen and Rajan (1994) noted that by monitoring business current accounts, banks are able to track the variation and size of firms' sales and cash flow. The existing non-loan deals would help banks to determine the extent, type and cost of loans to be granted (Petersen and Rajan, 1994). Thus, having a long-standing existing personal account does not necessarily favour entrepreneurs' decisions to borrow due to the lack of historic business records. This would lessen business owners' confidence about bank loans, and lead to possible discouragement. In turn, this may be reflected in the lending portfolios seen in Oman – Kasturi (2018) pointed out that many family-owned businesses use personal loans for their business needs. Interestingly, the empirical result of this part is supported by De la Torre et al. (2010), which provided evidence that in several developing financial markets banks do not exclusively rely on processing soft information of the firms to grant finance, suggesting that some firms do not obtain funding by relationship lending. This may affirm that in developing markets firm-banking relationship is not a necessary condition to access financing.

- **Satisfaction Level of Firm-Banking Relationship**

It is still not clear whether firms that are satisfied with their main banking relationship are more willing to approach banks for loans. Therefore, the current study hypothesizes that:

*H7a:* Non-oil related SMEs that have a satisfactory bank relationship are more likely to apply for bank credit compared to firms that have an unsatisfactory bank relationship.

In addition, the study postulates that:

*H7b:* Non-oil related SMEs that have a satisfactory bank relationship are less likely to be discouraged from applying for bank credit compared to firms that have an unsatisfactory bank relationship.

The current empirical analysis of both models discloses no evidence to support the argument that the level of satisfaction with a bank influences business owners' decision to borrow in Oman. Rather, it was found that firms which reported that they were neither satisfied nor dissatisfied were more likely to experience credit discouragement. This is consistent with Rostamkalaei et al. (2020). However, previous empirical evidence showed that UK firms with a good banking relationship are likely to encounter discouragement during normal periods of economic stability under a few restrictions (Cowling et al., 2016). The author argued that during favourable economic conditions, information transparency does not help to differentiate between safe and risky borrowers. This could be explained is that firms' satisfaction toward main bank services not necessary to be associated with firms' eligibility and willingness to seek financing from banks.

Interestingly, the empirical evidence manifested that firms that were dissatisfied with their main banking relationship were not discouraged from applying for bank financing, as illustrated in Table 7.2. It seems that changes in the credit market and governmental policies for SMEs encourage firms (even those not satisfied with their bank) to seek funding. Since discouragement is an effective form of self-credit rationing for risky firms, it might seem that this sample of dissatisfied firms could possess valued and better strategy-level characteristics, and they are owned and managed by quality human resources. This increases their opportunities to approach lenders, despite the fact that they are dissatisfied with the banks. In addition, the descriptive statistics show that discouragement incidents within firms

occurred within only 12.6% of firms that reported an unsatisfactory relationship with the bank, while 73.8% and 13.6% of discouraged firms had a satisfactory or neutral bank relationship, respectively. In light of the empirical result one could infer that unsatisfied banking relationship of business owner toward banking services or relationship does not necessarily affect their borrowing decision adversely (e.g. eschewing bank loan even when need it) in Oman.

### **7.1.3 Non-oil-related SME Primary Owner Characteristics**

This section discusses the empirical findings regarding firm primary owners' characteristics, as shown in Table 7.2.

- **Gender**

Gender variation among SME business owners is also assumed to impact the level of credit availability for potential projects. Therefore, the present study postulated that:

*H8a:* Female-owned non-oil-related SMEs are less likely to apply for bank credit compared to male-owned non-oil-related SMEs.

Furthermore, it is expected that:

*H8b:* Female-owned non-oil-related SMEs are more likely to be discouraged from applying for bank credit compared to male-owned non-oil-related SMEs.

However, from Models 1 and 2 it seems that gender is not an important factor for deciding whether or not to apply for funding when need for finance in Oman. Implying that the multivariate analysis of this study did not find evidence of credit discouragement among female-led businesses in the Sultanate.

These results are consistent with several previous studies conducted in Western contexts (e.g. Freel et al., 2012; Rostamkalaei, 2017; Altin et al., 2018). Conversely, the empirical study conducted in Eastern Europe and Central Asia by Gama et al. (2017) found that females were more likely to be prone to the credit discouragement issue, which may explain gender discrimination in this context.

Belwal et al. (2014) found that Omani female entrepreneurs face greater difficulties with accessing financing than their male counterparts due to a lack of education and managerial skills, or the fact that they are influenced by other socio-cultural factors such as not being appreciated for leaving the responsibilities of their home (care of children and husband) in order to work in a mixed business environment. However, Belwal et al.'s study focused on only one specific region in Oman, the Al-Dhahira region, and it employed interviews with 33 female entrepreneurs who had a secondary school qualification or less. In contrast, the sample of the current study included 52.2% females who had a higher level of formal education (e.g. postgraduate certificates or undergraduate certificates), while 37.3% of females running businesses had a lower level of formal education (e.g. high school or diploma degree). Furthermore, 10.4% of female entrepreneurs reported that they did not have formal academic qualifications. The data sample showed no major differences in the proportion of female business owners who had approached banks (46.6% of female-owned firms) and those who had not approached the banks for loan because of fear of an unsuccessful loan application (53.3%).

Another possible reason for the unclear evidence regarding gender influences on borrowing decision - whether female business owners eschewed borrowing compared to their male counterpart - is that the research sample of this study was dominated by male-owned firms, which reflects the reality of the male-based market in Oman. Females were therefore under-represented compared to their male counterparts, which may have reduced the significance of the factor in relation to the entrepreneurs' decisions to apply for bank financing. Carter and Mwaura, (2014) suggested in this case an alternative method of analysis to compare the gender differences in borrowing behaviour – comparing borrower typology demand for bank credit by gender and participation rates (see Chapter 6). The sample dataset of this study shows that 23.3% of female-owned firms were discouraged, while 76.6% of male-owned firms were discouraged.

- **Citizenship**

Previous studies in the Western context have focused on the common issue of Ethnic Minority Businesses (EMB) demand for bank loans and their ability to access external finance (Cavalluzzo et al., 2002; Fraser, 2009). However, the context of some oil-based economies such as GCC countries, specifically the Sultanate of Oman, is different. The

Central Bank of Oman (CBO) survey affirmed the presence of cases where nationals are registered as business owners while in fact, they are acting as agents for foreign owners in exchange for regular fees (Al-Barwani et al., 2014). This issue may hurt the SME sector's growth and performance, and the policy of reinforcing upward social mobility by starting businesses or expanding existing establishments in the market. Therefore, the present study hypothesised:

*H9a:* Omani-fronted businesses in the non-oil-related sector are less likely to apply for bank credit compared to Omani-owned businesses in the same sector.

*H9b:* Omani-fronted businesses in the non-oil-related sector are more likely to be discouraged from applying for bank credit compared to Omani-owned businesses in the same sector.

The empirical findings of Model 1 and 2 indicate that business ownership has an influence on entrepreneurs' decisions over whether or not to apply for bank finance, supporting *H9a* and *H9b*. Despite having a high level of education and reasonable experience of managing the business, the incidents of discouragement among Omani-fronted firms (65.9%) are high compared to those who had applied for bank loan (34.1%). This suggests that imperfect information may lessen entrepreneurs' confidence, thus affecting firms' ability to access banks. The real owners may be unable to reveal their real contract with the Omanis for the operation of the project. In reality, the Omani partners own nothing of these businesses; they simply possess the commercial registration certificate issued by the Ministry of Commerce and Industry (MoCI), in exchange for being paid regularly by their foreigner partners. None of the parties would be willing to reveal accurate information about their business, either for lenders or market stakeholders, since they might be questioned by the government and penalised.

When apply for bank loan for the business, creditors may require evidence about the business ownership and relevant information. Also, the owner of the business (registered owners) would be ask to sign the loan contracting documents. Therefore, imperfect information, in particular about the real owners and their responsibilities towards business ownership, may lead to self-credit rationing. Thus, these firms might rely on personal loans informal, financial source or non-banking financial sources. In this study, among 32 non-applicant

Omani-fronted firms, 65.6% relied on informal financing sources (e.g. friends and family), 18.8% used non-bank financial institutions, and 9.4% used personal loans, while other 6.2% did not seek for external finance. In addition, the government is striving to overcome the issue of invalid business ownership in the SME sector through terms and conditions attached to the lending transaction. This could encourage nationals to be committed to their business ownership and management. This may also play a role in deterring this type of business owner from approaching the banks.

- **Prior Relevant Business Experience**

The prior relevant business experience of the business owner is considered to be a major driver for promoting business success in Oman (Belwal et al., 2014; Al-Harhi, 2017). Therefore, this research postulates that:

*H10a:* Experienced non-oil-related SME primary owners are more likely to apply for bank credit compared to primary owners with no prior relevant business experience.

In addition, the present study posits that:

*H10b:* Experienced non-oil-related SME primary owners are less likely to be discouraged from applying for bank credit compared to primary owners with no prior relevant business experience.

As illustrated in Model 1, the results show evidence that owning a business for 1 to 5 years or more than 11 years' has a significant impact on the decision to approach banks for loans. This indicates that business owners with these attributes are more likely to apply for bank finance. Where business owners have 6–10 years' prior relevant business experience, this seems unimportant. With discouragement Model 2 it was found that an increase by one year in the prior relevant experience of the business owners reduces the probability of being financially discouraged in Oman – but there was no clear evidence for discouragement incidents among business owners who had 6–10 years' experience. This outcome is supported by Gama et al. (2017) and by Chakravarty and Xiang (2013), who found that experience is important in borrowing decisions and it reduces the probability of encountering financial discouragement in less-developed countries.

Furthermore, this outcome is consistent with the research by Kon and Storey (2003), which suggested that entrepreneurial experience helps to alleviate the information opacity issue between creditors and firms. It is also supported by Han et al. (2009), who found that the rate of discouragement is reduced among experienced business owners. This could be due to their high consciousness of lending requirements and procedures, or prior lending experience, which alleviates the information opacity issue. This is compatible with the Human Capital Theory, which assumes that high-quality human capital will lead to the better performance of a relevant task (Becker, 1975 cited in Bruns and Fletcher, 2008; Unger et al., 2011).

However, Cowling et al. (2016) found that discouragement probability increases more with experienced owners than with other entrepreneurs in both stable and recessionary economic periods. The authors argue that in normal favourable economic periods there are fewer constraints on supplying credit; nonetheless, the information asymmetry issue has restricted banks' ability to distinguish safe borrowers from risky ones. Additionally, there is further evidence which affirms that prior entrepreneurial experience can significantly increase the likelihood of credit discouragement among UK SMEs (Freel et al., 2012). The authors argued that the fluctuating credit history of entrepreneurship may cause pessimism amongst entrepreneurs in terms of the good application principals, which may deter them from applying for potential loans. However, both studies focused on SMEs in the UK context and they drew on secondary data. Experienced owners may be less confident toward borrowing decision when they are at old of age. Thus, in this situation, it is argued that they are likely to avoid bank lending risk (Scherr et al., 1993).

- **Formal Educational Degree**

The level of formal education of a business owner is another factor that is expected to affect credit availability for firms (Freel et al., 2012). Previous studies found that the degree of education of the entrepreneurs promotes the performance of Dutch businesses with rate of return of 13.7% and reduces financial constraints by 1.18% with each additional year of schooling (Parker and Praag, 2006). Thus, the present study hypothesised that:

*H11a:* Well-educated primary owners of non-oil-related SMEs are more likely to apply for bank credit compared to business owners who have no academic qualifications.

The empirical analysis shows that firms' ability to access bank financing increases with well-educated entrepreneurs and that this factor is significant for borrowing decisions. This confirms Hypothesis *H11a* and it is consistent with Rossi et al. (2016), who reported that the education factor is significantly related to and impacts positively on the probability of seeking credit from banks. On the contrary, the finding contradicts Cowling et al. (2016), who found that well-educated business owners are less likely to apply for bank credit by a magnitude of 5.5% of the marginal effect. However, this outcome relates to the period of the financial crisis in the UK. Better educated entrepreneurs are more able to estimate when their applications will be turned down; especially during economic recession or unstable credit market conditions. They might refrain from forwarding loan applications to avoid any possibilities of borrowing risks during that period. Cowling's et al. result is consistent with (Abdesamed and Wahab, 2014), speculating that educated owners know when to proceed their loan application.

A further hypothesis in this regard posits that:

*H12b*: Well-educated primary owners of non-oil-related SMEs are less likely to be discouraged from applying for bank credit than business owners who have no academic qualifications.

In the empirical analysis of the current study, the small p-value  $<0.01$  of the education degree factor implies that it is statistically significant in determining owners' borrowing decisions and whether or not they are discouraged from applying for funding in Oman. Thus, the outcome of the analysis confirms Hypothesis *H11b*. The marginal effect ratios of 44% and 34% demonstrate that an increase in the time spent in education by one year leads to a decrease in the fear of bank rejection among non-oil-related SME owners in Oman.

This finding supports other empirical studies in the US, which found that the rate of financial discouragement among food service industries declines with firms that have well-educated owners (e.g. Altin et al., 2018). The discouragement incidents increase with less-educated business owners in the US, as documented by Cole and Sokolyk (2016). Conversely, an empirical analysis of the UK SME survey disclosed that the education factor is not important for differentiating between discouraged firms and firms that apply for bank credit (Freel et al., 2012).

The results of both Hypotheses *H11a* and *H11b* may suggest that educated business owners are well prepared for the funding requirements and are better able to meet banks' terms in Oman. For instance, education and qualifications can enhance the confidence of entrepreneurs and with their acquired skills and knowledge they can prepare a good business plan and adequate, high-quality financial reports, which will increase their chances of raising capital. In addition, entrepreneurs with a good level of education can evaluate their loan application and speculate whether or not it will be turned down by the lenders. Therefore, they are more likely to be deterred from proceeding with the credit application.

An interesting finding with regard to the education factor is that even those firms owned by an entrepreneur with a low education level, such as high school qualifications or a diploma degree, obtained a chance to access the banks in Oman. Precisely, the survey of this present study documented that 43 firms that applied for bank financing had primary owners with a low level of education.

#### **7.1.4 Non-oil-related SME Characteristics: Industry Types**

Freel et al. (2012) pointed out that the variation in firms' assets, capital structure and business competition may cause variations in funding availability for SMEs. Therefore, for this study, we developed Hypothesis *H12a*, which stated that non-oil-related SMEs operating in the trade and service sectors are more likely to apply for bank credit compared to manufacturing firms. The findings of Model 1 confirm that the trade and service sectors are statistically significant and negatively related with the likelihood of firms' applying for bank credit, which supports Hypothesis *H12a*. This is consistent with previous studies (e.g. Rahman et al., 2017; Andrieu et al., 2018) but it contradicts Erdogan (2019), who found that firms in non-manufacturing sectors such as the service sector are more likely to access bank funding in Turkey. The author suggested that this resulted because of lower borrowing requirements and financial demand, which have a positive impact on service industries.

Moreover, this study hypothesised that:

*H12b*: Non-oil related SMEs operating in trade and service sectors are more likely to be discouraged from applying for bank credit compared to manufacturing firms.

The empirical findings support this hypothesis, implying that the trade and service sectors have a positive relationship with the probability of being discouraged among firms in Oman. Consistently, prior studies have found that belonging to the knowledge-intensive service sector is one of the distinguishable characteristics of SMEs being discouraged from accessing bank funding in the UK market (Freel et al., 2012). This is consistent to Brown et al. (2018a). Indicating that higher banks requirements for collateral may impact firms owners confidence in seeking finance, which refrains them from borrowing despite having needs for business growth.

The outcomes of both empirical models suggest that the tangible assets of firms play a great role – as collateral – in alleviating information asymmetry and promoting business creditworthiness, even in Oman where there are fewer restrictions in the credit market and intensive support from the government. There is evidence from the descriptive statistics that the approved loan applications of the present research sample were obliged with collateral such as business assets and stocks, personal assets and other collateral (e.g. business mortgage, personal guarantor, salary and audited financial report), representing 34.9%, 10.8%, 27.7% and 40% respectively.

### **7.1.5 Control Variables**

The model specification controlled for firm age and size, as in previous studies (e.g. Freel et al., 2012). The empirical findings of Model 1 and Model 2 provide evidence that firms' size and age influence entrepreneurs' decisions over applying for bank credit. One exception was in Model 2, which shows that a firm age between 6 and 10 years does not have a significant impact on the outcome of being discouraged in the credit market. An increase in the factor of firm age and size by one unit decreases the probability of financial discouragement. It seems that lower levels of credit discouragement are found in firms that have greater financial needs, implying increases in the extent and willingness of owners to approach banks in order to raise business capital. Andrieu et al. (2018) found that the size and age factors correlated positively with European SMEs' access to bank debt. The findings are also consistent with Rostamkalaei et al. (2020) Mac an Bhaird et al. (2016) and Chakravarty and Xiang (2013). On the contrary, other empirical studies found no evidence to suggest that firm age determines discouragement levels among SMEs (e.g. Freel et al., 2012; Gama et al., 2017).

From the aspect of the Omani context, the increases in demand for bank finance among non-oil-related SMEs may be attributed to the fact that the majority of the sample had been established in the market for 5 years or above. Arguably, as the age of firms increases, their desire for financing support would increase in order to enhance their business expansion needs. The older the better to reduce information asymmetries, hence, less likely to be discouraged from borrowing (Mac an Bhaird et al., 2016). Furthermore, the lending incentives and support from the Omani banking sector for these firms seem to have increased entrepreneurs' opportunities to access bank finance. For instance, as a result of the banking sector's cooperation with the CBO policy (i.e. increased share of lending for SMEs), Bank Muscat's Al-Wathiba programme was employed to finance SMEs (e.g. with equipment and working capital) including advisory services (Al-Maimani, & Johari, 2015). Oman Arab Bank offers different types of financial products (e.g. import and export finance, term loan for capital expenditures) under the TOMOUHY programme, as well participating in 50% of the Loan Guarantee Scheme by cooperating with government to finance these firms. Oman Development Bank (ODB) has enhanced the availability of overdraft-type finance and short- and long-term loans for SMEs and released the Izdhir programme, which is a fixed-term deposit account aimed at mobilising savings for future lending in order to maintain development and encourage people to adopt saving habits (HCT, 2020).

## **7.2 Credit Constraints of Non-oil-related SME Incidents**

Using the perspective of firms' business owners, this section presents explanations of the factors that have an impact on lenders' decisions with regard to loan applications from non-oil-related SMEs. The purpose of this is to answer the following questions:

- Does the Oman banking sector reduce or exacerbates the discouragement issue in the market? Do discouraged borrowers differ from credit constrained firms?

In Table 7.2 Model 3 shows the Likelihood Ratio Chi-squared of 41.3 with P-value  $< 0.05$ , indicating that the probability of firms being credit constrained is better explained with 13 predictors than a model with no predictors. The Pearson chi-square ( $\text{Prob} > \text{chi}^2 = 0.495$ ) and Hosmer-Lemeshow ( $\text{Prob} > \text{Chi}^2 = 0.851$ ) are greater than zero, suggesting that the estimations of the model reasonably and adequately fit the dataset of the present research. Important to mention that the variables business owners' level of education and firm age are excluded from the model to improve its goodness of fit.

### 7.2.1 Non-oil-related SME Strategy Characteristics

Export is one of the independent variables of business strategy that is used to examine its impact on credit rationing in the non-hydrocarbon sector in Oman. The present study postulates *H1c*: Non-oil-related SMEs with a high ratio of internationalised sales are more likely to be credit constrained than non-export firms. However, the sign of the marginal effects of firms exporting 50% or more of their total sales is statistically insignificant. This indicates that there is no clear evidence that the export intensity variable has an impact on lenders' decisions to allocate loans to the non-oil-related SME sector in Oman. This outcome contradicts other studies. For instance, in Australia, firms that exported 40% or more of their total sales were found to be less likely to be constrained by bank lenders (McCarthy et al., 2017). However, the authors employed only denial rate of bank loan applications as a proxy for credit rationing among Australian SMEs. In some Asian countries such as Chile, Israel, Korea, Thailand and Turkey, it was reported that the availability of overdraft funding for SMEs increased their market internationalisation and hence they were less likely to be constrained (Jinjarak and Wignaraja, 2016). Nonetheless, in this study the SMEs ranged in size from 100 to 300 employees, which is inconsistent with the present study context (i.e. much higher than the Omani limit of 99 employees). The authors used the International Enterprises Survey of the World Bank, which has limited firm-level information and the data are from different years for each country. For instance, the authors covered the Chilean SME data for 2010, the Turkish SME data from 2013, and the Thai SME data for 2006. These variations in the period of study of SME finance constraints may affect the rigour of the research inferences or cause contradiction.

A further factor of business strategy characteristics is the past sales growth performance of the firms. Thus, Hypothesis *H2c* states that non-oil-related SMEs with increased sales growth are less likely to be credit constrained than those with unchanged sales growth. The criterion of the prior performance of a firm's sales growth seems to be insignificant for lenders' decisions because the p-value is greater than the conventional significance level. Therefore, there is no evidence that an increase in prior sales growth is related negatively with the likelihood of being constrained by banks. This current empirical finding is contradicted by Wang (2016). Cowling et al. (2012) found that with the supply model the variable of UK SMEs' prior sales growth performance was significantly related to financiers' decisions about whether or not to supply the firm with funding – the probability

of granting finance to firms was positively related to the factor. Additionally, it has been found that UK SMEs with past growth and future growth are more likely to pay higher interest rates (Rostamkalaei and Freel, 2016). Nonetheless, this study examined the extent to which growing small firms are differentiated in terms of interest rates in the UK, using the Survey of SME Finance.

With respect to a formal comprehensive business plan, Hypothesis *H3c* assumes that non-oil-related SMEs with a strategic formal comprehensive business plan are less likely to be credit constrained than firms that do not keep a formal comprehensive business plan. Consistent with *H3c*, the empirical analysis provides evidence that the criterion of a formal comprehensive business plan is significantly related to lenders' decisions over whether or not to supply funding (at level 10%). This is in line with Erdogan (2018), who stated that banks were reluctant to lend to Turkish SMEs without clear financial records and business plans. Additionally, Pretorius and Shaw (2004) contended that the likelihood of credit rationing increases in firms without a business plan. However, Rostamkalaei et al. (2020) found that the likelihood of being informally turned down by lenders increased for firms with a formal business plan. The authors speculate that this may happen when owners used formal business plan to discuss their loan application with the lenders or submitting an informal business plan for a formal credit application may lead to rejection from bankers, perhaps informally. This could be evidence that informal and abbreviated business plans do not raise bank lenders' interest in financing their SME clients.

As noted earlier, enhancing the quantity and quality of available information is expected to reduce the credit rationing among SMEs. Prior studies (Berger and Udell, 2006; Moro and Fink, 2013) suggest that the presence of audited financial statements would contribute to reducing transaction costs and collateral values, which are needed to support lending deals. Therefore, this study hypothesised that: *H4c*: Non-oil-related SMEs that have their financial reports audited by the Big 4 audit firms are less likely to be credit constrained compared to firms that do not hire external audit firms. The outcome of the current study's empirical analysis confirms Hypothesis *H4c*. This finding is consistent with Palazuelos et al. (2018), who found that in Spain, loan officers' willingness to grant funding to SMEs is positively affected by the availability of quality accounting information – but only if the information report is audited. The study affirmed that for firms that had audited reports, the report quality is relevant to obtaining bank loans, while for non-audited firms, competence and trust

influence banks' credit supply. Furthermore, the finding is consistent with Van Caneghem and Van Campenhout (2012), who reported that the quantity and quality of financial statements have a positive impact on SME leverage. Using one of the quality and reputable Big 4 audit firms to certify periodic business reports would be a valuable signal for lenders. This might make them more likely to accept the proposal, and also lead to low transaction costs since the loan officer would not need much time to evaluate the loan proposals of their clients (Van Caneghem and Van Campenhout, 2012). On the other hand, firms that employ unknown audit firms may be subject to intensive costly evaluations, which may deter loan officers from collecting clients' information and monitoring loan transactions as this is expensive. This could therefore lead to them rejecting the loan applications of such firms.

Utilising sources of financial advice is another business strategy that should help to enhance financing provision for SMEs when needed. Rostamkalaei and Freel (2017), who reported the significance and effectiveness of advice for alleviating business risks and improving the prospects of making successful bank loan applications. Thus, for the present study, it is hypothesised *H5c* that non-oil-related SMEs that use sources of financial advice are less likely to be credit constrained compared to firms that do not use sources of financial advice. However, the marginal effect and level of significance could not provide clear evidence that the variable of using financial advice source is significantly and negatively related to credit constraint. This unclear result may be because sample of the present study includes 83% of firms that had accessed financial advice had their loan applications approved, while only 17% did not.

### **7.2.2 Non-oil-related SMEs' Relationships with their Main Bank**

As explained earlier, the provision of business information through a banking relationship should enhance credit availability for firms. Thus, *H6c* states that non-oil-related SMEs that have a long banking relationship are less likely to be credit constrained by lenders decision than firms with a shorter banking relationship. However, the length of this relationship is actually insignificant, implying that the factor does not necessarily help to increase the opportunities for firms to gain approval for credit. Cole (1998) found that an existing bank relationship grants opportunities for firms to be supplied with additional credit, but that the length of the relationship per se is insignificant. Madrid-Guijarro et al. (2016) reported the opposite, as they stated that Spanish SMEs with long banking relationships were less likely

to face obstacles to bank funding because the screening process for existing bank clients is easier than that for new clients. The scope of this research was the Spanish market, which has similar attributes and development to the rest of the European zone in terms of the SME and banking sectors. In addition, the authors admitted that the perspectives of loan officers and their decisions over whether to grant credit to audited or non-audited firms might be affected by their previous experiences of the real situation. Another study found that the likelihood of credit rationing decreased in small and large firms that had a long relationship with their main bank 'but more so for large firms endowed with more bargaining power' (Cenni et al., 2015:249). The data employed in this study focused on large firms and SMEs from Italy, and it was collected by the banking group Capitalia–Unicredit in 2003.

Moreover, the empirical finding rejects Hypothesis *H7c*, which postulates that non-oil-related SMEs that have a satisfactory bank relationship are less likely to be credit constrained than firms with an unsatisfactory banking relationship. However, the effect of a satisfactory bank relationship on lenders' decisions about allocating credit to non-oil-related SMEs is statistically insignificant in Oman. Rostamkalaei et al. (2020), who found that firms are less likely to encounter informal turndown when they have a satisfactory relationship with their bank. The result of the current study could be explained by the data sample, illustrated that among the 77 firms that reported that they had a satisfactory relationship, 72.7% had their loan applications approved, while only 63.6% of total credit-constrained firms by the lenders have a satisfactory relationship. This indicates that there is no significant difference between firms that had received finance and those constrained by the banks.

### **7.2.3 Non-oil-related SME Primary Owner Characteristics**

Gender is one of the most important characteristics of business owners that is expected to impact the credit availability of firms. Thus, *H8c* posits that female-owned non-oil-related SMEs are more likely to be constrained for bank credit compared to their male-owned non-oil-related SMEs. This hypothesis is supported by the empirical findings, implying that gender seems to be an important discriminator for bank lenders' decisions in Oman. The outcome confirms the findings of previous studies which found that female business owners faced difficulties with accessing formal supply funders such as banks in the US (Treichel and Scott, 2006), Italy (Bellucci et al., 2010), Kosovo (Krasniqi., 2010), the United Arab Emirates (Itani et al., 2011), and Australia (Van Hulten, 2012). However, previous studies

could not conclude the existence of discrimination between genders, even when a ‘gut feeling’ was employed by lenders during their judgement process, as stated by Wilson (2016), supporting Coleman (2000), and Eddleston et al. (2014).

With respect to the citizenship factor, Hypothesis *H9c* states that Omani-fronted SMEs in the non-oil-related sector are more likely to be credit constrained compared to Omani-owned businesses in the same sector. The outcome of the empirical analysis manifested that the variable is insignificant. Thus, it cannot be confirmed that lenders use the citizenship of the real firm owner in order to distinguish good borrowers from bad borrowers and to allocate loans efficiently in the Omani market. Due to imperfect information and government policies aimed at overcoming invalid business ownership, few entrepreneurs of Omani-fronted businesses had approached banks. The statistical analysis shows that out of 33 Omani-fronted firms, 6 firms had their loan application approved compared to 27 unsuccessful loan applications. The outcome of the descriptive statistics are in line with government policy, which has strengthened bank screening in order to distinguish between those with valid and invalid business ownership. One can deduce that those approved applications may be a result of applying for personal loans to be used for business purposes. Another reason is that imperfect bank screening (e.g. adverse selection) is likely to occur because of insufficient information being revealed by firms to banks.

A further factor examined in this study is primary owners’ prior relevant business experience. Thus, Hypothesis *H10c* postulates that experienced primary owners of non-oil-related SMEs are less likely to be credit constrained than primary owners with no prior relevant business experience. The marginal effect signs show that owners with 6 to 10 years’ experience and more than 11 years are more likely to be constrained, while having 1 to 5 years’ previous relevant business experience has no impact on the likelihood of facing credit rationing. This is contradicted by Robson et al. (2014), who found that well-experienced entrepreneurs are less likely to be constrained. The expertise of business owners is linked with their age. The data sample from the current study shows that 126 experienced business owners are aged 40 years or above. The older they become in their business field, the more experience they may acquire from their work achievements, implying that long tenure may enrich business owners with greater knowledge and develop their understanding about their businesses to enhance their sustainability in the market. Nonetheless, a previous study found that the age of a firm’s chairman is negatively related to the firm’s Tobin’s Q, i.e. the market

value of the company that is used to measure business performance (Peni, 2014). Gibbons and Murphy (1992) cited in Peni (2014) affirmed that older CEOs tend to select projects that can supply returns before they approach their retirement. Thus, experienced entrepreneurs of an older age are likely to avoid the bank financing risk because of the short time they would have for loan payment (Scherr et al., 1993). This view could be shared by banks; loan officers/managers may avoid lending to older entrepreneurs even if they are well experienced in their business domain, as the banks might consider their age as a risky criterion. This is because such entrepreneurs are close to retirement and they might be less active and ambitious with regard to their business performance and goals or even less committed to the loan contract. Thus, banks may be reluctant to lend to them in order to reduce adverse selection or moral hazard problems in this uncertain situation.

#### **7.2.4 Non-oil-related SME Characteristics: Industry Types**

Many academic scholars argue that it is still not clear whether the type of industry sector influences finance availability for firms (Brown et al., 2018b). Thus, Hypothesis *H12c* posits that non-oil-related SMEs operating in the trade and service sectors are more likely to be credit constrained than those in the manufacturing industry. The empirical analysis shows that there is no evidence that the trade sector is facing credit constraints in Oman. However, the relationship between the service sector and the probability of being financially constrained by lenders seems statistically significant and positive. This implies that banks' behaviour towards the business sector is based on tangible assets in order to alleviate opportunistic behaviour or asymmetric information that could be associated with some SME lending transactions, by using their tangible assets as collateral. Dong and Men (2014) found that firms in the non-manufacturing sector find it difficult to access bank credit in emerging markets. In Kosovo, there is evidence that banks still rely on collateral to process applications; thus, large private firms with more fixed assets are more likely to approach banks (Krasniqi, 2010). In Scotland, under the circumstance of imperfect information, manufacturing firms with new product development face difficulties with raising capital through banks (Deakins et al., 2010). However, the authors of this study employed qualitative Verbal Protocol Analysis (VPA) to understand the process of lenders' decision making where such type of analysis may influence by subjective perception of the authors.

### **7.2.5 Control Variables**

Employment size is used as a control variable for the specified model of financing constraint in the non-oil-related SME sector in Oman. The empirical finding shows that firm size is statistically significant in determining the likelihood of facing credit constraints. For example, an increase in one person in firm size reduces the likelihood of credit constraint among these firms. This indicates that this factor is an important discriminator for bank lenders to differentiate between good and bad borrowers in Oman. The results are supported by prior studies (e.g. Jensen and Mcguckjn, 1997; Krasniqi, 2010; Andrieu et al., 2018).

### **7.3 Credit Discouraged Firms Versus Credit Constrained Firms**

As additional analysis for research question Q4, Model 4 in Table 7.2 presents a comparison between firms that were financially discouraged from applying for bank loans (equal 1) and those that had approach the banks but were unsuccessful (i.e. formal and informal rejected loan applications and firms refused a bank offer) (equal 0). This empirical analysis discloses common factors among the discouraged non-applicants: they recorded unchanged sales growth performance; had used Big 4 audit firms to audit their annual financial reports; did not use a source of financial advice; had a long relationship with their main bank of more than 6 years; reported a neutral banking relationship; were male-owned firms and Omani-fronted firms with sole ownership; the entrepreneurs had no prior experience and no formal education degree; they were in the trade industry; and they were younger firms (established for 1–5 years).

Some of these results were unexpected, such as discouragement within firms that keep quality audited financial reports, firms with more than 6 years' relationship with their bank, and male-owned firms. They can be explained through the descriptive statistics, which reveal an imbalance proportions among the sample. The descriptive statistics show that 74% of discouraged firms had used one of the Big 4 audit firms, while only 25% of firms that reported an unsuccessful loan application had used a Big 4 audit firm. Furthermore, the statistics revealed that 80.7% of firms that had a long relationship with their main bank were discouraged from applying for bank finance, whereas 19.2% had unsuccessful loan applications. Among the 100 male-owned firms in this empirical analysis, the statistics also revealed that 79% of male business owners were discouraged from seeking financing

whereas only 23.3% were discouraged from borrowing. The descriptive statistic also shows that 63.6% of male business owners had applied for bank credit but been unsuccessful, while only 36.3% were constrained by lender decision.

Thus, the present study can deduce from this empirical analysis – along with the descriptive statistics – that the profile of discouraged non-oil-related SMEs differs significantly from that of firms that reported unsuccessful loan applications in the Omani credit market. This empirical analysis enriches and contributes to existing literature by estimating the variations between credit discouragement and unsuccessful loan applications; few previous studies have considered this aspect (e.g. Cole and Sokolyk, 2016).

#### **7.4 SUMMARY OF THE CHAPTER**

The first part of this chapter presented the empirical findings and explanations for the estimated likelihood of firms' ability to access banks and face financial discouragement. The hypotheses were discussed in detail, alongside the explanatory factors that influence owners' decisions over borrowing for business purposes. These factors are business strategy characteristics, banking relationship, primary owners' characteristics and business industry sector. The second part of the chapter discussed the impact of these factors on bank lenders' decisions about credit allocation among the applicant firms, exploring the extent to which firms are facing credit rationing in Oman. In addition, this study compared credit-discouraged firms with those that had unsuccessful loan applications, in order to examine the differences between them. The following chapter highlights a summary of the entire study, including relevant implications and recommendations based on the present findings of this study.

## **CHAPTER EIGHT**

### **8. CONCLUSION AND AVENUES FOR FUTURE RESEARCH**

The purpose of this chapter is to present a summary of the whole thesis, reflecting on the research scope and objectives and providing a conclusion for the research findings (sections 8.1 to 8.3). Section 8.4 discusses the research's implications for the academic field, governments, the banking sector, and business owners. Section 8.5 presents recommendations to policymakers, highlighting the main research findings that need to be considered for further reforms. Sections 8.6 and 8.7 present the research limitations and future research directions.

#### **8.1 Summary of Research Scope and Objectives**

Oman's economy relies heavily on oil revenues to accelerate economic growth and development. Since oil exploration began in Oman, the revenues from hydrocarbon have achieved remarkable economic development and had a positive effect on public sector expenditures for social welfare (e.g. education, health services, infrastructure, and real estate). However, this resource is under threat due to depletion and price volatilities in the global market. The latest dramatic reduction in the global price of oil (mid-2014) adversely impacted economic growth. This forced Oman's policymakers to pursue an economic diversification strategy to enhance the contribution of the SME sector to economic GDP, in particular businesses operating in the non-oil sector. The aim of this diversification through non-oil-related SMEs is to dampen the economic volatilities of the oil sector and bolster the state's GDP when its revenues begin to dwindle. It could also create jobs in the private sector for national jobseekers (IMF, 2016).

However, prior reports of the World Bank (Rocha et al., 2011) have clarified that this sector finds it difficult to raise capital for investments – only 2% of all bank loans are provided to SMEs in Gulf Cooperation Council (GCC) countries. During the oil price crisis, the shortage of oil revenues impacted banking liquidity due to the decline in government revenues from the oil sector. This in turn may have led to increasing credit-rationing among SMEs in oil-exporting countries (IMF, 2016) such as Oman. Therefore, the Omani government has undertaken many reforms in the credit supply side in order to reinforce credit availability

and help to promote SMEs' development and sustainability. One of the major sources of support is the Central Bank of Oman (CBO), which required the banking sector to increase the share of lending to SMEs to at least 5% of the total bank lending portfolio by the end of 2015 (CBO, 2015). However, the trend to finance SMEs remains low in Oman (Oxford Business Group, 2016).

Researchers argue that financing is an essential component of firm growth (Beck and Demirgüç-Kunt, 2006). The problem of credit rationing stems from the imperfect information that blights the firm-banking relationship in a market in disequilibrium (Stiglitz and Weiss, 1981). Previous studies argue that financing decisions may be determined by the attitudes and perception of the business owners (Cressy, 1995; Watson et al., 2009; Ferrando and Mulier, 2015). Once internal finance is exhausted, business owners prefer to seek debt, such as loans from the banking sector (Brun and Fletcher, 2008), followed by equity, as suggested by the Pecking Order Theory (POT) (Myers, 1984; Myers and Majluf, 1984). However, the business owner keeps equity as a last choice in order to avoid outsiders controlling their businesses (Watson et al., 2009; Silver et al., 2015).

Under asymmetric information conditions, previous research has found that the existence of financially discouraged firms was almost twice that of rejected firms among small businesses in the US (Levenson and Willard, 2000). These are firms that need financing, but do not apply for loans due to fear of lenders' rejection (Kon and Storey, 2003). Nonetheless, despite expecting to have more discouragement incidents in less-developed economies (e.g. Chakravarty and Xiang, 2013; Gama et al., 2017), we know little about the demand-side constraints on access to banks among non-oil-related SMEs. In particular, we know little in terms of whether the factors of business strategy, banking relationship, and firms' and business owners' characteristics impact the likelihood of credit discouragement in less developed oil-based economies, such as in the Oman context. Furthermore, to the best of the researcher's knowledge, no prior studies have examined the impact of business ownership (i.e. firm's citizenship) relevant to the Oman context on business owners' borrowing decisions – i.e. whether or not they feel discouraged from borrowing.

Thus, the objective of the present study is to address the following questions: Q1: Among non-oil-related SMEs that needed finance, which firms that had applied for bank loans and which had not? Q2: If exist, what are the determinants of discouraged non-oil-related SMEs

(i.e. characteristics)? Q3: Does the Omani banking sector reduce or exacerbate the discouragement issue in the market? Q4: Do discouraged borrowers differ from credit constrained firms? Q5: What are the reasons for being financially constrained and not approaching banks? Q6: How do financial constraints impact non-oil-related SMEs' growth?

The following sections provide a summary of the key findings of this study and their contributions to existing knowledge.

## **8.2 Summary of Descriptive Statistics: Non-oil-related SMEs' Demand for Bank Credit**

This study collected data from 315 non-oil-related SMEs with different demand status for bank loans. The dataset sample disclosed that 87 firms did not need finance. The reasons for this were because they did not wish to grow, they had no need for additional credit, or they had sufficient internal finance. In contrast, the survey provided evidence that the majority of non-oil-related SMEs (n=228) in Oman required finance. Of these, 103 had approached banks to raise business capital. The descriptive statistics show that 55.3% received the full amount requested, 19.4% received part of the required loan amount, 5.8% refused the bank's offer, and 19.4% were turned down.

A further 125 firms did not approach the banks despite their need for credit. These firms were categorized as discouraged non-applicants because they thought that lenders would reject their application (82.4%), while other non-applicants had different reasons for not approaching lenders for financing for their projects (12%). In addition, the findings documented that a few firms had sent an informal application for a bank loan to bank officers/managers but were informally turned down.

These data provided evidence that demand for bank credit varies among SMEs in the non-oil sector according to their capability and willingness to seek bank financing. Furthermore, they reflect that small firms find it difficult to obtain the bank funding that is needed to enhance their growth and survivability in the market. However, the levels of credit difficulty vary between firms in this sector.

### **8.2.1 Non-oil-related SMEs that Needed Credit and Approached Banks**

Notably, the study has contributed to providing information about the loan application similarities and differences among non-oil-related SMEs in terms of the type of required finance, the purpose of seeking finance, the ownership type of banks approached for the loan, borrowing costs and loan payment duration.

The findings documented that the most common type of finance sought by these firms were long-term and short-term loans: 64.9% of firms obtained a long-term loan and 25.9% obtained a short-term loan. However, 50% of firms that applied for a long-term loan and 46.2% of those that applied for a short-term loan were unsuccessful. A few firms used an overdraft (7.7%) or asset-based finance (1.2%). The majority needed the finance to purchase tools and equipment or other fixed assets, as working capital, to expand the business, or for exporting.

Most firms had applied for finance from Oman Development Bank (ODB) and domestic commercial banks. The findings provide evidence that domestic banks are more involved in financing the SME sector than foreign and Islamic commercial banks in Oman.

Despite government policies (e.g. increasing lending share, reducing the borrowing costs and the Guarantee Loan Scheme (GLS)), the findings showed that the banks still relied significantly on high interest rates and collateral value to secure loan contracts: 33% of firms that had refused the bank's offer stated that the lenders had required business and personal assets and a mortgage. Other applicants were asked to be guaranteed by someone else who would be committed to the loan repayment if the lenders faced payment risks with the borrower. The study disclosed that lenders have relied on high collateral value such as business assets and stocks and personal assets and savings to compensate for Default risk. The highest collateral value costs were between 175% and 200%, as reported by 28.5% of firms that obtained bank loans and 16.6% of firms that refused the offer. Furthermore, 16.8% of firms that received credit and 16.6% of firms that refused the offer were asked for collateral valued at over 200% of the total loan value. Regarding the highest interest rates for loans, 16.6% of approved loan applications had interest rates between 6% and 7%, and 15.5% had interest rates between 8% and 9%.

Since most loans were for long- or short-term financing, the findings demonstrated that the majority of loans were for 3 to 8 years: 25.5% were for 3–5 years, 24.6% were for 6–8 years and 35% were for more than 8 years.

In addition, the findings indicate that domestic commercial banks and the ODB have played a great role in increasing the rate of lending to the non-oil-related SME sector. However, borrowing costs remain high among small firms, which has led some firm owners to refuse the offer or be constrained in different ways (e.g. bank rejection).

### **8.2.2 Difficulties with Raising Bank Finance**

Although the majority of firms that applied for bank credit reported that they received approval from the lenders, some of the firms did not receive credit and so faced credit constraints. The survey has contributed to understanding the reasons behind credit constraint and its impact on business growth.

The findings highlighted that bank loan officers/managers rejected some of the loan applications due to a lack of personal and business credit records, or because the project seemed too risky to be financed by the banks. Other firms reported that the reasons for rejection were because the revenues and profit accounts of the business did not satisfy the lending requirement, or because they were unable to provide the bank with adequate information about the business. The bank's rejection led these business owners to obtain finance from friends and family and other non-bank financial institutions. However, other rejected firms suffered cash flow pressure, were unable to grow as planned for, cancelled or postponed investment plans, or faced a decline in business productivity.

A further type of credit constraint among firms is that some refused the bank's offer because of the high interest rate or collateral costs, or because the offered amount was not enough, the repayment period was too short, or the procedures were too much hassle. Other firms refused the lender's offer because their application did not meet ODB funding requirements where the applicant should not have a job other than that in his/her enterprise, a measure designed to reduce the problem of Omani-fronted businesses. Most of these firms faced a reduction in business productivity or pressure on cash flow, were unable to expand as

planned for, or cancelled the plan. Others attempted to obtain finance from informal sources or non-bank financial institutions.

The study also offers interesting findings through its investigation into why some firms only received part of the finance they applied for from the banks. The main reasons are as follows: the level of risk associated with the project (10.8%), a lack of collateral (8%), have too much debt (6%), a lack of business credit records (3.6%), and inadequate business plan information (1.2%). However, 10% of firms did not know the reasons why they received only partial funding.

Furthermore, the study has contributed to the existing literature by investigating the impacts of obtaining partial funding on business growth. The results demonstrate that some firms were unable to grow as fast as planned for, their cash flow was placed under pressure, or they had to postpone their business plan. However, 10% noted that obtaining part of the required funding did not affect their business. Other firms sought informal funding (15%) or used non-bank financial institutions to fund their businesses (10%).

### **8.2.3 Non-oil-related SMEs that Needed Credit but Did Not Approach Banks**

The study contributes in providing evidence about the reasons for not borrowing from banks, even though there is need for finance, and the impact of this on business growth.

#### **8.2.3.1 Discouraged Non-Applicants**

Some firms reported that they were discouraged from borrowing because they thought that their loan application would be rejected. The reasons behind the fear of rejection were a lack of collateral, a lack of business credit records, high interest rate, not meeting terms and conditions, or being influenced by their peers' experiences of borrowing. Although 19.1% of discouraged firms reported that their business was not affected by these demand constraint issues, other firms revealed that the constraints had a serious impact on their business growth, such as pressure on cash flow, being unable to expand as quickly as planned for, a reduction in productivity, postponed investment plans, cancelled plans, or bankruptcy. Other firms had sought alternative external finance from informal sources (26.2%) or non-bank financial institutions (9.7%) to meet their business's financing needs.

### **8.2.3.2 Main Reasons for Other Non-Applicants**

The survey documented that some firms have not sought bank credit in order to avoid the risks that may be associated with borrowing, or because the terms and conditions were too onerous. Others were concerned about the validity of the financing rules and whether or not they complied with Islamic funding rules. Legal deficiencies in the Kafala sponsorship system of visa employment for the business (i.e. business ownership issue) was another reason that hindered some entrepreneurs from approaching banks. Consequently, some of these firms were unable to grow the business as they had planned (26.7%), and others experienced cash flow pressure. A few firms reported that their firm's productivity declined, and investment plans were postponed. Furthermore, a few firms sought financing from friends and family or non-bank financial institutions. One of the firms reported that they used a personal loan to support the business.

### **8.2.3.3 Informal Rejection**

Informal rejection is another financing demand-side constraint where business owners approached the lender with an informal application, for instance through a meeting regarding borrowing enquiries, but they had the impression that the lenders were reluctant to finance their project. The present study contributes to the literature by detecting the existence of this type of financial constraint among SMEs in Oman. The descriptive statistics revealed that a lack of collateral, the level of project risk, an inability to meet some of the bank loan conditions and terms, and a lack of business credit records were the grounds behind informal rejection.

As a result, these firms encountered pressure on business cash flow, or they were unable to grow as fast as they had planned. Some postponed their investment plans or saw a decline in productivity. However, other firms fulfilled their funding needs by obtaining finance from informal sources or apply for personal loan.

## **8.3 Summary of the Empirical Findings of Firms' Demand for Credit**

The following sub-sections summarise the results regarding the impact of firm-level strategy, banking relationship, primary owners' characteristics, and business industry type

on firms' demand for bank credit – whether they approached banks, were discouraged from borrowing, or were constrained by the lenders.

### **8.3.1 Applicant Firms versus Non-applicant Firms**

In the comparison between firms that had sought loans from banks and those that did not apply, the empirical findings clarified that the factors of increased sales growth, using financial advice sources and having a better formal education made it more likely that firms would approach banks for loans. Unclear business ownership (Omani-fronted businesses), a long relationship with the bank of more than 6 years, a neutral banking relationship, and operating in industries with less tangible assets (trade and service) made it less likely that firms would seek bank loans.

The empirical analysis could not provide evidence about the relationship between female and satisfied business owners, a comprehensive formal business plan and quality audited information, business owners with 6–10 years' previous relevant experience and the probability of approaching banks for a loan.

### **8.3.2 Credit Discouraged Non-Applicant Firms versus Applicant Firms**

The findings suggest that discouraged borrowers' profiles are more opaque and involve higher risks than the profiles of loan applicants. In particular, it was found that discouraged firms are significantly smaller (sole ownership) and younger (trading age 1 to 5 years) than applicant firms. Furthermore, firms that exported less than 50% of their total sales were more likely to be credit discouraged. This reflects the fact that SME exporters in non-oil industries have been disadvantaged by banks' concentration on the performance and activities of the oil industries in GCC countries (Rocha et al., 2011). Omani-fronted businesses are more prone to credit discouragement in the credit market given the lack of information about the business ownership and the weak relationship between the business and the creditors in an imperfect market (*H9b*). For a business bank loan, lenders may require documents that prove business ownership. Also, the registered business owners would be asked to sign the banking documents that are needed for the loan application. This may reduce the ability of foreigners (the real owners of Omani-fronted businesses) to approach banks for loans. In this case, they

are more likely to use informal sources of finance, which would keep them away from developing a strong banking relationship with bank lenders.

The empirical findings provide evidence that there is a positive correlation between certain types of industries (i.e. trade and services sector) and the likelihood of being discouraged from borrowing (*H12b*). This is due to the lack of collateral that these industries possessed in the form of business assets. The banks' screening and assessment of loan applications from SMEs that are operating in the service sector could be more costly than those working in manufacture, because their understanding about these businesses is considered to be poor. This is because the nature of these firms' products and operations is intangible, and they commonly have a lack of tangible assets. Under the circumstances of a lack of information and collateral, the bank lenders will tend to secure the loan applications through employing higher interest rates against these firms or even offer a lower amount than what is requested. As a result, the higher borrowing costs may cause discouragement from applying for credit among these firms even when there is a need for credit.

The unexpected result was with Hypothesis *H6b*, which was rejected. This hypothesis stated that non-oil-related SMEs that have a long banking relationship are less likely to be discouraged from applying for bank credit compared to firms with a shorter banking relationship. This could be attributed to the impact of oil economy crisis on banking liquidity and unregulated banking relationship or a lack of diversified bank lending to the non-oil SME sector. In addition, many firms tend to rely on personal banking accounts rather than on business accounts to obtain financing from the banks, as confirmed by Kasturi (2018). This result would affirm that banking relationship is a determinant of firms' ability to seek for needed finance but is conditional upon the fact that such a relationship should be developed based on business transactions (e.g. utilizing banking services or a one-off loan transaction), instead of depending on personal loan. Banks need to know quality and accurate information about the business venture to secure a loan contract, especially for an opaque SME. Thus, the use of business soft information through a strong established bank relationship is a more optimistic scenario as it is likely to generate low borrowing costs and less probability to pledge collateral.

Firms that reported a neutral relationship with their bank were also more likely to be discouraged than firms that were dissatisfied with their banking relationship. This may be

due to absence of solid relationship between banks and the firms; resulting due to the weak market as explained above.

In contrast, the analysis shows no clear evidence that female-owned businesses (*H8b*), exports of 50% or more of total sales (*H1b*), hiring a Big 4 audit firm (*H4b*), or a satisfactory relationship with the main bank (*H7b*) have an influence on borrowing decisions, in terms of whether firms eschew bank loans due to fear of rejection.

Moreover, the empirical evidence confirmed that the following types of firms were less likely to be discouraged from applying for bank loans: those that recorded increases in past sales growth performance (*H2b*); those that sought financial advice (*H5b*); firms owned by owners with enough prior relevant business experience (*H10b*); those with well-educated firm owners (*H11b*); and those operating in manufacturing industries. These indicators seem to play an important role in enhancing business owners' confidence in seeking finance. This is because they help to reduce information asymmetries, given that these types of firms are more prepared for the loan application and can reveal adequate information to the creditors.

### **8.3.3 Credit Constrained Firms versus Credit Obtained Firms**

A comparison was developed through the empirical analysis between credit constrained firms and those who had obtained finance from the banks. The analysis shows that there is no association between the likelihood of facing credit constraints and the factors of export performance intensity, past sales growth performance, using financial advice sources, banking relationship, business ownership (citizenship), and trade industry. However, other factors have a significant impact on lenders' decisions regarding allocating loans to non-oil-related SMEs. First, having a comprehensive formal business plan was related significantly and negatively with the probability of being constrained by the lenders (*H3c*). Firms that are prepared and can produce clear and sufficient formal business information appear to be more likely to persuade the loan managers/officers to approve their applications. Through the testing of Hypothesis *H4c*, it was also found that firms able to present financial reports audited by one of the Big 4 audit firms were less likely to encounter banking credit constraints. The results of the two hypotheses confirmed that adequate and high-quality business information facilitates bank financing. Presented with official and complete

information, lenders are more confident about approving loans than when firms lack quality business records.

On the other hand, the empirical findings from testing Hypothesis *H8c* indicated that female business owners are more likely to be constrained by bank lenders. Hypothesis *H10c* was rejected by the empirical findings, showing that entrepreneurs with 6 years' or more prior relevant business experience are more likely to be constrained by bank lenders. This suggests that banks may avoid lending to older business owners, even if they have more years of business experience, because they are expected to be less active and the loan repayment might be affected by retirement. Firms in the service sector were found to be more likely to be constrained by lenders than those in the manufacturing sector due to a lack of collateral in the form of business assets, supporting Hypothesis *H12c*. The descriptive statistics shows that 35% of firms operating in the service sector reported being credit constrained by lenders, despite having recorded growth in their past sales performance. This confirms the evidence of bank lenders reliance on using high-value collateral to compensate for lending risk and to overcome the issue of selecting risky borrowers, despite the intensive support for the SME sector from the banking sector and government.

Banks do not dispense with the use of personal or business collateral as a signal of commitment by the borrower to approve the loan application, especially in countries that are vulnerable to the volatility of the market and the instability of the political environment. Even if the firms are performing well, banks prefer to secure their lending transactions from likely opportunistic attitudes of bad behaviour prospects that are attributed to adverse selection or moral hazard (Krasniqi, 2010). The loan manager-officer might examine a firm's sales growth that reflects business performance levels, yet this seems to provide insufficient critical signals to allocate credit among SMEs. Not always SMEs that has increases in their sales growth means that they are capable to repay the principal loan amount with the additional costs. Thus, some bank lenders may tend to evaluate firms' debt-equity ratios especially with firms that have an intangible product, as with those in the service sector (Cressy and Olofsson, 1997b). This is because the ratio helps them to know the extent to which the business equity is able to cover business obligations. The high ratio indicates that firms rely on borrowing to finance their operation which may pose a potential business risk (e.g. bankruptcy) of being unable to repay the loan during hard times (Murthi, 2021). When there is a likelihood of default risk, then there is a greater chance the lending interest rate

will be increased. However, there is still a possibility that the lenders may approve a risky loan application under uncertainty. Therefore, this may induce the lenders to collateralize the loan contract because the risk factor is then accounted for by the available value of the securities which should compensate the lending risk. In brief, banks' main target is to get their money back while maximizing their profits portfolio; thus, collateral along with interest rate remain the significant techniques to ensure borrower creditworthiness.

From the empirical findings, it is evident that the length of the firm-bank relationship is unimportant to lenders; however, the negative sign of the marginal effect may show that there is hope of possible success in accessing banks through the use of soft information, if it is well employed and harnessed by the firms.

#### **8.3.4 Credit Discouraged Firms versus Credit Constrained Firms**

When comparing discouraged non-applicant firms with firms that are credit constrained by lenders, the Probit ML model analysis suggests that discouraged borrowers share the following characteristics: they are significantly smaller and younger firms, firms that use Big 4 audit firms, and Omani-fronted businesses operating in the trade sector, with a neutral and long relationship (> 6 years) with their main bank. This finding implies that these variables influence business owners' decisions over whether or not to apply for a loan. Therefore, they are critical in differentiating between cases of credit discouragement and an unsuccessful approach to bank loans. These findings are unexpected such as firms with long relationship with the main bank, but they can be attributed to imperfect lending relationships and the imperfect, unregulated market of the Sultanate, which exacerbates the problem of information asymmetries. In addition, the proportions of the sample vary unequally between the probability outcomes. For instance, the descriptive statistics for discouraged non-applicants and those that reported an unsuccessful loan application were: 74% and 25% hired Big 4 audit companies respectively.

Interestingly, the empirical findings confirmed that firms which recorded a decrease in sales growth performance, used financial advice and operated in manufacturing industries, with well-educated owners with enough prior relevant business experience (more than 11 years), were less likely to be discouraged from applying for bank loans compared to those being constrained by the lenders.

In contrast, the analysis showed no clear evidence that the following factors can be used to discriminate between discouraged firms and those who approached banks but were unsuccessful: exporting firms, those that recorded increases in sales growth performance, those that kept a comprehensive formal business plan, and those operating in the service sector with female business owners with prior relevant experience of 1 to 5 years or 6 to 10 years.

## **8.4 Policy Implications and Recommendations of the Study**

This research has collected a large amount of data regarding non-oil-related SMEs' credit constraints, specifically regarding credit discouragement incidents among these firms in Oman, which have implications for the main actors in Oman who wish to promote non-oil-related SMEs' growth: government institutions, the banking sector, entrepreneurs, and academics.

### **8.4.1 Implications for Academics**

This study has contributed to the existing knowledge and literature concerning the financing of SMEs, in particular the status of credit constraints and discouragement issues within the SME sector. Therefore, this study may attract the interest of academics and scholars who work in the same field in Oman, as well as in other countries, in order to develop the knowledge and scope of the problems faced by SMEs when they wish to access bank finance. This study could provide the basis for a comparative study to be conducted between developed oil-based economies and less-developed oil-based economies. In particular, this study identifies firms that were constrained in their efforts to raise business capital, such as discouraged non-applicants, informally rejected firms, rejected firms and those that did not apply for other reasons. This information can be used to make comparisons with other oil-rich countries such as Botswana, Norway, and Malaysia (as these countries have recorded successful economic diversification, as reported by Van der Ploeg (2011)). In addition, this study can be used for comparisons with other relevant contexts, such as the GCC, to expand the knowledge of similar issues in business financing (e.g. business ownership) and the nature of financing the non-oil SME sector in these regions. It is also hoped that the findings of this thesis will encourage researchers to investigate cases that face direct discouragement in order to develop a more detailed comparison with those who were discouraged indirectly.

## 8.4.2 Implications for Omani Government

The study provides evidence that despite the great transition and reforms in the supply side as a consequence of the Omani government's policy for the banking sector in force since 2014, there is still limited finance available for SMEs operating in the non-oil sector. It was found that 151 firms faced difficulties with raising business capital, for various reasons; in other words, they were discouraged, rejected, refused the bank's offer or did not apply for other reasons. By helping to make policymakers aware of the various firms' status for bank credit demand, this study can aid the government in developing a scheme to enhance financial support and remove obstacles to obtaining credit, by considering the different types of constraints faced by SMEs. This may be done by providing alternative financial resources, backed by the government, such as encouraging wealthy business people to participate in financing SMEs via the methods of Business Angels (BAs) and Venture Capitalists (VCs). Such methods of non-bank financing will need to be structured and managed through a clear legislation system. Policymakers can benefit from the successful experiences of other countries in this field.

Considering the large proportion of credit discouragement incidents compared to refused loan applications among owners of non-oil-related SMEs, this study hopes to encourage policymakers to adopt the credit readiness concept as an analogy to 'investment readiness' (Mason and Kwok, 2010), which is concerned with enhancing financial suppliers' preparation. Credit readiness would enhance business owners' knowledge about lending requirements and the expectations of banks, thus enabling them to make more successful loan applications. The government may wish to consider effective and efficient workshops, training and seminars in order to inform entrepreneurs about the best practices for making successful loan deals with financiers.

This study also demonstrates the existence of Omani-fronted businesses within the non-oil SME sector – which is known by the Omani government as 'hidden trade' (Times of Oman, 2018; Al-Lawati, 2018). This confirms the findings of the Central Bank of Oman report (Al-Barwani et al., 2014). The empirical findings show that these firms are more likely to be financially discouraged. Therefore, they rely on informal financial sources and non-banking institutions. Being aware of this type of business and their characteristics, as described in Chapter 6, would help the government to identify appropriate rules and regulations, not only

in financing approaches but also in terms of organizing, controlling, and solving this existing issue. This is because even if the government expands and develops credit policies and sources to improve business growth, the real business owners (non-Omanis) would not be confident enough to apply for funding because they perceive that this support does not align with their business ownership structure. They may also be unwilling to reveal such information to the lenders, as they could pass it on to government bodies; this could be a problem as these businesses are considered to be an invalid form of business ownership.

Moreover, in this study, the proportion of female-owned businesses was very small compared to male-owned businesses; this may reflect the small number of Omani women entering the business market. This is consistent with previous studies conducted in the Sultanate (e.g. Belwal et al., 2014). This study therefore raises the awareness of the government to the lack of female entrepreneurs and can prompt them to promote female businesses by providing adequate support systems in terms of education and training programmes, consultations and mentoring, and funding. Government agencies are better placed to raise community awareness about the significance of women's participation in economic development, as this can help to deal with the restricted values of social culture and customs that may hinder women's success in business.

Moreover, this study emphasizes two major recommendations for policymakers in government institutions:

**First**, to overcome the lack of information between banks and SMEs, the key target that needs to be taken into account by the CBO is enhancing the exchange of information through the current Banking Credit Statistical Bureau (BCSB). The Bureau should design and build a registered SME database that is relevant to SME banking relationships (Al-Brawani et al., 2014). This would help lenders to collect SME credit history and credit scoring, which could be used to some extent as a substitute for the collateral required for SME loan contracts (ibid), assist decision making and maybe reduce the cost of borrowing. This would also help to build a strong relationship between potential SME borrowers and lenders.

To encourage more SME owners to apply for finance- which had not applied before, banks need to contribute and collaborate with their clients in establishing a good business relationship. The ideal way for the banks to build an attractive relationship with these firms

is through providing them with a wide variety of financial and non-financial services or products, and to simplify banking transactions as well as enhancing all facilities with low fees. Banks can offer incentives, such as cash bonuses or discounts on elements that businesses utilize from bank partnerships (e.g. insurance companies), for their clients that have opened bank accounts. This would encourage these business owners to open business bank accounts and, hence, improve their relationship with the bank. As the firms' owners participate in banking activities (i.e. creating banking transactions), specifically such as holding a banking account, debit and credit cards, payroll services, and paying their suppliers, that would help them to build business credit based on their business financial history records in the future. In turn, this may enhance business owners' confidence to apply, as these transactions can be reported to the credit bureau of the central bank. Furthermore, through business banking accounts information the specialists of the credit bureau or lenders will easily be able to know and assess the business outflow cash and inflow cash. This might also open the door for future borrowing from lenders who prefer to lend to firms that have business bank accounts. In brief, developing a good banking relationship will have a substantial impact in mitigating information asymmetry, thereby, strengthening firm owners' confidence to apply for finance when needed.

**Second**, there is a pressing need to develop a non-banking database that should be delegated to a specialized unit in the National Centre for Statistics Information (NCSI) in order to enhance the availability of SME information in the market. The database should include accurate and complete information required by stakeholders, including SMEs' addresses, their past and current performance, and the future orientation and expectations of the firms' performance. This would help policymakers to assess the contribution of the sector to the labour market, standard of living and economic growth. Furthermore, it would provide them with the information required for future plans for the development of entrepreneurship in the Sultanate. Given that the government's vision is to expand the exports of non-oil industries, it is also important to create a special platform for an SME export database in order to measure the scale of established and growing firms, and their performance, profits and value added to economic growth. Accordingly, policymakers would be able to assess the efficiency and deficiency of this sector, and the need for growth and regulation of its legal system. Thus, this facility would help policymakers to address the reform priorities for the credit demand constraints of SME access to banks.

**Third**, policymakers should facilitate business registration licensing and terms, documentation and procedures to encourage foreigners to establish their business under the legal system of FDI instead of circumventing it by establishing Omani-fronted businesses. It is necessary to reconsider the costs associated with foreign investments and to enhance the property rights protection and legal system for them. Al-Barwani et al. (2014) recommended that the government should develop FDI policies in a way that would provide opportunities for SMEs to benefit from ‘linkages and supply’. Boosting foreign investment would not only act as a partial substitute for the petroleum sector’s contribution to GDP, but it would also transfer knowledge and technology that would enhance market innovation and competitiveness.

### **8.4.3 Implications for the Banking Sector**

This study has highlighted the lack of historical financial records and insufficient collateral as the two most common reasons for SMEs facing financial constraints from bank lenders in Oman. The study has revealed that high interest rates, insufficient finance offers, and inappropriate loan repayment periods were reasons for SMEs refusing banks’ offers. Thus, being aware of these issues and how they hinder the financing of SMEs in the non-hydrocarbon sector should encourage banks to develop guidelines or clear lending processes that are compatible with the nature of their SME clients. In addition, this emphasises the need for the banking sector to diversify its financial services (e.g. bill discounting business asset-based lending, factoring and overdrafts) for these firms in order to solve the issue of the costly collateral required to secure loan contracts. These methods may stimulate banks to use other assets to secure loan contracts, such as bills, receivables and inventory. The availability of these methods may encourage SME owners, in particular those who lack collateral, to seek finance when it is needed. The findings of this study may also enhance banks’ awareness of how loan allocation management can be improved among SMEs.

This study highlighted that few firms had approached Islamic or foreign banks for financing compared to domestic banks. This reflects the levels of involvement of foreign and Islamic banks in financial and non-financial support for these firms in the market. Thus, this study highlights the need for the CBO to develop banking policies that would increase Islamic and foreign banks’ participation with non-oil-related SMEs by diversifying lending technologies and services. These two types of banks should consider that there are many firms that did not apply for bank financing due to their concerns about the validity of this financing against

religious standards. Considering this point is important in order to enhance credit availability for these firms.

#### **8.4.4 Implications for Primary Business Owners of Non-oil-related SMEs**

The study provides important implications for existing SME primary owners who have found it difficult to raise business capital and who have a potential plan to finance their project through the banking sector. Seeking clarification of the bank's loan terms and conditions, interest rates and loan application requirements were found to increase the likelihood of success for the potential business entrepreneurs. Learning from peers' experiences of applying for loans was also shown in this study to enhance entrepreneurs' knowledge about the required preparations for borrowing.

This study revealed that there are several factors that business owners need to consider in order to diminish the likelihood of being financially discouraged or constrained by enhancing their borrowing readiness. The business owners should ensure that they maintain audited financial reports and an updated formal business plan in order to be able to present banks with adequate information. An audited financial report was the document most required by bank lenders. The availability of formal information within the business could enhance SME owners' confidence regarding external finance since they would be able to evaluate the effectiveness of their investment plan and develop their future business plans. This information will provide opportunities for entrepreneurs to assess their performance and compare it with their competitors in the market, which will provide them with insights into business development and innovation. Therefore, the study findings may encourage potential SMEs to develop their strategy of keeping formal documented information in the future.

The empirical findings showed that a long firm-bank relationship did not reduce discouragement. This may indicate the existence of mismanagement in the relationship between firms and banks. Thus, business owners should develop their knowledge of how to manage their business current accounts and deposit accounts and adhere to the appropriate financial management techniques required by banks. It is hoped that business owners will benefit from the knowledge about the importance of the firm-bank relationship for accessing financial support and the factors that may weaken this relationship in Oman.

## 8.5 Research Limitations

The study involves a few limitations that may need to be considered in further studies; however, these limitations do not reduce the importance of the results. The lack of published financial information on non-oil-related SMEs hindered this study's ability to employ this type of data within the analysis. Thus, one of the key limitations is that the information collected through the survey is categorical data, which relies on participants' self-reporting instead of exact figures. It is believed that the information reported by the firms' owners is qualitative in nature (i.e. not numeric) (Storey, 2004) and is more likely reflects the real context of transition economy; however, it is not the first best data for regression analysis (Krasniqi, 2010). For instance, the factors of prior sales growth rely on the subjective answers of the business owners, and econometrics analysts prefer to measure continuous variables (i.e. numerical data) instead of qualitative data. Nonetheless, the current study has defined the variables based on prior studies' measurements (e.g. Storey, 2004; Krasniqi, 2010; Freel et al., 2012; Cowling et al., 2012).

The survey was constructed based on the nature and validity of the responses obtained from the participants in the piloting study, where it was found to be difficult to collect time-series information about business owners' credit demand. Therefore, the study relied on collecting information on this aspect through the respondents' recent applications for credit.

To measure banking relationship, some prior studies have included sets of variables such as the number of bank funders used for purpose of borrowing, distance of the bank locations and bank financial products and services (Cole and Sokolyk, 2016). However, these variables are not captured in this study. Moreover, this study did not use banking structure characteristics or GDP per capita because the collected data of the study was not panel data in time-series or cross-sectional for countries.

A further limitation of this study is the sample size. First, the number of firms that were denied funding was very small compared to the categories of discouragement and firms that had obtained the loan amount. This has restricted the ability of this research to estimate the determinants of refused loan applications compared to approved applications. It was also not possible to estimate the determinants of discouraged non-applicant firms compared to rejected firms. Therefore, the constructed model of credit constrained firms comprised

rejected loan applications, firms that refused the bank's offer, and those that received an informal rejection, versus those that obtained full or at least part of the requested loan. The same method was followed with the model of discouragement cases versus credit constraint cases.

Second, the small sample size meant that characteristics such as the gender and business ownership of the primary owners, and export intensity, were not balanced. This means that the variables of female and Omani-fronted firms are under-represented compared to their opposite respondents (i.e. male and Omani firms respectively). The business environment is dominated by male-owned firms for social, cultural and religious reasons, as seen in the small number of female-owned businesses in the market. In terms of business ownership of the primary owners, it was impossible to collect equal information from Omani-fronted firm owners because these firms are unobservable and not all firm owners are willing to reveal information about the business ownership – for this reason, the current study obtained few responses from such firms. Regarding the export intensity factor, there are few non-oil-related SME exporters recorded in the database of Ministry of Commerce and Industry (MoCI). The sample size of informal bank rejection cases was small; thus, it was not possible to estimate its probability outcome and how it is influenced by the research model factors compared to discouraged non-applicant firms.

Finally, it is important to highlight that there are many other variables that could not be included in the regression analyses in this research – most notably, the variables of banking products and services and types of financial advice sources have not been included in the analysis. For instance, it is expected that each different source of financial advice will have a different impact on business owners' decisions over borrowing. These variables were excluded from the research model regression in order to attain the robust goodness-of-fit of the models. However, the researcher has presented and analysed this data in the descriptive chapter, which has helped to understand its nature and relation to the research subject.

## **8.6 Avenues for Future Research**

Inevitably, the limitations of the current study and lack of research oriented (specifically in SME financing) in Oman have provided future research opportunities. The current study could be extended by developing a country comparative study to explore the understanding

of non-oil SMEs' demand and supply for bank credit in oil-rich economies, especially GCC countries (i.e. cross-sectional research). Due to the current drop in oil resource prices in the global market, along with a poorly developed financial market, these countries are transitioning towards diversifying their economies in order to enhance non-oil industries through the SME sector. Therefore, there is a need to investigate to what extent the level of firm strategy (e.g. using various types of financial advice), the market environment and business owner characteristics impact demand-side constraints on SMEs' access to banks. This future study would help us to understand the problem from the wider perspective of less-developed oil-based economies, especially given that these countries share the same culture, religion, and social customs and values. Therefore, the findings could lead to valuable implications and recommendations for GCC policymakers, which would help to promote non-oil sector development and sustainability. For the econometrics model, researchers may include data on country-level banking structure, measured by bank concentration (using the Herfindahl Index) and the percentage of foreign banks involved, including GDP per capita, as control variables across the regions.

A further strand for future research is to develop a comparison of the financing of SMEs in developed oil-based economies (e.g. Norway, Alberta in Canada) and less-developed oil-based economies in order to examine the differences in credit discouragement and constraint existence among firms in various credit contexts.

Using a specific context such as the exports of non-oil-related SMEs, this research could be extended by examining the determinants of different credit status, such as approved firms compared to rejected firms, discouraged versus rejected firms, and discouraged versus informally rejected firms. This would improve understanding about the level of funding required for export activities, since governments are making efforts to substitute oil export revenues with non-oil revenues in order to accelerate the economic growth of the country.

In future research it will be important to employ an advanced method of analysis such as Necessary Condition Analysis (NCA), which has recently attracted the attention of academics (Dul and Toth, 2019). As a brief explanation, this suggested statistical analysis (NCA) is expected to provide a new approach to evaluating the relationship between x and y. While the causal logic of OLS aims to estimate whether x is sufficient but not necessary for y, the purpose of NCA is to identify the necessary relationships between y and x but not

the sufficiency (Dul et al., 2018). It tests whether single determinants (x) are necessary or a requirement for the existence of the outcome (y) (ibid). For instance, the x effect could be interpreted as determining whether the level of export intensity is a necessary condition that allows credit discouragement incidents among non-oil-related SMEs in Oman. Notably, this method of statistical analysis uses the same assumption tests of linear regression and the same research methodology in terms of sampling and measurement techniques. The non-linear or linear regression develops a complex econometrics model that comprises all the relevant variables with control variables to avert any bias that may exist due to the omitted variables. NCA includes only variables of interest without facing the risk of omitted variable bias (Dul and Toth, 2019). For future research, researchers may wish to study the relationships between the different levels of firm demand for bank credit with the important factors that influence the outcome. For example, researchers could test whether certain factors of firms, business owners, banking relationships and firm strategy characteristics have a significant relationship with discouragement incidents.

Further research could aim to develop comparative analysis between certain factors such as female- versus male-owned firms, using financial advice or not, and keeping quality business information or not, to evaluate their impact on SMEs' ability to access banks for loans. For this research direction, the researchers may need to apply quantitative analysis such as the Maximum Likelihood Model (MLM) to examine the impact of the factors on the probability outcome for each model of the comparison. This may contribute to the understanding of how business owners perceive credit demand from banks based on certain suggested factors such as gender.

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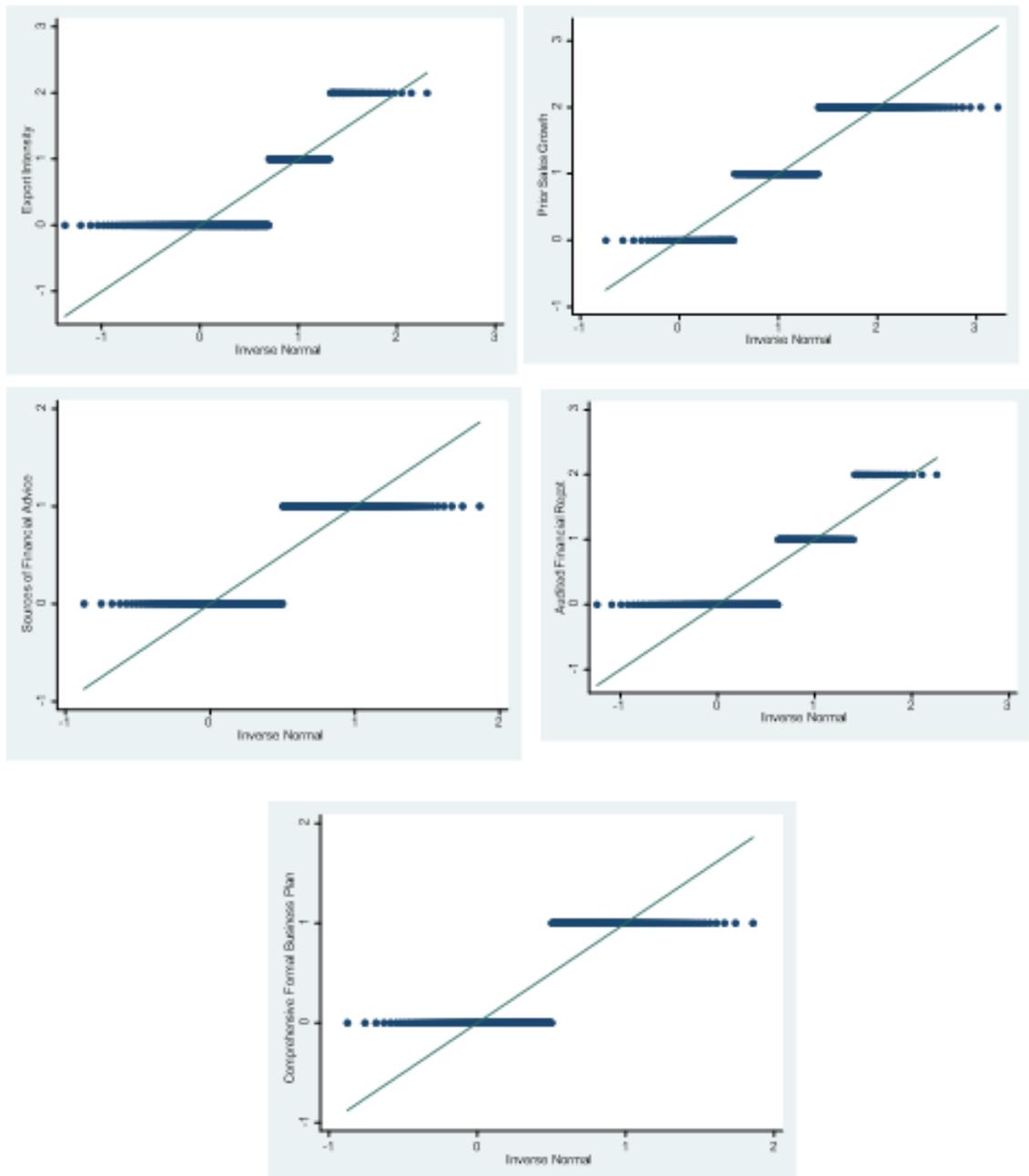
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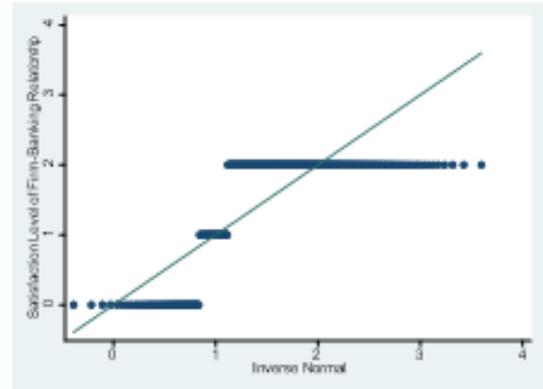
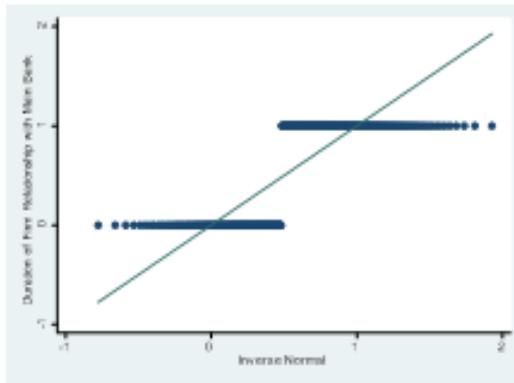
# APPENDICES

## Appendix I: Normality test by Normal Quantile Plot

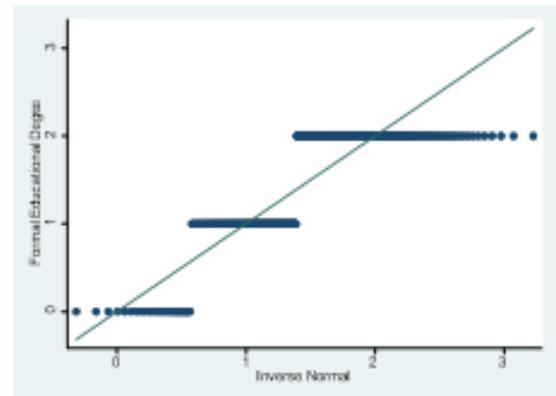
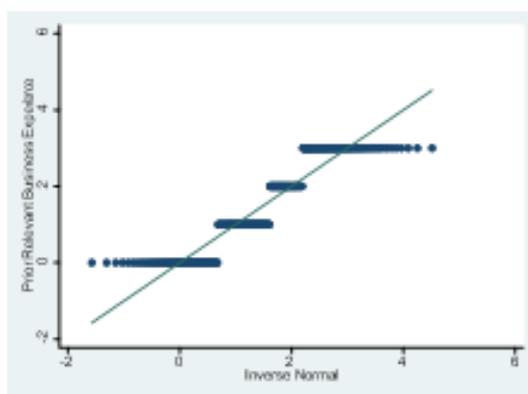
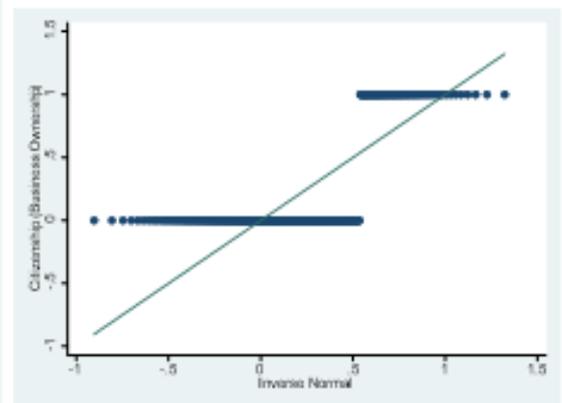
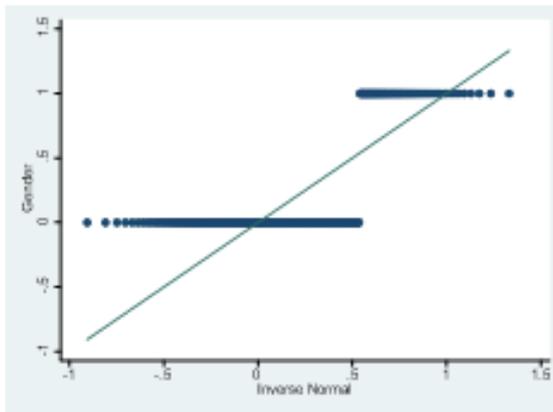
### a) Firm Strategy Characteristics



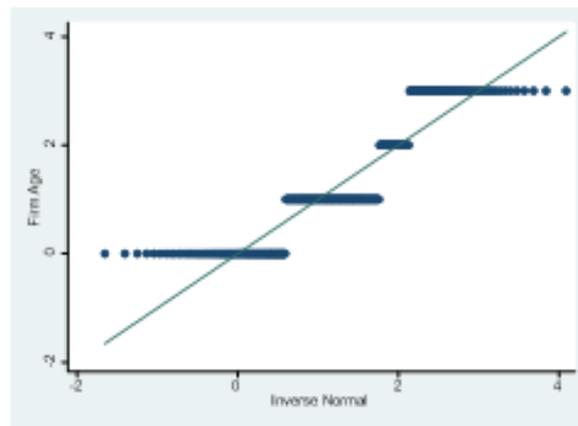
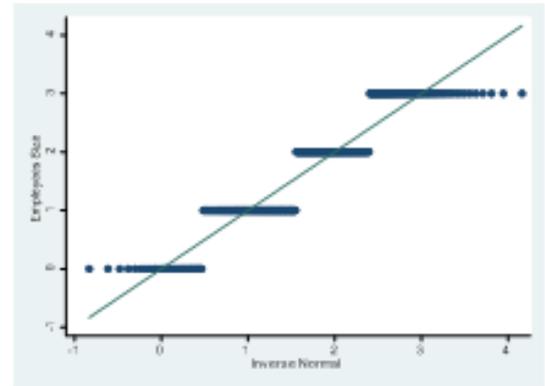
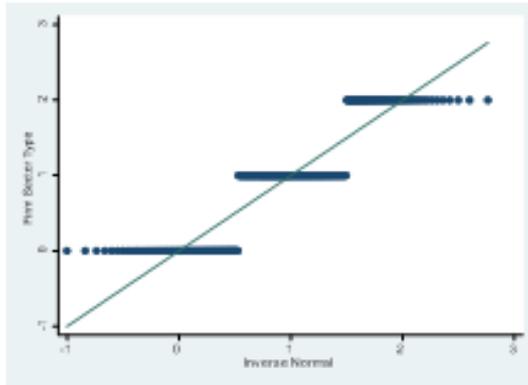
## b) Firm-Banking Relationship



## c) Primary Owner Characteristic



### d) Firm Characteristics



**Appendix II: Heckman Selection Models of Applicants, Discouraged Non-applicants, and Credit Constrained Firms**

<b>Model (1)</b> Applicants = 1 Vs. Non-applicants = 0 (discouraged firms, informally turned down firms, other applicants)		<b>Mode (2)</b> Discouraged Non-applicants = 1 Vs. Applicants = 0	<b>Model (3)</b> Constrained = 1 (rejected, informally turned down and refused offer) Vs. Firms obtained bank loan=0
	<b>Marginal Effect (dy/dx)</b>	<b>Marginal Effect (dy/dx)</b>	<b>Marginal Effect (dy/dx)</b>
<b>Explanatory Variables</b>			
<b>Non-oil-related SME-level Strategy:</b>			
FST_EXP_INTS (Ref: Not exporting)			
Low export intensity (< 50% of turnover)	-0.214** (0.078)	0.222** (0.084)	-0.054 (0.125)
High export intensity (≥ 50% of turnover)	-0.103 (0.120)	0.154 (0.121)	-0.022 (0.155)
FST_GRWT (Ref: Remained Unchanged)			
Decreased	0.210** (0.094)	-0.219** (0.098)	0.009 (0.155)
Increased	0.201** (0.091)	-0.221** (0.094)	-0.103 (0.139)
FST_BP (Ref: Not keep business plan)			
Yes	0.054 (0.068)	-0.073 (0.069)	-0.164* (0.092)
FST_AUD (Not hire external Auditor)			
Yes, Non-Big 4 companies	-0.068 (0.078)	0.092 (0.081)	0.087 (0.106)
Yes, Big 4 companies	-0.083 (0.133)	0.023 (0.141)	-0.138 (0.157)
FST_ADV (Ref: Not use)			
Use source of financial advice	0.243*** (0.061)	-0.242*** (0.063)	-0.128 (0.167)
<b>Banking Relationship</b>			
RE_LEN (Ref: ≤6 years)			
> 6 years	-0.157** (0.071)	0.159** (0.073)	-0.039 (0.089)
RE_SAT (Ref: Dissatisfied)			
Neutral	-0.191* (0.111)	-0.237** (0.117)	0.123 (0.156)
Satisfied	-0.087 (0.08)	-0.108 (0.086)	0.040 (0.106)
<b>Non-oil-related SME Primary Owners' Characteristics:</b>			
PO_GEN (Ref: Male)			
Female	-0.005 (0.077)	0.012 (0.082)	0.305** (0.099)

<b>PO_CIT (Ref: Omani)</b>			
Omani-fronted business	-0.174** (0.079)	0.222*** (0.083)	0.118 (0.127)
<b>PO_EXP (Ref: No prior experience)</b>			
1–5 years	0.234** (0.084)	-0.212** (0.086)	0.119 (0.118)
6–10 years	-0.022 (0.097)	-0.068 (0.102)	0.284** (0.138)
More than 10 years	0.251** (0.090)	-0.314** (0.094)	0.322** (0.123)
<b>PO_EDU (Ref: No formal education)</b>			
High school diploma and diploma degree	0.408** (0.119)	-0.389** (0.136)	NA
Postgraduate degree (PhD, MSc)	0.3293** (0.120)	-0.293** (0.137)	NA
<b>Non-oil-related SME Characteristics:</b>			
<b>F_SEC (Ref: Manufacturing sector)</b>			
Trade	-0.235** (0.081)	0.247*** (0.07)	-0.054 (0.115)
Service	-0.144** (0.093)	0.162*** (0.098)	0.224*** (0.112)
<b>Control Variables:</b>			
<b>F_AGE (Ref: 1-5 years)</b>			
6–10 years	0.115* (0.080)	-0.092 (0.082)	NA
11–15 years	0.438** (0.133)	-0.405** (0.140)	NA
Over 15 years	0.258** (0.117)	-0.187 (0.118)	NA
<b>F_SIZE (Ref: sole ownership)</b>			
2–5 employees	0.198** (0.115)	-0.186 (0.127)	-0.336*** (0.188)
6–25 employees	0.227** (0.128)	-0.212 (0.140)	-0.309 (0.194)
26–99 employees	0.422** (0.150)	-0.456** (0.160)	-0.456** (0.211)
Constant	0.260	0.000	0.104
<b>Credit Desire (Selection Equation)</b>			
<b>F_AGE</b>			
6-10 years	-0.476 (0.212)	-0.456 (0.216)	NA
11-15 years	-0.487 (0.293)	-0.451 (0.303)	
Over 15 years	-3.25 (0.271)	-0.290 (0.278)	
<b>F_SIZE</b>			
2-5 Employees	0.152 (0.294)	0.212 (0.303)	0.535 (0.395)

6-25 Employees	0.432 (0.306)	0.505 (0.315)	0.912** (0.411)
26-99 Employees	-0.027 (0.334)	0.074 (0.347)	0.647 (0.421)
<b>FST_GRWT</b>			
Decreased	0.264 (0.393)	0.321 (0.417)	0.466 (0.470)
Increased	0.812 (0.352)	1.065** (0.413)	1.147** (0.485)
<b>Employment Growth</b>			
Increased	0.225 (0.250)	0.229 (0.259)	0.140 (0.285)
Decreased	0.470*** (0.277)	0.377 (0.285)	0.276 (0.321)
<b>Assets Growth</b>			
Increased	-0.508*** (0.207)	-0.367 (0.300)	-0.655** (0.344)
Decreased	-0.881** (0.224)	-0.807 (0.286)	-0.829** (0.273)
<b>Cash Flow Growth</b>			
Increased	1.41 (0.371)	1.56* (0.420)	1.770** (0.487)
Decreased	0.475* (0.362)	0.640 (0.410)	0.523 (0.447)
Constant	0.892	0.535	0.033
Mills Ratio/ Lambda	-0.080	0.105	0.169
P-value	0.652	0.583	0.702
Z	-0.45	0.55	0.38
Rho	-0.192	0.251	-0.169
Sigma	0.420	0.420	0.384
Observations	315	293	197
Selected	228	206	110
Nonelected	87	87	87
Wald chi2(26)	97.43	94.48	47.34
Prob > chi2	0.000	0.000	0.000

**Notes:** These variables denote the following: *FST\_EXP\_INTS* export intensity, *FST\_GRWT* sales growth, *FST\_BP* business plan, *FST\_AUD* quality of audited financial report, *E\_ADV* using source of external advice, *RE\_LEN* duration of bank relationship, *RE\_SAT* level of stratification with main bank, *PO\_GEN* primary owner gender, *PO\_CITZ* primary owner citizenship, *PO\_EXP* primary owner prior experience of relevant business, *PO\_EDU* primary owner highest formal education degree, *F\_SEC* firm's sector, and controlled by *F\_AGE* firm age, *F\_SIZE* number of employees in firm including the owners. The marginal effects at means (dy/dx) report the predicted probability outcome of each explanatory variable's effects: any changes in the probability  $y$  given a unit change in an explanatory variable  $x$ . The standard error reported in parentheses. The model includes diagnostics of log likelihood,  $P$ -value, and chi-squared statistic of the regression. One asterisk (\*) denotes the significance level at 10% level, two asterisks (\*\*) denote the significance level at 5% and (\*\*\*) denotes the significance level at 1%. (NA) Not Applicable: variables excluded from the model to improve the model's significance level. 95% confidence interval.

Appendix III: Descriptive Statistics of Survey Data Questions (Additional Analysis)

	Freq. (n)	Per. (%)
<b>AI.1 Could you please identify the name of your main bank (or type of bank ownership) for the business purpose?</b>		
Domestic bank (22 Islamic banks)	292	92.6
Foreign bank	23	7.3
<b>AI.2 Why have you chosen this bank as main bank for the business? (choose as many as apply)</b>		
Efficient and quality customer services	200	63.4
Quick loan disbursement and Lack of bureaucracy	25	7.9
Low interest rate	18	5.7
Compatible with Islamic financial rules	27	8.5
Not ask for guarantee and securities	24	7.6
Convenient location	87	27.6
Recommended by friends, family or firm peers	38	12.0
Offer wide range of financial/non-financial services	109	34.6
Other (e.g Famous bank, not crowded, limit option available in the market)	101	32.0
<b>AI.9 Specify the following company factors based on the below scale if they have: increased, decreased, unchanged, NA over the last 4 years</b>		
<b>Cash flow</b>		
Increased	53	38.7
Decreased	140	16.8
Remained unchanged	122	44.4
<b>Employment growth</b>		
Increased	101	43.1
Decreased	78	32
Remained unchanged	136	24.7
<b>Firm's assets growth</b>		
Increased	87	27.6
Decreased	81	25.7
Remained unchanged	147	46.6
<b>BI.7 How many years has the firm been exporting goods or services? (Please tick only one)</b>		

Less than one year	9	2.8
1-5 years	29	9.2
6-10 years	40	12.7
11-15 years	13	4.1
Over 15 years	24	7.6
<b>B1.9 Geographically, where are your customers based? (Tick as apply)</b>		
Locally (in Oman)	306	97.1
Gulf Cooperation Countries (GCC)	92	29.2
Arab countries (non-GCC countries)	18	5.7
Africa	18	5.7
Europe	10	3.1
East Asia and Non-Arab countries in West Asia	19	6.0
USA	6	1.9
Australia	4	1.2
Latin American	3	0.9
<b>B1.10 what types of delivery channels does the business employ to serve the customers? (Tick as apply)</b>		
Direct sales	307	97.4
Indirect sales through intermediaries or distributors (e.g., wholesalers, retailers)	68	21.5
Exporting to distributors or agencies	85	26.9
<b>B1.12 Does the firm has annual financial report?</b>		
No	71	22.5
Yes	244	77.4
<b>B1.14 What is the recent external auditor opinion reported for your firm's financial performance? (Tick only one)</b>		
Unqualified opinion (i.e., financial statement discloses fair and true view about business operation and position)	111	35.2
Qualified opinion (i.e., financial statements did not disclose fair and true view about business operation and position)	24	7.6
Adverse opinion (i.e., When auditors take action to disadvantage opinion against firms due to its misleading financial statements)	-	-
Disclaimer opinion (i.e., Auditors prevent to report their opinion because the firm's management limits the auditor's performance)	-	-

<b>B1.2 Legal status of your firm (Please tick only one):</b>						
Proprietorship (single owner)		157		49.8		
Limited Partnership		73		23.1		
Limited Liability Company		85		26.9		
<b>B2.5 Please indicate the firm primary owner age group:</b>						
Under 20		0		0		
20-29		38		12.0		
30 -39		112		35.5		
40-49		104		33.0		
50 and over		61		19.3		
<b>A1.7 To what extent were these sources of advice useful for your business financial decisions?</b>						
<b>Types of external sources advice</b>	<b>Not at all useful</b>	<b>Not useful</b>	<b>Neither useful nor useless</b>	<b>Useful</b>	<b>Very useful</b>	<b>Not Applicable</b>
1. Main bank manager	-	0.6	3.0	16	9	89.8
2. Informal sources (e.g., Friends & Family)	-	-	6.0	9.3	16.6	72
3. Accountant	-	-	0.6	7.0	9.0	83.2
4. Solicitor	-	-	0.6	3.0	5.4	90.7
6. Government sector	0.3	0.3	2.4	6.1	6.5	84.2
7. Private sector	0.3	0.3	1.0	3.1	2.1	93.1
8. Other	-	0.3	0.6	0.3	1.0	97.5

**SURVEY 2018: BANK FINANCING FOR NON-OIL TRADABLE SMALL AND MEDIUM ENTERPRISES IN THE SULTANATE OF OMAN**

Assalam Alaykum, my name is Rabab Hamad Al-Hasni, a doctoral researcher at the University of Glasgow at the Adam Smith Business School. I am delighted to invite you to participate in my research study but before you start please read the below *Guidance Note carefully*.

This survey is being conducted to contribute to the study of 'The Access of Non-Oil Tradable SMEs to Bank Lending in Oil-Based Economy: A Case Study of Oman.' The survey has been structured into two sections A and B. Section A1 will provide explanations of the business banking relationship. Section A2 will provide clarifications of the firms access banks for loan, while section A3 will address firms that have not approached banks for finance. Section B will cover the aspect of understanding the characteristics of firms and their primary owner who possess the highest share of the business. Generally, the objective of this survey is to investigate the extent of financing in the non-oil tradable SME sector in Oman during the recent oil price crisis.

**Guidance Notes:**

1. All companies have been selected randomly and their names will not be attached to the study.
2. The survey should be answered by the firm's owner or manager and welcome to discontinue participation at any time. It should take approximately 15-20 minutes to complete the survey.
3. All information collected from this survey will be treated as strictly confidential according to legal constraints and professional guidance and only used for academic and research purposes (e.g., publish in conferences or academic journal articles). It will be analyzed with appropriate analytical tools to enhance the contribution to previous knowledge and to provide recommendations for policymakers to help contribute in developing Oman's non-oil tradable SME sector. This project has been considered and approved by the College Research Ethics Committee.
4. If you need to know the final findings of the survey, please record your email here:  
.....
5. If you have any enquiries regarding the survey do not hesitate to contact me by phone number 92924729 or email: [r.ahasni.1@research.gla.ac.uk](mailto:r.ahasni.1@research.gla.ac.uk)
6. By completing this questionnaire you consent to participate in the study.

**THANK YOU VERY MUCH FOR YOUR COOPERATION**

**SECTION A: BUSINESS FINANCE THROUGH BANKING CHANNELS**

<b>AI. PERCEPTION OF BANK LENDING</b>				
<b>AI.1</b> Could you please identify the name of your main bank (or type of bank ownership) of your business? _____				
<b>AI.2</b> Why have you chosen this bank as main bank for the business? ( <i>choose as many as apply</i> )				
<input type="checkbox"/> Efficient and quality customer services	<input type="checkbox"/> Not ask for loan guarantee/securities			
<input type="checkbox"/> Quick loan disbursement and lack of bureaucracy	<input type="checkbox"/> Convenient location			
<input type="checkbox"/> Low interest rate	<input type="checkbox"/> Recommended by friends, family or firm peers			
<input type="checkbox"/> Compatible with Islamic financial rules	<input type="checkbox"/> Offer wide range of financial/non-financial services			
<input type="checkbox"/> Other, please specify _____				
<b>AI.3</b> How long has your company dealt with your main bank? ( <i>Tick only one</i> )				
<input type="checkbox"/> Less than 1 year	<input type="checkbox"/> 4-6 years	<input type="checkbox"/> 10-12 years		
<input type="checkbox"/> 1-3 years	<input type="checkbox"/> 7-9 years	<input type="checkbox"/> More than 12 years		
<b>AI.4</b> What are the main services that you obtain from your main bank? ( <i>Tick as many as apply</i> )				
<input type="checkbox"/> Personal current accounts	<input type="checkbox"/> Loans			
<input type="checkbox"/> Business current accounts	<input type="checkbox"/> Personal credit cards			
<input type="checkbox"/> Overdrafts	<input type="checkbox"/> Business credit cards			
<input type="checkbox"/> Deposit accounts	<input type="checkbox"/> Non-financial services (e.g., consultation)			
Other, please specify _____				
<b>AI.5</b> Overall, how satisfied are you with the main bank you deal with? ( <i>Choose only one</i> )				
<input type="checkbox"/> Very satisfied	<input type="checkbox"/> Fairly satisfied	<input type="checkbox"/> Neither satisfied nor dissatisfied	<input type="checkbox"/> Fairly dissatisfied	<input type="checkbox"/> Very dissatisfied
<b>AI.6</b> What are external source of advice have you used to help you make business funding decision during the last 4 years? ( <i>Choose as many as apply</i> )				
<input type="checkbox"/> Have not used external advice	<input type="checkbox"/> Professional lawyers (e.g. Law offices)			
<input type="checkbox"/> Main bank manager	<input type="checkbox"/> Government sector (e.g., Export Credit Guarantee Agency, Riyadh, Al Raffd Fund)			
<input type="checkbox"/> Informal sources (e.g., Friends/family)	<input type="checkbox"/> Other private sources (e.g., Zubair Small Enterprises Centre)			
<input type="checkbox"/> Professional Accountants (e.g. Accounting offices)	<input type="checkbox"/> Other sources, please specify _____			

<b>Al.7 To what extent were these sources of advice useful for your business financial decisions?</b>						
<b>Types of external sources advice</b>	<b>Not at all useful 1</b>	<b>Not useful 2</b>	<b>Neither useful nor useless 3</b>	<b>Useful 4</b>	<b>Very useful 5</b>	<b>Not Applicable 6</b>
1. Main bank manager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Informal sources (e.g., Friends & Family)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Professional (e.g. Accountants offices)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Professional lawyers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Government sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Private sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Al.8 If you have not used external advice, what are the reasons for that? (choose as many as apply)</b>	
<input type="checkbox"/> Not knowing the right persons/companies to take advice from them	<input type="checkbox"/> Thought it would not be useful
<input type="checkbox"/> Applying for external advice is very costly	<input type="checkbox"/> I did not know the extent of the external advice quality
<input type="checkbox"/> Lack of time to ask	<input type="checkbox"/> Other, please specify _____

<b>Al.9 Specify the following company factors based on the below scale if they have: increased, decreased, unchanged, NA over the last 4 years:</b>				
<b>Factors</b>	<b>Increased</b>	<b>Decreased</b>	<b>Remained unchanged</b>	<b>NA (if firms is less than a year)</b>
Sales growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cash flow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*\* If you have applied for bank finance during the period 2014 - 2017, please go directly to section (A2) to complete the questionnaire.*

*\*\* If you have not applied at all for bank finance during 2014 - 2017, please go directly to section (A3) to complete the questionnaire.*

Section: Firms that Have Approached Banks for Credit (Loan Applicants)

<b>A2. BANK FINANCE USE AND REJECTION</b>	
<b>A2.1 Have you applied for bank finance over the 4 last year?</b> (Tick only one: choose the largest or most recent finance application)	
1. Yes, applied successfully (obtained full funding) (please answer Questions from A2.2 to A2.8 then go to section B1 &2)	<input type="checkbox"/>
2. Yes, applied but get partial funding (please answer Questions from A2.2 –A2.8 and A2.10 and A2.11 then go to section B1 &2)	<input type="checkbox"/>
3. Yes, applied but I refused the offer (please answer Questions from A2.2 to A2.8 and A2.12 and A2.13 then go to section B1 &2)	<input type="checkbox"/>
4. Yes, applied but got rejection (please answer Questions from A2.2 to A4, A2.11 then go to section B1 &2)	<input type="checkbox"/>
5. No, did not apply (please go to Section A3)	<input type="checkbox"/>
6. Made informal enquiries to loan officers or manager for borrowing but did not forward with the formal application as the bank seems unwilling to lend (please go to Section Q A3, answer A3.4 & A3.5)	<input type="checkbox"/>
<b>A2.2 If you applied for bank financing, what kind of financing?</b> (Please choose the largest or most recent finance application)	
<input type="checkbox"/> Long-term loan	<input type="checkbox"/> Short-term loan
<input type="checkbox"/> Overdraft	<input type="checkbox"/> Asset-based finance
<input type="checkbox"/> Bill discounting	
<b>A2.3 why you have applied for the finance?</b> (you can choose more than one)	
<input type="checkbox"/> Starting business	<input type="checkbox"/> Other fixed assets
<input type="checkbox"/> Working capital	<input type="checkbox"/> Expanding business
<input type="checkbox"/> Automobiles for the business	<input type="checkbox"/> Exporting
<input type="checkbox"/> Tools/ Devices/ Equipment	<input type="checkbox"/> Research and Development (R&D)
<input type="checkbox"/> Constructions /Buildings	<input type="checkbox"/> Other, please specify _____
<b>A2.4 Could you please identify the name of bank?</b> _____	
<b>A2.5 What type of collateral was required to obtain the finance?</b> (you can choose more than one)	
<input type="checkbox"/> Nothing was required	<input type="checkbox"/> Business assets (e.g., Land, buildings)
<input type="checkbox"/> Business stocks (e.g., inventories, raw materials, goods).	<input type="checkbox"/> Personal savings
<input type="checkbox"/> Business debtors (e.g., Account receivables)	<input type="checkbox"/> Personal assets
<input type="checkbox"/> Other, please specify _____	
<b>A2.6 What was the estimated value of the collateral to obtain the finance?</b> (Tick only one)	
<input type="checkbox"/> No collateral was required	<input type="checkbox"/> (175-200) % of the loan value
<input type="checkbox"/> 100% of the loan value	<input type="checkbox"/> Over 200% of the loan value
<input type="checkbox"/> (125-150) % of the loan value	

<b>A2.7 What was the average of the interest rate you pay for your loan? (Tick only one)</b>				
<input type="checkbox"/> 0 -3%	<input type="checkbox"/> 4 -5%	<input type="checkbox"/> 6 -7%	<input type="checkbox"/> 8 -9%	<input type="checkbox"/> Over 10%
<b>A2.8 What is the repayment duration (in years)? Number of years to repay the loan (Tick only one)</b>				
<input type="checkbox"/> Less than a year	<input type="checkbox"/> 1 - 2 years	<input type="checkbox"/> 3 – 5 years	<input type="checkbox"/> 6 – 8 years	<input type="checkbox"/> More than 8 years
<b>A2.9 If your application was not successful, what were the reasons given by the bank for this status? (choose as many as apply)</b>				
<input type="checkbox"/> Lack of collateral		<input type="checkbox"/> Bank considered that the project is too risky		
<input type="checkbox"/> Lack of personal credit records		<input type="checkbox"/> Have too many debts (outstanding debts)		
<input type="checkbox"/> Lack of business credit records		<input type="checkbox"/> Have not given any reasons for the rejection		
<input type="checkbox"/> Unclear or insufficient business plan		<input type="checkbox"/> Other, please specify _____		
<b>A2.10 If you got a partial funding only, what were the reasons given by the bank for this status? (choose as many as apply)</b>				
<input type="checkbox"/> Lack of collateral		<input type="checkbox"/> Bank considered that the project is too risky		
<input type="checkbox"/> Lack of personal credit records		<input type="checkbox"/> Have too many debts (outstanding debts)		
<input type="checkbox"/> Lack of business credit records		<input type="checkbox"/> Have not given any reasons for granting only part of the finance		
<input type="checkbox"/> Unclear or insufficient business plan		<input type="checkbox"/> Other, please specify _____		
<b>A2.11 How did the application rejection or obtaining part of the finance affects your business growth? (choose as many as apply-Then Please go to Section B1&amp;B2)</b>				
<input type="checkbox"/> No effects		<input type="checkbox"/> Bankruptcy status		
<input type="checkbox"/> Obtained funds from informal source (e.g., friends and family)		<input type="checkbox"/> Pressure on cash flow		
<input type="checkbox"/> Obtained funds from other formal non-bank sources		<input type="checkbox"/> Postponed investment plans		
<input type="checkbox"/> Plan was cancelled		<input type="checkbox"/> Reduction on firm's productivity		
<input type="checkbox"/> Unable to expand as fast as planned for		<input type="checkbox"/> Other, please specify _____		
<b>A2.12 If you applied but refused the bank offer, what were the reasons? (choose as many as apply)</b>				
<input type="checkbox"/> Interest rate was too high		<input type="checkbox"/> Collateral requirements were too costly		
<input type="checkbox"/> Offered amount was not sufficient and useless for the project		<input type="checkbox"/> Other, please specify _____		
<input type="checkbox"/> Duration of loan payment was too short and stressful				
<b>A2.13 How did your rejection to the bank offer affects your business growth? (choose as many as apply)</b>				
<input type="checkbox"/> No effects		<input type="checkbox"/> Bankruptcy status		
<input type="checkbox"/> Obtained funds from informal source (e.g., friends and family)		<input type="checkbox"/> Pressure on cash flow		
<input type="checkbox"/> Obtained funds from other formal non-bank sources		<input type="checkbox"/> Postponed investment plans		
<input type="checkbox"/> Plan was cancelled		<input type="checkbox"/> Reduction on firm's productivity		
<input type="checkbox"/> Unable to expand as fast as planned for		<input type="checkbox"/> Other, please specify _____		

\* If you have finished this section, please go directly to section (B) to complete the questionnaire.

(Section for Non-Applicants Only)

A3. NON-APPLICANTS FOR BANK FINANCE	
<b>A3.1</b> which of the following statements relate to you in terms of financing need for the business purpose? <i>(Tick only one)</i>	
<input type="checkbox"/> I do not need for bank finance I have sufficient internal finance <i>(Please go to Section B)</i>	
<input type="checkbox"/> I do not need for additional credit (i.e., those who have debt exist before 2014) <i>(Please go to Section B)</i>	
<input type="checkbox"/> I do not need for bank finance as I am not seeking my business to grow <i>(Please go to Section B)</i>	
<input type="checkbox"/> I need bank finance but have not applied because I do not think I will be successful <i>(please go to A3.2, and A3.5)</i>	
<input type="checkbox"/> I need bank finance but have not applied for another reasons <i>(please go to question A3.3 and A3.5)</i>	
<b>A3.2</b> What made you think bank is unwilling to finance your business? <i>(Choose as many as apply, then please go to QA3.5 and Section B)</i>	
<input type="checkbox"/> Lack of collateral	<input type="checkbox"/> Not fulfil bank terms and conditions (e.g., Not the real registered owner of the business)
<input type="checkbox"/> Lack of business credit records	<input type="checkbox"/> Peers' borrowing experience
<input type="checkbox"/> Lack of personal credit records	<input type="checkbox"/> Bank borrowing too costly (i.e. high interest rate)
<input type="checkbox"/> Unclear or insufficient business plan	<input type="checkbox"/> Other, please specify _____
<b>A3.3</b> If you have not applied for bank finance, what were the reasons for not applying? <i>(Choose as many as apply, then please go to QA3.5 and Section B)</i>	
<input type="checkbox"/> Lack of collateral	<input type="checkbox"/> Avoid bank borrowing risk (e.g., mis-payment, court cases)
<input type="checkbox"/> Lack of business credit records	<input type="checkbox"/> Peers' borrowing experience
<input type="checkbox"/> Lack of personal credit records	<input type="checkbox"/> Bank borrowing too costly (i.e. high interest rate)
<input type="checkbox"/> Not fulfil bank Terms and conditions (e.g., Not the real registered owner of the business)	<input type="checkbox"/> Unclear and insufficient business plan
<input type="checkbox"/> Other, please specify _____	

<b>A3.4 If you made formal inquiries to the bank loan officers or manager but you did not proceed your application, what made you think bank is unwilling to finance your business? (Choose as many as apply, then please go to Q A3.5 and Section B)</b>	
<input type="checkbox"/> Lack of collateral	<input type="checkbox"/> Bank considered that the project is too risky
<input type="checkbox"/> Lack of personal credit records	<input type="checkbox"/> Have too many debts (outstanding debts)
<input type="checkbox"/> Lack of business credit records	<input type="checkbox"/> Have not given any reasons for the rejection
<input type="checkbox"/> Unclear or insufficient business plan	<input type="checkbox"/> Other, please specify _____
<b>A3.5 How did not apply for bank finance affect your business growth? (Tick as many as apply)</b>	
<input type="checkbox"/> No effects	<input type="checkbox"/> Bankruptcy status
<input type="checkbox"/> Obtained funds from friends and family	<input type="checkbox"/> Pressure on cash flow
<input type="checkbox"/> Obtained funds from non-bank financial institution	<input type="checkbox"/> Postponed investment plans
<input type="checkbox"/> Plan was cancelled	<input type="checkbox"/> Reduction on firm's productivity
<input type="checkbox"/> Unable to expand as fast as planned for	<input type="checkbox"/> Other, please specify _____

*\* If you have finished this section, please go directly to section (b) to complete the questionnaire.*

## **SECTION B: FACTORS OF SMEs AND OWNERS AFFECTING BANK LENDING**

### **B1. NON-OIL BUSINESS CHARACTERISTICS**

**B1.1 Which of the following describe your business activity field? (Please tick only one)**

- Manufacturing     Extraction/Processing of natural resources (e.g., non-oil mining, fishing, agriculture, electricity, gas, water)     Wholesale and retail     Transport     Business Service
- Consumer Service     Other, please specify \_\_\_\_\_

**B1.2 Legal status of your firm (Please tick only one):**     Proprietorship (single-owner)

- Limited Partnership     Limited Liability Company

**B1.3 How long has your business been trading (in years)? (Please tick only one)**

- Up to 1 year     2-5years     6-10 years     11-15years     over 15 years

**B1.4 How many employees do you have in your firm currently, including you? (Please tick only one)**

- 1 (self-employed)     2-5     6-25     26-99     100 or more.

### **BUSINESS EXPORT AND FINANCIAL RECORDS**

**B1.5 Did your company export goods or services outside Oman?**

- No, did not export     Yes, services only  
 Yes, goods only     Yes, goods and services

**B1.6 What was percentage of the firm's sales turnover is derived from exporting?**

- Did not export     (50 -74)% of turnover  
 Less than 25%     (75 and 100) % of turnover  
 (25 - 49) % of turnover

**B1.7 How many years has the firm been exporting goods or services? (Please tick only one)**

- Less than one year     1-5 years     6-10 years     11-15 years     Over 15 years
- Not Applicable

**B1.8 Which of the following types of customer did your business have? (Choose as many as apply)**

- Private sector companies     Government (e.g., contracting)     individuals

**B1.9 Geographically, where are your customers based?** *(Choose as many as apply)*

- Locally (i.e. in Oman)     Gulf Cooperation Countries (GCC)     Arab countries (non-GCC countries)     Africa     Europe     Asia     USA     Australia     Latin American

**B1.10 what types of delivery channels does the business employ to serve the customers?** *(Tick as apply)*

- Direct sales     Indirect sales through intermediaries or distributors (e.g. wholesalers, retailers)  
 Exporting to distributors or agencies

**B1.11 Does the firm has a written business plan?** *(A document of complete explanations of current business position, financial position, future expectations and how to achieve the objectives)*

- Yes     No

**B1.12 Does the firm has annual financial report?**     Yes     No

**B1.13 Is the audited financial report certified by the external auditors?** *(Tick only one)*

- Yes, Big 4 audit companies (i.e. Deloitte, KPMG, PricewaterhouseCoopers, Ernst & Young)  
 Yes, but Non- Big4 audit companies     No, did not hire external auditors

**B1.14 What is the recent external auditor opinion reported for your firm's financial performance?** *(Tick only one)*

- Did not hire external auditors.  
 Unqualified opinion (i.e. financial statement discloses fair and true view about business operation and position)  
 Qualified opinion (i.e. financial statements did not disclose fair and true view about business operation and position)  
 Adverse opinion (i.e. When auditors take action to disadvantage opinion against firms due to its misleading financial statements)  
 Disclaimer opinion (i.e. Auditors prevent to report their opinion because the firm's management limits the auditors performance)

**B2. PRINCIPAL OWNER CHARACTERISTICS (WHO HAS LARGEST SHARE OF THE FIRM):**

**B2.1 Citizenship of owners** (Please determine the number and gender by each country):

Owners' Nationality by Country	Number of Owners	
	Female	Male
<input type="checkbox"/> Oman	-----	-----
<input type="checkbox"/> Gulf Cooperation Countries (GCCs)	-----	-----
<input type="checkbox"/> Europe	-----	-----
<input type="checkbox"/> USA	-----	-----
<input type="checkbox"/> Arab from non-GCC countries	-----	-----
<input type="checkbox"/> Pakistan	-----	-----
<input type="checkbox"/> India	-----	-----
<input type="checkbox"/> Bangladesh	-----	-----
<input type="checkbox"/> Other, please specify	-----	-----

**B2.2 The primary Owner of the company:**  Foreign  Omani

**B2.3 If the firm's primary owner is a foreigner, does he/she pay regular amount for the Omani sponsor (i.e. Kafil)?**  Yes  No  Not Applicable

**B2.4 Could you please specify how much is the regular payment?**

- |  |  |
|--|--|
| <input type="checkbox"/> Not Applicable  | <input type="checkbox"/> 500-999 Rials       |
| <input type="checkbox"/> Under 100 Rials | <input type="checkbox"/> 1000 Rials or above |
| <input type="checkbox"/> 100-499 Rials   |  |

**B2.5 Please indicate the firm primary owner age group:**

- Under 20  20-29  30 -39  40-49  50 and over

**B2.6 Before running the business, how many years of prior relevant business experience did the firm primary owner has?**

- |   |   |
|---|---|
| <input type="checkbox"/> Did not have relevant experience | <input type="checkbox"/> 11-15 years        |
| <input type="checkbox"/> 1-5 years                        | <input type="checkbox"/> More than 15 years |
| <input type="checkbox"/> 6-10 years                       |   |

**B2.8 What is the highest formal qualification degree does the firm primary owner has?**

- |  |   |
|--|---|
| <input type="checkbox"/> Do not have academic qualifications | <input type="checkbox"/> Bachelor degree                  |
| <input type="checkbox"/> General diploma degree or lower     | <input type="checkbox"/> Postgraduate degree (PhD or MSc) |
| <input type="checkbox"/> Diploma degree                      |   |

**Thank you very much for your time.**