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**Essays on Credit Rationing for SMEs and the Role of Credit  
Guarantee Schemes – the Case of Saudi Arabia**

By

**Rawaa Fouad Muhandes**

**Thesis Submitted in Fulfilment of the Requirements of the Degree  
of Doctor of Philosophy (PhD)**

**Adam Smith Business School**

**College of Social Sciences**

**University of Glasgow**

**June 2022**

## **Declaration of authenticity**

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.

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Signature:

# Abstract

Financial constraints of small and medium-sized enterprises (SMEs) with respect to large corporations, and the role of banks as major suppliers of finance are well documented in the literature (Stephanou & Rodriguez, 2008). The topic attains acknowledged relevance, especially because restrictions on bank credit to SMEs is a global phenomenon (Baas & Schrooten, 2006) and the causes for it are complex and multidimensional. The ongoing efforts to investigate SMEs' financing gap are particularly relevant for the oil-rich countries of the Gulf Cooperation Council (GCC), where SMEs are particularly financially constrained – the average share of SME lending amounts to only 2% of total bank loans, i.e., the lowest in the world (Rocha, 2011). In these countries, large banks dominate the banking sector while small-scale banks, those advantaged in lending to small firms, are not present which can create an especially challenging environment for SMEs. Interestingly, however, it is not possible to determine whether such financing gaps are due to supply-side factors (institutions not wanting to service them) or demand-side factors (firms do not want the financial services for religious reasons) (IMF, 2018a;b).

This thesis, therefore, within three empirical chapters employs primary data to examine the nature of bank finance for SMEs in the largest GCC country: Saudi Arabia. The thesis assesses the extent to which such a low share of bank loans is supply-driven or demand-driven. It further provides a country-focus impact evaluation on Saudi's public credit guarantee scheme "*Kafalah*", as a common supply-side initiative by governments around the globe (Gozzi & Schmukler, 2016). It also gathers hitherto unavailable information on commercial banks' realities and lending practices from face-to-face interviews with the "ultimate" bank insiders: relationship managers and team leaders of SME banking.

The first empirical chapter (Chapter 4) investigates arguments about large banks' ability to provide credit to SMEs through business models that emphasise the cross-selling of fee-based non-lending activities (de la Torre et al., 2010), while incorporating demand-side factors. Using firm-level data gathered through a tailor-made questionnaire from a sample of 328 SMEs to conduct several empirical methods, the findings do not find evidence for the aforementioned argument, but that SMEs' structural characteristics – mainly age and size – remain the main

determinants in obtaining credit from large banks. The findings, however, provide evidence on the usefulness of *Kafalah*. Importantly, supply-side constraints appear to play a major role in deterring SMEs from seeking bank finance in the first place. While the majority of sampled SMEs (around 62%) indicate that they have never applied for bank finance, perceived high interest rates on the potential loan was found to be the major reason. Religious reasons were found to be less important. However, the findings suggest that the stringent laws in Saudi which incriminate defaulters seem to constitute an institutional barrier to entrepreneurs' credit demand through creating a high level of risk aversion.

The second empirical chapter (Chapter 5) focuses on evaluating the impact of *Kafalah* which has never previously been subject to independent empirical evaluation, to the best of the author's knowledge. Utilising primary firm-level data collected through a telephone survey from 124 firms of *Kafalah*'s recipients and the responses of the 328 sampled SMEs in Chapter 4 as a control group, the findings show that *Kafalah* results in high levels of finance additionality, i.e., 73.3% of *Kafalah*'s beneficiaries would have been rejected if it were not for the scheme, which is well above the average of 30-35% that exists in all credit guarantee schemes that are properly designed (Levitsky, 1997). However, subject to methodological limitations and the prevailing economic downturn in Saudi, the economic additionality analysis suggests that participating in *Kafalah* does not affect SMEs' growth in terms of employment, which should be affected positively if growth is limited by the availability of external finance. This was attributed to the type of firms (i.e., older and larger SMEs) and loans extended (i.e., short-term loans) by commercial banks through the scheme. It was concluded that *Kafalah* has not fully achieved its goals. The research, however, does not find evidence for arguments on induced moral hazard by these schemes.

The third empirical chapter (Chapter 6) examines commercial banks' realities and how they adapt to different direct/indirect government interventions in the credit market, using qualitative primary data from face-to-face interviews with 11 bankers. The findings suggest *Kafalah* was a milestone in encouraging lending to SMEs and hence banks' lending policies have witnessed some modifications to comply with *Kafalah*, which enabled lending to many more SMEs than would otherwise have been allowed under banks' original policies. Recent government efforts to publicise SMEs as a new national priority have pressured banks to offer innovative lending solutions for SMEs' working capital financing needs, such as the Point of Sales Financing

product. Yet, in line with conventional wisdom, the findings suggest that large banks' current business models appear to be suitable mainly for older, more transparent firms with audited financial statements (Berger & Udell, 2006) who can mainly obtain short-term loans. Interestingly, bankers highlighted the importance of soft information in decision-making, despite the employment of financial statement lending. This raises doubts on policies that call for a larger presence of foreign-owned banks in developing countries, but who would lack the required local insights.

Overall, the findings suggest that SMEs in Saudi are constrained in their access to bank finance, and that these constraints are mainly supply-driven. Younger and smaller firms are particularly credit-rationed and, hence, the findings cast doubts on arguments that large banks are just as able to extend credit to opaque SMEs as small banks (Berger et al., 2007). The findings, therefore, suggest there may be a room for government-directed lending programmes to provide finance of a long-term nature and to start-ups, given that this thesis' evidence implies what commercial banks can currently do for SMEs in this regard is limited. Accordingly, Saudi Arabia's decision to set up a bank dedicated to SMEs seems promising.

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# Chapter 1: Introduction

Small and medium-sized enterprises (SMEs) are considered to be an essential component of a successful economy due to their role in pioneering and developing emerging technologies, stimulating competition, and generating positive externalities as an outcome of entrepreneurial activity (Huggins & Williams, 2012; Shapira, 2010). Nevertheless, a common refrain in the literature is that SMEs often encounter restrictions in accessing bank credit and this is viewed as a major growth constraint (Ayyagari et al., 2017; Brown et al., 2011). SMEs are mostly not in a position to have access to conventional sources of equity finance (Harrison & Mason, 1986). Consequently, their establishment and more importantly their growth bear heavily the impact of shortages in bank finance which is the main source of external funds for SMEs worldwide (Brown et al., 2010; Safavian & Wimpey, 2007).

While constraints in accessing bank finance by SMEs is a global phenomenon (Baas & Schrooten, 2006), these constraints are more pronounced in developing countries, with the weaknesses in their institutional environment and financial institutions being argued to explain why SMEs in these countries are highly credit-constrained (Beck, 2007), or more strictly, credit-rationed. For example, Rocha (2011) finds that the average share of loans to SMEs in the developing countries of the Middle East and North Africa (MENA) region is only 8%, i.e., lower than the average share in other developed and developing countries. Such percentages are even lower in the Arab Gulf Cooperation Council (GCC) countries, amounting to only 2%, which is the lowest in the world (Rocha, 2011). Interestingly, the International Monetary Fund (IMF) (2018a) recognises that it is not possible to determine whether such financing gaps in the GCC are due to supply-side factors – banks not wanting to service this segment, or demand-side factors – firms do not want banks’ financial services for religious reasons (IMF, 2018a;b). Indeed, it has been increasingly recognised in the literature that self-rationing (firms refrain from applying for credit due to factors on the demand-side) is potentially a greater constraint on entrepreneurship than traditional credit rationing (Fraser, 2019).

Accordingly, this thesis in its first empirical chapter (Chapter 4) investigates the existence and prevalence of credit rationing in the largest country of the GCC, Saudi Arabia. As in other GCC countries, although banks in Saudi are highly capitalised (Das Augustine, 2017), the average share of banks’ loans to SMEs in 2016 was only 2%. However, in a recent report about the



obstacles facing Saudi SMEs, lengthy bureaucratic procedures and licensing were found to be the major obstacles (Jeddah Chamber, 2016). This is interesting as one would expect access to finance to be reported as the major obstacle, given that access to bank credit, which is the main source of external funds for SMEs, is particularly low in Saudi. This in turn raises questions about the actual demands of SMEs for commercial banks' finance. In this regard, it is argued that the magnitude of credit rationing in an economy cannot be identified unless the demand and supply for credit is known (Hashi & Toçi, 2010). Therefore, the credit rationing analysis in Chapter 4 incorporates demand-side factors affecting SMEs' borrowing decisions, to identify the extent to which such low shares of bank loans to SMEs lie within supply-side factors.

Saudi provides an interesting context in which to analyse credit rationing and contribute to the debated literature on the effect of the banking industry structure on credit availability for SMEs. Within this, large banks dominate the banking sector and small-scale banks' entry is restricted (IMF, 2018a; World Bank Group, 2016). The literature has long argued that small-scale banks are advantaged in servicing SMEs because of their reliance on relationship lending based on soft information (Beck et al., 2017; Berger & Udell, 1998). Under this view, large and foreign-owned banks cannot cater for SMEs because of their arm's-length transactional lending technologies which rely mainly on hard information obtained from audited financial statements, which SMEs usually lack (Beck et al., 2011).

A number of articles, however, have challenged this and indicated that large banks are just as able to extend credit to opaque SMEs as small banks (Berger et al., 2007). Some studies characterised a different pattern of bank involvement with SMEs that focuses on the increased interest of large and foreign banks for offering fee-based non-lending products/financial services (de la Torre et al., 2010). The cross-selling of these non-lending activities was found to facilitate increased lending to SMEs via the greater ability such banks have in diversifying risk while deriving income from these products/services. The implication of such studies is that SMEs' structural characteristics, which are the source of difficulties, become less constraining for these banks who can overcome weaknesses in the institutional environment through different incentive-compatible mechanisms. Additionally, because large and foreign banks view SMEs as a profitable market, State-sponsored initiatives become less essential (de la Torre et al., 2010). Accordingly, government policies restricting the entry of foreign banks can reduce SME credit

availability (Berger & Udell, 2006) since these banks can bring in much-needed technology and experience to developing countries (Beck, 2013).

Chapter 4, therefore, tests large banks' ability to cater for SMEs' financing needs through the cross-selling of different non-lending products/financial services. Because of the lack of adequate secondary data on SMEs, a tailor-made questionnaire was designed to acquire first-hand information from a sample of 328 SMEs to examine their borrowing decisions, experience in securing bank finance and the role of the Saudi credit guarantee scheme (CGS) *Kafalah* in facilitating bank finance access. The findings suggest that a relatively lower share of SMEs in Saudi actually apply for bank finance (38%). Loan rejection rate, however, is high. Over half of sampled applicant firms (54%) are credit-rationed. Importantly, the results do not find evidence that large banks' involvement with SMEs through cross-selling non-lending activities facilitate SMEs' access to bank finance, and that SMEs' structural characteristics, mainly their age and size, remain the main determinants in obtaining credit. The findings, however, provide evidence on the usefulness of *Kafalah* in improving SMEs' bank finance access. Importantly, supply-side constraints appear to play a major role in deterring SMEs from seeking bank credit initially. While the majority of sampled SMEs (around 62%) indicate that they have never applied for bank finance, perceived high interest rates on the potential loan was found to be the major reason affecting SMEs' credit demand. Religious reasons were found less important in deterring SMEs, which can be attributed to the greater availability of Islamic products offered by commercial banks in recent years (IMF, 2018a). The findings also suggest that the stringent Saudi laws that incriminate defaulters seem to constitute an institutional barrier to credit demand through creating high levels of risk aversion in entrepreneurs.

A closely related issue to the effect of the banking industry structure and the institutional environment on credit availability for SMEs deals with the appropriate type of government intervention. It is argued that a weaker institutional environment does not allow banks to develop lending technologies appropriate to optimising lending costs and risks in the SME market (Beck, 2007). Therefore, policy makers can affect credit availability in developing countries through market-enabling and market-developing policies (Beck, 2007; Berger & Udell, 2006). Other forms of direct government intervention such as CGSs are viewed by some economists negatively and not desirable (Cressy, 2002; Parker, 2002), even though evidence from historical experience on the successful post-war reconstruction of Western Europe provides that active

States influenced and guided the markets (Marangos, 2003). Indeed, despite the long history of CGSs globally, the theoretical and empirical literature on their impact is inconclusive (Boocock & Shariff, 2005; Dvouletý et al., 2019; Honohan, 2010). This can be attributed partially to the large differences in their features and rules worldwide (Beck et al., 2010).

This thesis therefore in its second empirical chapter (Chapter 5) provides an outcome evaluation of the Saudi CGS *Kafalah*, in response to calls for further country-focused empirical studies (Beck et al., 2010; Saadani et al., 2011). Chapter 5 evaluates *Kafalah* in terms of its ability to generate finance and economic additionality, which are argued to be the acid test for CGSs' effectiveness (Boocock & Shariff, 2005). It also investigates arguments that CGSs induce moral hazard and hence guaranteed borrowers perform worse since they are not required to pledge their own collateral. Employing primary firm-level data collected through telephone surveys of 124 firms of *Kafalah*'s beneficiaries and the responses from the 328 firms in Chapter 4 to construct a control group, the findings suggest that *Kafalah*'s finance additionality is estimated (with 95% confidence) as  $73 \pm 7.9\%$ . In this, 73.3% of *Kafalah*'s beneficiaries would have been rejected had *Kafalah* not been introduced. Survey respondents confirmed the predicted finance additionality from the econometric analysis. An overwhelming majority of about 72% of *Kafalah*'s beneficiaries indicate that their lending bank would not have extended finance, if it were not for *Kafalah*. This percentage is well above the average of 30-35% which exists in all CGSs that are properly designed and implemented (Levitsky, 1997). Nevertheless, subject to methodological limitations and the prevailing economic downturn in Saudi since the decline in oil prices, the economic additionality analysis suggests that participating in *Kafalah* does not affect SMEs' growth in terms of employment, which should be affected positively if growth is limited by the availability of external finance. This can be attributed to firm type (i.e., older and larger SMEs) and loans extended (i.e., short-term loans) by commercial banks through *Kafalah*. It was concluded that *Kafalah* did not fully achieve its goals. Nevertheless, the results do not find evidence for arguments on the induced moral hazard effect in guaranteed borrowers.

The economic literature on the banking industry structure, in which each bank type is advantaged by different lending technology, does not clearly show how soft and hard information interact, and where managerial information (e.g., human capital and borrower character) fit within transaction lending technologies (Uchida et al., 2008). Therefore, deeper understanding of how banks underwrite loans through interacting with commercial banks' loan

officers is deemed important (Feldstein, 2000; Helper, 2000), especially how banks adapt to changes where large-scale development through different direct and indirect government interventions take place (Feakins, 2004).

Therefore, this thesis' third empirical chapter (Chapter 6) collects hitherto unavailable information on commercial banks' realities and lending practices in the SMEs market in Saudi from 11 face-to-face interviews with the "ultimate" bank insiders: relationship managers and team leaders of SME banking. The findings suggest that government intervention, through *Kafalah*, was the milestone in encouraging banks to lend to this segment; and, hence, allowed lending to many more SMEs than what a bank's original policy would have allowed. Indeed, bankers identified that large bank policy, which mandates lending decisions to be made on financial-statement ratios and credit scoring, constitutes a major supply-side constraint for SMEs. The findings, hence, do not support arguments that large banks are just as able to extend credit to opaque SMEs as small banks (Berger et al., 2007). Indeed, only under pressure from recent economic reforms in Saudi, which publicise SMEs as a new national priority, have some large banks created new lending products and credit programmes due to many SMEs being rationed out by current banks' business models. Nevertheless, transaction lending does not occur in a vacuum but in synergy with soft information about the SME, its owners and its local community. This, in turn, raises doubts about foreign banks' ability to lend to SMEs as they would lack important local insights.

## **1.1 Motivation and Background**

The main rationale for this thesis lies in the huge transition in the economy of Saudi, articulated in Vision 2030 – an economic reform which aims to decrease overreliance on oil revenue through activating the private sector role. One such role is to support SMEs to increase their contribution to GDP from 20% to 35% (Vision 2030, n.d.); hence, this segment has become a new national priority in Saudi. However, like other resource-dependent countries, large banks dominate the banking sector, and their business models are regarded as geared towards financing large corporations which can create an especially challenging environment for SMEs, hence severely hindering Vision 2030 intentions. Therefore a key goal of the Vision is to encourage financial institutions to allocate up to 20% of their total loans to SMEs by 2030 (Vision 2030,

n.d.). In doing so, the government has created enabling organisations and initiated different programmes to support the SME sector and improve their capitalisation. For example, in 2016, the Saudi Small and Medium Enterprises General Authority (Monsha'at) was tasked to develop policies and standards which aim to diversify the funding sources for SMEs and to support establishing companies suited to fund this segment, while encouraging commercial banks to assume a more prominent role in investing in and funding SMEs. Furthermore, under Vision 2030, the Financial Sector Development Program (FSDP) was initiated with the goal of creating a diversified and effective financial services sector through financial inclusion and deepening, but also through enabling greater access to productive financing assets including SME lending. The FSDP developed many strategies to incentivise the financial sector to finance SMEs, including strengthening the legal system in collateral enforcement, enabling the two Saudi credit bureaux to update comprehensive data on SMEs, establishing a national credit rating agency and increasing the allocation of government contracts directly to SMEs. The FSDP was, therefore, committed to increasing the share of SMEs' loans as a percentage of total banks' loans from the current 2% to 5% by 2020 (Vision 2030, n.d.).

More importantly, the government has restructured the role of the Saudi CGS *Kafalah* to focus on specific sectors (e.g., tourism), firm activities (e.g., supply chain) and regions, to improve its operational efficiency, and increase its capital (KPMG, 2020). It also introduced the Qawaem Program to enhance the quality of financial reporting, which enables firms and audit companies to file their financial statements electronically. This provides commercial banks with accurate financial statements and builds up the required database for policy making (Saudi Business Center, 2021).

Nevertheless, it is argued that only certain types of enterprises drive growth and economic development (Bateman, 2017), goals that Vision 2030 aims to reach. Indeed, Bateman (2017) provided the term “right” SMEs to describe the type of firms who should be supported by the local financial systems to achieve economic development. These enterprises include SMEs whose projects are based on renewed local production which involves high specification work, employment of new technology, promotion of innovation and orientation towards exports, i.e., those able to generate wider positive externalities. Therefore, it is essential to assess whether the Saudi banking system is able to identify the “right” type of SMEs and whether such a system

is development-oriented and more committed to supporting such firms, rather than being excessively short-term focused (Bateman, 2000).

## **1.2 Overall Contributions of the Thesis**

While the thesis aims to serve Saudi Arabian policymakers responsible for improving SMEs' access to credit, it is also relevant to discussions about the nature of finance available to and the type of SMEs supported by the financial system in countries where small-scale banks are less prevalent and/or in countries where the banking industry is going through massive consolidation. The findings are also relevant to dissections of policy recommendations that call for greater openness to large foreign financial institutions entering developing countries. This thesis contributes to a number of different strands of the literature on SMEs' financing as follows:

First, as discussed previously, the literature is inconclusive on the extent to which the lower share of bank loans lies within supply-side or demand-side factors (Fraser, 2019; Freel et al., 2012; IMF, 2018a;b). Therefore, this thesis contributes to such gaps by finding that when large banks dominate the banking sector, SMEs are more likely to refrain from applying for bank credit because of the strict terms and conditions imposed on the potential loans, as opposed to self-rationing, even when a wider range of reasons for self-rationing, including less established ones, i.e., religious beliefs, are incorporated. Such supply-driven factors are more acute in deterring highly uncertain firms, i.e., younger and unincorporated ones. Furthermore, the thesis responds to calls for more research to understand the extent to which entrepreneurs' control aversion and risk perceptions affect their credit demand (Fraser, 2019). The thesis finds that risk aversion can be exacerbated by stringent laws which incriminate defaulters. While risk aversion is argued to be a self-rationing behaviour more related to entrepreneurs' cognition, in countries with weak insolvency laws it seems to stem from institutional barriers.

Second, it makes several contributions to the literature on banking industry structure's effect on credit availability for SMEs. Over the past decade, a number of articles disputed the conventional wisdom that small and domestic private banks are better suited to financing SMEs (Berger & Udell, 2006; Berger et al., 2007; de la Torre et al., 2010). This paradigm argues that

large and foreign-owned banks can be as effective in lending to opaque SMEs, through different types of transactional lending technologies and involvement with this segment over cross-selling non-lending activities. Accordingly, government policies which restrict the entry of foreign financial institutions can appreciably reduce SME credit availability (Berger & Udell, 2006). The findings of this thesis, however, do not find evidence to support such arguments; large banks were found unable to cater to opaque firms, i.e., the smaller and younger SMEs, through transactional lending. Nevertheless, the reliance on this transactional lending was found to be only one element in the lending decision and is usually used in conjunction with soft information gathered from personal interaction with the owner of the business and its community. This raises questions on how a larger presence of foreign banks can increase credit availability for SMEs without the essential local knowledge that was found to constitute a significant part of the lending criteria large banks employ.

Moreover, this paradigm, which advocates transactional lending as important, or even more important than relationship lending, argues that large and foreign banks can apply different incentive-compatible mechanisms, including requiring collateral to increase the likelihood of repayment. It argues that those mechanisms allow these banks to overcome imperfect institutional environments, thus freeing them from having to rely on public CGSs to lend to SMEs, since these banks indeed want to serve SMEs and find this segment profitable (de la Torre et al., 2010). This thesis, however, finds that such mechanisms result in higher rejection rates and the weak institutional environments have moved banks to require more liquid collateral in the form of cash deposits or stock portfolio, which SMEs usually lack. Therefore, government intervention through the CGS was found essential to encourage large banks to lend to SMEs through effectively acting as a substitute for collateral. Indeed, without different forms of intervention in the credit market, these banks may have continued to focus on lending to large corporations, despite the higher profitability of SME lending, due to the higher uncertainty in the latter.

Third, the thesis findings inform the conflicting assessments of the effectiveness of CGSs by assessing the impact of the Saudi CGS *Kafalah*. The findings conflict with arguments that economic additionality depends on financial additionality (Craig et al., 2005) by showing that the latter does not necessarily lead to the former. In this, a significantly high level of finance additionality was found in a country where even larger and older SMEs are highly constrained.

Nevertheless, finance additionality does not necessarily generate economic additionality in terms of employment, if banks are still cautious in lending to younger firms who can grow relatively faster and if these banks mainly extend short-term loans. Furthermore, it contributes to theoretical and empirical arguments that such schemes induce moral hazard as borrowers do not pledge collateral of their own and hence CGSs can do more harm than good (Arping et al., 2010; Seibel, 1995; Uesugi et al., 2010). In this, *Kafalah's* participants, who did not extend additional collateral/security, are not statistically different in terms of employment growth compared to the other groups of SMEs.

All in all, the findings suggest that large banks in resource-reliant countries whose business models are formed according to the resource sector's needs, i.e., structured to serve big well-known corporations, have a relatively limited scope in fostering a vibrant SME sector. The findings also suggest that there may be room for government-directed lending programmes to provide long-term finance and for start-ups, given that the evidence here implies that what the banking sector can do for SMEs in such regard currently is limited.

The rest of the thesis is structured as follows. Chapter 2 presents the literature review, which provides a brief background on the different theories on SMEs' borrowing decisions and on credit rationing. It also reviews the relevant studies related to SMEs' financing both from supply- and demand-side factors. Additionally, it presents a brief review on CGSs' history, mechanisms and the contrasting views on their effectiveness. Chapter 3 presents the methodology, data collection methods for both the quantitative and qualitative studies, the design of the survey instrument and the semi-structured interviews utilised. Chapter 4 studies large banks' ability to cater to SMEs through cross-selling non-lending products/services; it also investigates the extent to which SMEs are credit-rationed or self-rationed and the role of CGSs. Chapter 5 provides an empirical evaluation of *Kafalah's* benefits in terms of finance and economic additionality; it also tests arguments of induced moral hazard which can have a direct bearing on the legitimacy of CGSs. Chapter 6 examines commercial banks' realities and the microstructure of their decision-making by interviewing bankers involved with SMEs; additionally, it investigates how banks' lending policies adapt to different direct and indirect government intervention, the type of SMEs they serve and the scope for further lending. Chapter 7 summarises, concludes the thesis and provides policy implications.



## Chapter 2: Literature Review

The importance of the SME financing topic lies in the findings, while it is debated<sup>1</sup> that SMEs play a major role in employment generation and recovery from recessions through their innovative activities (Ayyagari et al., 2017). Given that the vast majority of firms worldwide fall into the classification of micro, small or medium-sized enterprises, concerns that SMEs are restricted by institutional and market failures in accessing external finance have often justified policy efforts targeting this segment (Beck, 2013).

It is widely documented in the literature that one of the major obstacles for SMEs is obtaining external financing, which affects them disproportionately more than large corporations. Bank financing is the primary source of external finance for SMEs in most countries, according to much of the existing literature (Ayyagari et al., 2010; Berger & Udell, 1998; Brown et al., 2010; Safavian & Wimpey, 2007; Schoar, 2010), and compared to informal finance, bank finance is the only source of external funds associated with higher rates of growth (Ayyagari et al., 2010). Yet, SMEs often report difficulties in securing bank credit. Several studies have shown that constraints in accessing external finance by SMEs and the higher cost they are charged are, in turn, constraining their productivity and growth (Beck et al., 2008b). For example, credit-rated firms have a lower growth rate and lower levels of labour productivity (Becchetti & Trovato, 2002; Motta, 2020). This thesis, hence, focuses mainly on bank financing as an external source of finance for SMEs, but before proceeding, it is important to stress two issues with regard to this topic.

First, it is important to note that there is no universal agreement on the definition of SMEs and this definition varies across countries, depending on some common criteria: number of employees, sales level, investment level and total net assets (Ayyagari et al., 2007; 2017). The distinction between formal and informal enterprises is a relevant issue for the definition of SMEs, with the latter type of enterprises often seen as synonymous with microenterprises. Nonetheless, the distinction of formality extends beyond pure size; it is more closely linked to

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<sup>1</sup> Cross-country findings suggest the relationship between SMEs and growth is not very robust. Some studies indicate there is no causal relationship between the share of SMEs in a country and economic growth (Ayyagari et al., 2017).

organisational, behavioural and other dimensions that distinguish these groups (micro, small and medium-sized) (Beck, 2013).

Second, the literature distinguishes SME finance from microfinance. Microfinance involves the supply of tiny loans to the poor to set up or expand a simple income-generating activity (Bateman, 2010). This type of loan is seldom undertaken by banks, much more by non-governmental organisations or specialised microfinance banks (Beck, 2013).

This thesis, however, is only concerned with formal businesses including formal microenterprises registered with the specific authority as per country regulations. Additionally, it only focuses on formal finance from banks as opposed to microfinance institutions. This is so because the argued economic outcomes in terms of job creation and growth are more related to activities of firms in the formal sector (Ayyagari et al., 2014; 2017). Hence, it is essential to take stock of the financing needs and financing constraints faced by SMEs in the formal sector, given their importance for economic growth. This section provides an overview on the theoretical frameworks and empirical studies on SMEs' access to bank finance.

## **2.1 SMEs' Financing**

SMEs' need for finance differs with the different stages of their life-cycle, from establishment, launching of the firm, and through the stages of development and growth. However, SMEs are far from being a homogeneous group of companies. SMEs are very diverse with respect to the sector, growth potential, innovativeness (Demary et al., 2016) and, hence, their business financing (Moritz et al., 2016). Broadly speaking, the literature provides two categories of venture, with key financing differences; namely, high-growth ventures (i.e., classic start-ups) and lifestyle ventures (e.g., restaurants, hair salons, etc.), with the former favouring and predominantly using equity financing, and the latter favouring and mostly using debt financing (De Bettignies, 2008; Fraser, 2019).

At the start-up year, for example, SMEs almost invariably require external funds. However, such start-ups are distinct from more established firms in two ways:

*“(1) they are subject to far less restrictive disclosure laws than large publicly held corporations, and their profits and cash flows are not easily verifiable by a court of law; and (2) both the*

*entrepreneur and the investor may play active roles in the management of the venture, but their respective levels of involvement (i.e., effort) are difficult to measure” (De Bettignies, 2008, p.151).*

On the one hand, high growth ventures (especially those in high-tech or research-based industries) tend to rely on three primary sources of equity financing: venture capitalists, angel investors and corporate investors, because the amount of external finance required is larger compared to the amount of insider finance. Also such equity investors play an active role in these firms and help in bringing innovative products to the marketplace (Denis, 2004). Therefore, it is assumed that bank debt is not a suitable source of finance for such start-ups because of their relatively unusual proposals that fail to fit banks’ own internal guides on benchmarking for a sector, in addition because banks tend to focus primarily on low-risk projects and typically require collateral (Deakins et al., 2010; Vanacker & Manigart, 2010). Such firms, however, usually lack tangible assets that can be pledged as collateral since they tend to operate in intangible-intensive sectors. On the demand side, such start-ups tend to prefer equity financing, as opposed to debt financing, because equity investors provide long-term funds with minimum cash outflows compared to interest payments in the case of bank credit. Also, equity investors are perceived as sophisticated financial professionals which, in turn, enhances the credibility of the firms they are investing in, particularly through the value-added commercial skills, entrepreneurial experience and business know-how these investors bring in (Abdulsaleh & Worthington, 2013; Mason & Harrison, 1996).

Lifestyle ventures, on the other hand, rely mainly on funding from insiders such as the entrepreneur, other members of the start-up team and loans from family and friends – sources of unsecured debt (Avery et al., 1998; Beck & Demirgüç-Kunt, 2006; Berger & Udell, 1998; Lee & Persson, 2016; Mac an Bhaird & Lucey, 2010), which represents the cheapest form of informal finance (Love et al., 2011).

As these firms grow, and become more established and profitable, retained earnings become the most frequent source of finance. Daskalakis and Psillaki (2008) argue that SMEs’ managers prefer internal funds when sufficient, as opposed to other sources of finance, because of a substantial wedge between the costs of internal and external finance (Vanacker & Manigart, 2010). Retained earnings not only provide additional funding for SMEs but also serve as an

assurance source of strength to attract external finance (Berger & Udell, 1998). Therefore, as such firms start establishing track records, in addition to their ability to pledge assets as collateral, they start substituting internal sources of finance with external ones (Abdulsaleh & Worthington, 2013), with bank finance being the main source for lifestyle business owners.

Whilst high-growth innovative ventures tend to rely more on equity injections provided by angels and venture capitalists as they grow (Cotei & Farhat, 2017), such firms are few in number and more than 90% of start-ups are lifestyle ventures (De Bettignies, 2008; Vanacker & Manigart, 2010). This explains why bank debt is the main source of external funds for entrepreneurs who want to start or grow their businesses. Indeed, only a very small minority of ventures have the high growth potential and ambition to attract equity investors (Fraser, 2019). Therefore, a discussion of SMEs' finance, particularly relating to venture capital, business angels and/or equity crowdfunding, is outside the scope of this thesis.

## **2.2 The Financing of SMEs: Theoretical Framework**

Existing research on SMEs' financing is multidimensional (Stephanou & Rodriguez, 2008) and has been approached from different perspectives. Many theories were employed in an attempt to provide explanations for the financing options available and utilised by SMEs. There are theories which explain the demand-side behaviour for SME financing while others explain the supply-side behaviour; the former include the life-cycle theory. Berger and Udell (1998) studied SMEs' financing decisions in the context of a financial-growth cycle, where different capital structures are optimal at different stages of the cycle. During their early years of operation, most SMEs rely on internal sources of funds; as they grow in size and age, they should have better access to external funds. The expanded argument stems from the fact that larger and older SMEs have better collateralisable assets and technical proficiency, which reduces informational opacity.

Corporate finance literature has provided other theories that have been applied to explain the determinants of entrepreneurs' choices of finance (i.e., debt vs. equity, short-term vs. long-term finance). By introducing market imperfections, Trade-off Theory argues that firms determine the debt levels to balance the benefits of tax-shield i.e., using more debt when bankruptcy costs

rise (DeAngelo & Masulis, 1980). On the other hand, Myers (1984) provided an alternative explanation, called the Pecking Order Theory, in which entrepreneurs prefer to use internal finance first because it is cheaper, followed by more costly external finance (i.e., debt and then equity) in cases where internal finance is insufficient. Short-term debt is more favourable for SMEs than long-term, as the probability of banks' involvement in the decision-making is reduced with short-term loans. Equity financing is the last resort as it causes higher dilution of ownership (Myers, 1984). Some empirical studies adopted this framework and find evidence supporting it (Mac an Bhaird, 2013; Sánchez-Vidal & Martín-Ugedo, 2005). Moreover, Jensen and Meckling's (1976) Agency Theory is applied to highlight the conflict of interest between the entrepreneur (i.e., the agent) and the finance provider (i.e., the principal). The cost of mitigating agency problems such as monitoring and building relationships with small firms is high, which places SMEs at a disadvantage when seeking external finance (Jensen & Meckling, 1976). Therefore, availability of collateral helps align interests and can result in higher availability of external debt. The overall empirical evidence seems to support the Agency Theory and Pecking Order Theory over the Trade-off Theory (Fraser, 2019).

One of the most important theories on SMEs' financing highlights the importance of the way SMEs perceive the probability that banks will accept their loan application as a factor affecting their decision to apply for bank credit. Kon and Storey (2003) identified a specific type of SMEs who are regarded to be good firms in need of funds to finance positive net present value (NPV) projects; however, they choose not to apply to banks because they fear rejection of their applications. Those SMEs are named *discouraged borrowers*. The authors theoretically show that the scale of discouragement in a country depends on banks' imperfect screening, the scale of application cost and the extent of the difference in the interest rate charged by banks, as opposed to those charged by moneylenders. The concern is that if the scale of discouragement is large, or significantly larger than the rate of loan rejection by banks, intervention mechanisms may better address the fears of discouraged borrowers rather than focusing on factors in the supply-side (Kon & Storey, 2003).

Despite these theories on firms' financing decisions, the economic literature provides theories explaining supply-side behaviour. Models of credit rationing usually argue that banks ration credit for SMEs rather than demanding higher interest (Stiglitz & Weiss, 1981). Hodgman (1960) provides an earlier definition of credit rationing, i.e., a situation where the demand for

credit is greater than supply at a given interest rate. That means credit rationing is associated with the behaviour of the lenders who determine the amount of repayment (both principal loan and interest rate) by the borrower based on his/her credit quality and willingness to pay. Thus, lenders ration credit when default risk is greater than the interest rate charge based on the borrower's credit demanded (Hodgman, 1960).

New Keynesian theory (the mainstream view) and Post-Keynesian theory provide opposing views about credit rationing. While both suggest a possibility of credit rationing, the former emphasises the information asymmetry between lenders and borrowers, as borrowers are believed to have better information about their investment projects; the latter, however, argues that information asymmetry is not significant in practice because the borrower is also uncertain about his/her project's future returns and risk.

New Keynesian theory argues that as credit markets are not functioning perfectly, lenders (principals) have insufficient information about the borrowers' (agents') credit quality, and that borrowers have better information about their projects' future return and risk – information asymmetry (Stiglitz & Weiss, 1981). Information asymmetry may give rise to adverse selection and moral hazard problems because credit markets enable entrepreneurs to seek resources for risky ventures that they would not embark on with their own money (Beck, 2007). Adverse selection refers to the possible event in which the loan is extended to businesses which subsequently fail (type one error) or reject lending to businesses which become successful (type two error) (Mason & Stark, 2004). The risk of moral hazard arises from situations where the borrower invests in riskier projects than those stated in the loan contract to receive higher returns, in turn increasing the probability of default (Hall, 2001). Thus, in equilibrium credit markets, the existence of information asymmetry leads to credit rationing (Berger & Udell, 1992; Stiglitz & Weiss, 1981). To overcome information asymmetry, interest rates can be used as a screening device by banks to distinguish between good and bad borrowers. However, this interest rate may itself increase the riskiness of the pool of loans in two ways: 1) sorting potential borrowers; i.e., solvent debtors drop out because of the higher interest rate which worsens the loan application pool as defaulters are minimally affected by higher interest rates (adverse selection); 2) interest rate itself may incentivise the borrower to switch to riskier projects with higher returns if successful to cover the higher interest rate charged (moral hazard). Thus, as the interest rate rises, the riskiness of the borrowers increases which lowers banks' profitability.

This is why banks are reluctant to lend to borrowers with default risk beyond the optimal level and therefore ration credit (Stiglitz & Weiss, 1981).

Post-Keynesian theory, however, argues that neither the lender nor the borrower knows with certainty the investment project's return and risk (Ekpu, 2016a). This implies that information asymmetry is not significant in practice. Proponents of Post-Keynesian theory argue both the lender and borrower are subject to fundamental uncertainty (Wolfson, 1996), i.e., investments are subject to uncertainty rather than risks. The future economic environment affects the return and risk of the investment which makes similar past investments different from new investments; what happened in the past provides no reliable guide to future events. Thus, in Post-Keynesian theory, credit rationing exists because of asymmetric expectations. Both lenders and borrowers evaluate the future and the likelihood of repayment differently as both are uncertain about the future (Ramskogler, 2011). In this case, borrowers are more optimistic about the future of their investments compared to lenders (Wolfson, 1996). In Post-Keynesian theory lenders extend credit to all creditworthy demands (i.e., firms meeting banks' lending criteria), since the supply of bank credit is endogenous, i.e., credit supply is demand-led (Lavoie, 2014). However, uncreditworthy demands are rationed (Wolfson, 1996). Furthermore, change in the financial conditions will alter the lender's usual view about the future and thus the level of credit rationing. In this, banks' liquidity preference and the confidence they have over uncertain future are important. Banks with higher liquidity preference will be reluctant to increase loans or accept new customers, particularly when banks are not optimistic about the future. In such times, banks will raise their lending criteria by requiring firms to have lower debt-to-equity ratios, better cash flow and/or higher collateral requirements (i.e., assessments of creditworthiness are a matter of confidence). Hence, a number of borrowers will no longer be deemed creditworthy and those who decline to satisfy the collateral requirements will be rejected (Lavoie, 2014; 2009). This framework suggests that when the credit market freezes, it is not because there is a sudden increase in asymmetric information, but due to a higher degree of uncertainty (Lavoie, 2014).

Nevertheless, there are theoretical objections to credit rationing. For example, De Meza and Webb (1987) provided an asymmetric information model in which credit rationing cannot arise (Parker, 2002), i.e., the inability of banks to determine the characteristics of the projects of entrepreneurs leads to more investment than socially efficient (overlending takes place). Hence, increasing interest rates above free market level leads to restoring optimality (De Meza & Webb,

1987). Moreover, Vos et al. (2007) extended the contentment hypothesis for SME financing which cast some doubts on credit rationing theories. They argue that such theories typically start with the assumption that growth is expected. Nevertheless, they argue that most SMEs' owners do not seek rapid growth but instead prefer to maintain control by avoiding the use of external financing. Furthermore, despite accounting for a small percentage of the overall population, growth-oriented SMEs tend to have access to external financing. Hence, they have doubts that market failure exists, as few SMEs desire external capital initially.

## **2.3 SMEs' Bank Financing: An Empirical Overview**

Similarly to the above theoretical framework, empirical studies examine factors affecting the process of procuring business capital in SMEs from supply-side and demand-side points of view. The policies and practices of the domestic financial institutions – in this thesis banks – are linked to supply-side factors. On the demand-side, issues are related to how the characteristics and preferences of SMEs' owners/managers influence their borrowing decisions and how financial institutions perceive them (Read, 2002). This section provides a literature review of the empirical studies about SMEs' bank financing from both the supply- and demand-side, in addition, to an overview on credit guarantee schemes (CGSs) as a popular State-sponsored initiative.

### **2.3.1 SMEs' Bank Financing: Supply-Side Factors**

The SMEs' finance literature frequently refers to the concept of a finance gap to explain the capital structure of SMEs relative to large corporations. Many researchers attribute such a gap to supply-side factors (Kotey, 1999), i.e., financial institutions, particularly large banks, pursue large corporates' deals and prefer to invest in less costly loans to these safer companies (Mkhaiber & Werner, 2015). Therefore, it is argued that financial institutions are reluctant to provide funds on the terms and conditions required by SMEs because of their high risk and the anticipated higher costs associated with evaluating their loans. Small firms' risk ratings tend to be high because they do not have track records of performance on the basis of which their credit rating could be evaluated. Furthermore, the size of loans small firms usually require relative to the associated administrative costs, including those related to information collection, the potential interest income and relative to the default risk, make them unappealing (Binks & Ennew, 1996). Thus, the financial needs of those SMEs are unserved or underserved by existing



financial institutions – supply gap (Burns & Dewhurst, 1986); therefore, some researchers argue that financial markets discriminate against SMEs (Meredith, 1975; Schiffer & Weder, 2001). Accordingly, it is argued that restricted access to finance for SMEs may in part be counteracted by the use of collateral and/or by having a strong working relationship between lenders and borrowers (i.e., relationship lending) (Binks & Ennew, 1996; Kotey, 1999). This section, therefore, provides a literature review on the key supply-side factors shaping the decision to supply finance which concerns the availability of collateral as one criterion by which banks assess SMEs, the microstructure of the individual bank and the banking sector structure which allows or prevent the use of relationship lending.

### **A) The Impact of Lending Criteria on the Financing of SMEs**

Following on from the Post-Keynesian view, banks' liquidity preference and the confidence they have over an uncertain future are important regarding their willingness to finance a borrower (Lavoie, 2014). This, in turn, reflects on banks' risk appetite which is shaped by a number of factors, including financial regulations and general economic and financial conditions (Ekpu, 2016b), i.e., banks choose the level of risk they are happy with and change their lending standards accordingly (e.g., the effective interest rate, collateral requirement and loan maturity). For example, during contractionary phases of the business cycle, interest rates on loans increase and the probability of collateralisation arises. During expansionary phases, however, interest rates decline, and so does the probability of collateralisation (Asea & Blomberg, 1998).

Therefore, when evaluating the proposals of SMEs, banks use a set of general criteria to reduce the risks and costs associated with lending to them. These criteria take into account information about the business, such as the risk profile of business sectors, growth, and profitability, as well as the personal characteristics of the SME's owner/manager, such as education and experience, as a proxy for human capital (Abdulsaleh & Worthington, 2013; Read, 2002).

Importantly, the amount of risk banks are faced with is also affected by the level of collateral offered by the borrower firm (Ekpu, 2016b). Therefore, one of the most important criteria for banks is whether the SME's owner/manager is able to extend a guarantee of collateral on the required loan, i.e., financial institutions rely on collateral as a safety net for loans to SMEs (Kotey, 1999).

Beck et al. (2008a) provide evidence in a cross-country study that 75% of banks require collateral to make business loans; this percentage is slightly higher in developing countries given their weak informational and institutional environment. Similarly, according to Ayyagari et al. (2017), 75% of firms around the world reported that collateral was required in securing bank loans and line of credit. The percentage is higher in low-income countries (i.e., 85%). However, the type of collateral accepted by banks varies from country to country. For example, movable property can serve as a collateral in the U.S, but unacceptable to lenders in developing countries due to inadequate legal and regulatory environments (Ayyagari et al., 2017).

Yet, many small businesses might have insufficient fixed assets to be held as collateral by banks (Kotey, 1999); therefore, most small businesses' loans are personally guaranteed by owners, giving financial institutions access to their personal assets in the case of default. In many circumstances, the small business owners' personal assets are also pledged as collateral and since the majority of small businesses are categorised as proprietorships and partnerships, i.e., are not protected by limited liability laws, those owners may have their personal wealth at stake to repay loans whether or not their personal assets are pledged against borrowing. As a result, much of the external funding for small businesses can be considered to be at least partially insider finance, in the sense that their owners are legally obligated to absorb losses in the event of a default (Berger and Udell, 1998).

New and recently established small firms who often lack track records are perceived by banks as high-risk. Therefore, collateral requirements tend to be high to offset the risk perceived (Beck et al., 2010; Harrison & Mason, 1986), which can have a negative impact on firms with growth aspiration, particularly start-ups. Therefore, Mac an Bhaird (2013) advises that lending decisions are better made on investment appraisal of growth and predicted cash flows, rather than collateral availability, i.e., asset-based lending techniques. He finds empirical evidence that the probability of receiving bank credit is determined by firm size and age but not growth. He concluded that the reduced bank lending to SMEs is a consequence of credit rationing rather than improved lending practices.

The availability of collateral and firm's riskiness are closely related to the industry sector in which SMEs operate. For example, SMEs operating in the services sector are usually regarded

as being particularly risky because entry barriers to this sector are quite low due to low capital requirements. This in turn results in high exiting rates because of high competition within the sector (Read, 2002). Furthermore, the differences in the asset structure across sectors affect SMEs' ability to secure bank credit. Firms operating in sectors categorised by tangible assets are more likely to access bank financing because of higher collateral availability (Mac an Bhaird, 2013). Daskalakis and Psillaki (2008) further explain that the notions of financial distress costs are closely related to assets' structure. Thus, firms with large investments in tangible assets will have smaller financial distress costs. For these reasons, businesses in the manufacturing sector often receive better credit terms than those in the services sector.

Additionally, one of the most important criteria employed by banks when assessing SMEs is the existence of reliable financial track records; however, many small firms, particularly new start-ups lack these which increases information asymmetry significantly and limits their ability to obtain bank credit. Berger and Udell (1998) argue that informational opacity is the most important characteristic that defines SMEs' financing. Unlike large firms, small firms keep most of their contracts private. In addition, they do not have securities traded in the public markets, hence do not register with the Securities and Exchange Commission. This, in turn, increases the transaction costs of evaluating loan applications of SMEs and does not offer the banks benefits from economies of scale. Indeed, one of the main obstacles in delivering credit to SMEs is the high transaction cost associated with processing, monitoring and enforcing loan payments (Kotey, 1999). Besides, SMEs lack the audited financial statements usually used to project future cash flows that are required in loan contract terms (de la Torre et al., 2010). Thus, when evaluating an individual loan, banks incur a fixed cost which includes legal services, regulatory costs, costs of payments and settlement systems, etc. This fixed cost is, in part, independent of the loan's size and amount. Thus, this higher cost and the greater risks involved are usually passed on to the borrower SME and reflected in higher interest rate (de la Torre et al., 2010).

All in all, many of the criteria employed by banks in assessing extending loans for SMEs can potentially discriminate against lending to them because small firms' characteristics often do not fit those criteria (e.g., lack of collateral) (Read, 2002). While banks rejecting extending loans to SMEs due to poor project quality and high risk is not particularly worrying, rejection due to discrimination and high prices is. To explore these issues further, the following section investigates how banks' microstructure and the banking sector structure affect the supply of

funds to SMEs through enabling the development of a good working relationship between borrowers and lenders.

### **B) The Impact of the Microstructure of Individual Banks and the Banking Sector on the Financing of SMEs**

It is argued that SMEs' credit availability is highly affected by the lending technologies employed by financial institutions, including banks, because banks must develop lending technologies that allow optimising the cost and risk in lending to SMEs (Beck, 2007). The literature identifies two broad lending technologies: *relationship lending* and *transaction lending*. Conventional wisdom has long argued that relationship lending is the obvious, if not the only, way to lend to SMEs (Beck et al., 2017). Banks must satisfy themselves regarding the creditworthiness of the potential borrower's project and character. For this reason, precisely, banks develop client relationships with their borrowers (Moore, 1988). The common view is that relationship lending can overcome opaqueness as it depends on soft information collected by the loan officer through ongoing, personalised, direct contact with SMEs' owner/manager and the local community in which they operate (Berger & Udell, 2006; Boot, 2000). Empirical research finds evidence on the importance of relationship lending in terms of credit availability for SMEs and credit terms such as loans price and collateral requirement (Berger & Udell, 1995; Cole, 1998; Petersen & Rajan, 1994). Established borrowers with ongoing banking relationships and borrowing records are almost always subject to less tightening of credit standards (Wolfson, 1996).

Therefore, the literature on credit availability for SMEs categorises the individual bank's structure and the banking sector structure on the basis of to what extent banks can employ relationship lending. Hence, factors such as, bank size, bank ownership and the banking market structure have been explored by existing studies to assess SMEs' access to bank finance.

A closely related issue to the type of lending technology employed is banks' size. In the absence of transparent disclosure in the form of audited financial statements, the literature traditionally has argued that bank lending to SMEs is largely based on soft information. Reliance on soft information requires a small closely-held form of organisational structure with few managerial layers within the bank because of the high authority of loan officers in the decision-making (Berger & Black, 2011; Berger & Udell, 2002). Consequently, small banks are viewed as

advantaged in processing this type of information which helps in addressing information problems that are not feasible or cost-effective to be tackled by other transaction lending technologies. In relationship lending, the lender acquires soft information about the borrower and his/her business over time including the business owner, local business's environment and how his/her business interacts with that environment. Therefore, conventional wisdom provides that small-scale banks are advantaged in lending to the smaller, less transparent SMEs, compared to large and foreign-owned banks who tend to employ transactional lending (Berger & Black, 2011). Furthermore, small banks have a large SME allocation because those banks cannot extend large loans to large corporates due to diversification and legal restrictions on lending-limit (de la Torre et al., 2010). Large banks, on the other hand, allocate a lower share of their loan portfolios to SMEs than small banks, according to previous research (Mkhaiber & Werner, 2015).

Over the past decade, however, some studies argue that a misconception in the literature tends to group all different transaction lending technologies into one category – financial statement lending. In this, transaction lending technologies are not homogeneous and transaction lending technologies other than financial statement lending can actually result in a higher supply of bank financing to SMEs (Berger & Udell, 2006). Under this research paradigm, large banks, including foreign-owned ones, are leaders in lending to SMEs. Because of their size, such banks benefit from economies of scale and scope when lending to SMEs by using different types of transaction lending technologies. In this, the use of credit scoring models, which assess risk based on statistical properties, requires a large number of clients such as those in large banks (de la Torre et al., 2010). Nevertheless, there is more recent evidence that relationship lending plays an important role in mitigating the negative effects of credit cycle downturns, in particular for smaller, younger and less transparent firms with less fixed assets to pledge as collateral (Beck et al., 2017). Hence, the importance of relationship lending for local firms' growth is again highlighted.

The issue of market structure is also related to bank ownership. According to Berger and Udell (2006), some arguments suggest that government-owned institutions can affect the supply of funds to SMEs, because these institutions usually operate with subsidies from governments, thus have mandates to supply credit to SMEs in specific industries and sectors. However, Berger et al. (2008) find that privately-owned banks tend to serve SMEs more than State-owned banks.

They warn that government-owned banks might crowd out private banks who might serve SMEs better. In contrast, Beck et al. (2008b) find that government-owned banks have a higher share of secured loans to SMEs with lower fees and interest rate. Additionally, government-owned banks are less driven by the profitability of this segment compared to private banks (Beck et al., 2008a).

Another type of bank ownership that has prompted a debate over its impact on SMEs' access to external capital is foreign bank ownership (Beck, 2013). As mentioned earlier, de la Torre et al. (2010) argue that such cross-border banks can benefit from economies of scale and scope when lending to SMEs. They can introduce new technology and experience to the banking sector, resulting in enhanced efficiency (Beck, 2013). Nevertheless, compared to government-owned banks, Beck et al. (2008a) find that foreign-owned banks accept a lower number of applications by SMEs and tend to charge higher fees on their loans. Conversely, compared to domestic private banks, they find that the number of secured loans to SMEs offered by foreign banks are higher. Nevertheless, foreign banks were found mostly able to serve more transparent firms compared to opaque small firms (Beck et al., 2008a; Berger et al., 2008b). However, evidence suggests that enterprises of various sizes report fewer funding obstacles in countries with a higher share of foreign bank ownership (Clarke et al., 2006). Brown et al. (2010) explain that the ability of foreign banks to overcome the disadvantages in SMEs' lending, are related to size, distance and different home market conditions as they often step into markets where SMEs' lending is lacking from domestic banks.

Similarly to the above mixed evidence, the literature on the effect of market structure and bank concentration vs. bank competition on access to finance is ambiguous (Beck, 2013). On the one hand, a set of studies provides evidence on the unfavourable effects of bank competition on SMEs' credit supply. In the US, Petersen and Rajan (1995) provide evidence that the cost of loans is lower for small young firms when banks operate in concentrated markets. Additionally, the availability of bank loans increases for those firms in more concentrated markets. The authors argue that banks in concentrated markets are more likely to advance loans to young, constrained firms as those banks expect higher returns from future higher interest rates when those firms grow, i.e., banks internalise the benefits of assisting those young firms. Similarly, in Italy, Di Patti and Dell'Ariccia (2003), find that bank concentration is relatively more favourable to highly opaque firms, i.e., bank competition is less beneficial to the emergence of

new firms with high information asymmetry. Some cross-country studies support these findings. In Europe, Ratti et al. (2008) report evidence along this line. Likewise, Alvarez and Bertin (2016) show that in Latin America, bank competition negatively affects credit supply for SMEs, particularly firms that are smaller or have fewer tangible assets.

Some studies, on the other hand, support the notion that increased bank competition enhances credit availability for SMEs. Beck et al. (2004) find that bank concentration is associated with increased financing obstacles, especially for SMEs. This relationship holds for low-income countries. They find that the institutional environment and ownership structure of the banking sector influence this relationship, i.e., in countries with a stronger institutional environment and a solid presence of foreign banks, this relationship tends to be reduced. In France, during the post-deregulation period, Bertrand et al. (2007) find that increased competition among banks made banks' lending decisions more tied to firms' performance. Thus, they find that poor performing firms have increased cost of capital compared to good performing ones. This implies that higher bank competition allows devoting credit to more productive firms and may force poor performing firms into restructuring to become more productive; hence, lowering their financing costs. More recent studies support such findings. Leon (2015) advances Beck et al. (2004) by classifying credit constraint into application rejection and self-discouragement. They find that bank competition leads to less stringent loan approval decisions and reduces borrower discouragement in developing countries. Love and Peria (2014) support this and show that low competition levels diminish SMEs' access to finance.

To summarise, the banking sector structure, the individual banks' microstructure and the lending techniques employed, can affect the supply of bank credit to SMEs; however, existing empirical results did not provide consensus evidence on the availability of bank finance to SMEs and those factors. This mixed evidence is also affected by the samples used and the different credit availability indicators employed (Leon, 2015). However, it is suggested that if the appropriate institutional and regulatory conditions are in place, competition and openness to foreign ownership can help in overcoming SMEs' financing constraints (Beck, 2013). Such discussions about foreign banks and competition/concentration are relevant to this thesis because, despite the mixed results, among the policy recommendations for developing countries including those in the GCC is to increase competition and remove restrictions on the entry of foreign-owned banks (Berger & Udell, 2006; World Bank Group, 2016). In the next section, attention is turned

to public policies which aim to address the supply gap, with CGSs being one of the most popular forms of public sector support.

### **2.3.2 Credit Guarantee Schemes**

As mentioned earlier, SMEs are more bank-dependent than large corporations as they typically cannot access equity markets (Harrison & Mason, 1986). However, SMEs are rationed out of the credit market if they do not meet banks' lending criteria (Lavoie, 2014). The above section shows that one of the most important criteria is the availability of collateral; but, most SMEs do not have the required collateral, in terms of quality or quantity. This in turn can result in a situation best described in relation to the US as: *"Innovation and business development will become a luxury reserved for the wealthy, and the economy as a whole will suffer"* (Hanson, 1983).

Therefore, governments around the globe provide many billions of dollars to support small and young firms and offer them more generous financial terms and conditions than would otherwise be accessible to them from private sector lenders (Hancock et al., 2008). CGSs are one of the most popular forms of public sector initiatives throughout the developed and developing world. Since the 1950s, governments have initiated CGSs, with more than 2,250 schemes operating in 70 countries by the early 2000s (Gozzi & Schmukler, 2016).

CGSs are multilateral agreements where lenders, guarantors and borrowers interact (Boschi et al., 2014). The guarantor, usually a government or quasi-government body<sup>2</sup>, pledges to repay some/the entire amount of the loan to lenders (generally private financial intermediaries such as banks) in cases where borrowers default. In most countries, the guarantor charges fees in exchange for this service (Gozzi & Schmukler, 2016). Therefore, the government encourages banks to lend to small firms who are unable to secure conventional finance because they lack collateral and/or a track record (Parker, 2002). Thus, the primary mechanism through which CGSs have sought to improve SMEs' access to credit is via the collateral channel, i.e., by effectively providing a substitute for collateral (Cowling & Mitchell, 2003).

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<sup>2</sup> CGSs can emerge privately, e.g., members of small business organisations might create a mutual guarantee association (Gozzi & Schmukler, 2016).



CGSs aim to increase the credit capacity to SMEs by increasing banks' willingness to provide loans for SMEs, including long-term loans needed for capital investments, as it reduces expected credit losses. For borrowers, CGSs lower the amount of collateral needed to be pledged against borrowing. Additionally, such schemes can help entrepreneurs to build a credit reputation which can reduce their collateral requirements in future transactions. They can also facilitate borrowing to entrepreneurs in capital-intensive sectors until they accumulate enough assets to access the credit markets without external insurance (Cowan et al., 2015; Gozzi & Schmukler, 2016). This in turn allows additional productive investments to take place, leading to higher production and employment (Hennecke et al., 2018).

CGSs have been highlighted as one of the most effective policy interventions for assisting SMEs integrate into the credit markets, especially when compared to one-time grants or subsidies, provided that a set of conditions about their operations are met (Panetta, 2012). This is because those schemes are generally provided by intermediary public, private or mixed nature institutions, which usually engage in collective agreements with banks on the interest rate, terms and conditions of funds loaned to SMEs. They also assist in the selection and monitoring of applications. Therefore, CGSs alleviate information asymmetry between banks and SMEs which relaxes credit market imperfections (Vento & Porretta, 2012). Furthermore, it is argued that CGSs do not eliminate the incentives of banks to screen and monitor borrowers as only part of the credit risk is guaranteed, which makes these schemes one of the most market-friendly types of intervention (Saadani et al., 2011).

The specific relevance of CGSs has been especially evident in crises when credit rationing increases in general (Cowling et al., 2022). For example, CGSs have been used as a countercyclical policy tool, especially during the global financial crisis, with the aim of offsetting SMEs' financial distress, implying an extension in their scale and scope. Therefore, amid the Covid-19 crisis, CGS became one of the main policy actions in support of SMEs during the pandemic. Government increased the funding available for GCSs, raised the level of guarantee on loans, extended eligibility criteria to include a wider range of firms, and simplified the administrative processes to access the schemes (Brault & Signore, 2020; Demmou & Franco, 2021).

The effect of the Covid-19 crisis is undoubtedly without precedent. The crisis has led to policy responses on a scale never seen before, with an explosive increase in the use of CGSs from May 2020 onwards (Yamori & Aizawa, 2021). The primary objective of CGSs during the Covid-19 crisis is to respond rapidly to the liquidity shortfalls triggered by the lockdowns and the resulting low demand, thus shielding viable but illiquid firms from turning insolvent because of the pandemic (Anderson et al., 2021). Near-real-time data from the European Central Bank Lending Survey suggest that CGSs played an important role in stabilising the economy during 2020. The demand for loans covered by CGSs increased significantly mostly to meet severe liquidity needs and build precautionary liquidity buffers, while the demand for all other loans declined. Moreover, the overall rejection rate was lower in light of eased credit standards, terms and conditions for guaranteed loans (Demmou & Franco, 2021). In Japan, for example, the credit guarantees extended in the course of the first wave of the Covid-19 crisis have far exceeded those provided during the global financial crisis. The elimination of guarantee fees and interest costs allowed SMEs to borrow, despite the considerable decline in the macroeconomy, particularly those in hard-hit industries such as the restaurant industry (Yamori & Aizawa, 2021). Employing cross-country firm-level data from a sample of OECD countries, Demmou and Franco (2021) find that CGSs enabled 8% of firms to remain liquid, filling the liquidity gap of about one-quarter of firms which would have been distressed absent these schemes. In terms of individual business types, more than 15% of the firms in the Accommodation & Food, Transportation and Arts & Entertainment sectors (hard-hit sectors) would have struggled to meet their short-term financial commitments if it were not for those schemes. Importantly, CGSs (together with job retention schemes and moratoria on debt and taxes) offset the disproportionate effect on high productivity firms. Consequently, such policy actions are argued to correct about 30% of the efficiency of market selection lost due to the pandemic. Furthermore, only a small share of the firms (4% - 8%) turning liquid due to CGSs could be classified as artificially alive firms (zombie firms). The researchers attributed this to eligibility criteria which restricted the access to guaranteed credit to firms that were not in financial difficulty at the end of 2019. Nevertheless, in the medium-term, Demmou and Franco (2021) warn that increases in CGSs were associated with weaker reallocation of credit and labour from low to high productivity firms. The opposite, however, holds in countries with relatively small CGSs to GDP and by loan guarantees in intangible-intensive industries.

Nevertheless, policy makers need to consider the impact of the explosive increase in the use of CGSs on long-term economic growth, particularly issues about firms' ability to repay a tremendous amount of money post-Covid-19 (risk of debt overhang). While funds obtained through borrowing under CGSs were used to pay wages and rent; hence, were important to keep businesses in operation, unlike capital investment, they do not generate new cash flow. Therefore, SMEs will be heavily indebted and unable to borrow which may affect their recovery, and potentially weaken their future investment and productivity growth (Cowling et al., 2022; Demmou & Franco, 2021; Yamori & Aizawa, 2021). Moreover, some sectors may not fully recover from the crisis. Public support for those sectors may negatively affect future growth prospects if it ends up 'zombifying' parts of the economy. Additionally, a share of those government-sponsored loans will not be repaid (Anderson et al., 2021); therefore, Brault and Signore (2020) highlight the importance of CGSs' evaluations to assess their fiscal and opportunity costs.

In this regard, employing data from pre-Covid-19 and the Global Financial Crisis, Cowling et al. (2022) predicted the net losses on the UK's Bounce Back Loan scheme to range from £7bn to £12bn. This represents around 15.1% to 26.2% of the total loans under guarantee, which amount to £46.5bn. Still, the researchers concluded that the above-mentioned scheme was an appropriate policy measure to respond to the Covid-19 crisis and is regarded as a very cost-effective job creation intervention. This is so because some 118,639 firms who provide employment for 1,117,849 workers were at immediate risk during the pandemic.

Overall, the literature on CGSs can be grouped into three broad areas. The first group consists of cross-country surveys demonstrating the main features of those schemes (e.g., Beck et al., 2010; Levitsky, 1997). The second consists of individual country studies to evaluate CGSs' impacts (e.g., KPMG, 1999; Riding et al., 2007). The third group focuses on best practice, drawing on international experiences (e.g., Green, 2003). While such efforts allow better understanding of the mechanisms through which CGSs work, the role of these schemes in ameliorating problems of access to finance is significantly debated (Gozzi & Schmukler, 2016). Empirical evaluations are still quite rare compared to the frequency of CGSs' implementations and the current results of researchers in the field are mixed (Dvouletý et al., 2019). The second empirical chapter of this thesis (Chapter 5) addresses these issues in more detail.

All in all, the above studies on the supply-side factors and the rationale that financial institutions discriminate against lending to SMEs and, hence, CGSs address such supply gaps, are sometimes criticised on the basis that the identification of financially constrained firms remains challenging. In this, the fact that not many SMEs secure credit is not sufficient to prove constraints, since some SMEs may have no need for credit initially. It is argued that the definition of credit constraints would not be comprehensive unless the unfulfilled credit demand by the existing supply of credit is measured (Leon, 2015). Indeed, there are some contentions about the actual demands of SMEs for commercial bank finance (Feakins, 2004). Some studies argue that demand-side self-rationing (i.e., SMEs refraining from applying for bank finance) might be a more important issue than supply-side credit rationing (Fraser, 2019). The next section provides an overview on these demand-side studies.

### **2.3.3 SMEs' Bank Financing: Demand-Side Factors**

Another strand of research has argued supply- and demand-driven credit rationing (Hashi & Toçi, 2010). While credit rationing is usually considered to be supply-driven, some researchers argue that borrowers themselves may be discouraged from applying for a loan, believing that banks will reject them. Levenson and Willard (2000) were pioneers in this strand of literature. They show that demand-side self-rationing behaviour on the part of SMEs' owners/managers exists and estimate that 4.22% of small firms were discouraged from applying for bank finance, having anticipated rejection. In this, firms were nearly twice as likely to be discouraged from seeking bank finance as to be rejected. The literature provides other components that shape the capital required by SMEs such as the perceived availability of credit and factors relating to entrepreneurial cognition (Fraser, 2019). Yet, the majority of the existing research has largely neglected demand-side factors such as the need for credit (Cole & Sokolyk, 2016). This section provides a brief review of the literature on these components. Chapter 4 provides more details.

One of the most important strands of literature which aims to explain SMEs' financing decisions from the demand-side is the literature on borrower discouragement; this distances itself from other studies by considering not only firms that apply for bank finance but also non-applicant SMEs fearing bank rejection (self-rationed). As mentioned in Section 2.2, Kon and Storey (2003) theoretically show that specific types of SMEs, who are regarded as good firms and in need of funds to finance positive NPV projects, choose not to seek bank credit because they fear

that their applications will be rejected. Other empirical studies provide support for the study by Levenson and Willard (2000); Freel et al. (2012) in the UK, and Mac an Bhaird et al. (2016) in a cross-country study, find that discouragement is a significant phenomenon.

Other demand-side studies address the lack of a need for bank credit in the first place. In this, many SMEs would choose to finance their businesses internally simply because the need for external funds does not actually exist. Such firms do not require significant additional financing because they are able to cover their ongoing financial needs with internal funds (Read, 2002). Cole and Sokolyk (2016) find that about 50% of all small firms in the US do not need to obtain additional credit, even during recessionary years, e.g., 1993 and 2003. Such firms were found to be significantly less levered, more liquid, older and of higher credit quality. Furthermore, these firms tend to have older, wealthier owners who are more likely to be white, more creditworthy and have fewer bank and non-bank relationships. Similarly, using a cross-country sample from Western and Eastern Europe, Brown et al. (2011) find that 83% and 60% of sampled firms, respectively, indicate no need for additional finance as the reason for not seeking bank credit. These reasons were found very much related to firm ownership, financial transparency and the cost of doing business. Indeed, the literature provides many factors which contribute to shaping the need for external finance by SMEs. For example, the age and size of the business enterprise has long been provided to explain their financing needs according to the growth cycle theory (Berger & Udell, 1998).

Other factors shaping SMEs' borrowing decisions are related to cultural aspects. According to Beck (2013), the first type of obstacle in accessing bank credit is demand-driven, stemming from financial illiteracy or cultural barriers; this, in turn, can lead to self-exclusion, resulting in too low numbers of loan application. More recent studies argue that borrower discouragement is not the only explanation for self-rationing. Nguyen et al. (2020) identify another cause for this phenomenon: some borrowers self-ration because they are naturally debt averse, i.e., they avoid bank loans because they think that debt is inherently bad. While Nguyen et al. (2020) argue that such debt aversion can stem from some cultural aspects that view debt very negatively, in other countries debt aversion can stem from religious beliefs. In a report by the International Finance Corporation on MENA, numbers suggest that concerns in accessing finance by SMEs include the prohibited interest-based loans in Islam. Around 32% of SMEs across the MENA region are totally excluded from accessing bank credit for religious reasons

and would not substitute it with a conventional loan. In those countries, SMEs are in need of \$8.63bn-\$13.2bn in Islamic finance (IFC, 2014).

Moreover, some perceptions from the psychology literature applied to financial economics propose that entrepreneurs' risk perception and preferences, in addition to their objectives, growth ambitions and control aversion, can provide more explanation for the observed variation in the financing decisions of SMEs (Fraser, 2019). As mentioned earlier, Vos et al. (2007) extended the contentment hypothesis for SME financing as an alternative research paradigm to the existing one where growth is the normative expectation, but credit rationing restricts it; they state that the desire for growth in the SME world is tempered and many SMEs exhibit signs of financial contentment where control provides utility. The preference to maintain ownership and control over the business makes those firms prefer internal over external financing (Holmes & Kent, 1991). In addition to control aversion, many SMEs might avoid bank finance because it involves risking personal assets which are held as collateral by banks – risk aversion. The female entrepreneurship literature, for example, shows that women are less inclined than men to take risks in their firms. Even if they are able to provide collateral for bank loans, female entrepreneurs may prefer to use internal funds rather than risking personal assets that might have a negative effect on their family well-being (Brush, 1992). Indeed, some studies argue that the desire not to jeopardise the family home explains why female entrepreneurs are more hesitant to take out bank loans (Carter & Cannon, 1992). It is further argued that while such control-/risk-averse borrowers do not have unfulfilled credit demands, they may be underinvesting because of their entrepreneurial preferences rather than supply-side financial constraints (Fraser, 2019).

Overall, incorporating demand-side factors when investigating credit rationing is crucial. It is argued that the magnitude of credit rationing in a country cannot be identified unless the demand and supply for credit is known (Hashi & Toçi, 2010). Therefore, Fraser (2019) indicates that more research is needed to enhance the current limited understanding of how SMEs' owners/managers form beliefs about their chances of being approved for bank credit, how this affects their borrowing decisions, and the extent to which entrepreneurial preferences affect credit demands initially.

## 2.4 Research Gaps

This chapter has reviewed the relevant literature on SMEs' access to bank finance. As shown, both the theoretical and empirical literature is not consistent regarding the extent to which the financing gap facing SMEs lies within supply-side or demand-side factors. One view is that SMEs face credit rationing (Stiglitz & Weiss, 1981; Wolfson, 1996) the other is that they face credit gluts (De Meza & Webb, 1987) – *supply-side studies*. On the demand-side, there are arguments that SMEs' owner/managers' desires, and preferences contribute to shaping the financing decisions of SMEs – *demand-side studies* (Vos et al., 2007), i.e., existing studies do not clearly explain to what extent SMEs are credit-rationed or self-rationed and the reasons for self-rationing. Consequently, it is important to distinguish between actual users of bank finance and non-users who might have access to bank credit but choose not to use it. The lack of clarity on this issue has some important implications. If SMEs are voluntarily excluding themselves (self-rationing) from bank financing, public policymakers need some guidance as to the causes and how to address such behaviour, e.g., these SMEs may require specific training if the causes are due to financial illiteracy; otherwise, policymakers might need to focus their interventions on traditional supply-side mechanisms, e.g., CGSs.

Cross-country studies such as the World Bank (WB) studies (e.g., Beck et al., 2008b; Brown et al., 2010) do not address the effects of country-specific social aspects such as culture and religion on the supply and demand for bank finance by SMEs. It has been argued that to fully understand the flow of capital, it is necessary to integrate economic views with concepts about social process (Sargent & Young, 1991). Furthermore, some studies employing the WB surveys to measure access to bank finance are based on owner/manager subjective judgement on credit constraints and how these affect his/her business, i.e., perception measures criticised by Kuntchev et al. (2012).

This review also shows that the literature is inconclusive on the effect of the banking industry structure on overall credit availability for SMEs. While cross-country and country-specific studies show that large and foreign-owned banks can employ different types of lending technologies to reach out to smaller firms (Beck et al., 2011; de la Torre et al., 2010), more recent evidence shows that relationship lending plays an important role in mitigating the negative effects of credit cycle downturns, in particular for smaller, younger and more opaque

firms with less assets to pledge as collateral. Hence, the importance of relationship lending for local firm' growth is once again highlighted (Beck et al., 2017).

Finally, despite the long history of CGSs around the world, the theoretical and empirical literature on these schemes is inconclusive. CGSs' benefits are often vague, little studied and continue to focus on developed countries (Boocock & Shariff, 2005; Dvouletý et al., 2019; Honohan, 2010). Hence, more impact evaluation with country-focus is needed since CGSs vary across major features and designs which can partially explain the different results obtained from different evaluations (Beck et al., 2010; Saadani et al., 2011).



## Chapter 3: Methodology

This chapter presents the methodology and data employed for analysing credit rationing in Saudi from demand-side and supply-side perspectives. The thesis relies on primary data, at both firm-level and bank-level, obtained using two different methods. At the firm-level, through literature consulting, a tailor-made questionnaire was used to acquire first-hand information necessary for examining SMEs' borrowing decisions, experience in securing bank finance and the impact of the Saudi CGS *Kafalah*. Data from the questionnaire allowed quantitative analysis research to be conducted for the first two empirical chapters (Chapters 4 and 5).

At the bank-level, qualitative research in a single case study (Saudi Arabian market) was adopted for the third empirical chapter (Chapter 6) as it allows rich in-depth information about the decision-making process and lending policies within commercial banks in lending to SMEs. Semi-structured in-depth interviews are used as the main research method for collecting data about commercial banks' perception and lending practices.

This section is organised as follows: Section 3.1 details the method and data collection process for the quantitative analysis employed in Chapters 4 and 5. It also covers the main aspects in designing the survey instrument and the sampling selection process. Section 3.2 discusses those for the qualitative research conducted for Chapter 6. Both sections also provide an overview of the advantages, limitations and justification for each method adopted.

### 3.1 Method and Data Collection for Quantitative analysis

The methodology employed in Chapters 4 and 5 is quantitative research, which is based on logical positivism and refers to approaching empirical enquiries through collecting, analysing and displaying data in numerical rather than narrative form (Given, 2008). Quantitative research comprises a systematic approach of observing and describing the properties or characteristics of an object or event in order to find relationships between a predictor (independent variable) and an outcome (dependent variable) within a population (Best, 1981). Closed-ended questionnaires are used to collect data in quantitative research, allowing them to be converted into numerical forms such as statistics, percentages, graphs, and so on, which can then be entered into models

based on mathematical models forms, theories, and hypotheses to obtain the desired result (Given, 2008).

Accordingly, a questionnaire survey was chosen as an instrument for the primary data collection method in view of the lack of adequate published data on SMEs, particularly in developing countries such as Saudi. Similarly, due to confidentiality issues, data on *Kafalah*'s participants were not attainable. Questionnaire surveys are not uncommon in the literature on small firms in general and CGSs' evaluations in particular. It is well established that SMEs lack consistent, standardised and reliable data, and even when data are available, the different definitions of what constitutes a small or medium-sized enterprise vary from one local context to another (Stein et al., 2013). Therefore, many studies use the questionnaire survey instrument for collecting primary data in SMEs' financing research (e.g., Boocock & Shariff, 2005; KPMG, 1999).

Questionnaires provide a balance between large sample data which offer cross-sectional variation and statistical power, and case studies which provide excellent details but tend to employ small samples; they typically use moderately large samples and provide the chance to ask qualitative questions (Frank & Goyal, 2008). Moreover, questionnaires offer greater uniformity of responses and allow for better analysis and interpretation of large numbers of responses. Norton (1991b) argues that surveys can help investigate some of the finance literature qualitative assumptions regarding capital structure and also examine some motivations that managers face in processing capital structure decisions. Hence, this thesis embarked on a data collection exercise to acquire first-hand information necessary for assessing the extent of credit rationing among SMEs in Saudi.

Nevertheless, there are potential problems in using a questionnaire survey. According to Graham and Harvey (2001), surveys tend to measure beliefs, not necessarily actions, the responses may not be representative of the population firms, and the survey questions may be misunderstood. Therefore, several measures were taken to address such limitations including contacting Chambers of Commerce in main regions of the country to obtain a higher number of registered SMEs and decrease the problem of misrepresentation of the population. Additionally, pilot testing was conducted on a sample of SMEs to check for understandability. Finally, questions were structured to measure both actions and beliefs, since this study concerns SMEs'

financing preferences and decisions to seek bank finance (explained in detail in the coming sections).

### **3.1.1 Designing the Survey Instrument**

The survey designed for this study is generally comparable to the World Bank (WB) surveys, particularly the Enterprise Survey. It also includes some sections inspired by the questionnaire administered by KPMG (1999) on CGSs to evaluate certain aspects of *Kafalah*. However, this survey departs from those conducted by the WB in the following ways: first, it was tailored specifically to address country-specific social aspects such as culture and religion which were found to affect SMEs' owners'/managers' decision to apply for bank finance (Kamel, 2006; Nguyen et al., 2020; Waked, 2016), in addition to aspects related to entrepreneurs' cognition such as control and/or risk aversion (Cressy, 1995; Norton, 1991a). In this, unlike the Enterprise Survey, the designed survey addresses voluntary exclusion more precisely and investigates reasons other than borrower discouragement, which is the only type of self-rationing behaviour in the Enterprise Survey. This allows for determining to what extent constraints in accessing bank finance lie within demand-side factors or supply-side factors, as opposed to focusing mainly on potential loans' terms and conditions deterring SMEs from seeking bank finance. Second, the designed survey allows investigating banks' reasons for not serving or underserving applicant SMEs. Third, the survey was designed so that information on access to bank finance and the extent of credit rationing are based on factual data from respondents, i.e., it asks about the number of times firms applied for bank finance, success rate and the outcome of firms' applications. This would provide better distinction between different categories of SMEs compared to data on perceptions such as those from questions which ask respondents to what degree access to finance is an obstacle. Such data based on perceptions can be misleading as they do not allow differentiation between actual and perceived credit rationing. This point was highlighted by Freel et al. (2012) who argue that Cambridge studies noted that a high percentage of entrepreneurs cite availability of bank finance as a constraint to expansion but those studies equally find that only a small number of entrepreneurs who seek bank finance actually fail in obtaining it. Hence, the data collected from the designed survey would allow overcoming such shortcomings as advised by Kuntchev et al. (2012).

Furthermore, the primary business sectors in the Enterprise Survey are manufacturing and services. The designed survey, however, includes sectors such as wholesale/retail, and

construction, which are dominant sectors in Saudi, to obtain a sample with a close representation of the general population, and to avoid problems associated with samples of limited industry scope. Moreover, this survey defines SMEs based on the definition provided by the Small & Medium Enterprises General Authority (Monsha'at) which is remarkably different from the definition used in the Enterprise Survey. For example, the latter defines small-sized firms as those with average sales of \$1.8m and fewer than 20 employees, while medium-sized firms are those with average annual sales of \$14.5m and 20-99 employees. However, in Saudi, small-sized firms are those with revenues from \$800,000-\$10.6m and from 6-49 employees, whereas medium-sized firms are those with 50-249 employees and revenues over \$10.6m but not exceeding \$53.3m.

The structured survey asks about firms' involvement with the banks over fee-based non-lending products/services as a proxy for banking relationships. Additionally, there are questions that were included to enable conducting impact evaluation analysis on *Kafalah*, particularly, those with regard to finance and economic additionality. The questionnaire, hence, asks respondents why they applied through *Kafalah*; what type of finance available for them had *Kafalah* not been introduced; and what impact does guaranteed finance have on their employment and revenue?

The questions are mostly in the form of multiple choice, to ease/speed up the answering process. Nevertheless, each question provides a wide range of possible responses including "I do not know", which not only speeds up the process but is expected to evoke a higher response rate. Some questions were open-ended, so respondents did not feel restricted in answering and felt free to comment, which allows obtaining deeper perspectives. The structured questionnaire has seven sections totaling 78 questions as follows:

- I. Section A. The firm: questions in this section concern the main information on firms' characteristics: age, size, economic sector, legal status, current and previous employees, and growth intentions. The literature provides that such firms' characteristics affect both firms' borrowing decisions and banks' lending decisions.
- II. Section B. The interviewee: firms' owner/manager characteristics: gender, age, previous experience, and education. This in turn allows assessing how gender and human capital affect firms' capital procuring process.

- III. Section C. Sources and uses of funds: information about the sources of finance used at the start-up stage and after (i.e., running the business) and sources of external finance preferred if needed. It is argued that few firms desire external capital (Vos et al., 2007); this in turn can impact their borrowing decision. Hence, this variable is used to control for selection bias (described in Chapters 4 and 5).
- IV. Section D. Application for bank finance and the take-up of *Kafalah*'s support: questions in this section investigate the decisions to seek bank credit, including why firms have not applied for bank finance; the year of applying; if finance application was through *Kafalah*; the number of applications made; the success rate; the amount approved, i.e., the full amount, less amount or if the application was turned down (application's outcome), and why banks provided less or rejected the application; the main purpose of recent applications; type of finance requested as well as the type of collateral pledged and reasons for not providing collateral, if this were the case. Furthermore, questions investigated if banks have directed the respondent to *Kafalah* and the reasons cited by banks as to why the firm should apply for guaranteed finance.
- V. Section E. Additionality and displacement effect: this section deals with *Kafalah*'s participants who obtained guaranteed finance. It provides questions about finance additionality including whether the firm would have been able to raise the same amount of finance had *Kafalah* not been available, whether the bank would have agreed to lend the firm if it were not for the scheme, and if *Kafalah* provides favourable interest rates and longer maturities. Furthermore, it asks if the bank has lent the firm additional non-guaranteed finance after using *Kafalah*. Other questions are regarding the economic impact of *Kafalah* including changes in revenue, employment and firm development, and guaranteed firm's competitors, i.e., regional, local and foreign, to assess *Kafalah*'s displacement effect.
- VI. Section F. Banks' involvement with the firm: questions concerning the frequency of providing information about the business required by banks after finance was provided; if firms have a bank-firm relationship, i.e., repeated interactions with a bank employee for a long time; who then knows you and your business very well and when did such relationship start (i.e., before or after the application). Also, if the firm uses fee-based non-lending products/services from the bank (e.g., collection of receivables, payroll services, etc.) as a practice of cross-selling by banks, and firms' opinions on the specialised SMEs' units within the banks, to better address and serve SMEs' needs.

VII. Section G. Firm activities: questions in this section deal with firms' activities which were identified in economic history as important for the development of the SME segment. The first activity respondents are asked about is if they are involved in inter-firm relationships such as subcontracting/raw material supply, franchisor/franchisee, joint venture, or cooperate in manufacturing/marketing/problem solving/technology development with other firms. The other activity is concerned with innovation. Like the Enterprise Survey, a broad definition of innovation is employed, *new-to-firm innovation*, i.e., developing new product/service or new process in manufacturing products/providing services. This definition is more appropriate for a developing country like Saudi. Additionally, it is wide enough to include firms from different sectors, not just those in high-technology sectors. Finally, respondents are asked if they directly/indirectly export. As in the Enterprise Survey, indirect exports are defined as products that are sold domestically to a third party that exports them.

A pre-test of the draft questionnaire was conducted after translating it into Arabic – the Saudi language. The pilot study was conducted with 16 selected owners of SMEs in Saudi from different sectors to obtain feedback on its length, the layout and content of the questions, and to check for ambiguity. Most comments were about its length and some respondents expressed the need to provide more answer options so some questions were more applicable to all respondents. Based on these comments, amendments were made. A copy of the questionnaire in English is in Appendix 3.A. The Arabic version is in Appendix 3.B.

The College of Social Science Research Ethical Committee has reviewed the questionnaire and has no objections to the proposed data collection protocol (Appendix 3.C)

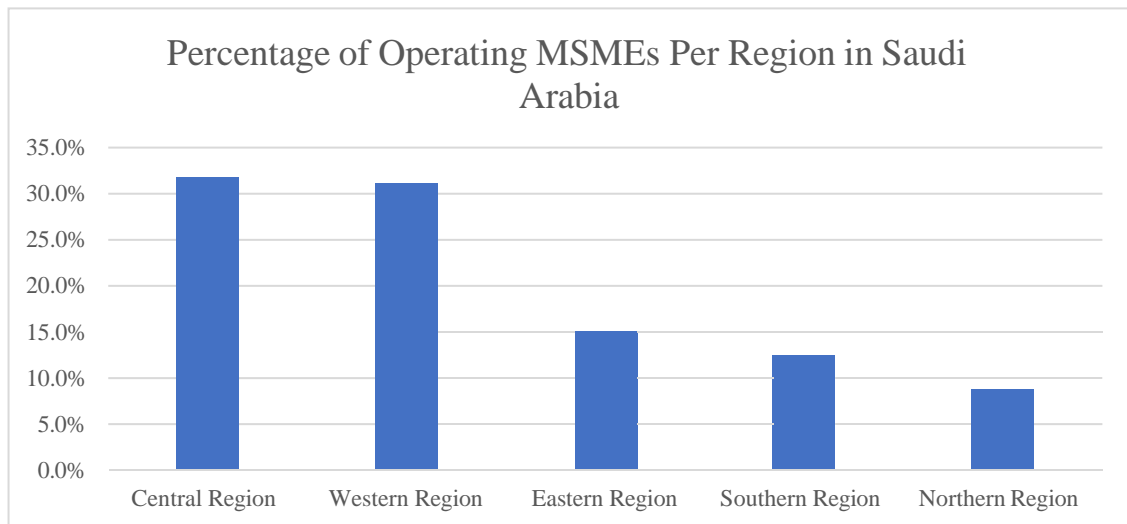
### **3.1.2 Sampling Selection Process and Survey Administration**

The sampling selection and data collection process for the first and second empirical chapters are not identical. In this section, the process employed for each of these quantitative chapters is described.

### **A. Sampling Process and Survey Administration in the First Empirical Chapter**

For the first empirical chapter (Chapter 4), SMEs' sampling in Saudi was conducted using a one-stage, cluster sampling technique. This involves a geographic stratification of the country into regions with intense SME activities. This was followed by a random selection of respondents within each region. Figure 3.1 shows the highest number of micro-enterprises and SMEs (MSMEs) is in the Al-Riyadh region (Central), followed by Makkah region (Western) and finally Eastern Region.

**Figure 3.1 Percentage of Operating MSMEs Per Region in Saudi Arabia**



Source: author's calculation based on data from Saudi General Authority of Statistics

The sampling process aimed to include only formally registered SMEs from these three main regions in Saudi with high SMEs intensity. The survey targeted SMEs with different types of economic activities to overcome generalisation problems associated with samples of limited industry scope, i.e., manufacturing, personal services, professional services, logistics services, wholesale/retail, and construction. As mentioned, the survey employed the definition provided by Monsha'at in defining SMEs. Although the survey was mainly aimed at targeting SMEs, the inclusion of formally registered micro-enterprises, i.e., 1-5 employees, was inevitable as they represent the majority of enterprises in Saudi, accounting for 87% of the total (General Authority for Statistics, 2017a).

A preliminary field visit was undertaken in January 2019 to establish contacts with various SMEs' owners/managers and institutions that assist SMEs (financial and non-financial) such as Chambers of Commerce and Industry in the Central, Western and Eastern regions, Monsha'at, Saudi Industrial Development Fund (SIDF) and Social Development Bank, in addition to visiting large corporations involved in inter-firm relationships with SMEs, such as the Saudi Basic Industries Corporation (SABIC) through their initiative department Nusaned, which supports SMEs to integrate with this giant petrochemical corporate. The purpose of these visits was to identify previous ongoing research on SMEs, and to search for possible databases and contact details to establish the sample for this research.

Some institutions provided a list of emails for SME owners/managers; others asked for the survey to be emailed to them so they could distribute it to SME owners/managers registered with them. Furthermore, volunteer sampling techniques, including snowball and self-selection sampling, were employed to allow for the inclusion of additional respondents. These techniques are commonly used when it is difficult to reach members of the desired population (Saunders et al., 2012). Under snowball sampling, the SME owners/managers contacted were asked to identify other SMEs and provide contact details. Using the self-sampling technique, the researcher publicised the need for cases by advertising through appropriate social media channels such as Twitter, and asked formally registered SMEs to take part in the study.

Using the structured questionnaire, written and online self-administered surveys were distributed to SMEs' owners/managers from different sectors within the three major Saudi regions. The main survey was conducted between September and October 2019. Using the contact details lists provided, the survey was distributed in three ways: first, it was distributed via a web-link using "Qualtrics", and sent to the email list of SMEs' owners/managers obtained from Chambers of Commerce. The email lists obtained amounted to 18,149 addresses, of which 13,633 were usable. Second, the structured questionnaire was distributed by hand through meeting entrepreneurs during different workshops in Saudi; participants were asked to sign a consent form before completing it. Those responses from returned questionnaires were then entered into the survey software "Qualtrics" to keep all the data together. Third, the survey was sent by posting the web-link on social media such as Twitter to reach out to more SMEs' owners/managers. The web-link was also sent to those institutions who preferred to distribute the survey to their SMEs themselves. Finally, to reach a higher number of SMEs, a number of



workshops were attended. These included one of the largest exhibitions in the Middle East, Dhahran Expo for Entrepreneurs; a number of SME owners/managers there indicated that they had already participated, having received the survey via email prior to the exhibition.

As a result, the total number of web-link surveys opened by SME owners/managers using “Qualtrics” was 1,028 but only 411 responses were actually completed. Thus, the response rate obtained from the entire sample is 39.9% and is above the average response rate in small business studies, which hovers around 30% (Dennis, 2003). Those responses were then comprehensively checked for logical consistency and completeness. Based on these checks, 379 responses were deemed usable, from which only firms who had applied for bank finance in the last three years were included so the economic cycle, since the decline in oil prices, is common to all respondents. No restrictions were applied to non-applicant sampled firms. The total sample from this subset of data is 328.

A sample size of this magnitude would be appropriate for regression analysis. The typical rule of thumb for determining the number of participants in a regression or correlation analysis is no fewer than 50, with the number increasing as the number of predictors increases (VanVoorhis & Morgan, 2007). According to Harris (1985), the sample size should exceed the number of predictors by at least 50, i.e., total number of participants equals the number of explanatory variables plus 50.

So that survey results are valid and generalisable, an examination of whether the findings would have been different had the response rate been 100% should be conducted (i.e., non-respondent bias) (Saunders et al., 2012). Comparing respondents' responses to those of non-respondents is one technique to check for this; however, because information on SMEs that declined to participate in the survey could not be gathered, such a comparison was not possible. Another option is to compare respondents' responses to late responders' responses, as some suggest that the latter are identical to non-respondents.

“(…) that late respondents be defined operationally as those who respond in the last wave of respondents in successive follow-ups to a questionnaire (…)” (Lindner et al., 2001, p.52).

Lindner et al. (2001) also recommend that the number of late respondents should not be less than 30 persons. Accordingly, late respondents were defined as those SMEs who participated after a follow-up email in November, compared to respondents who participated earlier. Total number of late respondents is 138. Running Chi-squared tests to compare answers from the two types of respondents revealed statistically significant differences only across two questions in the two waves; these are the industry sector and firm size in terms of revenue. Non-response bias, nevertheless, was not detected in any other question across late and early respondents, which suggests no major problems with external validity and generalisability. Furthermore, the current study uses number of current employees as a proxy for firm size, where no bias is detected from that question. All results are in Appendix 3.D.

### ***B. Sampling Process and Survey Administration in the Second Empirical Chapter***

As mentioned earlier, Chapter 5 employs the same questionnaire to conduct an impact evaluation study on the Saudi CGS *Kafalah*'s participants, but was administered differently. *Kafalah* officials were contacted first to ask for available data on *Kafalah*'s participants. Due to confidentiality issues, the only feasible source of such information is from *Khafala*'s beneficiary SMEs themselves through their contact details, which *Kafalah* agreed to provide. However, only with approval from those participants could primary data be collected, and the designed survey was employed to obtain the necessary information.

*Kafalah* provided a random list of mobile numbers of SMEs' owners/managers who have obtained guaranteed finance from commercial banks in Saudi; this contact list provided 601 beneficiary SMEs' owners/managers from different economic sectors and geographical regions. The questionnaire survey was administered via telephone interviews, given the nature of the contact details provided. Telephone interviews are argued to be best suited for asking structured questions where responses need to be obtained from a geographically spread sample (Bougie & Sekaran, 2016) as is the case for *Kafalah*'s participants. Telephone interviews provide other advantages. In addition to their lower costs, the response rates from this method are as high as those from personal interviews and are higher by 13.2% compared to those from postal surveys (Engel et al., 2005). Furthermore, during the course of the telephone survey, an automatic consistency check and reference to earlier answers are possible. Hence, data entry is less prone

to errors and can be corrected immediately if required. Nevertheless, telephone surveys suffer from the lack of control in the interview situation as the respondent can terminate the interview without warning by hanging up. Additionally, useful non-verbal responses cannot be observed. Participation in the survey also depends on the availability of the target person and their attitude towards the interview (Engel et al., 2005).

Therefore, a number of measures have been adopted to minimise such drawbacks in this methodological tool. First, participants were assured confidentiality and that the study is being conducted purely for academic purposes. Letters from the supervisor of the study were sent to those with doubts. Moreover, several contact attempts at different times, depending on the convenience of the targeted respondents, were made to increase the proportion of SMEs' owners/managers reached. This fieldwork was carried out in Saudi from September to November 2019.

To increase the number of participants, almost all the contact numbers on the list from *Kafalah* were approached; nevertheless, about 35 were wrong numbers, out-of-service or the person contacted was not the owner/manager. Most non-responses occurred because around 200 contacted persons did not answer the phone call, despite several attempts. Additionally, some owners/managers were travelling outside Saudi at that time, or key respondents lacked the time to take part in the survey, also around 12 refusals were recorded from owners/managers. Moreover, some of the numbers were duplicated, having had financing from more than one financial institution.

As a result, a sample size of 155 firms was obtained, which is considered sufficiently robust as sample sizes greater than 30 and less than 500 are considered appropriate for most research studies (Harris & Hague, 2000). It must be noted that testing for non-respondent bias was deemed inappropriate on this sample since such tests are usually conducted when surveys are sent out at the same time, not the case here; the nature of the telephone survey entails approaching participants sequentially.

Table 3.1 lists the number of *Kafalah's* beneficiary SMEs in the population in 2019 and the survey sample by Saudi regions. As shown, the profile of the sample obtained closely corresponds to that of the population. In this, SMEs in the Central Region represent the majority

of *Kafalah*'s beneficiaries, both in the population and sample. Moreover, while the number of SMEs operating in the Eastern and Western Regions are equal in the survey sample, those operating in the former represent a slightly higher percentage in the population compared to SMEs in the latter (28.8% vs. 25.9%). Similarly, SMEs in the Southern and Northern Regions represent a significant minority of the sample, 7.1% and 1.3%, respectively, which closely corresponds to the population.

Moreover, when compared to *Kafalah*'s population in terms of industry sector (Appendix 3.E), sampled *Kafalah* participants closely correspond to the population according to the latest report on *Kafalah*'s website (in 2019). As shown in Table 3.2, sampled firms operating in the trade sector represent the highest percentage of respondents (around 38%), followed by those in the construction sector which account for around 25% of the sample. Such percentages mirror the general population of *Kafalah*'s beneficiary firms. According to *Kafalah*'s report, beneficiary SMEs in the trade sector account for the highest number of *Kafalah*'s recipients, representing 39.3%. Firms in the construction sector represent the second largest number of firms receiving guaranteed finance and account for 26.5%. The report shows that SMEs in the manufacturing sector represent the third highest percentage of *Kafalah*'s beneficiary SMEs, accounting for 8.3%. However, when grouping the separate different economic sectors in *Kafalah*'s report, such as professional, technical and scientific activities, administrative and support services, and information and communication services, into one economic sector, the total percentage of beneficiary SMEs in what can be called the professional services sector is 9.7%. Hence, those firms represent the third largest economic sector in terms of the number of guaranteed SMEs in the population. This is close to the sample where SMEs in the professional services represent the third largest sector in terms of guaranteed SMEs, accounting for approximately 17% of the total responses. Survey respondents in the manufacturing sector represent around 12% of the sample. Similarly to *Kafalah*'s report, sample firms in the personal services and logistic services account for 7% and 2%, respectively.

**Table 3.1 Number of *Kafalah* Beneficiary SMEs and Survey Sample**

Region	Populations		Sample	
	No. of firms	%	No. of firms	%
Central Region	1020	37.7	54	34.8
Eastern Region	778	28.8	44	28.4
Western Region	700	25.9	44	28.4
Southern Region	154	5.7	11	7.1
Northern Region	54	1.9	2	1.3
<b>Total</b>	<b>2,706</b>	<b>100</b>	<b>155</b>	<b>100</b>

Source: Calculated from *Kafalah* Statistical Report 2019 & Survey Data

**Table 3.2 Sampled *Kafalah's* participants by Industry Sector**

Industry Sector	No. of Firms	Percentage
Wholesale/retail	59	38.1%
Construction	38	24.5%
Professional services	26	16.8%
Manufacturing	18	11.6%
Personal Services	11	7.1%
Logistics services	3	1.9%
<b>Total</b>	<b>155</b>	<b>100%</b>

Source: Telephone survey of *Kafalah's* participants

### 3.1.3 Possible Limitations of Survey Data

One of the main limitations of the data obtained from the general population of SMEs and those from *Kafalah* is economic bias. In this, the study was conducted in 2019, a time when Saudi was experiencing economic downturn as oil prices dropped. Hence, the government introduced a number of measures to ease the State deficit. Such measures had a direct effect on SMEs, including higher expat fees and the removal of water and electricity subsidies (Fahim, 2019); therefore, SME owners/managers became less optimistic and some planned to close their business. However, under Vision 2030, several initiatives were introduced to develop the SME sector, including improved access to bank finance. Under these recent initiatives, changes in banks' lending to SMEs might be a result of increased pressure from the government as opposed to the normal practices of banks (i.e., without these initiatives). Another possible limitation of

the collected data employed in Chapter 4 is that online questionnaires entail the risk of the survey being completed by those assigned by senior management but are not involved in the decision-making process regarding raising finance. Therefore, the researcher has to accept the completed surveys on faith (Shariff, 2000).

### **3.2 Method and Data Collection for Qualitative Analysis**

Qualitative research in a single case study (Saudi Arabian market) was adopted for the third empirical chapter (Chapter 6). This approach was employed to examine the decision-making structure and lending technologies employed by commercial banks when lending to SMEs in Saudi. A typical definition of qualitative research is:

*“Qualitative research is multimethod in focus, involving an interpretative, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials – case study, personal experience, introspective, life story, interview, observational, historical, interactional, and visual texts – that describe routine and problematic moments and meanings in individuals’ lives.”* (Denzin & Lincoln, 2005, p.2).

The qualitative approach was chosen because it allows rich in-depth information which enables understanding the realities of commercial banks’ involvement with SMEs. This can address the different obstacles and drivers when servicing this segment. Additionally, it shows how different lending policies and decision-making processes adapt to direct and indirect government intervention in the credit market. Interacting with the employees of commercial banks through field research is recommended and is receiving more attention as a means of conducting research in economics (Feldstein, 2000; Helper, 2000). Field research avoids the “arm’s length” approach practised more often by economists and social statisticians, therefore enables empirical research to be solidly grounded in reality (Reid, 1993).

Semi-structured in-depth interviews are used as the main research method for collecting data about commercial banks’ perception and lending practices. This approach has parallels with research that conducted interviews to explore SMEs’ access to credit from a supply-side point

of view in a specific context (Deakins et al., 2010; de la Torre et al., 2010; Koford & Tschoegl, 1997). It is also in line with contentions previous research provides on the need for more qualitative studies on this topic, with Feakins (2004) being particularly forthright on this matter.

In-depth interviews offer the greatest opportunity for acquiring detailed responses in required areas, particularly when the necessary information is absent, such as with the risk assessment methods commercial banks use (Deakins et al., 2010) and their decision-making processes. Findings from these interviews can reveal the reasoning behind certain practices that cannot be found from official reports, and thus offer a more accurate, comprehensive and detailed outlook. The semi-structured interview was chosen because its flexibility avoids presenting a precise chronological list of questions (Kumar, 2005). Importantly, it gives participants the freedom to explore and disclose their own views, experiences and thoughts, which may consequently trigger further questions from the researcher. Hence, subject matters can be explored further (Robson, 2002), which facilitates the collection of rich, high-quality data.

This study's interviews are Chapter 6's primary source of data, and explain and evidence how banks' structure, processes and perceptions align with Vision 2030, within which SMEs are central. The interview guide ensured all fundamental areas were explored over four sets of questions, each based around a specific area. The first set provides insights into banks' drivers and obstacles when lending to SMEs prior to and after Vision 2030 was launched, but also covers related changes in banks' structure, operational procedures and other aspects resulting from the Vision. The second examines banks' employed lending technologies and practices, such as loan application appraisal, decision-making, and terms and conditions setting processes. The third addresses the role of *Kafalah* in encouraging banks to lend to SMEs. The final set deals with banks' non-lending activities and the role of cross-selling in SME banking. The interview questions were designed to be brief and to encourage open discussion of the subject matter (Appendix 3.F). These questions were then translated into Arabic and the interview guide was piloted twice to ensure the questions were easily understood. First, two drafts of the guide were distributed to Arab PhD students with qualitative research experience; second, a copy was sent to one banker. Amendments were made accordingly and the final format, therefore, established according to the maximum feasible amount of testing. The interviews were conducted in Arabic, the Saudi language (Appendix 3.G presents the interviews in Arabic).

Face-to-face interviews were chosen because they are much more conducive to reciprocal interaction and both fuller and effective conversations allow information to be conveyed more precisely (Zikmund, 2003). However, four of the early interview sessions were conducted via the videoconferencing services of the internet application Zoom because of social distancing requirements during the Covid-19 pandemic. Shortcomings of online interviews include lower ability to read body language, barriers to the (inter)personal experience, and interactions having to go through another medium instead of being more immediate and direct (Fowler et al., 2002; Zikmund, 2003). Although this unavoidable circumstance is far from ideal, such limitations are now less pronounced, given that people's digital skills and competences have generally grown as their almost daily online communications and interactions during the pandemic have helped many become more familiar with such commonly used online platforms. This therefore makes their partaking in online research data collection easier (Lobe et al., 2020). The other interviews were conducted face-to-face at the interviewer's workplace when social distancing requirements were reduced in Saudi.

The research employed a self-select sampling tool whereby research participants specific to the subject matter were selected using purposive sampling. While non-probability sampling brings inherent bias that might affect its efficiency, purposive sampling adds value to the data obtained since it considers the reliability and competence of the chosen participants (Tongco, 2007). Accordingly, the interviewees were selected based on their role in appraising SME credit applications and/or because they are involved in such decision-making. Basically, the criteria mainly concerned their significant professional involvement with SME lending. Specifically, the study's main empirical data derive from interviews conducted with the "ultimate" bank insiders who are involved with SMEs on a daily basis: relationship managers or team leaders of SME banking.

Importantly, the College of Social Science Research Ethical Committee reviewed the interview guide and made no objections to the proposed data collection protocol. Research participants' confidentiality and anonymity were emphasised. Consent to take part in the interview and the use of tape recordings was granted by all participants (Appendix 3.H).



### **3.2.1 Possible Limitations of Interviews**

A drawback of the interview method concerns the purposive sampling procedure as it involves much subjectivity and can provide only partial representation, though from another perspective it is usually impractical or even impossible to interview every individual relevant to the subject matter. Moreover, interview transcripts offer personal insights into the subjects discussed but are subjective so do not provide fixed, accurate representations. Integrating different perspectives, however, can help overcome these limitations (Tonkin, 1995). Additionally, the extent to which the data collected is reliable is another core concern, especially as there is no guaranteed method to validate that data. This makes the generalisability of such data a potential problem (Boocock & Shariff, 2005). The researcher, nevertheless, utilised cross-verification methods to detect inconsistencies in interviewees' statements. Vogel and Adams (1997) further argue that such methods are vulnerable to the Hawthorne Effect, i.e., interviewees' responses might be influenced by what they think the researcher wants to hear. Some strategies suggested by Al-Yateem (2012) have been followed to alleviate this effect and to obtain the highest possible quality of data. One of these is to prolong engagement with participants, especially before interviews take place so trust can be created. Furthermore, the researcher assured confidentiality to participants and that the study is conducted only for academic purposes. The research goals were explained carefully during the initial contact when participants signed the consent form. Participants were reminded about their voluntary participation and the interview sessions were conducted within a setting familiar to participants. Hence, interviewees were very comfortable and highly encouraged to talk, which may also counter the various aforementioned issues.

# **Chapter 4: Are SMEs self-rationed or credit-rationed when large banks dominate? Evidence from Saudi Arabia**

## **4.1 Introduction**

An extensive finance and growth literature argues that finance is critical for growth. Better access to external finance supports innovation and allows firms to achieve larger size of equilibrium by permitting them to choose potentially more efficient organisational forms (Ayyagari et al., 2017). This is even more pronounced in the entrepreneurship literature where finance was found to be directly related to the creation and growth of small firms (Freel et al., 2012). However, despite their acknowledged importance and despite making up a large part of every country's private sector, SMEs are more constrained in their access to finance relative to large firms (Ayyagari et al., 2017; Beck et al., 2008b; Kotey, 1999).

In the case of bank finance which is the main source of external finance for SMEs in most countries (Ayyagari et al., 2010; Berger & Udell, 1998; Safavian & Wimpey, 2007), the key issue in the literature concerns credit rationing. Mainstream theoretical models argue that asymmetric information is the most important characteristic that defines SMEs' financing (Stiglitz & Weiss, 1981). Contrasting large firms, small firms keep most of their contracts private. This, in turn, increases the transaction costs of evaluating SMEs' loan applications and does not offer banks benefits from economies of scale (Berger & Udell, 1998). Banks face difficulties when assessing SMEs' capacity to pay (whether they have viable projects) and it is difficult to assess their willingness to pay (de la Torre et al., 2010). Under these circumstances, banks reduce such issues by rationing credit on bases other than price (Freel et al., 2012). In the Post-Keynesian literature, credit rationing results from asymmetric expectations by banks and borrowers about the future and likelihood of repayment. Banks are prepared to take a higher credit risk level with large firms than with SMEs (Wolfson, 1996).

Because of the nature of SME financing, conventional wisdom argues the most appropriate – if not the only – tool via which banks can cope with the opaqueness of SMEs is relationship lending based on soft information (Beck et al., 2017). Under this view, large and foreign-owned

banks cannot cater for SMEs because of their arm's-length transactional lending that relies mainly on hard information obtained from financial statements, which SMEs usually lack (Berger & Udell, 2006). Over the past decade, however, a number of articles challenged such arguments and characterised a different pattern of bank involvement with SMEs that goes beyond lending and focuses on the increased interest of banks to offer fee-based non-lending products/financial services to SMEs (de la Torre et al., 2010). In this, both large and foreign banks have set up dedicated units in an attempt to better serve SMEs (Beck et al., 2008a). Through such units, cross-selling of non-lending products/services has become one of banks' core strategies in the SMEs business. This in turn was found to facilitate increased lending to this segment via diversifying risk in terms of lending to new types of firms while deriving income from those fee-based non-lending activities. The implication of such studies is that SMEs' structural characteristics, which form the source of difficulties, become less constraining. Additionally, under these new business models, institutional environment deficiencies were found to be less restricting and government programmes to support SMEs as less essential for these banks in reaching out to this segment. Banks, within such models, can cope with the less than perfect institutional environment by mainly extending short-term loans and requiring collateral and broad guarantees from SMEs' owners (de la Torre et al., 2010).

This model, however, does not clearly address the possibility of credit rationing situations for a genuinely good, low risk firm when the collateral amount required exceeds its asset endowment (Cowling et al., 2018). It also does not address SMEs' need for fixed capital investment loans required for economic development. In this, it does not identify if banks under this model lend to firms with greater profitability, firms with weak track records but good prospects, or if the availability of collateral is the most important determinant for extending loans. Therefore, whether models that go beyond relationship lending do indeed increase SMEs' access to bank credit and the type of SMEs they can serve, needs to be investigated further.

Nevertheless, there are some strands of literature which cast doubts on the view that SMEs are credit-rationed in the financial markets and argue that SME financial behaviour shows substantial financial contentment (Vos et al., 2007). Indeed, some theoretical models not only reject the possibility of credit rationing but also suggest that too much lending takes place, i.e., under information asymmetry over-investment occurs (De Meza & Webb, 1987). Additionally, it is argued that the magnitude of credit rationing in an economy could be assessed if the demand

for and supply of credit were known. However, what is usually examined is the quantity of credit transacted, not the excess demand for credit. Therefore, credit rationing may be extremely difficult to identify, and empirical tests should differentiate between applicant firms for bank credit and those that have not applied (the demand effect), also between applicant firms that have been successful or unsuccessful in their application for credit (the supply effect) (Hashi & Toçi, 2010). Kon and Storey (2003) emphasise that earlier models of credit rationing ignore the group of non-applicant firms, in particular those discouraged from applying for credit. Also, it is argued that for the definition of credit constraints to be comprehensive, it should assess the demand for credit that is unmet by the existing supply of credit due to market imperfections (Leon, 2015). Some studies argue that demand-side self-rationing (i.e., SMEs refraining from applying for bank finance) might be a more important problem than supply-side credit rationing (Fraser, 2019). Yet, existing research has largely ignored demand-side factors (Cole & Sokolyk, 2016).

Such demand-side issues are particularly relevant in the developing countries of the Gulf Cooperation Council (GCC). In this, while SMEs' share of bank loans is among the lowest averages in the world, the IMF (2018a) recognises that it is not possible to determine whether the financing gaps in these countries are due to supply-side factors (institutions not wanting to service this segment) or demand-side factors (people not wanting financial services). It is argued that some demand-side factors in these countries may affect SMEs' credit demand, particularly, their religious beliefs (IMF, 2018b). Investigating these issues is important because each type of access problem requires different policies (Beck, 2013). Differentiating non-applicant firms is deemed important because if self-rationing is a distinctive characteristic of certain types of entrepreneurs or SMEs, and such firms are not inevitably less creditworthy, then public policy makers might need some guidance on whether to deviate their interventions from traditional supply-side mechanisms (Freel et al., 2012).

This chapter aims to explore these issues by investigating the existence and prevalence of credit rationing in banking sectors where large banks dominate, while incorporating demand-side factors in the largest GCC country, namely Saudi Arabia. Saudi provides an interesting context in which to examine issues of self-rationing vs. credit rationing and large banks' ability to cater to SMEs' needs without government intervention in the credit market. This is so because these large banks, which dominate the banking sector in Saudi, are highly-capitalised (Das Augustine,

2017). However, the average share of banks' loans to SMEs in 2016 was only 2% (Jeddah Chamber, 2016). Interestingly, in a statistical report about the most occurring obstacles to Saudi SMEs' development, lengthy bureaucratic procedures and licensing were found to be the major obstacles (Jeddah Chamber, 2016). Therefore, unlike traditional studies that have been concerned mainly with those who apply for bank finance, in particular with the characteristics of rejected SMEs and regarding non-applicants as some homogeneous form of disinterestedness, this study aims to investigate the reasons behind SMEs' decisions not to apply for bank finance.

Through literature consulting, a tailor-made questionnaire has been designed as a primary firm-level data collection method on a sample of 328 SMEs. The results suggest that a relatively low share of SMEs in Saudi actually apply for bank finance (38%). Unsurprisingly, however, loan rejection rate is high. Over half of sampled applicant firms, i.e., 54%, are credit-rationed, while around 46% have had their financing needs met by commercial banks partially or fully. Over half of those approved (around 58%) were underserved by banks, i.e., their application success rate is less than one and/or obtained a lower amount than requested. More importantly, the results do not find evidence that large banks' involvement with SMEs through cross-selling fee-based non-lending activities facilitate SMEs' access to bank finance but that SMEs' structural characteristics, mainly their age and size, remain the main determinants for obtaining credit.

The results, however, provide evidence on the usefulness of government programmes, particularly credit guarantee schemes (CGSs) to support SMEs. Firms who apply through the Saudi CGS *Kafalah* are more likely to access bank finance, compared to applicants for non-guaranteed bank loans. This in turn raises some doubts on arguments that such schemes are less essential since large banks perceive SME lending as profitable through the cross-selling of different activities (de la Torre et al., 2010). The multivariate analysis suggests a banking system where large banks dominate cannot cater for the needs of highly uncertain firms such as younger and smaller ones. Furthermore, larger and older firms can mainly rely on banks for project financing purposes that are of short-term maturity. Such loans are usually secured by assigning project proceeds to the bank. This in turn flags some concerns about SMEs' ability to obtain loans for long-term investments, which impacts on growth both in terms of employment creation and output (GDP).

Unsurprisingly, collateral requirements, argued to allow large banks to cope with the imperfect institutional environment (de la Torre et al., 2010), were found to form a major barrier to accessing finance. The majority of rejected applicants (around 76%) were turned down because of insufficient collateral.

Supply-side constraints also appear to play a major role in deterring SMEs from seeking bank finance initially. While the majority of sampled SMEs (around 62%) indicate that they have never applied for bank finance, the Henry Garrett ranking technique suggests that the top three reasons for this decision are supply-side driven. Perceived high interest rates on the potential loan is the highest cited reason for refraining from seeking bank finance. Indeed, the banking sector in the GCC, including Saudi, is characterised by having high net interest margins, compared to high-income countries (World Bank Group, 2016). Religious and cultural reasons for refraining from bank finance, however, are not among the top five reasons.

The results suggest that the stringent Saudi laws that incriminate defaulters seem to constitute an institutional barrier in seeking bank credit through creating high levels of risk aversion in entrepreneurs. Garrett's ranking technique suggests that the top 4th and 5th reasons for not seeking bank credit originate from risk avoidance behaviour. While the literature states that risk-averse entrepreneurs deliberately limit their funding to personal equity and retained earnings (Kotey, 1999), the institutional environment in Saudi seems to force SMEs into not seeking bank credit, even though they are possibly in need of it.

Similarly to Brown et al. (2011) and Cole and Sokolyk (2016), this study further examines how the reasons for not applying are related to firms'/entrepreneurs' characteristics, by focusing exclusively on the main reason provided by each survey respondent. Under this approach, the results suggest that the majority of SMEs voluntarily self-ration. Approximately 77% have never applied for bank finance either because they belong to the *No Need*, *Discouraged Borrowers*, *Religious/Cultural Rationed* or *Risk/Control Averse* group. In this, less than a quarter of sampled SMEs (24%) were deterred by some supply-side factors, e.g., high interest rates, high collateral requirement and/or short maturities of the potential loan, i.e., *involuntary self-rationing*. Nevertheless, when characterising firms with potential financing needs (i.e., excluding the *No Need* group), the results suggest that supply-side credit constraints affect highly uncertain firms, particularly younger and unincorporated (sole proprietor/partnership). Unlike self-rationed

firms, these firms desire bank finance and are in possible need of it. Altogether, the results on banks' lending decisions and firms' borrowing decisions suggest that younger firms are credit-rationed in Saudi. The policy implications for these findings are discussed in Section 4.7.

This thesis contributes to a number of different strands of the literature on SMEs' financing. First, it contributes to the debated literature on banking industry structure and availability of credit for SMEs by comprehensively analysing large banks' ability to cater to SMEs through cross-selling non-lending activities. In this, the current study identifies the type of firms (i.e., larger and older SMEs) who can access credit in markets where large banks dominate and the type of loans they can obtain (i.e., short-term loans). Second, it contributes to the literature on public policies, particularly CGSs, by providing evidence on their importance in improving SMEs' access to bank credit. The study further contributes to demand-side studies by incorporating wider types of self-rationing, other than borrower discouragement (e.g., religious/cultural reasons and control/risk aversion).

The chapter is structured as follows. Section 4.2 provides a review of the relevant literature on SMEs' bank finance both from the supply- and demand-sides. Section 4.3 provides sample screening and summary statistics of the data. Section 4.4 outlines the analytical approach. Section 4.5 reports the results on credit rationing status for applicant firms (banks' lending decision). Section 4.6 reports the results on SMEs' credit demands and firms' borrowing decisions. Section 4.7 concludes and highlights policy implications.

## **4.2 Literature Review**

As discussed in Chapter 2, access to finance is one of the major challenges for SMEs and it affects them disproportionately more than large corporates; such challenges are more pronounced in developing countries. Studies have found that banks in these economies, which are characterised by weak legal and financial institutions, tend to be less exposed to SMEs and to charge them higher fees and interest rates. According to Stein et al. (2013), around 55% of SMEs in developing countries have unmet demand for credit, i.e., they are unserved/underserved by financial institutions. Nevertheless, there are some contentions about the actual demands of SMEs for commercial bank finance (Feakins, 2004). Some studies find evidence of self-rationing behaviour on the part of SMEs in developing countries (IFC, 2014)

and the US (Cole & Sokolyk, 2016). This section provides an overview of the relevant empirical findings both on the supply- and demand-side.

#### **4.2.1 Supply-side Studies**

Despite restrictions on bank credit to SMEs being a global phenomenon (Baas & Schrooten, 2006), SMEs in developing countries are more constrained in accessing bank finance compared to those in developed countries (Petrovito & Pozzolo, 2019). Beck et al. (2011) find that banks in developing countries provide a lower share of long-term loans to SMEs and charge higher fees and interest rates on small firms' loans. Similarly, Ayyagari et al. (2010) provide evidence that SMEs in such countries rely heavily on self-fund-raising channels such as retained earnings, informal sources, loans from family and friends, and trade credit. Nevertheless, in China, only bank finance was found to be associated with faster firm growth. Among the factors explaining variations in financing obstacles across countries is the level of institutional development, including the legal system and financial institutions, even when differences in GDP per capita are controlled for, i.e., firms report significantly lower financing obstacles in countries with higher levels of institutional development compared to those in countries with lower institutional development (Beck, 2007; Beck et al., 2006). Furthermore, the tendency of banks in developing countries to charge higher interest rates was found to be associated with worse protection of property rights and higher costs of contract enforcement (Beck et. al., 2011).

Institutional development was also found to affect the type of bank loans obtained. For example, there is evidence that in countries with stronger legal environments, SMEs are more likely to obtain long-term bank financing (Hernández-Cánovas & Koëter-Kant, 2011). Similarly, Beck et al. (2008b), use firm-level data from the World Business Environment Survey to investigate the effect of financial and institutional development on firms' financing. They find that firms in countries with higher property rights protection use more bank financing; the effect was found to be stronger for SMEs.

This can be explained by arguments that the lending technologies developed by banks to optimise lending cost and risks are constrained by the institutional environment. Weaker institutional environment does not allow for greater credit supply optimisation. Hence, credit markets settle at a point below the maximum share of viable loan applicants that could be served by financial institutions (Beck, 2007). Berger and Udell (2006) argue that government policies



can affect credit availability through policies that deal with the banking structure (i.e., large vs. small, foreign vs. domestic, and State-owned vs. private banks) and the institutional environment (i.e., the information, legal, judicial, bankruptcy, social, tax, and regulatory environment), which determine the feasibility and profitability of deploying different lending technologies. This is based on the view that each bank type has comparative advantages in different lending technologies; the institutional environment, hence, affects their legality and profitability (Berger & Udell, 2006).

As mentioned in Chapter 2, the literature identifies two broad lending technologies *relationship lending* and *transaction lending*. Traditionally, the literature has long argued that relationship lending in which small-scale banks are advantaged is the most appropriate tool in lending to SMEs. This is because it is largely based on soft information gathered through contact over time with the SME and its owner in addition to communication with members of the local community (Berger & Udell, 2006). As a result, ex-ante screening and ex-post monitoring is facilitated (Steijvers & Voordeckers, 2011) and uncertainty is reduced (Chakraborty & Hu, 2006). The empirical evidence on the effects of relationship lending is extensive (Elyasiani & Goldberg, 2004). A pre-existing relationship with lenders was found to increase the availability of financing to small businesses and help overcome inefficient credit rationing (Petersen & Rajan, 1994; 1995). Some studies argue that more centralised and hierarchical organisational structures like those of large banks can negatively impact lending to opaque SMEs (Stein, 2002).

It is argued, however, that relationship lending involves higher cost. This in turn is passed on to borrowers and stems from the need for more monitoring of loan officers' activities in addition to higher cost of labour involved in gathering and updating soft information (Cotugno et al., 2013; Cressy, 2002). Moreover, Sharpe (1990) argues that relationship lending might become disadvantageous to borrowers as banks can utilise their information monopoly by imposing higher interest rate or requiring more collateral. It is argued that collateral can be used to mitigate the soft budget constraint issue associated with relationship lending (Boot, 2000). Soft budget constraint can cause some inconsistency in the policy of the provision of credit contracts by banks, i.e., renegotiation of a loan deal can be too easy for such close borrowers. This can affect borrowers in making insufficient efforts to prevent bad outcomes (as they can renegotiate). Therefore, banks try to countervail this behaviour by imposing higher collateral requirements, hoping that the risk of executing the collateral will influence debtors' performance (Badulescu,

2012). There is some evidence of a positive correlation between the strength of borrower-lender relationships and collateral requirements (Machauer & Weber, 1998; Ono & Uesugi, 2009; Uchida, 2011).

Nevertheless, some researchers dispute the conventional wisdom on the importance of relationship lending and propose that different types of banks, particularly large and foreign ones, have developed new business models that go beyond pure relationship lending. Large banks, therefore, through transaction lending technologies based on hard quantitative data, can provide a higher supply of bank credit to SMEs (Beck et al., 2011; Berger & Udell, 2006). Transaction lending represents activities with a one-time emphasis on a single customer; they are scalable and can be easily replicated for transactions with a variety of customers boosted by the evolution in IT (Marinč, 2013). Transactional lending includes financial statement lending, asset-based lending, fixed-asset lending, leasing, factoring and credit-scoring models to automatically process loans for SMEs<sup>3</sup>. According to this paradigm, all these transaction lending technologies are suitable for lending opaque SMEs, with the exception of financial statement lending (Berger & Udell, 2006).

De la Torre et al. (2010) find that large and foreign banks have introduced dedicated SME units through which they sell fee-based non-lending products/financial services which become a core strategy for banks in the SME business. Therefore, lending is not always the main product offered but is usually extended to eventually cross-sell those non-lending activities. This in turn was found to deepen banks' engagement with SMEs and hence facilitate SMEs' access to credit. Therefore, banks contend deficiencies in the institutional environment are not major constraints in involvement with SMEs. In that, banks can cope with imperfect institutional environment by mainly extending short-term loans and requiring collateral from SMEs' owners. Accordingly, government programmes to support SMEs are viewed as less important decisive factors in reaching out to this segment. For example, Beck et al. (2008a) find that only 8% of banks in developing countries perceive the institutional environment as an obstacle in financing SMEs. Furthermore, de la Torre et al. (2010) find that because of their size, IT allows large and foreign

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<sup>3</sup> Despite the similarity in names, asset-based lending is relatively distinct from fixed asset lending. The former is focused on lending against inventory and accounts receivables employing a very high-intensity monitoring structure. It requires certain settings, e.g., sophisticated commercial laws on security interests. Hence, asset-based lending appears only in five common law countries: Canada, Australia, New Zealand, the UK and the US (Uchida et al., 2008).

banks to exploit scale and scope economies when lending to SMEs by boosting transaction lending technologies. For example, the use of credit scoring models, which assesses risk based on statistical properties, requires a multitude of clients such as those in large banks. Such systems were found to be associated with a significant increase in small business credit availability in terms of: the quantity of credit extended, the credit to risky opaque firms, credit to low income areas, and credit to long distance locations and loan maturities (Berger & Frame, 2007).

Moreover, as large banks are more involved with corporations, they are advantaged in reaching out to good SMEs with whom those corporations have long-term relationships and hence leverage from the knowledge embedded in their client corporates about those SMEs. Large banks can also manage risk better because of diversification, advanced risk management tools and better data (de la Torre et al., 2010). In that, advanced risk management systems offer automatic registration of risky events, allow for centralised risk oversight over the whole bank and provide decision support for risk mitigation (Marinč, 2013). Even though de la Torre et al. (2010) find that such business models do not solve the problem of securing long-term fixed-interest rate loans for SMEs, they argue that such interactions are at least as important as, or even more important than, relationship lending.

A technical note by the Financial Sector Deepening in Kenya, which studies and evaluates the SME banking model choices available to banks, argues that traditionally SME account officers were expected to have wide financial skills. However, this attitude is changing. Banks have started to recognise that SMEs' credit is quite similar to corporate credit, hence fewer financial skills are needed. Therefore, banks are now hiring sales-oriented personnel rather than financial types into SMEs' account officer positions. In particular, as SMEs' loan decisions are made centrally by IT systems, there is less need for account officers with such analysis skills. Instead, there is greater need for salespersons, as loans can be packaged by a credit support structure (Miller & Oyaro, 2015). Nevertheless, the empirical evidence on the banking industry structure is inconclusive. On the one hand, it was found that the availability of bank credit to small firms does not decrease when there are fewer small banks in the banking industry (Jayaratne & Wolken, 1999). On the other hand, Craig and Hardee (2007) find that the use and the level of debt are lower in areas where large banks dominate.

Such findings have important policy implications. Under the traditional view, a reasonable policy implication is that a considerable market share for small banks is important to meet the demands of opaque SMEs. Therefore, a significant consolidation within the banking industry might lower the viability of credit to SMEs. In contrast, under this more recent conceptual framework, if large and foreign banks were found capable of lending to opaque SMEs through packaging loans by a credit support structure within non-lending products/services and through lending technologies other than relationship lending, then the effect of bank consolidation on the reduction in the number of small banks may be less critical. Similarly, if the overall SMEs' credit availability depends on accessing a full menu of these non-lending product/services, then policy makers should implement legal and regulatory environments where all these non-lending products/services are feasible.

Despite the literature on the banking structure and openness for foreign ownership being inconclusive, Berger and Udell (2006) call for a larger presence of foreign banks in developing countries and a lesser presence of State-owned banks, since the former are more advantaged in transaction lending. Beck (2013) argues that competition and openness to foreign-owned banks can improve SMEs' access to bank finance if the necessary institutional and regulatory conditions prevail. Accordingly, policy makers can affect credit availability for SMEs through market-enabling policies, including removing restrictions on foreign banks' entry, additionally through market-developing policies such as improving the institutional environment (Beck, 2007; Berger & Udell, 2006). Therefore, among the policy recommendations for the GCC, including Saudi, is the need for improving the banking sector competition from foreign banks and warnings that State-sponsored initiatives may interfere with a level playing field in the banking industry and distort competition (Caggiano & Calice, 2016; IMF, 2018a; World Bank Group, 2016).

However, studies arguing that large banks' business models can adapt to weak institutional environments by requiring collateral on SMEs' loans, do not clearly address the facts that small firms are often incapable of providing the required collateral because of the relatively small size of their asset base (Kotey, 1999). They also do not address SMEs' need for fixed capital investment loans required for economic development. In this, they do not identify if banks under this model lend to firms with weak track records but good prospects, or if the availability of collateral is the most important determinant for extending loans. Therefore, whether such

business models in large banks do indeed increase SMEs' access to bank credit and the type of SMEs they can serve, need to be investigated further.

Nevertheless, investigating such issues on the supply-side would be incomplete without incorporating demand-side factors. This is so because some researchers argue that the financing gap can be demand-originated (Beck, 2013; Kotey, 1999). Therefore, for the analysis on credit rationing to be comprehensive, the demand and supply for credit must be known (Hashi & Toçi, 2010). In the next section, attention is turned to the ways in which the characteristics, preferences and attitudes of SMEs themselves might affect their borrowing decisions.

#### **4.2.2 Demand-Side Studies**

As mentioned in Chapter 2, another strand of research has argued supply- and demand-driven credit rationing. The fact that not many SMEs secure credit is, however, insufficient evidence of constraints, since some SMEs may not actually have a need for credit (Leon, 2015). Empirically, Levenson and Willard (2000) show that demand-side self-rationing behaviour on the part of SMEs' owners/managers exists, and it might be a more important issue than supply-side credit rationing. It is crucial, therefore, to reconcile the impediment to accessing bank finance from the demand-side.

##### ***A. Entrepreneurs' Awareness and Financial Skills***

One component that shapes the financing decisions of SMEs' owners/managers is limited awareness about the different options for acquiring funds and the limited knowledge about the appropriate sources of finance for their firms – *knowledge gap*. For example, in Australia, Holmes and Kent (1991) find that small firms in the manufacturing sector have limited levels of awareness about the forms of finance provided by banks compared to large firms. The costs involved in being informed about the types of debt options limit the incentives of SMEs to increase their level of awareness about the available sources of finance (Holmes & Kent, 1991). Furthermore, the knowledge gap stops a substantial number of SMEs in need of external finance from seeking it because they do not know how to successfully present themselves to potential external fund suppliers. Without financial abilities and experience, many SMEs' owners/managers are unable to evaluate effectively the financial needs of their enterprises or successfully negotiate financial agreements (Read, 2002).

The loan application process requires well-defined and well-presented business plans that are used by banks to assess SMEs' ability to repay. Financial and managerial skills enable entrepreneurs to develop feasible business plans and are associated with their level of education and experience. Indeed, the educational background and experience of entrepreneurs, as a proxy for human capital, was found to be related to usage of bank finance (Abdulsaleh & Worthington, 2013). Storey (1994b) argues that entrepreneurs with higher levels of education are more confident in dealing with banks and other capital providers.

Highly educated entrepreneurs are expected to reduce information asymmetry as they can provide clearer, more detailed business plans and financial information compared to those less educated. Furthermore, educational background has an effect on the motivation of entrepreneurs in terms of searching for alternative finance sources, constructing finance networks and planning for long-term finance solutions for the business (Nanyondo et al., 2014). Bates (1990) finds that entrepreneurs' level of education is a main determinant of the extended amounts of bank loans. Indeed, the fact some entrepreneurs are inexperienced, unaware of or unfamiliar with the alternative bank products and services makes it essential to distinguish between market imperfections or perceptions of financing gaps and actual gaps facing SMEs.

### ***B. Entrepreneurs' Preferences and Attitudes***

It is argued that existing theories on firms' financing decisions typically explain 10-30% of the observed variation in such decisions by SMEs. Other perceptions from the psychology literature applied to financial economics propose that entrepreneurs' risk perception and preferences, in addition to their objectives, growth ambitions and control aversion, can explain some of the remaining unexplained parts (Fraser, 2019). In this, some studies address the component of personal preferences and attitudes of SMEs' owners/managers in accessing debt financing. It has been argued that SMEs' financial structure reflects the desires of their owners/managers as much as the constraints by funds suppliers (Mac an Bhaird, 2013). According to Cressy (1995), small businesses' independent owners/managers are suspicious of outside control. This goes back to 1971 when the Bolton committee highlighted entrepreneurs' aversion to banks generally and to any dilution of power over their firms by outside fund providers. Such evidence contrasts with the mainstream finance literature which explains non-borrowing as an outcome of market imperfections. Such literature assumes no utility attached to entrepreneurs' control and does not

consider bank interference as a cost to borrowing. However, contrary to this mainstream argument, other strands of literature argue that restrictions on borrowing may be internal (Cressy, 1995).

There is evidence that many SMEs exhibit signs of financial contentment where control provides utility (Vos et al., 2007). For example, Mac an Bhaird (2013) find that SMEs' owners who seek to retain ownership and managerial independence, such as those in closely held ownership (i.e., sole proprietorship, partnership and family firms), tend to use internal equity, and when external finance is required they resort to bank finance. By extension, those who seek equity finance from outside investors are less likely to apply for bank finance (Mac an Bhaird, 2013). The preference to maintain control over the business, therefore, provides an explanation for research results where small firms who secure bank financing were found to prefer substituting their own funds for borrowed funds when business wealth improves (Cressy, 1992).

In addition to control aversion, many SMEs might avoid bank finance because it involves risk by jeopardising personal assets held as collateral by banks – risk aversion. While the female entrepreneurship literature provides evidence of such behaviour on the part of female-led businesses (Brush, 1992), such risk aversion is not exclusive to female entrepreneurs. Norton (1991a) finds that management risk perception and preference is of further importance in explaining the capital structure of small firms, compared to well-established theories such as agency cost, information asymmetry and bankruptcy costs. Risk-averse owners/managers are described as dealing with uncertainties by avoiding actions, including borrowing money. They deliberately limit their funding to personal equity and retained earnings (Kotey, 1999).

An important issue arising from this physiological self-rationing behaviour is that even though those risk/control averse entrepreneurs do not have unfulfilled credit demands, they may be underinvesting and, therefore, their firms may still underperform because of their entrepreneurial preferences rather than because of supply-side financial constraints (Fraser, 2019).

### ***C. Discouraged Borrowers***

As mentioned in Chapter 2, one of the most important strands of the literature has identified borrower discouragement when explaining firms' borrowing decisions. This literature has

highlighted the importance of the way SMEs perceive the probability that banks will accept their loan application as a factor affecting their decision to seek bank credit (Kon & Storey, 2003). Empirical studies other than that by Levenson and Willard (2000) provide evidence on the existence of discouraged borrowers. For example, Freel et al. (2012) find that small firms in the UK are likely to be discouraged twice as often as be denied loans by banks. Certain types of firms were found more likely to register discouragement, particularly smaller firms, firms operating in knowledge-intensive services sectors and limited liability firms. Freel et al. (2012) note that discouragement might suggest more efficient SMEs' finance markets if discouraged borrowers' quality is like those of rejected firms, i.e., "appropriately discouraged borrowers". This implies good judgement on the part of firms. However, a greater number of inappropriately discouraged borrowers leads to sub-optimal levels of investment. Thus, the need for policy attention will persist (Freel et al., 2012).

In a cross-country study, Mac an Bhaird et al. (2016) find that borrower discouragement is a significant phenomenon and can in part be explained by firm characteristics, macroeconomic factors and the banking industry structure. They confirm previous findings that smaller, young firms are more likely to be discouraged and find that discouragement serves as an efficient rationing mechanism in concentrated banking systems, i.e., discouragement of 'good borrowers' decreases in these markets as banks tend to invest more in soft information and relationship lending which reduces potential screening errors by banks leading to less discouragement by "good borrowers". Additionally, the authors emphasise the importance of a sound regulatory environment as they find that improved regulatory quality is positively associated with discouragement. In this, a robust regulatory system deters moral hazard which in turn discourages "bad borrowers" (Mac an Bhaird et al., 2016).

While the theoretical formulation of borrower discouragement in Kon and Storey (2003) is based on rational behaviour by entrepreneurs (Fraser, 2019), the above-mentioned studies suggest that some entrepreneurs may be irrational in their expectation of bank denial. For example, Cole and Sokolyk (2016) find that discouraged borrowers are significantly different from rejected applicants along a number of dimensions. About one in three discouraged borrowers would have been approved for bank credit had they applied.



#### ***D. Cultural and Religious Factors***

The social environment surrounding all actual or potential entrepreneurs has important effects on their financing decisions. It is argued that there is a need to incorporate the traditional economic views with concepts about social process in order to explain the flow of capital (Sargent & Young, 1991). According to Beck (2013), one of the types of access to credit problems that is demand-originated is self-rationing resulting from cultural barriers. However, few studies in the literature have considered country-specific aspects such as culture and religion when examining SMEs' access to bank finance; they find that some SMEs exclude themselves voluntarily from bank credit due to cultural and religious reasons (i.e., self-rationing).

Evidence on voluntary self-rationing due to cultural reasons was provided by Kamel (2006). She finds that the mentality and attitudes towards banks might explain the lower debt ratios for SMEs in a developing country, namely Jordan. She finds that 60% of SMEs in the sample perceive banks as rescuers, i.e., they only apply for short-term bank credit when they face financial problems. The mentality of SMEs in Jordan, which evolves around their pride and perception of status, makes them perceive applying for bank loans as unethical behaviour. The family reputation and tribal culture in Jordan makes SMEs ashamed to apply for bank loans. Similarly, Nguyen et al. (2020) find that some Vietnamese SMEs self-ration from the credit market because they are inherently debt averse, i.e., they avoid bank finance because they do not desire incurring debt. The presence of such firms is greater in magnitude compared to discouraged borrowers (11.6% vs. 6.9%). Nguyen et al. (2020) argue that debt aversion might stem from the Vietnamese culture where debt is viewed negatively, and concluded that traditional public policy mechanisms in alleviating financial constraints would have limited results if debt aversion is not properly addressed.

Another social factor affecting SMEs' decision to apply for bank finance is religion. As mentioned earlier, around 32% of SMEs across the MENA region are totally excluded from accessing bank credit for religious reasons. In these countries, SMEs are in need of \$8.63bn-\$13.2bn in Islamic finance (IFC, 2014). In the case of Saudi, Waked (2016) finds that more than 40% of Saudi SMEs have not applied for bank finance, with religious reasons being reported by one-third of them. Respondents mentioned the limited choices of Islamic financial products offered by banks as their main concern regarding applying for bank finance. Consequently,

Waked (2016) argues that it is important to distinguish between actual users of bank finance and non-users who might have access to bank credit but choose not to use it for religious reasons.

### ***E. SMEs' Need for External Finance***

As mentioned earlier, the fact that few SMEs secure credit is not sufficient to prove constraints, since some SMEs may not actually have a credit need (Leon, 2015). Empirically, this group of SMEs is more dominant than either applicants or discouraged borrowers, accounting for the majority of this segment (Cole & Sokolyk, 2016; Fraser, 2019). Many factors attribute to shaping the need for external finance by SMEs. For example, the sector in which SMEs operate can offer some explanations for their financing requirement. This is due to differences in asset structure across sectors, i.e., firms operating in sectors categorised by tangible assets are more likely to access bank financing and require a higher input of finance than those operating in the services sector. Mac an Bhaird (2013) finds that Irish SMEs in the construction sector are more likely to apply for bank financing compared to those in the services sector. Similarly, Beck et al. (2008a) find that firms in the manufacturing sector are the greatest users of bank finance. Moreover, the size and age of the business enterprise affects the need for external finance. Empirical evidence supports the positive relationship between firm size and the probability of applying for bank finance (Mac an Bhaird, 2013) and the amount of bank credit used (Cassar, 2004). In that, larger firms were found to use more debt than small firms (Daskalakis & Psillaki, 2008). Similarly, Love et al. (2011) find that younger firms rely less on bank finance and more on informal funds. As firms mature, they tend to switch to formal bank financing. This relationship between firms' age and source of finance holds despite firm size, sector and country (Love et al., 2011). Likewise, in a cross-country study, Brown et al. (2010) find that firm age is positively related to the use of bank finance by SMEs and negatively related to the use of informal funds, e.g., loans from family and friends. The business strategies or objectives can also be linked to the need for external finance. For example, SMEs with a more aggressive strategy of business expansion are likely to need more external finance relative to SMEs with a more passive strategy. It is argued that high growth firms tend to exhaust internal funds, which increases their need to seek external finance in order to invest in new profitable opportunities (Daskalakis & Psillaki, 2008). Cassar (2004), for example, finds a significant association between firm's intentions for growth and the decision to seek external finance, including bank finance.

Overall, the literature review suggests that it is important to incorporate different aspects of firm's borrowing decisions in analysing credit rationing. It is argued that more studies are increasingly recognising that self-rationing is potentially more of a constraint on entrepreneurs than traditional credit rationing (Fraser, 2019). It is important hence to assess the extent to which lower rates of accessing bank finance lie within supply-side or demand-side factors as different access problems require different measures of intervention (Beck, 2013)

### **4.3 Data Collection and Sample**

As mentioned in Chapter 3, this thesis employs a questionnaire survey instrument as a primary data collection method due to the lack of adequate published data on SMEs, particularly in developing countries such as Saudi. The total response rate from the employed questionnaire survey is 39.9%, therefore above the average response rate for small businesses studies which hovers around 30% (Dennis, 2003). Those responses were then comprehensively checked for logical consistency and completeness. The empirical analysis is conducted on a subset of data that includes only firms who have applied for bank finance in recent years. This is because Saudi has been experiencing an economic downturn since 2014. In this way, the economic cycle is common to all respondents in this subset data. No restrictions were applied on SMEs who have not applied for bank finance. The final sample for the empirical analysis comprises 328 firms<sup>4</sup>.

#### **4.3.1 Summary Statistics of the Data**

Table 4.1 presents summary statistics of the survey data that outlines the general background of sampled firms and owner/manager characteristics for the full sample and for subsamples based on firms' borrowing decision (i.e., applicant vs. non-applicant).

The current study defines firm age as follows: new firms are less than three years old; established firms have been in business for 3-6 years; old firms have been operating for 7-10 years and very old firms are over 10 years old. Table 4.1 shows that sample firms are relatively old as less than a quarter of respondents indicate that they have been in business for less than three years (around 21%). Regarding firm size, the descriptive statistics suggest that micro-sized enterprises are underrepresented in the sample when compared to the general population of Saudi (26% vs. 87%). By implication, small-sized and medium-sized enterprises are overrepresented when

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<sup>4</sup> For more details, see Chapter 3.

compared to the population (60% vs. 12%) and (15% vs. 1%), respectively (General Authority for Statistics, 2017a). However, since the study is more focused on SMEs, such overrepresentation should not be problematic.

Moreover, the highest number of respondents indicate that they operate in wholesale/retail, i.e., trade sector, representing 28% of total responses. This closely represents the overall population in Saudi where the trade sector accounts for the largest percentage of enterprises, i.e., 47.3% (General Authority for Statistics, 2017a). However, respondents from the construction sector are underrepresented when compared to the general population, accounting for around 13%. The recent economic downturn can provide some explanation; the construction sector has witnessed an increase in the number of firms exiting this market since the decline in oil price, due to the higher volume of costs, higher cost of implementation and the increase in the cost of labour by about 150% (Al-Watan, 2017).

Additionally, the majority of SMEs in the sample are sole proprietors or in partnership as their legal status (around 71%). Limited liability companies account for 29% of the total sample. Such figures closely represent the overall population where sole proprietors constitute the majority of registered firms (79.3%), followed by limited liability (15%), whereas partnerships account for only 1% (Internal Trade Agency, 2018). Moreover, the majority of sampled owners/managers (around 66%) indicate that they aim to grow the business in the coming three years either by increasing production/service levels, introducing new goods/services or opening new locations. However, less than a quarter (21%) intend to downsize their businesses or close altogether. Again, this can be a result of the recent contraction in Saudi's economy and the austerity measures imposed (Azhar, 2019).

The current study also investigates employment change in surveyed firms. Table 4.1 shows the average employment change for sampled SMEs is 2.16%. According to Storey (1994a), conventional employment growth is calculated as:

$$\frac{E_t - E_0}{T}$$

where,  $E_t$  is the current employment and  $E_0$  is employment in 2014 since older SMEs provided the number of employees in that year. Employment change in young SMEs is calculated as:

$$\frac{E_t}{T}$$

$E_t$ = number of current employees and  $T$  is number years of operation of the firms. It is argued that this measure is a good proxy for growth in young businesses (Storey, 1994a)

As mentioned in Section 3.1.1, this thesis is interested in three firm activities that are identified in economic history as being pivotal in deriving economic growth and development: inter-firm relationships, new-to-firm innovation, and exporting (Bateman, 2017). This is to measure the effect of those activities on the demand for bank finance and if the large banks' models can identify and support such firms. The current study identifies firms as involved in inter-firm relationships only if they are integrated with large corporations, foreign firms and/or government organisations. The reason for this restriction is that the literature suggests that access to finance can be facilitated for such SMEs either because those large organisations might offer direct financing to SMEs, or the link to such large organisations strengthens SMEs' capacity to obtain credit. This can happen either through the reputational effect of working for a large organisations, the reliable future cash flows and orders from such large firms, or because those large organisations may be willing to offer guarantees (Navas-Alemán et al., 2012). Such effects are expected to be lower for SMEs who are involved only with other local small-sized and/or medium-sized firms. Table 4.1 shows that only 38% of sampled firms indicated having such inter-firm relationships. Moreover, the current study employs *new-to-firm innovation* to define innovative firms. Table 4.1 shows that more than half of the sample (i.e., 56%) has either introduced/significantly improved product(s)/service(s) or processes of manufacturing products/offering services during the past three years. Furthermore, a minority of SMEs in the sample indicated that they directly or indirectly export (indirect export is when products are sold domestically to a third party that exports them), i.e., only 21% are direct/indirect exporters. Such a low number of exporters is common in the GCC oil countries (Rocha, 2011).

Regarding the characteristics of entrepreneurs, the average number of founders in the sample is around two and male entrepreneurs dominate. Only around 12% are female-led businesses. This low percentage of female respondents is representative of the general population. The percentage of SMEs owned by women is 12% of the total enterprises in Saudi (Saudi Press Agency, 2018). Additionally, the majority of SMEs' owners/managers are from 30-50 years old, representing around 78% of sampled entrepreneurs. This percentage is similar to that of the

General Entrepreneurship Monitor's report on Saudi, i.e., entrepreneurs and established businesses owners averaged 37 and 39.5 years old, respectively (Coduras et al., 2019).

Moreover, sampled owners/managers are generally educated; approximately 80% of them have bachelor's or postgraduate degrees. This percentage is in line with that of Coduras et al. (2019) who find that 75% of entrepreneurs and established business owners in Saudi have at least a university degree. Besides, the largest proportion of sampled business owners were salaried employees (77%). Only around 13% have previous experience in managing small businesses as they were/are owners of other small enterprises. The dominance of employment experience is one of the characteristics of the oil economies of the GCC. Nationals in those countries tend work in the public sector due to its desirable positions. This in turn discourages risk-taking in the SME sector (Rocha et al., 2011).

Table 4.1 further shows that the desire for bank finance is a characteristic of a relatively lower percentage of owners/managers in the sample. Around 47% have selected conventional bank financing/sharia-compliant bank financing as a preferred source of finance, should their enterprise need external finance in future. It appears that bank finance is *not* desired by a slightly higher percentage of the sample as an external source of finance in any given time, i.e., by around 53% of total respondents. This relatively lower desire for bank finance in Saudi is reflected in the number of firms who have actually applied for it. Only around 38% of sampled firms have applied for bank finance for business purposes, whereas the majority (approximately 62%) have never applied. Of applicant firms, around 48% have applied for guaranteed loans through the CGS *Kafalah*, while around 52% have applied for non-guaranteed bank loans. Moreover, the majority of applicant SMEs in the sample have applied for working capital purposes (approximately 59%). Applications for fixed assets investment purposes represent around 28%. Applying for start-up purposes and project financing purposes only account for 9% and 4%, respectively. From the open-ended questions, respondents elaborated that project financing includes obtaining letters of guarantee from the bank to enter initial bidding processes or final bidding processes for project contracts, down payments, issuance of credit and refinancing, which usually have short-term maturities.

Moving to the current study's measurements for banks' involvement with SMEs, Table 4.1 shows that the usage of fee-based non-lending products/financial services by SMEs is not

prevalent in Saudi. A smaller share of sampled firms are users of such products and services, accounting for approximately 38%, while only around 3% became customers for such products/services after applying. This contrasts with findings in other developing countries where de la Torre et al. (2010) find that the use of non-lending services/products is substantial; almost all SMEs in their sampled developing countries use these services/products. This lower percentage of bank involvement with SMEs in Saudi, nevertheless, can be attributed to the fact that banks have only recently started to show interest in this segment under Vision 2030. The Vision aimed to increase the share of SMEs loans as a percentage of total banks' loans from the current 2% to 5% by 2020 (Saudi Vision 2030, 2017). On their website, the *Kafalah* Program states that it aims to encourage financial institutions to deal with SMEs. Additionally, it aims to attract a new segment of SMEs' owners/managers who are not accustomed to dealing with financing agencies (Kafalah Program, n.d. b), which suggests that SMEs' interaction with commercial banks is not prevalent in Saudi.

Table 4.1 also presents averages for survey data variables sorted by firms' borrowing decisions. The last column reports univariate tests of differences in means between applicant and non-applicant SMEs; the data suggest that applicant and non-applicant firms differ across some characteristics. Interestingly, these tests suggest a higher percentage of non-applicant firms listed bank finance as a preferred source of external funds if needed. This in turn suggests some proportion of latent demand for bank finance. Moreover, non-applicant firms appear to be significantly smaller in size, unincorporated firms (i.e., sole-proprietorship or partnership), non-innovative and non-exporter. The results on firm size, and innovative and exporting activities are aligned with previous studies on non-applicant firms (e.g., Brown et al., 2011; Lee et al., 2015; Love et al., 2011). However, the result on firm's legal status contrasts with studies by Freel et al. (2012) and Mac an Bhaird (2013). The former finds that limited liability firms are more likely to be non-applicant, and particularly are more likely to be discouraged by anticipated rejection. The latter study finds that the need for control and independence in unincorporated firms pushes them to use debt financing in the form of bank financing, as opposed to seeking external equity. Nevertheless, since limited liability firms in Saudi are required to prepare audited financial statements for each fiscal year under Article 175 of Saudi Companies' Law (1965), it can be argued that such firms are more transparent. The result, therefore, is in line with Brown et al. (2011) that audited firms are more likely to apply for bank finance.

Additionally, Table 4.1 suggests that non-applicant firms have lower numbers of founders and are more likely to be female-led businesses, which aligns with the literature (Lee et al., 2015; Treichel & Scott, 2006). Interestingly, involvement with the bank over fee-based non-lending products/services does not seem to have a statistically significant difference between applicants and non-applicants; this contradicts previous studies which found that influenced the borrowing decision. For example, Cole et al. (2004) find that 81% of applicant firms had a deposit account with the bank and 31% of them obtained bank's financial management services. It can be argued, hence, that this observation on involvement with the bank may simply reflect a correlation with a third variable. Therefore, in the coming section a multivariate analysis is conducted.



**Table 4.1 Descriptive Statistics**

	Full Sample (n=328)	Non-applicant (n=204)	Applicant (n=124)	t test and $\chi^2$ statistics
<b>Firm Characteristics:</b>	<b>Obs.</b>	<b>Total percentage of firms</b>		
<b>Firm age group</b>	328			.672
New (<3 years old)		21.0%	62.3%	37.7%
Established (3-6 years old)		35.4%	63.8%	36.2%
Old (7-10 years old)		18.6%	63.9%	36.1%
Very old (>10 years old)		25.0%	62.2%	37.8%
<b>Firm size group</b>	328			<b>11.090***</b>
Micro (1-5 employees)		25.6%	73.8%	26.2%
Small (6-49 employees)		59.5%	61.5%	38.5%
Medium (50-249 employees)		14.9%	44.9%	55.1%
<b>Industry sector</b>	328			7.490
Manufacturing		17.4%	47.4%	52.6%
Personal services		19.2%	66.7%	33.3%
Professional/logistics services		22.3%	67.1%	32.9%
Wholesale/retail		28.4%	61.3%	38.7%
Construction		12.8%	69.0%	31.0%
<b>Legal status</b>	325			<b>5.997**</b>
Sole-proprietor or partnership		70.8%	66.1%	33.9%
Limited liability		29.2%	51.6%	48.4%
<b>Firm performance</b>				
Average employment change	328	2.16%	2.57%	1.48%
<b>Growth intentions</b>	328			1.934
Grow		66.2%	61.3%	38.7%
Maintain business size		12.5%	56.1%	43.9%
Downsize		21.3%	68.6%	31.4%
<b>Firm activities</b>				
Inter-firm relationships	320	38.1%	58.2%	41.8%
No inter-firm relationships		61.9%	64.1%	35.9%
New-to-firm innovation	328	56.4%	57.3%	42.7%
No new-to-firm innovation		43.6%	68.5%	31.5%
Exporter	328	21.0%	49.3%	50.7%
Non-exporter		79.0%	65.6%	34.4%
<b>Entrepreneurs' Characteristics:</b>				
<b>Business founders</b>				
Mean number of business founders	327	1.82	1.71	2.01
<b>Gender</b>	328			<b>11.751***</b>
Female		11.9%	87.2%	12.8%

Male		88.1%	58.8%	41.2%	
<b>Age group</b>	328				.451
Below 30 years old		8.5%	60.7%	39.3%	
Between 30-50 years old		77.7%	61.6%	38.4%	
Above 50 years old		13.7%	66.7%	33.3%	
<b>Education</b>	327				1.396
No bachelor's degree		19.6%	60.9%	39.1%	
Bachelor's degree holder		51.7%	59.8%	40.2%	
Postgraduate degree holder		28.7%	67.0%	33.0%	
<b>Previous experience</b>	323				1.380
Owned another SME		12.7%	53.7%	46.3%	
Employment experience		77.4%	62.4%	37.6%	
Student		9.9%	65.6%	34.4%	
<b>Desire and application for bank finance:</b>					
<b>Desire for bank finance</b>	326				<b>13.034***</b>
Prefer bank finance as an external source of funds if needed		46.6%	52.3%	47.7%	
Does not prefer bank finance		53.1%	71.7%	28.3%	
Applied via <i>Kafalah</i>	60	18.2%	N/A	48.4%	N/A
Applied for non-guaranteed bank finance	64	19.5%	N/A	51.6%	N/A
Main purpose: start-up	123	3.4%	N/A	8.9%	N/A
Main purpose: fixed assets		10.4%	N/A	27.6%	N/A
Main purpose: working capital		22.3%	N/A	59.3%	N/A
Main purpose: project financing		2.1%	N/A	4.1%	N/A
<b>Involvement with the bank:</b>					
Uses fee-based non-lending products/services prior to applying if applicant	322	37.6%	65.3%	34.7%	.999
Uses fee-based non-lending products/services after applying		2.5%	N/A	100%	
Does not use fee-based non-lending products/services		59.9%	62.2%	37.8%	

Notes: This table presents the number of observations and details the number of respondents in each variable for the full sample and the subsamples of applicants and non-applicant firms. N/A means not applicable. Significance: \*\*\* p<0.01; \*\* p<0.05; \* p<0.1.

## 4.4 Analytical Approach

### 4.4.1 Measurement of Credit Rationing Status

Following Kuntchev et al. (2012), who use the WB's Enterprise Survey to construct major groups to measure the credit-constraint status of SMEs, the current study categorises sampled firms into different categories regarding the extent of credit rationing. Nevertheless, the conditions used in defining the groups are quite different because the current study focuses mainly on bank finance while Kuntchev et al. (2012) focus on external finance generally. In the current study, firms are categorised as: *fully credit-rationed*, *partially credit-rationed*, *non-credit-rationed*, conditional on application for bank credit and bank's decision.

The current study departs from Kuntchev et al.'s (2012) in the following ways. First, they categorised firms who did not apply for external finance because of the potential loan's terms and conditions (i.e., unfavourable interest rate and/or high collateral requirements) as *fully credit-constrained*. However, the current study assumes such firms to be those who drop out of the market because the cost and requirements of being pooled with greater risk applicants is high. Therefore, this group is categorised in the non-applicant firm category, which is analysed in the coming section. By focusing only on those SMEs who have actually applied for banks' finance, analysis of the conditional probability of credit rationing against the probability of obtaining bank finance can be conducted more accurately.

More importantly, unlike Kuntchev et al. (2012) who were more restricted by the older version of the Enterprise Survey and, hence, could only infer loan application rejections by comparing the questions on application to bank credit with the fact that no external finance was used, the current survey has an explicit question on the outcome of the application. It asks if the firm was able to obtain the full amount requested, less than the requested amount or if the application was rejected. Hence, the *partially credit-rationed* group can be more precisely identified.<sup>5</sup> Using the designed survey, three major groups were constructed to establish the current study's indicator of credit rationing status as follows:

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<sup>5</sup> NB: these questions have been added to more recent versions of the Enterprise Survey.

1. **Fully Credit-Rationed.** SMEs in this group have a need for bank finance and applied for bank credit but were denied credit altogether. SMEs in this group fit into the following criteria simultaneously:

- A) Have applied for bank finance for business purposes but the success rate of their applications is zero, and
- B) Their most recent bank application was rejected.

2. **Partially Credit-Rationed.** Firms in this group have a need for bank finance and were able to secure it, but only to a certain level. This means their demand for this source of finance was only partially met, i.e., they were underserved by these financial institutions. This group includes enterprises that meet the following conditions:

- A) Have applied for bank finance more than once but their applications were not approved each time they applied, i.e., the success rate of their applications is greater than 0 but less than 1, or;
- B) The success rate of their applications is 1 but were given less than the total amount requested from the bank in their most recent application.

3. **Non-Credit-Rationed.** Includes firms that fit into the following criteria:

- A) Have applied for bank finance more than once and the success rate of their applications is 1, and
- B) Were able to secure the full amount requested in their latest bank application.

Firms in the *non-credit-rationed* group are able to obtain bank credit and have their demand served by banks. Distinguishing this group and their characteristics can provide some insights when investigating the type of firms who have access to bank finance in Saudi.

Table 4.2 presents summary statistics for the indicators of credit rationing. As mentioned earlier, a relatively lower share of SMEs in Saudi apply for bank finance (38% vs. 62% non-applicants). However, over half of those who apply for bank finance (i.e., 54%) are credit-rationed, i.e., their demand for finance was not met by commercial banks. Furthermore, of those credit-rationed firms, approximately 10.2% offered to pay the bank a higher interest rate but the bank still refused. In such circumstances, banks are literally rationing credit. Unsurprisingly, the loan rejection rate in Saudi is substantially high when compared to that in transition economies in

Eastern Europe and to those in Western Europe where only 5% and 3% of applicant firms are rejected, respectively (Brown et al., 2011).

On the other hand, a lower share of applicant firms (approximately 46%) were successful in obtaining bank finance. Of those, a higher majority were underserved by banks (26.6%), which means that they did not obtain finance each time they applied and/or obtained a lower than the requested amount in their latest application. Only 19.4% of bank applicants in the sample were able to obtain bank finance each time they applied and were successful in obtaining the full amount requested in their latest application.

**Table 4.2 Credit Rationing and Approval Rates**

No. of firms	Did not apply	Applied	<u>Credit Rationing Status</u>		
			Credit-Rationed	Partially Credit-Rationed	Non-Credit-Rationed
328	204	124	67	33	24
	<u>Share of all firms:</u>		<u>Share of all firms that applied:</u>		
	62.2%	37.8%	54.0%	26.6%	19.4%

Source: survey data

It is important to note that more than half of firms whose latest applications were rejected indicated that insufficient collateral was one of the reasons provided by the bank for rejecting their application (i.e., around 57.1% of total responses). Moreover, around 19% of total responses indicate that the business/project not being guaranteed by *Kafalah* was one of the reasons why banks turned them down. Since CGSs act as substitutes for collateral (Vogel & Adams, 1997), one can estimate that around 75.7% of total responses suggest lack of collateral as a main reason for banks' rejection. On the other hand, banks' rejection due to low credit score at the Saudi Credit Bureau or the project being considered unprofitable and/or high risk, are the least selected options in explaining why banks declined lending, representing approximately 13%, 14%, and 7%, respectively. Traditional reasons which are related to the opacity of SMEs, such as lack of credit history and/or track record, represent a higher percentage of responses of around 24% and 23%, respectively. Approximately 27% of total responses selected *other*

reasons. From the open-ended answers provided, around 20% of firms indicated the lack of audited financial statements as one of the reasons why banks declined lending (Table 4.3).

**Table 4.3 Reasons Provided by Banks for Turning Down Applicants**

Reasons Provided by Banks for Turning Down Applicants	Responses		% of Total Cases
	No. of Respondents	Percent	
Insufficient collateral	40	31.0	57.1
Project is not guaranteed by <i>Kafalah</i>	13	10.1	18.6
Low credit score	9	7.0	12.9
No credit history	17	13.2	24.3
No track records	16	12.4	22.9
High risk of the project	5	3.9	7.1
Project was considered unprofitable	10	7.8	14.3
Other	19	14.7%	27.1
<b>Total</b>	129	100.0	184.3*

\*Percentage does not add up to 100% because it is a multiple response question where respondents choose more than one answer. Total number of cases is 70.

Compared to applicants who were approved for bank finance either partially or fully (i.e., *partially credit-rationed and non-credit-rationed*), approximately 73% of approved borrowers either pledged collateral or were guaranteed by the government CGS *Kafalah*. Around 18% of approved firms extended collateral against their loans and approximately 39% of them were guaranteed by *Kafalah*. Around 16% of approved firms pledged collateral in addition to being guaranteed. Approximately 28% of approved firms were not required to provide collateral (Table 4.4). From the open-ended question, those who explained why they were not required to provide collateral provided the following reasons. Some indicated that the good performance of the firm reflected in its revenue and/or good credit rating as why they were not required to pledge collateral. Others mentioned that the type of financing requested does not require collateral. Moreover, others indicated that while they did not provide collateral, they provided promissory notes signed by the owner to the bank and/or assigned project's proceeds to the bank. Two respondents claim that they do not know the reason why the bank did not ask them to pledge collateral. However, one respondent referred this to being an old client at the bank. Overall, survey data suggest the importance of collateral to obtain bank finance in Saudi.

**Table 4.4 Collateral Required from Partially and Non-Credit-Rationed Firms**

	<b>Frequency</b>	<b>Percent</b>
Pledged collateral	9	17.6
Pledged collateral and guaranteed by Kafalah	8	15.7
Guaranteed by Kafalah	20	39.2
Did not pledge collateral	14	27.5
<b>Total</b>	<b>51*</b>	<b>100</b>

\*Six responses are missing

#### **4.4.2 Empirical Strategy and Variables Selection**

The numbers of applicant and non-applicant SMEs are likely to be driven by some firm/entrepreneur's characteristics which might be correlated with the decision to borrow and the success in obtaining bank finance. In order to control for this, a series of Probit regression models are estimated to know: (1) which firms are likely to apply for bank finance, and (2) which applicant firms are likely to be *credit-rationed*, *partially credit-rationed* or *non-credit-rationed*. The indicators for firms' borrowing decision and the subsequent success/failure in securing finance are dichotomous variables that can be modelled by Probit or Logit regressions. However, following Mina et al. (2013), Probit models are chosen because they can be used in bivariate set-ups with endogenous selection and hence allow for consistent models of both decisions (i.e., firm's borrowing decision and bank's lending decision). Heckman selection model is estimated to consider the credit rationing status of applicant firms while controlling for selection effects (see Brown et al., 2011; Freel et al., 2012; Lee et al., 2015; Mina et al., 2013 for similar applications). Such a model is important to deal with selection bias (Heckman, 1979) which is likely to occur as those who apply for bank finance are not representative of the general population, i.e., firms with certain characteristics are more likely to seek bank finance; and those who do not cannot be turned down by banks.

The key variable of interest is the use of fee-based non-lending products/services offered by large banks as a proxy for firm involvement with the bank. This is to test if such involvement does indeed facilitate access to bank finance. Nevertheless, one of the most intractable difficulties in investigating credit rationing is associated with the fact that bank credit proposals are *not* qualitatively homogeneous. Therefore, it is important to control for these characteristics which are sources of heterogeneity and are most likely to impact upon the success of bank

finance applications (Freel, 2007). Standard characteristics to control for include firm size, age, sector and legal status, also, gender, and qualifications of the entrepreneurs (Lee et al., 2015). Many of the selected variables in the current analysis have been used in other multivariate studies on small business financing. Table 4.5 provides a guide to these prior studies' findings. However, influenced by past research on the importance of inter-firm relationships with other enterprises (Bateman, 2000), this variable is included in the analysis. The definitions of the selected firm-level variables in the current study are provided in Appendix 4.A, together with the expected signs of their assumed relationships with firm's borrowing decision and bank's lending decision.



**Table 4.5 Previous Studies’ Findings on Firms’ Borrowing Decisions and Banks’ Lending Decisions**

Variable	Study	Findings on Firms’ Borrowing decisions	Findings on Banks’ Lending Decision
<b>Firms’ characteristics:</b>			
<b>Firm age</b>	Love et al. (2011)	Younger firms rely less on bank finance and more on informal funds. As firms mature, they tend to switch to formal bank financing.	
	Mac an Bhaired (2013)	Younger firms have a lower demand for bank credit than older firms.	
	Brown et al. (2010)		Firm age is positively related to the use of bank finance by SMEs and negatively related to the use of informal funds such as those provided by family and friends.
<b>Firm size</b>	Mac an Bhaired (2013)	A positive relationship between firm size and probability of applying for bank finance.	Larger firms tend to use more debt than smaller SMEs.
	Freel et al. (2012)	Larger firms in terms of number of employees are more likely to apply for bank finance.	
	Treichel and Scott (2006)		Banks are less willing to provide loans to smaller firms because of the higher costs and relatively lower profit margins in the smaller amounts typically requested by such firms.
<b>Industry sector</b>	Lee et al. (2015)	Manufacturer SMEs are characterised as being capital-intensive firms with higher financing needs compared to those in the services sector.	
	Mac an Bhaired (2013)	SMEs in the construction sector are more likely to seek bank financing compared to those in the services sector.	
	(Beck et al., 2008b)		Manufacturer SMEs are the greatest users of bank finance.
	Daskalakis and Psillaki (2008)		Firms with large investments in tangible assets have smaller financial distress costs. Therefore, manufacturers often receive better credit terms than those in the services sector.
	Freel et al. (2012)		The wholesale/retail sector is a well-understood sector by bankers. Banks’ appraisal procedures are unsympathetic towards services-based firms.
<b>Legal status</b>	Mac an Bhaired (2013)	The need for control and independence in closely held firms, e.g., sole proprietorships and partnerships, pushes them to use debt financing in the form of bank financing, as	

		opposed to seeking external equity from new investors.	
	Freel et al. (2012)	Limited liability companies are more likely to be discouraged from applying for bank finance.	The empirical evidence on banks' lending decisions is less clear-cut.
	Cassar (2004)		Banks may consider SMEs' incorporation as a good indication that conveys credibility and formality of operations and may represent a signal of future growth or growth potential.
	Cowling and Mitchell (2003)		Limited liability firms default more than sole proprietors or partnerships.
<b>Firms' previous performance (employment change)</b>	Lee et al. (2015)	Firms experiencing growth or decline are more likely to seek finance. In the former case, balance sheets are expected to be better and firms are more likely to apply for growth capital. For the latter, declining cash-flows make firms with declining turnover borrow funds.	Firms with declining performance find it harder to access finance.
	Freel (2007)		Firms experiencing faster growth are less likely to be successful applicants due to cash constraints and collateral difficulties which are more acute in growth firms.
<b>Firms' growth intention</b>	Cassar (2004)	A significant association between firm's intentions for growth and the decision to seek bank finance.	
	Freel et al. (2012)		It is anticipated that firms with growth ambitions are likely to be viewed positively by potential lenders. Such intention indicates optimism surrounding the project.
<b>Inter-firm relationships</b>	Carter and Jones-Evans (2012)	Networks within inter-firm relationships assist SMEs in sourcing finance, obtaining information, advice and supplementing internal sources.	
	de la Torre et al. (2010)	Engagement with large firms causes SMEs to expand. Such expansion is likely to result in higher needs for external finance.	Banks outreach promising SMEs who are involved in inter-firm relationships with other corporations in the bank's portfolio utilising the embodied knowledge in large corporates regarding the quality of those integrated SMEs.
	Navas-Alemán et al.,(2012)		Financial flow for SMEs in inter-firm relationships can be facilitated by: (a) the reputational effect of such engagement which increases the default cost to such SMEs (thought of as kind of collateral), (b) the steady future cash flow and orders from those large corporates, or (c) the large firm might be willing to offer guarantees to its supplier SME.

<b>New-to-firm innovation</b>	Lee et al. (2015)	Innovative firms are more likely to seek funding from banks than other firms.	Innovative firms are more likely to encounter absolute credit rationing from all sources.
	Freel (2007)		Only a few innovative firms are successful applicants compared to their less innovative peers.
	Mina et al. (2013)		In the US, firms involved new-to-firm innovation are actually more likely to secure finance than other firms. This was not found in the UK.
<b>Exporting</b>	Brown et al. (2011)	Exporters are more likely to seek bank finance.	Exporters have lower rejection rate.
	Freel (2007)		Exporter firms enjoy loan application success.
<b>Entrepreneurs' characteristics:</b>			
<b>Number of founders</b>	Lee et al. (2015)	SMEs with larger numbers of directors are more likely to seek external finance because of better external networks and sources of knowledge.	Firms with more directors are more likely to have difficulty obtaining finance. This can reflect the finance they apply for, with several directors leading to more ambitious applications.
<b>Entrepreneur's gender</b>	Treichel and Scott (2006)	Female entrepreneurs are less likely to seek bank finance than males. This is usually associated with females' lack of self-confidence, higher risk aversion, desire to maintain control and the belief that supply-side discrimination exists.	Entrepreneur's gender is not significant in explaining the probability of an application being turned down.
	Cavalluzzo and Cavalluzzo (1998)		There is little variation in credit availability by gender.
	Carter et al. (2007)		There is still a residual gender effect in accessing finance. The structure of the business does not entirely account for such differences between male-led and female-led businesses.
<b>Entrepreneur's age</b>	Gibb and Ritchie (1982)		Owner's own resources are important to his/her ability to raise additional finance. The age of the entrepreneur is argued to be related to accrued human capital and asset formation (i.e., more resources).
	Freel et al. (2012)	Younger entrepreneurs are argued to be needier for bank finance. Pushed by their optimism, they are more likely to seek bank finance.	Younger entrepreneurs are less likely to be successful loan applicants because of their lower personal assets which can be pledged against borrowing.
	Deakins et al. (2010)		Bankers argue that in the case of older entrepreneurs, there should be succession planning in place. For younger ones, it is the lack of experience that could be a factor.

<b>Entrepreneur's education and experience</b>	Freel et al. (2012)	It is not clear that education influences borrowing or lending decisions.	
	Read (2002)	Without financial competences and knowledge, many SMEs' owners/managers are less able to effectively assess the financial needs of their enterprises or successfully negotiate financial arrangements.	
	Gamage (2011)		Entrepreneurs' education is associated with access to bank finance.
	Abdulsaleh and Worthington (2013)		The educational background and experience of the SME owner/manager, as a proxy for human capital, is found to be related to usage of bank finance.
<b>Involvement with the bank:</b>			
<b>Using fee-based non-lending products/services</b>	de la Torre et al. (2010)		The sale of such products and services deepens banks' involvement with SMEs and can increase lending to this segment via diversifying risk in terms of lending to new types of firms while receiving income from those fee-based non-lending activities.
	Cole et al. (2004)		The majority of borrowers (around 81%) had a deposit account with the bank while 31% obtained financial management services from the bank.
	Beck et al. (2017)		The presence of banking relationships was found to be associated with fewer firms being credit-constrained in 2008-2009, i.e., during the financial crisis. This impact is greater for young, small and non-exporting firms, in addition to firms with no other external sources of finance and those who lack fixed assets.
	Freel et al. (2012)	Firms involved with banks through seeking business advice are less likely to register discouragement.	
<b>Application through CGSs</b>	Cowling and Mitchell (2003)		UK's Small Firm Loan Guarantee (SFLG) was successful in addressing a very real capital constraint for most of participant small firms.
	KPMG (1999)		There is a strong case for SFLGS to continue playing a role in meeting the needs of SMEs who lack security but have sound business propositions.

<b>Main purpose of application</b>	Kotey (1999)	SMEs rely heavily on short-term credit in the form of business credit cards and bank overdrafts.	Banks avoid lending SMEs long-term funds because of the high cost and risk associated with such loans.
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Source: previous research findings

#### 4.4.3 Multicollinearity Diagnostics

Like other types of multiple regression, Probit regression is sensitive to high correlation among explanatory variables (multicollinearity) (Freel et al., 2012). According to Tabachnick and Fidell (2014), one should think carefully about including two predictors with a bivariate correlation of .70 or more in the same regression. Tests for multicollinearity using Spearman's correlation coefficient (Table 4.6) indicate little problem in this respect; there are no bivariate correlations above .46. Spearman's correlation coefficient was chosen over Pearson's correlation because the former is argued to be more appropriate for the data obtained, i.e., appropriate for both continuous and discrete variables, including ordinal variables (Muijs, 2012).

**Table 4.6 Correlation matrix of variables used in regression analysis (Spearman's  $\rho$ )**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<b>1</b> Firm age	1.000																
<b>2</b> Firm size	0.25	1.000															
<b>3</b> Industry	0.094	-0.133	1.000														
<b>4</b> Legal status	0.052	0.407	-0.24	1.000													
<b>5</b> EMPL change	-0.366	0.254	-0.123	0.311	1.000												
<b>6</b> Growth intent	0.138	-0.064	0.237	-0.15	-0.344	1.000											
<b>7</b> Inter-firm R'ship	0.000	-0.070	0.009	-0.121	-0.105	0.113	1.000										
<b>8</b> Innovative	-0.065	-0.273	0.245	-0.324	-0.234	0.295	0.148	1.000									
<b>9</b> Exporter	-0.008	-0.043	0.182	-0.168	-0.055	0.196	0.102	0.258	1.000								
<b>10</b> No. founders	0.001	0.323	-0.212	0.46	0.25	-0.179	-0.105	-0.267	-0.101	1.000							
<b>11</b> Gender	0.026	0.073	0.006	0.071	0.003	0.005	-0.123	-0.076	-0.12	0.129	1.000						
<b>12</b> Owner's age	0.268	0.067	-0.036	0.009	-0.146	0.077	0.021	0.046	-0.021	0.000	0.098	1.000					
<b>13</b> Education	-0.089	0.005	-0.167	0.171	0.064	-0.016	-0.159	-0.187	-0.096	0.148	-0.005	0.026	1.000				
<b>14</b> Experience	-0.104	-0.063	0.156	-0.106	0.000	-0.027	0.048	0.076	0.129	-0.045	-0.205	-0.267	-0.028	1.000			
<b>15</b> <i>Kafalah</i>	-0.045	-0.087	-0.059	0.158	0.063	-0.105	-0.197	-0.060	-0.182	0.064	-0.130	0.038	0.146	-0.067	1.000		
<b>16</b> User non-lending	0.082	0.231	-0.018	0.26	0.057	-0.042	-0.040	-0.075	-0.058	0.146	0.016	-0.031	0.082	-0.029	-0.099	1.000	
<b>17</b> Main purpose	0.174	0.006	0.296	0.065	0.030	0.137	-0.097	-0.176	-0.004	0.059	0.009	-0.019	0.055	-0.062	0.2	0.030	1.000

## 4.5 Bank Credit in Saudi Arabia

In this section, cross-sectional analysis on credit rationing in Saudi based on the structured survey is presented. The section starts by examining first which firms apply for bank finance (firms' borrowing decision). This is followed by examining the credit rationing status of applicant firms (banks' lending decision). The analysis on non-applicant firms is presented in Section 4.6.

### 4.5.1 Which firms apply for bank finance?

Table 4.7 presents results for the estimated Probit model of application for bank finance. The dependent variable in this regression is the dummy variable *Apply* where 1= if the firm indicates it has applied for bank finance over the last three years; 0= if the firm indicates it has never applied. The desire for bank finance as an external source of funds is controlled for since it is likely to influence the borrowing decision. The full model containing all variables is statistically significant  $\chi^2$  (26 df, N=303) =53.389,  $p < .001$ . This indicates that the model is able to distinguish between respondents who have applied for bank finance and those who did not.

As expected, the results in Table 4.7 suggest that the preference for bank finance as an external source of funds positively associates with the decision to apply. Nevertheless, some structural characteristics appear to also have significant effects on firms' borrowing decision. For instance, in common with the small firm financing literature: size matters. The results suggest that smaller firms in terms of employment, i.e., micro and small-sized firms, are less likely to apply for bank finance, compared to medium-sized firms, which may be demand-driven or supply-driven. In the former case, smaller firms may have access to alternative informal sources of funds or may have less profitable investment opportunities, hence, lower need for bank finance (i.e., voluntary self-rationing). On the other hand, smaller firms' decision not to apply can be supply-side driven if banks demand higher interest rates and/or collateral requirements due to greater perceived risk in such firms. Therefore, they are credit-constrained. This highlights the importance of differentiating non-applicant firms as in the coming section.

Additionally, firms' previous employment change is statistically significant in explaining the decision to seek bank finance. In contrast to Lee et al. (2015), the results suggest that firms who have experienced recent positive change in employment are less likely to be applicant firms.

This result also has two explanations. First, firms with recent growth might have cash constraints and collateral difficulties (Freel, 2007), hence, expect to perceive rather tighter credit constraints from banks as in Binks and Ennew (1996). Alternatively, such firms having been able to achieve recent growth, do not need to borrow. By implication, the results suggest those with negative employment change are more likely to be applicant firms. They might be experiencing declining cash-flow which in turn pushes them to seek bank credit for reasons other than obtaining growth capital. This finding has parallels in other Arab developing countries, namely Jordan, where Kamel (2006) finds evidence that SMEs perceive banks as rescuers and only apply for credit when they face financial problems.

Unsurprisingly, some entrepreneurs' characteristics also have significant effects on the decision to apply. In line with Treichel and Scott (2006), the results suggest that female owners/managers are less likely seek bank finance compared to their male counterparts. This can be explained either by beliefs held by female owners/managers that they might face discrimination during the lending process, or their higher risk aversion to extending personal assets as collateral that might have a detrimental effect on their family well-being, as explained by Brush (1992). Moreover, the coefficient of university education is positive and significant, albeit weakly, i.e., bachelor's degree holders are more likely to apply for bank finance. This observation is consistent with Cowling et al. (2016) who find that university degree holders are less likely to register discouragement due to anticipated rejection. It is also consistent with Nguyen et al. (2020) who find that such entrepreneurs are less likely to self-ration due to debt aversion.

Surprisingly, the results suggest that firms involved with the bank by being customers of fee-based non-lending products/services are less likely to be applicant firms. The result, however, is only significant at the 10% level. This is surprising because previous studies have found such involvement to positively influence SMEs' borrowing decisions, e.g, 81% of applicant firms were found to have had a deposit account with the bank and 31% of them obtained banks' financial management services (Cole et al., 2004). Such results, however, seem to provide support for the current study's attempt to incorporate cultural/religious aspects and SMEs' owners'/managers' preferences and attitudes when explaining their borrowing decisions. These factors may have more influence on SMEs' borrowing decision than the type of involvement they have with their banks. Section 4.6 investigates this issue in more detail.



**Table 4.7 Which firms apply for bank finance?**

	Coefficient estimate	Standard error	Wald	df	95% CI for odds Ratio		
					Lower	Odds ratio	Upper
Desire bank finance	<b>.484***</b>	.1619	8.950	1	1.182	1.623	2.229
Firm age: New (<3 years old)	.055	.2702	.042	1	.622	1.057	1.795
Firm age: Established (3-6 years old)	-.008	.2253	.001	1	.638	.992	1.542
Firm age: Old (7-10 years old)	-.029	.2600	.012	1	.584	.972	1.618
Firm size: Micro (1-5 employees)	<b>-.923***</b>	.3321	7.731	1	.207	.397	.761
Firm size: Small (6-49 employees)	<b>-.675**</b>	.2729	6.122	1	.298	.509	.869
Industry: Manufacturing	.403	.3078	1.716	1	.819	1.497	2.736
Industry: Personal services	.340	.2990	1.292	1	.782	1.405	2.524
Industry: Professional/logistics services	-.022	.2857	.006	1	.559	.978	1.713
Industry: Wholesale/retail	.113	.2729	.171	1	.656	1.119	1.911
Legal status (Ltd.)	.173	.2180	.631	1	.776	1.189	1.823
Employment change	<b>-.019**</b>	.0095	4.150	1	.963	.981	.999
Growth intent: Grow	.063	.2172	.085	1	.696	1.065	1.631
Growth intent: Maintain business size	.310	.2842	1.192	1	.781	1.364	2.380
Inter-firm relationships	.085	.1722	.243	1	.777	1.089	1.525
Innovative	.169	.1878	.806	1	.819	1.184	1.710
Exporter	.244	.2128	1.319	1	.841	1.277	1.938
No. of founders (LN)	.024	.1666	.020	1	.739	1.024	1.419
Female owner/manager	<b>-.831**</b>	.3222	6.650	1	.232	.436	.819
Owner age: below 30 years old	.586	.3887	2.275	1	.839	1.797	3.850
Owner age: between 30-50 years old	.232	.2482	.871	1	.775	1.261	2.051
Education: no bachelor's degree	.238	.2470	.927	1	.782	1.268	2.058
Education: bachelor's degree holder	<b>.347*</b>	.1906	3.317	1	.974	1.415	2.056
Experience: owned another SME	-.093	.3723	.062	1	.439	.911	1.890
Experience: employment experience	-.097	.3114	.097	1	.493	.907	1.671
Uses fee-based non-lending products/services	<b>-.301*</b>	.1779	2.856	1	.522	.740	1.049
Intercept	-.529	.5251	1.017	1	.210	.589	1.648
No. of observations	303						
$\chi^2$	<b>53.389***</b>						
	<b>(26 df)</b>						

Notes: The dependent variable in this table is the dummy variable *Apply*. There are 25 missing cases from some independent variables. All variables are defined in Appendix 4.A. \*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.

#### 4.5.2 Which firms are credit-rationed?

The summary statistics presented in Table 4.2 suggest that more than half of the firms that apply for bank finance in Saudi are credit-rationed with fewer firms being able to obtain bank finance either partially or fully. Therefore, it is important to have a closer look at the determinants of the credit rationing status.

As mentioned above, the sample of firms who apply for bank finance is not representative of the general population of SMEs. This is called selection bias and is corrected for by using Heckman selection model which was estimated using the HECKPROBIT procedure in STATA. This model is used to correct for the probability of a firm applying for bank finance (the selection equation). This estimated probability is then used to correct for the second model which estimates the credit rationing status of applicant firms (the equation of interest). Implementing Heckman model requires identifying at least one variable that is correlated with the firm's decision to apply but does not affect banks' decision to extend lending (Freel et al., 2012). The collected data allow approaching this problem by modelling a firm's decision to apply as a function of the firm's desire for bank finance, i.e., desire for bank finance may affect the probability of a firm applying for bank finance but not the bank's actual decision. However, the likelihood ratio tests of independent equations suggest that selection bias is not present in the three equations on applicant firms' credit rationing status (Appendix 4.B). Therefore, the regressions are re-run using random-effects Probit models, as in Table 4.8.

Table 4.8 presents three sets of results from the estimated Probit models where the dependent variable is one of the measures for the credit rationing statuses provided in Section 4.4.1, i.e., *credit-rationed* (Model 1), *partially credit-rationed* (Model 2), *non-credit-rationed* (Model 3). The main independent variable of interest is the use of fee-based non-lending products/financial services to assess if indeed such involvement with the bank facilitates access to credit. Also controlled for are SMEs who applied through the *Kafalah* Guarantee Scheme since it acts as a substitute for collateral (Vogel & Adams, 1997), and would increase the chances of approval. Standard structural variables on firms' and entrepreneurs' characteristics are also entered, as identified in subsection 4.4.2.

The estimation of the models of credit rationing status followed an iterative process. In the first iteration, Probit regressions were employed to estimate the models of credit rationing status as

a function of all variables. Table 4.8 presents the results of this first estimation. As shown, all three models demonstrated a high goodness-of-fit, but retain many variables that are not statistically significant in explaining the credit rationing status. Therefore, standard practice is to re-estimate the models iteratively, removing one or more predictors that are not statistically significant at each step (Riding et al., 2007). The result is the more parsimonious “reduced model” presented in Table 4.9. As in the first iteration, all three models showed a high goodness-of-fit.

For every credit rationing status, there are two columns, namely, *credit-rationed* (I and II), *partially credit-rationed* (III and IV) and *non-credit-rationed* (V and IV). In this, for every group, there is one complete specification (odd columns) with all variables, and one simplified specification (even columns) with only the intercept and the use of fee-based non-lending products/services.

As shown in Table 4.9, the results with all variables (in the odd columns) and with the simplified specification (in the even columns) suggest that being involved with the bank over fee-based non-lending products/services does not have a significant effect on banks’ lending decision. It must be noted that under Vision 2030, the government of Saudi has imposed some regulations that entail increased usage of such banks’ non-lending activities. For example, by the end of 2017, all commercial facilities were obliged to open bank accounts and start using point of sales through commercial banks to develop non-cash transactions which aimed to eliminate commercial fronting<sup>6</sup> (Ministry of Commerce, 2017). This also allows for higher transparency in financial transactions and supports the collection of the first time introduced Value Added Tax (VAT). Additionally, it is argued that this would benefit enterprises in terms of simplifying the accounting processes, process them in real time, manage inventory and maintain electronic records (Al Zahrani, 2017). Similarly, in 2015, SMEs became obliged to either open bank accounts or issue through commercial banks salary disbursement cards to all employees. In addition to protecting workers’ rights, this Wages Protection Program aims to provide realistic updated information and data that reflect the state of the private sector and its future needs (Ministry of Human Resources and Social Development, 2020). These regulations would also

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<sup>6</sup> Commercial fronting is illegal in Saudi, and is defined as enabling a non-Saudi national to work for his own by a Saudi national in a banned activity for foreigners, whether by using the Saudi violator’s name, licence, commercial register or any other method (Ministry of Commerce, 2021)

allow banks to have accurate reliable information and data on firms' revenue, hence decreasing uncertainty when evaluating loan applications. Nonetheless, the results suggest that bank involvement with SMEs through the cross-selling of these non-lending activities is not statistically significant in determining loan approval.

Other variables, however, appear to have statistical effects on banks' lending decision. As expected, the results provide evidence on the usefulness of *Kafalah*. Applicant firms through *Kafalah* are more likely to be approved, however, only partially (i.e., obtain some of their financing needs), compared to applicants for non-guaranteed bank finance. Furthermore, the results support arguments that bank's lending decision is more affected by firm's structural characteristics (e.g., age and size) which are generally found to be negatively associated with firm failure (Jensen & McGuckin, 1997) and, through this, borrower's riskiness. So, in line with our predictions and the literature, the results suggest that firm age and size affect the likelihood of credit rationing. Newly established SMEs are more likely to be credit rationed and less likely to be non-credit rationed, compared to very old firms who have been operating for more than 10 years. Additionally, Model 3 suggests that even firms who have been trading for 3-6 years (established firms) and old ones who have been in business for 7-10 years are less likely to obtain bank finance each time they apply and/or obtain the full amount requested (i.e., *non-credit rationed*), compared to very old firms. This implies that these older firms are more likely to be *partially credit rationed* (i.e., not successful each time they apply and/or obtain a lower amount than requested). Indeed, although the observations are not statistically significant in Model 2, the directions of the coefficients suggest that established and old firms are more likely to obtain some of their financing needs.

Similarly, the results suggest that smaller firms in terms of employment i.e., micro-enterprises and small-sized firms are more likely to be credit rationed compared to medium sized-firms. To the extent that increasing size suggests lower risk and greater resources (Avery et al., 1998), it is unsurprising that larger firms are more likely to be successful applicants. Model (2) confirms that micro-firms are less likely to obtain even some of their financing needs from banks (i.e., less likely to be *partially credit-rationed*). Additionally, the multivariate analysis suggests that the industry sector in which firms operate influences the likelihood of credit rationing. Model (1) suggests that firms in the professional/logistic services sector and those in the wholesale/retail sector (traders) are less likely to be credit rationed, compared to construction

SMEs. The result, however, is significant at the 5% level only for firms in the trade sector and confirms arguments that this sector is well understood by bankers and hence traders are more likely to be approved (Freel et al., 2012). Nevertheless, Model (2) suggest that traders are more likely to be *partially credit-rationed*, i.e., did not obtain finance each time when they applied and/or obtained a lower amount than requested. Whilst such finding is unexpected since construction firms, similarly to manufacturers, are likely to have higher levels of tangible assets and hence easier access to bank, the economic downturn in Saudi can provide some explanation. As mentioned earlier, the construction sector stands at the threshold of historical losses since the drop in oil prices affected the size of the allocations to public projects and resulted in rescheduling government repayments to construction firms. The percentage of stalled projects in the country increased to about 40% because of the increase in the number of firms exiting this market and because of the reduced volume of bank financing for this sector (Al-Watan, 2017).

Moreover, the results suggest that firms who intend to grow in the foreseeable future are less likely to be credit-rationed and more likely to be non-credit-rationed, compared to those who intend to downsize. It can be argued that firms with growth intentions are superior firms compared to the rest of SMEs. This is so because during the economic downturn such firms are likely to be more efficient and have managed the economic recession more effectively; and, hence, have positive future prospects. This in turn suggests that banks are more likely to provide growth capital for such firms compared to those who apply to finance their declining cash flow.

Furthermore, some of the personal characteristics of the entrepreneurs appear to have significant effects on banks' lending decision. The results show that education, as a proxy for human capital, matters in accessing bank finance. SMEs' owners/managers with lower levels of education, i.e., no bachelor's degree, are more likely to be credit-rationed and less likely to be non-credit-rationed, compared to their highly educated peers, i.e., postgraduate degree holders. This confirms arguments that bankers tend to conflate education with capabilities (Freel et al., 2012).

Last but not least, the main purpose of the application appears significant in explaining banks' lending decisions, albeit weakly. Firms applying for purposes other than project financing are less likely to be non-credit-rationed, particularly those for start-up or fixed assets investments

purposes. The results are unsurprising as the literature argues that SMEs tend to rely on short-term financing which is renewed several times to be used as long-term loans; and, hence, can increase firm's financial risk (Kotey, 1999). It can be argued that applications for project financing entail less risk as they usually involve assigning projects' proceeds to the banks, providing higher assurance of repayment.

Altogether, the results do not find evidence that large banks' involvement with SMEs through cross-selling fee-based non-lending products/services facilitates access to bank finance. In this, firm's structural characteristics, which are the source of difficulties in accessing bank credit, are not mitigated by such involvement with the bank. Younger and smaller SMEs are credit-rationed in the banking system where large banks dominate. The results, however, provide evidence on the usefulness of government programmes tailored to SMEs, particularly CGSs. This in turn raises some doubts on arguments that such schemes are less essential since large banks perceive SME lending as profitable through the cross-selling of such non-lending activities (de la Torre et al., 2010).

**Table 4.8 Full Probit regression models of credit rationing status**

Model	(1)		(2)		(3)	
	<u>Credit-Rationed</u>		<u>Partially Credit-Rationed</u>		<u>Non-Credit-Rationed</u>	
	I	II	III	IV	V	VI
Intercept	-.306 (1.3811)	.225 (.1480)	-2.431 (1.9469)	<b>-.729***</b> (.1618)	-.105 (1.5586)	<b>-.923***</b> (.1718)
Uses fee-based non-lending activities <i>prior</i> to applying	.025 (.4318)	-.285 (.2437)	.171 (.4957)	.299 (.2573)	-.378 (.4677)	.047 (.2815)
Uses fee-based non-lending activities <i>after</i> applying	-.632 (.7732)	-.544 (.4750)	-.107 (.6643)	.055 (.5082)	.970 (.7429)	.604 (.4830)
Applied through <i>Kafalah</i>	-.426 (.3544)		<b>.699*</b> (.3727)		-.380 (.4291)	
Firm age: New (<3 years old)	<b>1.020*</b> (.5565)		.120 (.6028)		<b>-1.850**</b> (.7865)	
Firm age: Established (3-6 years old)	.625 (.4711)		.414 (.5201)		<b>-1.437**</b> (.5559)	
Firm age: Old (7-10 years old)	.209 (.5347)		.737 (.5903)		<b>-1.134*</b> (.6373)	
Firm size: Micro (1-5 employees)	<b>2.458***</b> (.8043)		<b>-2.552***</b> (.9822)		-.545 (.9041)	
Firm size: Small (6-49 employees)	<b>1.368**</b> (.5296)		-.664 (.4797)		-.860 (.6120)	
Industry: Manufacturing	<b>-1.268*</b> (.6960)		.640 (.7867)		.888 (.8304)	
Industry: Personal services	-1.117 (.7851)		.163 (.9038)		.940 (.9261)	
Industry: Professional/logistics services	<b>-1.270*</b> (.7268)		1.267 (.7909)		.201 (.8632)	
Industry: Wholesale/retail	<b>-1.567**</b> (.7159)		<b>2.019**</b> (.7926)		-.285 (.9018)	
Legal status (Ltd.)	-.412 (.4731)		.020 (.5263)		.519 (.5268)	
Employment change	.011 (.0189)		-.006 (.0176)		-.005 (.0237)	
Growth intent: Grow	<b>-1.144**</b> (.5704)		.066 (.5559)		<b>2.130**</b> (.9541)	
Growth intent: Maintain business size	-.456 (.6770)		-.447 (.7225)		<b>1.779*</b> (1.0023)	
Inter-firm relationships	-.521 (.3627)		.304 (.3783)		.284 (.4314)	
Innovative	.204 (.4127)		-.024 (.4747)		-.273 (.5228)	
Exporter	-.150 (.4084)		.075 (.4756)		.287 (.5273)	
No. of founders (LN)	-.281 (.3151)		.602* (.3524)		-.378 (.3871)	

Female owner/manager	-0.152 (1.1109)		.972 (1.2635)		a	
Owner age: below 30 years old	-0.612 (.8439)		-0.637 (1.0147)		.964 (.9692)	
Owner age: between 30-50 years old	-0.427 (.6083)		-0.470 (.5951)		.720 (.6899)	
Education: no bachelor's degree	<b>1.754***</b> <b>(.5812)</b>		-0.958 (.6991)		<b>-1.745***</b> <b>(.6664)</b>	
Education: bachelor's degree	-0.011 (.3990)		.422 (.4481)		-.559 (.4200)	
Experience: owned another SME	-0.960 (.7778)		.990 (.9225)		.011 (.7954)	
Experience: employment experience	-0.028 (.6060)		.522 (.7766)		-.468 (.6734)	
Main purpose: start-up	1.537 (1.1707)		1.166 (1.3104)		<b>-1.848*</b> <b>(1.0939)</b>	
Main purpose: fixed assets	1.757 (1.1307)		.574 (1.2444)		<b>-1.733*</b> <b>(.9779)</b>	
Main purpose: working capital	<b>1.961*</b> <b>(1.1010)</b>		-.583 (1.2373)		-.949 (.8690)	
No. of observations	120	123	120	123	120	123
Wald $\chi^2$	<b>63.961***</b> <b>(30 df)</b>	2.269 (2 df)	<b>49.612**</b> <b>(30 df)</b>	1.359 (2 df)	<b>43.202**</b> <b>(29 df)</b>	1.534 (2 df)

Notes: The dependent variable in this table is one of the dummy variables *Credit-Rationed*, *Partially Credit-Rationed* and *Non-Credit-Rationed*. Model 1 reports coefficients from Probit estimations for *Credit-Rationed* firms. Model 2 reports those for *Partially Credit-Rationed* firms. Model 3 reports coefficients of the Probit model for the *Non-Credit-Rationed* firms. The standard errors are in brackets. There are four missing cases (i.e., missing responses from some independent variables). All variables are defined in Appendix 4.A.

a. because of quasi-complete separation issues, the variable female owners/managers is removed from the regression model. The model would not converge otherwise, i.e., results are not produced unless this variable is removed.

\*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.



**Table 4.9 Reduced Probit models of credit rationing status**

Model	(1)		(2)		(3)	
	<u>Credit-Rationed</u>		<u>Partially Credit-Rationed</u>		<u>Non-Credit-Rationed</u>	
	I	II	III	IV	V	VI
Intercept	-.698 (1.1673)	.225 (.1480)	-2.249 (1.5637)	<b>-.729***</b> <b>(.1618)</b>	.704 (1.2260)	<b>-.923***</b> <b>(.1718)</b>
Uses fee-based non-lending activities <i>prior</i> to applying	-.101 (.4236)	-.285 (.2437)	.183 (.4656)	.299 (.2573)	-.329 (.4414)	.047 (.2815)
Uses fee-based non-lending activities <i>after</i> applying	-.775 (.7063)	-.544 (.4750)	-.079 (.6458)	.055 (.5082)	1.024 (.7058)	.604 (.4830)
Applied through <i>Kafalah</i>	-.386 (.3406)		<b>.719**</b> <b>(.3528)</b>		-.617 (.3973)	
Firm age: New (<3 years old)	<b>.878*</b> <b>(.5072)</b>		.012 (.5532)		<b>-1.701**</b> <b>(.6918)</b>	
Firm age: Established (3-6 years old)	.578 (.4226)		.164 (.4461)		<b>-1.375***</b> <b>(.4812)</b>	
Firm age: Old (7-10 years old)	.175 (.4896)		.482 (.5113)		<b>-.995*</b> <b>(.5692)</b>	
Firm size: Micro (1-5 employees)	<b>2.522***</b> <b>(.7462)</b>		<b>-2.610***</b> <b>(.8947)</b>		-.386 (.7826)	
Firm size: Small (6-49 employees)	<b>1.421***</b> <b>(.4840)</b>		<b>-.733*</b> <b>(.4347)</b>		-.789 (.4982)	
Industry: Manufacturing	-1.108 (.6778)		.677 (.7572)		.542 (.7311)	
Industry: Personal services	-.831 (.7371)		.353 (.8441)		.450 (.8138)	
Industry: Professional/logistics services	<b>-1.189*</b> <b>(.6948)</b>		1.233 (.7556)		-.054 (.7994)	
Industry: Wholesale/retail	<b>-1.429**</b> <b>(.6973)</b>		<b>1.937**</b> <b>(.7549)</b>		-.605 (.8201)	
Legal status (Ltd.)	-.595 (.4882)		.227 (.4829)		.384 (.4938)	
Growth intent: Grow	<b>-.993*</b> <b>(.5094)</b>		-.085 (.5074)		<b>1.984**</b> <b>(.8613)</b>	
Growth intent: Maintain business size	-.377 (.6184)		-.505 (.6530)		<b>1.574*</b> <b>(.8883)</b>	
Inter-firm relationships	-.382 (.3387)		.368 (.3594)		.139 (.3928)	
Innovative	.161 (.3830)		-.042 (.4402)		-.341 (.4850)	
Exporter	-.237 (.3858)		.218 (.4414)		.298 (.4766)	

No. of founders (LN)	-.310 (.3064)		<b>.583*</b> <b>(.3310)</b>		-.444 (.3678)	
Female owner/manager	-.172 (.9975)		.597 (1.1447)		<b>a</b>	
Education: no bachelor's degree	<b>1.703***</b> <b>(.5535)</b>		-.850 (.6568)		<b>-1.762***</b> <b>(.6509)</b>	
Education: bachelor's degree	.087 (.3769)		.322 (.4235)		-.499 (.4119)	
Main purpose: start-up	1.309 (1.0832)		1.132 (1.2010)		<b>-1.747*</b> <b>(1.0501)</b>	
Main purpose: fixed assets	1.483 (1.0045)		.694 (1.1250)		<b>-1.650*</b> <b>(.8814)</b>	
Main purpose: working capital	1.604 (1.0072)		-.361 (1.1108)		-.793 (.8055)	
No. of observations	120	123	120	123	120	123
Wald $\chi^2$	<b>59.845***</b> <b>(25df)</b>	2.269 (2 df)	<b>46.897***</b> <b>(25 df)</b>	1.359 (2 df)	<b>40.623**</b> <b>(24 df)</b>	1.534 (2 df)

*Notes:* The dependent variable in this table is one of the dummy variables *Credit-Rationed*, *Partially Credit-Rationed* and *Non-Credit-Rationed*. Model 1 reports coefficients from Probit estimations for *Credit-Rationed* firms. Model 2 reports those for *Partially Credit-Rationed* firms. Model 3 reports coefficients of the Probit model for the *Non-Credit-Rationed* firms. The standard errors are in brackets. There are four missing cases (i.e., missing responses from some independent variables). All variables are defined in Appendix 4.A.

a. because of quasi-complete separation issues, the variable female owners/managers is removed from the regression model. The model would not converge otherwise, i.e., results are not produced unless this variable is removed.

\*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.

## 4.6 Measurement of Credit Demand

The summary statistics in Table 4.2 show the majority of SMEs (approximately 62%) in Saudi have never applied for bank finance. Section 4.5.1 explores the differences between applicants and non-applicants and shows that the two differ across a number of characteristics. The analysis suggests that non-applicants are significantly smaller, have witnessed a positive change in employment and are more likely to be female-led businesses. Non-applicant firms are also less likely to prefer bank finance as an external source, but more likely to be users of banks' non-lending activities, albeit weakly. As mentioned earlier, these differences can be demand-driven or supply-driven. Therefore, it is essential to examine the reasons why SMEs do not seek bank finance since each type of access problem warrants different policies (Beck, 2013), i.e., to assess if non-applicant SMEs are self-rationed or credit-rationed by supply-side factors.

The structured questionnaire asks non-applicant respondents to rank the main reasons for not applying for bank finance in order of importance. Thirteen options were provided and are drawn from well-established strands of the literature on small firms' financing, such as: discouraged borrowers (Kon & Storey, 2003), knowledge gap i.e., limited awareness about appropriate sources of finance (Holmes & Kent, 1991), supply-side factors i.e., potential loans' terms and conditions (Brown et al., 2011; Kuntchev et al., 2012), SMEs with no need for bank finance (Fraser, 2019; Read, 2002), control aversion (Cressy, 1995) and risk aversion (Norton, 1991a); the latter is expected to be of relevance in Saudi because of laws that incriminate defaulters. Article 46 in Saudi law states that if the debtor fails to comply, or to disclose property sufficient to satisfy the debt within five days from the notification date, the enforcement judge may imprison the debtor in accordance with the provisions of this law (Bureau of Experts at the Council of Ministers, 2018)<sup>7</sup>. The questionnaire also provides less established reasons in the literature that are more closely related to Islamic countries including Saudi, i.e., religious beliefs (IFC, 2014; Kamel, 2006; Nguyen et al., 2020). Indeed, the IMF (2018b) provides that some demand-side factors may affect Saudi SMEs' credit demand. For example, religious reasons were cited by around 7% of Saudi adults for why they do not use bank credit.

Hence, unlike previous studies which tend to compare those who were successful in their bank applications with those who were rejected, while treating non-applicants as some homogeneous

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<sup>7</sup> NB. This law was amended in 2020.

form of disinterestedness, this study investigates more thoroughly the factors affecting SMEs' borrowing decision, including religious reasons which are assumed to be of relevance. Table 4.10 presents all the options provided for non-applicants to rank.

The current paper employs two approaches in analysing non-applicant SMEs. The first employs Henry Garrett's ranking technique (Garrett & Woodworth, 1969), where each ranked reason is converted into a score value to determine the most important ones given by all respondents as to why they did not seek bank finance. The second approach follows previous studies by Brown et al. (2011) and Cole and Sokolyk (2016) and categorises non-applicants by focusing exclusively on the main reason provided by each respondent for not applying. The two approaches complement each other; the former allows knowing the most important reason cited by all respondents, the latter allows examining how the reasons for not applying are related to firms' and entrepreneurs' characteristics.

**Table 4.10 Reasons for not applying for bank finance**

If you did <b>not</b> apply for bank financing, what were the <b>main</b> reasons? <i>(Please assign a number to <b>rank the main reasons only</b> in order of importance from 1 where 1 is the most important)</i>
Interest rates are not favourable.
Complexity of application / the long duration of the process.
Collateral requirements are too high.
To avoid indebtedness.
Bank loans involve high risk of losing personal assets.
There are no current needs for external finance.
I did not think my application would be successful.
Other sources of finance are available if needed.
Limited experience in dealing with banks and the financial services provided.
Religious and cultural reasons.
Debt covenants might result in bank's involvement in the decision making.
Loan terms are too short.
Other reasons (please specify)

Source: survey data

#### 4.6.1 Henry Garrett Ranking Technique for Non-Applicant SMEs

The first analytical approach for the non-applicants employs Garrett's ranking technique (Garrett & Woodworth, 1969). As per this method, the ranked factors were converted into score values according to the following formula:

$$\text{Percent position} = \frac{100 (R_{ij} - 0.5)}{N_j}$$

where:  $R_{ij}$  = Rank given for the  $i^{th}$  variable by  $j^{th}$  respondents

$N_j$  = Number of variables ranked by  $j^{th}$  respondents

The percent position calculated was converted into scores using scale values obtained from Henry Garrett's Scale Conversion Table. The scale values for the first to the thirteenth rank are 84, 73, 67, 62, 58, 54, 50, 46, 42, 38, 33, 27 and 16 respectively. The score value for every factor (reason) is calculated by multiplying the number of respondents with the respective scale values. The total scores are then obtained by summing up the score values for each rank for every factor (reason). The average score is then found to know the order of importance given by respondents for the factor (reason). Based on the average score, the overall ranks are given for each reason. The reasons with the highest average value are then regarded as the most important reasons why SMEs do not apply for bank finance in Saudi.

The ranking for the reasons provided by sampled SMEs' owners/managers for not applying for bank credit are presented in Table 4.11. Survey data show that perceived high interest rate of the potential loan was ranked as the major reason for not seeking bank finance with an average score of 33.2. This is followed by "complexity of application/the long duration of the process" which was ranked second with an average score of 32.4. The reason ranked third is "high collateral requirement" with an average score of 30.6. From these top three ranked reasons, the results show Saudi SMEs are mainly deterred by the potential loan's terms, conditions and procedure. This, in turn, suggests that supply-side factors constrain SMEs' access to bank finance which can indicate some forms of credit rationing, even though those respondents have never applied for bank finance as defined by Kuntchev et al. (2012).

Interestingly, the results show high levels of risk aversion by SMEs' owners/managers. In this, "to avoid indebtedness" is ranked fourth for not seeking bank finance followed by "bank loans involve high risk of losing personal assets" which is ranked fifth. It seems that the stringent regulation by which Saudi law allows imprisonment for debt (criminalisation of loan defaults) (IMF, 2018a;b) may have created a culture of caution towards borrowing. Risk-averse owners/managers are described in the literature as dealing with uncertainties by avoiding actions, including borrowing money, and deliberately limit their funding to personal equity and retained earnings (Kotey, 1999). While it is argued that risk-averse entrepreneurs may be underinvesting because of their entrepreneurial preferences rather than because of supply-side financial constraints (Fraser, 2019), Saudi laws seem to constitute some institutional barriers to SMEs and can explain why risk aversion is ranked highly in the country.

Moreover, it is argued that the empirical literature indicates that the absence of credit demand is often cited by the majority of small firms and is very prevalent (Fraser, 2019). However, the results from Garrett's method show that the absence of current need for external finance is ranked only as the sixth important reason why firms do not apply. The ability to access other sources of finance if needed is ranked eighth. This suggests that SMEs in Saudi do not apply for bank finance although they are (possibly) in need of it and supply-side constraints are more important in deterring SMEs from seeking bank finance.

Furthermore, borrower discouragement, where SMEs do not apply for bank finance because they fear bank rejection, seems less important in deterring SMEs in Saudi. It is ranked the seventh most important reason for not applying. Similarly, the limited experience in dealing with banks and the financial services provided was not found to be of high importance, i.e., ranked ninth. An interesting finding is that "religious and cultural reasons" was one of the least frequently highly ranked factors as a major reason for not applying, with an average score of 20.9 (i.e., tenth out of 13). This is interesting because in Islam, which is the only religion in Saudi, interest-based lending is considered a major sin and since the level of religious consciousness is 90% in the country (IFC, 2014), religious reasons were expected to be ranked as one of the major reasons for not applying. One possible explanation is that in recent years the banking sector has witnessed a greater availability of Islamic products, which helped make banking services acceptable to investors and borrowers who were previously non-bankable for religious beliefs (IMF, 2018a).

Additionally, the results are less supportive of the control aversion argument by Cressy (1995). In this, control aversion, i.e., “debt covenants might result in bank's involvement in the decision-making” is ranked among the three least important reasons for not applying for bank finance (ranked eleventh). The literature argues that entrepreneurs seem to attach utility to being independent, more than simply for the higher income generated from self-employment. This desire for independence is manifested in SMEs’ aversion to banks in general and to any dilution of power by outside investors (Cressy, 1995). However, this might not be the case in Saudi. A recent survey found that most Saudi entrepreneurs stated they have chosen entrepreneurship mainly to increase their personal income. Maintaining independence is quite prevalent; however, this shift towards boosting income has occurred since 2016 when Saudi experienced an economic slowdown (Coduras et al., 2019).

Table 4.11 also clearly indicates those reasons that are perceived as least important. The option “other” is ranked as the least important reason why firms do not seek bank finance. Also, short maturity, i.e., “loan terms are too short”, is one of the reasons ranked low in terms of importance (ranked twelfth). Such results suggest that the maturity of the loan is of a lower concern to SMEs in Saudi. This is in line with the literature which indicates that small firms rely heavily on short-term financing and tend to use it as long-term financing by renewing short-term loans several times (Kotey, 1999).

Altogether, the results from Garrett's method show supply-side constraints are prevalent in deterring SMEs from seeking bank finance. Moreover, the results suggest that the stringent laws that incriminate defaulters seem to constitute an institutional barrier in seeking bank credit through creating high levels of risk aversion in entrepreneurs.

**Table 4.11 Reasons for not applying for bank finance: Henry Garrett Ranking technique**

<b>Reasons for not applying</b>	<b>Total *</b>	<b>Average Score</b>	<b>Rank</b>
Interest rates are not favourable.	6768	33.17647059	1
Complexity of application / the long duration of the process.	6619	32.44607843	2
Collateral requirements are too high.	6247	30.62254902	3
To avoid indebtedness.	5478	26.85294118	4
Bank loans involve high risk of losing personal assets.	5041	24.71078431	5
There are no current needs for external finance.	4706	23.06862745	6
I did not think my application would be successful.	4626	22.67647059	7
Other sources of finance are available if needed.	4372	21.43137255	8
Limited experience in dealing with banks and the financial services provided.	4286	21.00980392	9
Religious and cultural reasons.	4278	20.97058824	10
Debt covenants might result in bank's involvement in the decision making.	3643	17.85784314	11
Loan terms are too short.	2726	13.3627451	12
Other reasons (please specify)	1622	7.950980392	13

\* Calculated using Henry Garrett's (1969) table

#### 4.6.2 Classifying Non-Applicant Firms

The second analytical approach to studying non-applicant SMEs is to group the reasons they provided for not seeking bank finance into different categories. Following Brown et al. (2011) and Cole and Sokolyk (2016), five groups are constructed according to respondents' primary reason given for *not* applying (i.e., the reason ranked first by each respondent). However, Brown et al. (2011) were more restricted by the options provided in the WB's Business Environment & Enterprise Performance Survey as borrower discouragement is the only voluntary type of self-rationing included in that study. A growing literature, however, has shown that reasons other than borrower discouragement can cause self-rationing, such as perceptions, cognitive ability, culture and religion (Fraser, 2019; Nguyen et al., 2020). This study, therefore, incorporates this wider variety of reasons for voluntary self-rationing. Non-applicant firms in the sample are categorised into five different groups: *No Need*, *Discouraged Borrowers*, *Religious/Cultural Rationed*, *Risk/Control Averse* and *Discouraged Terms/Conditions*.

The *No Need* group includes those who have ranked one of following as the first reason for not applying for bank finance:

- A) There are no current needs for external finance, or
- B) Other sources of finance are available if needed.



Firms in this group are satisfied with their current capacity to finance their businesses or can secure finance from sources other than banks, e.g., family wealth. Therefore, they have no demand for bank finance. However, it is argued some of these firms may have a higher desire to retain control over their businesses, despite the possibility of improved firm performance with external financial support, which, in turn, actually stops them from having any credit demand in the first place (Fraser, 2019). The structured questionnaire includes the option “Debt covenants might result in bank's involvement in the decision making” which can be considered a form of control aversion, and allows distinguishing those who genuinely are not in need of bank finance from those who wish to retain control.

The second group is *Discouraged Borrowers* and includes those who are discouraged from applying as they fear bank rejection. In this, they are not deterred by the potential loan's terms and conditions but probably by the cost of applying for bank finance, as defined by Kon and Storey (2003). Hence, *Discouraged Borrowers* include those who have ranked one of the following as the first reason why they have never applied for bank finance:

- A) Did not think the application would be successful, or
- B) Limited experience in dealing with banks and the financial services they provide, or
- C) Complexity of application/the long duration of the process.

Most of the literature on discouragement highlights the fear of rejection as the main characteristic of discouraged borrowers (Freel et al., 2012). However, the following argument is extended to explain why the other two reasons can be considered as characteristics of discouragement. Since Holmes and Kent (1991) argue that the costs involved in being informed about the ranges of debt options limit the incentives of SMEs to increase their level of awareness about the available sources of finance, one can argue that not applying for bank finance because of “Limited experience in dealing with banks and the financial services provided” or “Complexity of application and lengthy process” implies higher application cost. Kon and Storey (2003) theoretically show that borrower discouragement can be explained by high loan application costs and the banks' screening errors. Hence, those two reasons can be considered as a source of discouragement (Nguyen et al., 2020).

The third group is *Religious/Cultural Rationed*. As mentioned, the current study departs from existing studies by including this group which consists of those respondents who have ranked the following as the first reason why they have never applied for bank finance:

- A) Religious and cultural reasons.

The fourth category deals with the psychological aspects of entrepreneurs and is called *Risk/Control Averse group*. Advancements in behavioural economics have been increasingly informing the entrepreneurial literature that credit outcomes may be as much affected by entrepreneurs' cognition as by supply-side credit constraints (Fraser, 2019). The most mentioned aspects in this strand of the literature are risk perceptions and preferences (Norton, 1991a) and the desire to retain control (Cressy, 1995). This group, hence, comprises firms who do not make use of the financial opportunities available and self-select out of the credit market either because they want to avoid the risk involved with debt financing or to retain control over their firms, i.e., they avoid uncertainties such as borrowing money or are preoccupied with threats of being subject to external control. Hence, they avoid situations that expose their businesses to external financiers (Kotey, 1999). In this, demand-side market failure, defined by Aston Business School (1991) as the situation where firms do not make use of the available financial opportunities, can be assumed. Firms in this group include those who have ranked one of the following as the first important factor why they do not seek bank finance:

- A) Debt covenants might result in bank's involvement in the decision-making, or
- B) Bank loans involve high risk of losing personal assets, or
- C) To avoid indebtedness.

The final group is *Discouraged Terms/Conditions*. This group includes those who were deterred from applying by the potential loan's terms and conditions. This group differs from the above-mentioned ones as these firms did *not* voluntarily exclude themselves from the credit market; instead, some supply-side factors affected their decision not to seek bank credit. Indeed, some researchers consider these firms as *credit-constrained* even though they have not applied for bank finance (Brown et al., 2011; Kuntchev et al., 2012). Firms in this group have ranked one of the following as the first reason why they have not applied:

- A) Interest rates are not favourable, or
- B) Collateral requirements are too high, or

C) Loan terms are too short.

It must be noted that three respondents have ranked “Other” as the first reason for not applying. They elaborated their answers as follows: the first respondent said that “Banks do not lend to individual establishments in the construction sector like my enterprise”. It seems from this answer that this respondent was expecting bank denial, therefore, is considered to belong to the *Discouraged Borrowers* group. The second respondent said “I did not apply due to the bank’s horrible attitude”. Similarly, this answer indicates a perception that banks are not interested in small firms, therefore, can be included in the *Discouraged Borrowers* group. The final respondent said “as per our policy we are not allowed to take bank loans”. Such a response is assumed to reflect a desire to retain control and, hence, can belong to *Risk/Control Averse* group.

Table 4.12 outlines the percentage of firms in each group. As shown, under this approach, borrower discouragement is dominant in Saudi. Firms in this group account for the greatest percentage of the non-applicant firms (approximately 27%). The high denial rates of bank finance to SMEs in Saudi might have influenced such perception on anticipated rejection. Nevertheless, a high percentage of non-applicants were deterred by the potential loan’s terms and conditions, i.e., *Discouraged Terms/Conditions*; they represent the second largest group of non-applicants (approximately 24%). This contradicts the results obtained from using Garrett’s method in Table 4.11, i.e., supply-side factors are the most important reason why SMEs do not apply for bank finance. Nevertheless, the inclusion of the highly ranked factor “Complexity of application/the long duration of the process” with the fear of rejection in identifying discouraged borrowers can explain why the two approaches in identifying non-applicants vary. It can be argued hence that the limited experience in preparing bankable applications and the costs associated with being informed about the process constitute a major deterrent for discouraged borrowers.

Moreover, Table 4.12 shows that those who refrain from applying due to their psychological perceptions of retaining control or avoiding risk associated with bank credit represent the third largest majority, accounting for approximately 20% of all non-applicants. Even so, when using Garrett’s method, risk aversion seems to be of more importance than control aversion. Firms indicating that they have no current need, or can access other sources of finance if needed, represent a lower majority (i.e., 18%). This confirms results from Garrett’s method where these

reasons are among the lowest ranked factors for not applying. Last but not least, in line with Garrett's method, the effect of religion/culture is not as prevalent. Those who are rationed by their religion/cultural beliefs represent the lowest majority among non-applicants, i.e., 12% of the total non-applicant firms.

Overall, when focusing on the primary reason why firms do not apply for bank finance, survey data suggest that *voluntary self-rationing* is prevalent in Saudi. The majority of non-applicants refrain from seeking bank finance due to factors *not* related to supply-side limitations (representing approximately 77%). On the other hand, firms who were forced to exclude themselves from the credit market due to the prevailing lending conditions, therefore, are assumed to *involuntarily self-ration*, account for less than a quarter of total non-applicant firms (approximately 24%).

**Table 4.12 Classifying Non-Applicant Firms by main reason provided**

Non-applicant firms (n=204)	Primary reason for not applying for bank finance				
	No Need	Risk/Control Averse	Religious/Cultural Rationed	Discouraged Borrowers	Discouraged terms and conditions
No. of firms	37	40	25	54	48
Share of all firms which did not apply (percent):	18.1%	19.6%	12.3%	26.5%	23.5%
<p style="text-align: center;"><b>Voluntary Self-Rationing</b>            No. of firms=156.            Share of all firms=76.5%</p>					<p style="text-align: center;"><b>Involuntary self-rationing</b>            No. of firms=48.            Share of all firms=23.5%</p>

Source: survey data

### 4.6.3 Which firms self-ration?

In order to provide evidence on the characteristics of firms and entrepreneurs who *voluntarily* excluded themselves from the credit market and those who were deterred by some characteristics of the loan (*Discouraged Terms/Conditions*), i.e., *involuntarily* self-rationed, a multinomial logit estimation of firms' reasons for not seeking bank finance is conducted in Table 4.13. The model is similar to that of Brown et al. (2011); however, unlike Brown et al. (2011) and similarly to Nguyen et al. (2020), firms who belong to the *No Need* group are considered as not having financing demand; and, therefore, are excluded from this analysis. Whereas those who belong to the other groups are considered to have financing needs, they differ in why they refrained from applying: non-applicants in the *Religious/Cultural Rationed*, *Discouraged Borrowers* and *Risk/Control Averse* groups exhibit some demand-side voluntary self-rationing behaviour; firms in the *Discouraged Terms/Conditions* group were forced to exclude themselves (i.e., credit-rationed non-applicant).

The importance of differentiating non-applicant firms is that if self-rationing is a distinctive characteristic of certain types of SMEs, and such firms are not inevitably less creditworthy, then public policy makers might need some guidance on whether they need to deviate their interventions from traditional supply-side mechanisms; other forms of intervention might be needed, such as those concerned with improving small businesses awareness (e.g., awareness about the availability of Islamic lending products at banks and/or awareness on how to prepare bankable applications). Storey (1994b) argues that improving small businesses' owners' quality and awareness may be the most important single step to enhance the relationship between them and financial institutions.

Table 4.13 shows there are three potential outcomes per firm in the model: *Discouraged Borrowers*, *Religious/Cultural Rationed*, *Risk/Control averse* where the *Discouraged Terms/Conditions* group serves as the base outcome, i.e., the coefficients in the table presents the impact of each firm/entrepreneur characteristic on the probability of registering self-rationing behaviour, rather than being credit-rationed by supply-side factors. The independent variables are those used in earlier regressions. However, the desire for bank finance as an external source of funds is the first variable to control for as it was found to influence firms' borrowing decision. As shown in Table 4.13, the full model containing all predictors is statistically significant,  $\chi^2(81, N=147) = 105.131$   $p < .05$ , indicating that it was able to distinguish

between self- and credit-rationed non-applicants. However, the results in Table 4.13 appear to be random and the table retains many statistically not significant variables. In this, of all the firm's characteristics explanatory variables, only firm age, legal status and exporting activities appear significant. Interestingly, however, none of the variables on the SME's owner/manager personal characteristics appear significant in explaining self-rationing. This is unexpected because the decision making within SMEs often relies on the individual judgement of the SME's owner/manager. Thus, their personal characteristics are more likely to affect their financing decisions compared to those in large corporations where such important decisions require approval from many stakeholders (Nguyen et al., 2020). Therefore, the model is re-estimated iteratively removing one or more variables that are not statistically significant at each stage (Riding et al., 2007). The results of this more parsimonious 'reduced model' are reported in Table 4.14. Similarly, the overall model fit is statistically significant  $\chi^2$  (48 df, N=147) =80.308,  $p < .01$ .

The results in Table 4.14 suggest that self-rationed firms and credit-rationed non-applicants differ across some firm and entrepreneur characteristics. In the first instance, the results complement the earlier finding that desire for bank finance affects firms' borrowing decision, by uncovering why more than half of those (52.3%) with a desire for bank finance do not apply (Table 4.1), even though they possibly need it. The multinomial regression suggests that firms desiring bank finance are more likely to be discouraged by the potential loan's terms and conditions than to self-ration, i.e., self-rationed firms particularly *Religious/Cultural Rationed* have no desire for this source of funds even if external financial support is needed.

Moreover, while the results on firms' borrowing decision (Section 4.5.1) suggest that smaller firms are more likely to be non-applicants, the results in this section suggest that the reasons for not applying are more affected by firm age. Newly established firms (less than three years old) are more likely to be deterred by tough lending terms and conditions (i.e., credit-rationed) than to self-ration. In contrast, the results suggest that older firms who have been trading for 7-10 years are more likely to register self-rationing behaviour arising from wishes to retain control or avoid risk associated with bank credit (risk/control averse), i.e., they are less likely to be credit-rationed by supply-side factors. The results in this section and the section on bank's lending decision (Section 4.5.2) suggest that younger firms with possible financing needs are credit-rationed in Saudi.

Furthermore, the results suggest that incorporated firms (limited liability companies) are more likely to refrain from applying for reasons other than supply-side factors (voluntary self-rationing); they are more likely to be *Religious/Cultural Rationed*, *Risk/Control Averse* and *Discouraged Borrowers* through anticipated rejection. The result on the latter group, however, is only significant at the 10% level and is line with findings by Freel et al. (2012) on borrower discouragement. By implication, the results suggest that sole proprietors/partnerships are more likely to be credit-rationed non-applicant firms. This contradicts Mac an Bhaird (2013) who finds that the need for control and independence in unincorporated firms pushes them to use bank financing. Indeed, the results in Table 4.14 suggest that it is limited liability companies, rather than the former, that are more likely to be *Risk/Control Averse*. It seems that banks require higher interest rates and/or more collateral from sole proprietors/partnerships due to higher perceived uncertainty as these unincorporated firms, unlike limited liability firms, are not required to prepare audited financial statements under Article 175 of the Saudi Companies Law.

The results further suggest that firms who plan to maintain business size in the foreseeable future are more likely to be *Risk/Control Averse* than to be deterred by some supply-side factors, albeit weakly. This provides some support for arguments that such owners/managers may be underinvesting because of their entrepreneurial preferences rather than supply-side financial constraints (Fraser, 2019). Nevertheless, this cautious view about the future prospects of the business on the part of *Risk/Control Averse* owners/managers can also be related to the economic situation since the drop in oil prices. Importantly, the results suggest that exporter firms are more likely to be deterred by tough lending conditions, compared to non-exporters who do not apply. The result, however, is only significant at the 10% level but suggests that important types of SMEs, in terms of possible higher contribution to GDP, are credit constrained.

Unsurprisingly, some of the characteristics of the entrepreneurs, particularly their human capital, have significant effects on the reasons for not seeking bank finance. Less educated owners/managers with no university degree are more likely to be *Religious/Cultural Rationed* compared to postgraduate degree holders, again only weakly. This supports findings on Vietnamese SMEs, where less educated entrepreneurs were found to be inherently debt averse and such aversion is argued to stem from the Vietnamese culture (Nguyen et al., 2020).

Furthermore, the results suggest that experienced entrepreneurs who own/used to own other small businesses are less likely to register self-rationing and are more likely to be deterred by some supply-side factors, compared to inexperienced ones who did not apply (i.e., were students before starting the business). It can be argued that such experienced entrepreneurs may have had prior encounters with bank funding over businesses other than the one they are surveyed about. These encounters may have created awareness about the prevailing terms and conditions in the credit market which in turn deter them from applying. Alternatively, banks may be demanding higher interest rates and/or collateral requirements from them because of prior indebtedness from the other businesses they owned. The result, however, is only significant at the 10% level.

Furthermore, the results suggest that firms with more founders are less likely to register discouragement and more likely to be credit-rationed non-applicants. The external connections and sources of knowledge in firms with more than one founder may explain the negative association with anticipated rejection. It is worthwhile to reflect on an interesting “non-finding”. Given the literature on financial institutions’ discrimination against female entrepreneurs, the results on owner’s/manager’s gender warrants comment. When investigating firms’ borrowing decision, the results suggest that female entrepreneurs are significantly less likely to seek bank credit, compared to their male peers. While the results on gender effects from the multinomial regression in this section are not significant, the directions of the coefficients suggest that female entrepreneurs are more likely to be credit-rationed non-applicants. To explore this further, the multinomial model was re-estimated, beginning with this gender variable. Nevertheless, the results are still not statistically significant, nor the overall logit equation (Appendix 4.C).

Interestingly, the results suggest that customers of fee-based, non-lending products/services offered by banks are more likely to register self-rationing behaviour than to be deterred by the potential loan’s terms and conditions, compared to non-customers who do not apply. The results, therefore, provide some explanation for the findings in Section 4.5.1 where users of these products/services are less likely to seek bank credit. The multinomial regression in this section suggests that these banks’ customers are more likely to refrain from applying because they want to avoid the risk involved with bank credit or to retain control (i.e., *Risk/Control Averse*). Since Garrett’s ranking technique provides that risk aversion is of higher importance than control aversion, it can be argued that these customers are more aware of banks’ requirements under which bank loans are not extended without promissory notes, which can lead to imprisonment



in case of default. Hence, these customers refrain from applying because of risk aversion which stems from institutional barriers. This is interesting because whilst this variable does not appear significant in explaining banks' lending decisions, it appears significant in explaining firms' borrowing decisions and the reasons behind them. It can be argued further that being involved with the bank over these products/services does not necessarily lead to loan approval, particularly for younger and smaller SMEs. It would, however, improve the potential loans' terms and conditions for older SMEs since *Risk/Control Averse* entrepreneurs are significantly older. Alternatively, such involvement with the bank merely creates a positive perception about the ability to obtain bank finance at an acceptable price and/or collateral requirement.

Overall, the results suggest that self-rationed firms are less likely to prefer bank finance as an external source of funds even though they are in possible need of external finance. Moreover, they are significantly older, incorporated and involved with the bank over fee-based non-lending products/services. Since the analysis on bank lending decision (Section 4.5.2) suggests that older firms are less likely to be credit-rationed, and since incorporated firms are required to have audited financial statements under Saudi law, the results imply that these self-rationed firms are less likely to be denied credit, if they applied.

**Table 4.13 Full Multinomial Logistic Regression of Non-Applicant Firms**

Main reason for not applying (base outcome: <i>Discouraged terms and conditions</i> )	Discouraged Borrowers	Religious/Cultural Rationed	Risk/Control Averse
Prefer bank finance	-.031 (.538)	<b>-1.952**</b> (.879)	-.590 (.671)
Firm age: New (<3 years old)	.403 (.873)	<b>-2.877*</b> (1.577)	1.396 (1.062)
Firm age: Established (3-6 years old)	-.202 (.742)	-.173 (.910)	1.154 (.902)
Firm age: Old (7-10 years old)	1.043 (.894)	-.228 (1.205)	<b>2.972***</b> (1.078)
Firm size: Micro (1-5 employees)	-2.096 (1.407)	-2.043 (1.789)	-1.663 (1.493)
Firm size: Small (6-49 employees)	-1.754 (1.305)	-1.522 (1.655)	-1.181 (1.402)
Industry: Manufacturing	-1.425 (1.065)	-.603 (1.185)	-.738 (1.336)
Industry: Personal services	-1.629 (1.003)	-2.190 (1.368)	-1.753 (1.205)
Industry: Professional/logistics services	.183 (.944)	-.623 (1.203)	.829 (1.139)
Industry: Wholesale/retail	-.627 (.882)	-.893 (1.145)	.382 (1.053)
Legal status (Ltd.)	1.348 (.824)	<b>2.413**</b> (1.041)	<b>1.811*</b> (.976)
Employment change	-.012 (.030)	.021 (.041)	-.032 (.041)
Growth intent: Grow	.549 (.655)	.498 (.810)	-.494 (.747)
Growth intent: Maintain business size	.074 (1.172)	.711 (1.650)	<b>2.005*</b> (1.022)
Inter-firm relationships	.312 (.580)	.265 (.751)	-.753 (.748)
Innovative	-.052 (.601)	-.399 (.846)	-.031 (.721)
Exporter	-.751 (.752)	-1.522 (1.064)	<b>-1.973*</b> (1.025)
No. of founders (LN)	<b>-1.262*</b> (.680)	-1.354 (.887)	-.450 (.750)
Female owner/manager	.056 (.872)	-.608 (1.310)	.400 (.945)
Owner age: below 30 years old	-.708 (1.286)	.419 (1.758)	.818 (1.342)
Owner age: between 30-50 years old	.266 (.794)	.189 (1.125)	.498 (.956)
Education: no bachelor's degree	.318 (.774)	1.544 (1.141)	.095 (.927)

Education: bachelor's degree holder	.045 (.649)	.933 (1.023)	-.178 (.723)
Experience: owned another SME	-2.113 (1.461)	.035 (1.709)	-2.080 (1.683)
Experience: employment experience	-1.110 (1.176)	-.183 (1.500)	-.919 (1.234)
Banking relationships	-.454 (.559)	.564 (.783)	.127 (.674)
Uses fee-based non-lending products/services	.496 (.581)	.945 (.756)	<b>1.330*</b> <b>(.681)</b>
Intercept	3.174 (1.967)	1.098 (2.475)	.409 (2.252)
No. of observations	147		
$\chi^2$	<b>105.131** (81 df)</b>		

*Notes:* This table details results from multinomial logit regression. The dependent variable is the main reason for not applying for bank finance. The base outcome is *Discouraged Terms/Conditions* and is compared to *Discouraged Borrowers*, *Religious and Cultural Rationed* and *Risk/Control Averse*. The reported coefficients are the impact of each explanatory variable on the relative risk ratio Prob(X)/Prob (*Discouraged Terms/Conditions*). The standard errors are in brackets. There are 20 missing cases (i.e., missing responses from some independent variables). All variables are defined in Appendix 4.A.

\*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.

**Table 4.14 Reduced Multinomial Logistic Regression of Non-Applicant Firms**

Main reason for not applying (base outcome: <i>Discouraged terms and conditions</i> )	<b>Discouraged Borrowers</b>	<b>Religious/Cultural Rationed</b>	<b>Risk/Control Averse</b>
Prefer bank finance	.003 (.483)	<b>-1.725**</b> (.749)	-.571 (.608)
Firm age: New (<3 years old)	-.241 (.699)	<b>-2.910**</b> (1.258)	.547 (.870)
Firm age: Established (3-6 years old)	-.677 (.636)	-.589 (.760)	.640 (.779)
Firm age: Old (7-10 years old)	.628 (.803)	-.553 (1.097)	<b>2.401**</b> (.975)
Legal status (Ltd.)	<b>1.380*</b> (.720)	<b>2.507***</b> (.893)	<b>1.729**</b> (.866)
Growth intent: Grow	.483 (.575)	.416 (.730)	-.650 (.659)
Growth intent: Maintain business size	.009 (1.095)	.442 (1.433)	<b>1.761*</b> (.921)
Inter-firm relationships	.278 (.512)	.482 (.695)	-.577 (.640)
Exporter	-.957 (.628)	<b>-1.550*</b> (.864)	<b>-1.640*</b> (.876)
No. of founders (LN)	<b>-1.219**</b> (.563)	-.927 (.733)	-.317 (.625)
Female owner/manager	-.600 (.718)	-1.284 (1.048)	-.283 (.800)
Education: no bachelor's degree	.383 (.691)	<b>1.779*</b> (1.019)	-.039 (.809)
Education: bachelor's degree holder	.363 (.575)	.944 (.902)	-.079 (.656)
Experience: owned another SME	<b>-1.921*</b> (1.134)	-.412 (1.259)	<b>-2.327*</b> (1.353)
Experience: employment experience	-.722 (.869)	-.542 (1.057)	-1.112 (.923)
Uses fee-based non-lending products/services	.298 (.502)	.839 (.661)	<b>1.239**</b> (.573)
Intercept	.744 (1.140)	-.551 (1.477)	.210 (1.274)
No. of observations	147		
$\chi^2$	<b>80.308*** (48 df)</b>		

*Notes:* This table details results from multinomial logit regression. The dependent variable is the main reason for not applying for bank finance. The base outcome is *Discouraged Terms/Conditions* and is compared to *Discouraged Borrowers*, *Religious and Cultural Rationed* and *Risk/Control Averse*. The reported coefficients are the impact of each explanatory variable on the relative risk ratio Prob(X)/Prob (*Discouraged Terms/Conditions*). The standard errors are in brackets. There are 20 missing cases (i.e., missing responses from some independent variables). All variables are defined in Appendix 4.A.

\*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.

## 4.7 Conclusion and Policy implication

A debate has emerged concerning the nature of bank financing for SMEs. In this, the conventional wisdom was that small and domestic private banks are more advantaged in financing SMEs since they are better suited to engage in “relationship lending”, based primarily on “soft” information. Hence, large and foreign banks are usually viewed as disadvantaged in serving this segment (Stein, 2002). However, some studies have disputed this and proposed a new paradigm for bank SME finance, arguing that large banks are just as able to extend credit to opaque SMEs as small banks (Berger & Udell, 2006; Berger et al., 2007; de la Torre et al., 2010). In this, large and foreign banks have created new business models that enable servicing SMEs through cross-selling a wide variety of fee-based non-lending products/services. The income derived from selling these activities allows diversifying risk, hence, increased lending to SMEs is facilitated, making government programmes including CGSs less essential (de la Torre et al., 2010).

Nevertheless, some researchers criticise existing studies for focusing on the supply-side of bank financing for SMEs and largely ignoring the demand-side, which might be a more important problem than supply-side credit rationing (Fraser, 2019; Cole & Sokolyk, 2016). The current study, therefore, attempts to incorporate these issues in a country where large banks dominate, namely Saudi Arabia. Saudi provides an interesting context to examine issues of self-rationing vs. credit rationing and large banks’ ability to cater to SMEs’ needs without government intervention. Although the average share of banks’ loans to SMEs in Saudi is within the lowest in the world (Jeddah Chamber, 2016), it has been recognised that it is not possible to determine whether the financing gaps are due to supply-side or demand-side factors, including religious reasons (IMF, 2018a).

In light of the lack of secondary data, a tailor-made questionnaire has been designed to collect primary firm-level data from a sample of 328 firms aiming to explore if Saudi SMEs are self-rationed or credit-rationed by the banking system. The results suggest that a relatively lower share of SMEs in Saudi actually seek bank finance (38%). The loan rejection rate, however, is high, i.e., over half of sampled applicant firms (i.e., 54%) are credit-rationed while around 46% have had their financing needs met by commercial banks, with a higher majority of those approved borrowers (around 58%) underserved by banks, i.e., their application success rate is less than one and/or obtained a lower amount than requested. More importantly, the multivariate

analysis's results do not find evidence that large banks' involvement with SMEs through cross-selling fee-based non-lending products/services facilitates SMEs' access to bank finance. The results, nevertheless, provide evidence on CGSs' usefulness. This in turn raises some doubts on arguments that such schemes are less essential because large banks perceive SME lending as profitable through the cross-selling of non-lending activities (de la Torre et al., 2010).

The multivariate analysis does not provide support for findings that large banks are just as able to extend credit to opaque SMEs as small banks (Berger et al., 2007). The results suggest that a banking system where large banks dominate cannot cater to the needs of highly uncertain firms such as younger and smaller ones, and that even larger and older SMEs mainly obtain loans of a short-term nature.

Supply-side constraints also appear to play a major role in deterring SMEs from seeking bank finance in the first place. While the majority of sampled SMEs (around 62%) indicate that they have never applied for bank finance, Henry Garrett's ranking technique suggests that the top three reasons for this decision are supply-side driven. Under this approach, perceived high interest rates on the potential loan is the highest cited reason for firms refraining from seeking bank finance. Firms' perceptions about high loan prices reflect the realities of the credit market in the GCC, including Saudi, i.e., banks in these countries are characterised by having high net interest margins, compared to high-income countries (World Bank Group, 2016). Moreover, the complexity of application/the long duration of the process was ranked as the second important reason while high collateral requirement is ranked third. This implies that the potential loan's terms, conditions and procedure are the major deterrents affecting SMEs' borrowing decision, which indicates some forms of credit rationing.

Interestingly, the results suggest that the stringent laws that incriminate defaulters seem to constitute an institutional barrier to firms' borrowing decision through creating high levels of risk aversion in entrepreneurs. Reasons which reflect some risk aversion behaviour such as "to avoid indebtedness" and "bank loans involve high risk of losing personal assets" are cited among the top four and five reasons, respectively. While the literature suggests that risk-averse entrepreneurs avoid borrowing deliberately (Kotey, 1999), the country's institutional environment appears to force SMEs to avoid seeking bank credit even though they possibly might be in need of it.

The current study further examines how the reasons for not applying are related to firms' and entrepreneurs' characteristics. Following Brown et al. (2011) and Cole and Sokolyk (2016), non-applicants are categorised by focusing exclusively on the main reason provided by each respondent. Under this approach, the results suggest the majority of SMEs voluntarily self-ration. Approximately 77% have never applied for bank finance either, because they belong to the *No Need, Discouraged Borrowers, Religious/Cultural Rationed* or *Risk/Control Averse* group. In this, less than one quarter of sampled SMEs (24%) were deterred by some supply-side factors such as high interest rates, high collateral requirement and/or short maturities of the potential loan, i.e., *involuntary self-rationing*.

Nevertheless, when characterising firms with potential financing needs (i.e., excluding the *No Need* group), the results suggest that self-rationed firms are less likely to prefer bank finance as an external source of funds. Self-rationed firms were found to be significantly older and incorporated. To the extent that increasing age suggests lower risk and greater resources, and that incorporated firms (limited liability companies) are relatively less uncertain because by law they are required to have audited financial statements, the results suggest that such firms could obtain bank finance, if they wanted to. They simply appear to have no preference for it despite being in possible need of external finance. The results further suggest that self-rationed firms are more likely to be involved with the bank over fee-based non-lending products/services, compared to *involuntary self-rationed* firms. While such involvement with the bank does not appear to significantly affect banks' lending decision, it appears significant in explaining both firms' borrowing decisions and the reasons behind them. Because self-rationed firms are significantly older, this may suggest that such interactions with the bank over these products/services would improve the potential loan's terms and conditions for older SMEs. Alternatively, being involved with the bank simply creates a positive perception in self-rationed firms about the potential to secure bank credit at a reasonable price and/or collateral requirements.

Supply-side credit constraints, on the other hand, are the main reasons why highly uncertain firms do not seek bank finance, particularly, younger and unincorporated (sole proprietors/partnership) firms with a desire and possible need for bank finance. Altogether, the results on banks' lending decision and firms' borrowing decision suggest that younger firms are

credit-rationed in Saudi. Albeit weakly, there is some evidence that these credit constraints are more likely to affect exporters than non-exporters who do not apply. This suggests that an important type of SME, in terms of possible higher contribution to GDP, is credit-constrained.

It can be concluded that SMEs in Saudi are constrained in their access to bank finance and these constraints are mainly supply-driven. Younger and smaller firms are particularly credit-rationed by high interest rates and/or collateral requirements, with the latter playing a major role in banks' lending decision. In this, collateral requirements, publicised as an effective incentive-compatible mechanism to increase the likelihood of repayment; and, hence, enable large banks to cope with the imperfect institutional environment (de la Torre et al., 2010), were found to form a major barrier to accessing bank finance. The majority of rejected applicants (around 76%) were denied bank finance because of insufficient collateral while the majority of approved ones (approximately 73%) extended some form of collateral; of those, around 55% were guaranteed by *Kafalah*. This finding, while unsurprising, is important in the light of the comment by Hanson (1983) who, in relation to the US, argues:

*“Without reasonable access to financing, many of our countries' most talented and aggressive entrepreneurs will be cut out of the economic system. Innovation and business development will become a luxury reserved for the wealthy.”*

Moreover, the current laws that incriminate defaulters appear to be another major deterrent for SMEs through creating a culture of caution towards bank credit. While risk aversion is argued to be a self-rationing behaviour more related to entrepreneur's cognition, risk aversion in Saudi seems to stem from institutional barriers and can result in poorly capitalised firms.

As for policy implications, the results suggest that any intervention or action should seek to address supply-side gaps first. Large banks' business models, which have been geared towards large corporations for decades, do not seem able to cater to younger and smaller SMEs. These banks might need more time to develop different skills, products and programmes to cater to such firms. The results, however, suggest that what the banking system in Saudi can do for SMEs at the moment is limited. The *Kafalah* Program seems to play an important role in improving access to bank credit. Nevertheless, large banks appear mainly in a position to service larger and older SMEs' needs for working capital through short-term loans. Firms do not seem able to count on these banks to secure capital required for long-term investments, which can



impact growth in terms of both employment and output (GDP). This in turn flags some concerns about the recent consolidation in the banking sector (Al-Ghalayini, 2020) where large banks already dominate and where bank competition is among the lowest in the world (World Bank Group, 2016). Indeed, increased competition in the banking sector, while debated, would improve the situation<sup>8</sup>. Competition, however, should not be from large foreign-owned banks, but from government lending institutions that already exist. This can help improve small firms' capitalisation because such institutions usually offer interest-free, medium- and long-term loans. Activating the role of institutions such as the SIDF and the Saudi Credit and Savings Bank can be an important step. The current efforts seem to focus on publicising *Kafalah* and its different financing solutions offered through commercial banks (Monsha'at, n.d. c). Publicising these government credit institutions can provide alternative sources of funds, particularly for SMEs who are credit-rationed by commercial banks.

Other market-developing policies, such as improving the legal, judicial, and bankruptcy laws, seem important to address risk aversion in entrepreneurs. Therefore, the newly drafted regulations that aim to cancel the executive imprisonment of defaulters seem promising (Al-Shibraway, 2021); that said, some demand-side interventions are also needed, particularly those which aim to improve small business awareness about bank dealing and document preparation. The Monsha'at academy can address this demand-side gap (Monsha'at, n.d. b).

The findings of this thesis, nevertheless, have to be considered in light of some limitations. First, the study is based on self-reported firm responses; hence response bias cannot be ruled out. However, the use of such data is not uncommon in small firm studies due to very limited data on such private unlisted firms (Ayyagari et al., 2017). Second, the survey coincided with/followed a period of economic recession in Saudi, i.e., when credit constraints for SMEs were particularly stringent and the market was going through massive economic reforms. Third, the study does not address specific instances of rationing, such as those in female-owned businesses. In this, while the results suggest that female entrepreneurs are less likely to apply for bank finance, the results from the reasons behind their decisions are not significant. The signs of the coefficients, however, suggest that female entrepreneurs might be expecting rather

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<sup>8</sup> In his review of the literature, Beck (2013) argues that the theoretical and empirical evidence is ambiguous on the effect of competition in the banking sector and SMEs' access to bank credit.

tighter credit constraints. Future lines of research could assess this issue further, given the inconclusive literature on female-owned businesses' access to bank finance. Moreover, depending on data availability, future research could enhance our understanding of the effect of limited access to bank finance on firms' growth, such as fixed assets investments, employment and sales, particularly for younger and smaller firms.

## Appendices to Chapter 4

### Appendix 4.A: Definition of variables used in regression analysis

Variable name	Definition	Expected sign with borrowing decision	Expected sign with lending decision
<b>Firm Characteristics:</b>			
Firm age group	Categorical variable indicating firms' age: "new" = firms that have been in business for less than 3 years; "established" = firms that have been in business for 3-6 years; "old" = firms that have been in business for 7-10 years, with "very old" = firms that have been in business for more than 10 years as the reference group.	-	-
Firm size group	Categorical variable indicating the size of firms in terms of employment level: "micro" = firms employing 1-5 employees; "small" = firms employing 6-49 employees, with "medium" = firms employing 50-249 employees as the reference group.	-	-
Industry sector	Categorical variable indicating the sector in which firms operate: "manufacturing"; "personal services"; "professional/logistics services" "wholesale/retail"; and "construction" as the reference group.	Manufacturers and construction firms are more likely to apply because of higher financing needs in such capital-intensive firms.	Manufacturers and construction firms are more likely to be approved because of the availability of fixed assets. Traders are more likely to be approved because the sector is well understood by bankers. Services based sectors are less likely to be approved.
Legal status	Binary dummy variable where 1= limited liability company; 0= sole proprietorship/partnership.	-	Empirical evidence on bank lending decision is not clear-cut.
Employment change	Continuous variable calculated for change in number of employees five years ago, i.e., in 2014, or at establishment if the firm is more recently established as in Storey (1994a):	+	+

	$\frac{E_t - E_0}{T}$		
Growth intentions	Categorical variable indicating growth intention of firms: “intend to grow”; “maintain the business size”, with “downsize the business” as the reference group.	+	+
Involved in inter-firm relationships	Dummy variable where 1= if the respondent indicated having a subcontracting/raw material supply relationship, franchisor/franchisee, joint venture, or cooperates in manufacturing/marketing/ problem solving/technology development with large corporations, foreign and/or government entities; 0 otherwise.	+	+
Innovation	Binary dummy variable where 1= firm introduced/significantly improved product or process of manufacturing/providing services in the last three years, 0 otherwise.	+	-
Exporter	Binary dummy variable where 1= the firm directly or indirectly exports, 0 otherwise.	+	+
<b>Entrepreneur Characteristics:</b>			
Number of founders	Natural logarithm of the number of founders of the business.	+	-
Gender	Binary dummy variable where 1= female; 0= male.	-	-
Age group	Categorical variable indicating “below 30 years old”; “between 30-50 years old”; and “above 50 years old” as the reference group.	+	-
Education level	Categorical variable indicating owner’s highest level of education: “No Bachelor’s degree”; “Bachelor’s degree holder”; with “postgraduate degree holder” as the reference group.	-	-
Previous experience	Categorical variable indicating: “small business experience”; “employment experience”; with “student” as the reference group.	+	+
<b>Involvement with the bank:</b>			
Usage of non-lending products and financial services	Categorical variable where 0= if the firm selected “yes, prior to applying” or “yes, prior to and after applying”; 1= “after applying” to the question	+	+

	“Do you use <b>fee-based non-lending</b> products/services from banks (e.g., collection of receivables, payroll services, etc.)?”; 2= “no, I do not use such products/services” as the reference group.		
Applying through <i>Kafalah</i>	Binary dummy variable where 1= the firm applied through the <i>Kafalah</i> Program; 0 otherwise.	Not applicable.	+
Main purpose of latest application	Categorical variable indicating the main purpose for applying for bank finance: “Start-up”; “Fixed asset investment/expansion”; “Working capital financing” with “project financing” as the reference group.	SMEs are more likely to apply for working capital financing and project financing purposes.	Applications for working capital financing and project financing are more likely to be approved.
Desire for bank finance	Binary dummy variable where 1= bank finance is <i>not</i> among the preferred sources of external finance if funds are needed in the future; 0= bank finance is among the preferred sources of external finance if funds are needed in the future.	+	Not applicable.

## Appendix 4.B: Probit regression models, with Heckman selection: credit rationing status

Model	(1)	(2)	(3)
	Credit Rationed	Partially Credit Rationed	Non-Credit Rationed
Uses fee-based non-lending products/services	-0.06954 (0.364493)	0.136091 (0.467924)	-0.15291 (0.257363)
Applied through <i>Kafalah</i>	-0.564363* (0.338024)	0.7384106* (0.391794)	-0.03715 (0.274295)
Firm age: New (< three years old)	0.982349 (0.678152)	0.103765 (0.607881)	-1.34411*** (0.5121696)
Firm age: Established (3-6 years old)	0.567219 (0.459531)	0.355012 (0.522589)	-0.8898459** (0.353803)
Firm age: Old (7-10 years old)	-0.07899 (0.475787)	0.933615 (0.606281)	-0.8179611** (0.378266)
Firm size: Micro (1-5 employees)	2.439442** (1.045318)	-2.622613** (1.030884)	-0.33167 (0.543398)
Firm size: Small (6-49 employees)	1.394103** (0.645566)	-0.6819 (0.508557)	-0.50529 (0.347334)
Industry: Manufacturing	-0.7987 (0.635369)	0.649675 (0.815958)	0.198063 (0.415506)
Industry: Personal services	-0.7623 (0.658108)	0.107366 (0.899201)	0.184002 (0.479344)
Industry: Professional/logistic services	-0.93914 (0.673823)	1.160807 (0.840645)	0.048301 (0.459248)
Industry: Wholesale/retail	-1.191904* (0.698017)	2.133278** (0.940138)	-0.2645 (0.446206)
Legal status (Ltd.)	0.630101 (0.475755)	-0.04533 (0.540763)	-0.32351 (0.345237)
Employment growth%	0.002156 (0.016744)	-0.00645 (0.017924)	0.009959 (0.014299)
Growth intent: Grow	-1.07563 (0.715083)	0.100604 (0.566348)	1.064795** (0.530404)
Growth intent: Maintain business size	-0.29823 (0.596921)	-0.43596 (0.726079)	0.955194 (0.584378)
Inter-firm relations	-0.42372 (0.41213)	0.425695 (0.407447)	0.129744 (0.283621)
Innovative	0.303576 (0.390086)	0.079104 (0.475136)	-0.13034 (0.314914)
Exporter	-0.13677 (0.361509)	0.047546 (0.478019)	0.077505 (0.283705)
No. of founders (LN)	-0.19272 (0.282685)	0.525779 (0.377629)	-0.079 (0.21417)
Female owner/manager	-0.45638 (0.964693)	-0.86896 (1.253687)	a

Owner age: below 30 years old	-0.61705 (0.723273)	-0.61484 (1.01803)	0.850906 (0.588028)
Owner age: between 30-50 years old	-0.32534 (0.542489)	-0.55695 (0.583077)	0.665063 (0.423942)
Education: no bachelor's degree	1.67114** (0.794221)	-0.91619 (0.717966)	-1.410546*** (0.4335526)
Education: bachelor's degree	-0.11071 (0.346219)	0.514177 (0.477391)	-0.4723554** (0.234781)
Experience: owned another SME	-0.62442 (0.66132)	0.946262 (0.934173)	0.29767 (0.447487)
Experience: employment experience	0.166012 (0.519362)	0.492324 (0.77504)	-0.3247 (0.41084)
Main purpose: start-up	a	1.170272 (1.29332)	a
Main purpose: fixed assets	a	0.549122 (1.225389)	a
Main purpose: working capital	a	-0.62824 (1.240297)	a
Constant	1.278397 (1.576661)	-1.46257 (2.571984)	-1.20755 (0.971759)
Selection equation instrument	Applied	Applied	Applied
Do not desire bank finance	-0.5305684*** (0.1454188)	-0.523428*** (0.1445651)	-0.535822*** (0.1385556)
Constant	-0.06658 (0.102016)	-0.07477 (0.102098)	-0.06753 (0.100127)
No. of observations	323	322	323
Censored observations	119	118	119
Uncensored observations	204	204	204
Wald $\chi^2$	10.62 (26 df)	20.12(29 df)	102.53***(25)
LR test of independent equations ( $p=0$ ), $\chi^2$	0.31 (1 df)	0.01(1 df)	2.92* (1 df)

Notes: The dependent variable in this table is one of the dummy variables *Credit Rationed*, *Partially Credit Rationed* and *Non-Credit Rationed*. Model 1 reports coefficients from Probit estimations for credit rationed firms. Model 2 reports those for partially credit rationed firms. Model 3 reports coefficients of the Probit model for the non-credit rationed firms. The standard errors are reported in brackets. a. because of quasi-complete separation issues, the variables female owners/managers and the main purpose of application are removed from the regression Model 3. The model would not converge otherwise. \*\*\* denotes significance at 1% level; \*\* denotes significance at 5% level; \* denotes significance at 10% level

### Appendix 4.C: Multinomial Logistic Regression Model of Non-Applicant Firms

Main reason for not applying (Base outcome: <i>Discouraged terms and conditions</i> )	Discouraged Borrowers	Religious/ Cultural Rationed	Risk/Control Averse
Intercept	.118 (.217)	-.598** (.265)	-.163 (.233)
Female owner/manager	.000 (.532)	-.383 (.727)	-.125 (.588)
No. of observations	167		
$\chi^2$	24.236 (3df)		

*Notes:* This table details results from multinomial logit regression where only the entrepreneurs' gender is included. The dependent variable is the main reason for not applying. The base outcome is *Discouraged Terms/Conditions* and is compared to *Discouraged Borrowers*, *Religious and Cultural Rationed* and *Risk/Control averse*. The reported coefficients are the impact of this explanatory variable on the relative risk ratio Prob(X)/Prob (*Discouraged Terms/Conditions*). The standard errors are in brackets.



# Chapter 5: Impact Evaluation of Credit Guarantees to Support SMEs in Saudi Arabia

## 5.1 Introduction

Although widely recognised that SMEs drive economic forces through employment generation and recovery from recessions (Ayyagari et al., 2017), a common concern raised in the small business literature is that capital market failure exists and limits the availability of finance for SMEs (Cowling, 2010). The most obvious symptom of market failure defined by economists is *credit rationing* (Ramskogler, 2011). Stiglitz and Weiss (1981) have shown theoretically that asymmetric information can lead to adverse selection and moral hazard. Therefore, banks ration credit instead of increasing interest rates, as the latter attracts high-risk borrowers (Stiglitz & Weiss, 1981). In the Post-Keynesian literature, credit rationing of SMEs results from asymmetric expectations by banks and borrowers about the future and the likelihood of repayment; understandably, banks are prepared to take a higher level of credit risk with large firms than SMEs (Wolfson, 1996), which in turn leads to the exclusion of some creditworthy borrowers from the credit market.

Such common concerns have led governments, almost without exception, throughout the developed and developing world to initiate Credit Guarantee Schemes (hereafter, CGSs) (Boocock & Shariff, 2005; Cowling & Mitchell, 2003; OECD, 2017). The basic mechanism of CGSs is that the guarantor, usually a government or quasi-government body<sup>9</sup>, pledges to repay some or the entire amount of the loan to lenders (generally private financial intermediaries such as banks) in cases where borrowers default. The guarantor usually charges fees in exchange for this service, which makes this a more expensive form of borrowing (Gozzi & Schmukler, 2016; Parker, 2002). Such schemes are usually targeted at SMEs with insufficient collateral and/or insufficient credit experience, exporters, and innovators, typically those who are perceived to be underserved by the private financial systems and/or those who are considered to have positive externalities (Gozzi & Schmukler, 2016; Saldaña, 2000). In this way, CGSs are intended to close

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<sup>9</sup> CGSs can emerge privately. For example, members of small business organisations might establish a mutual guarantee association (Gozzi & Schmukler, 2016).

the funding gap, overcome credit rationing, and enable disadvantaged SMEs to access bank financing by ensuring that a share of the overall risk on the loan amount is underwritten, i.e., effectively providing a substitute for collateral (Gai et al., 2016; Valentin & Henschel, 2013). Therefore, CGSs allow additional productive investments to take place, leading to higher production and employment (Hennecke et al., 2018).

Despite the long history of CGSs worldwide, the empirical literature has been rather sparse on this subject. CGSs' benefits are often vague, little studied, and typically focus on developed countries (Boocock & Shariff, 2005; Dvouletý et al., 2019; Honohan, 2010). Methodological challenges and a general lack of associated financial data make it difficult to measure their outcomes (Meyer & Nagarajan, 1996; Samujh et al., 2012). Recent literature and the several contributions that have attempted to fill this gap propose that CGSs' impact on economic incentives is at best contentious, and there is no conclusive evidence that they result in additional lending to financially constrained SMEs (Cowan et al., 2015; Ono et al., 2013; Zecchini & Ventura, 2009). Similarly, the theoretical literature provides contrasting views regarding the effectiveness of CGSs (Gozzi & Schmukler, 2016; Zecchini & Ventura, 2009). Some scholars are sceptical about their effectiveness, the theoretical justification for such government intervention, and indeed their financial sustainability (Arping et al., 2010; Parker, 2002; Vogel & Adams, 1997). In this, under the asymmetric information framework, CGSs can allow some projects with a negative NPV to be financed, exacerbating the problem of "overlanding" (De Meza, 2002; De Meza & Webb, 1987).

The present research, therefore, aims to contribute to this debate by assessing the impact of the Saudi CGS *Kafalah*. Despite those few studies on CGSs in developing countries, and being relatively new compared to other CGSs, the *Kafalah* Program has not previously – to the best of the author's knowledge – been subject to independent empirical evaluation. The current study hence responds to calls for further empirical studies on specific schemes because of the considerable differences in their features and rules worldwide (Beck et al., 2010), particularly with regard to local conditions (Dvouletý, 2017).

Local conditions in Saudi provide an interesting context in which to study CGSs. This is because small-scale banks, which are advantaged by serving SMEs, are absent in Saudi. Large banks dominate the banking system and their business models are regarded as being geared towards

financing large corporations (World Bank Group, 2016). Nevertheless, with the decline in oil prices since 2014, Saudi has articulated its Vision 2030 to activate SMEs' roles. One such approach is to increase both SMEs' contribution to GDP from 20% to 35% and bank lending to SMEs from around 2% in 2016 to 20% by 2030 (Vision 2030, n.d.). The main contribution made by this thesis, therefore, is to broaden the analysis of CGSs with a specific focus on large banks' ability to serve the SME sector without government intervention in the credit market, as argued by de la Torre et al. (2010).

Accordingly, it is important to assess the *Kafalah* Program in terms of its effectiveness to promote lending to SMEs who have previously been unable to obtain bank finance, i.e., are effectively credit-constrained. The literature defines this impact as *finance additionality* (Riding et al., 2007; Saadani et al., 2011). Another impact analysed is concerned with what is called *economic additionality*, i.e., whether any increase in access to finance contributes to an improved performance on the part of the guaranteed firms, e.g., higher growth, investment, employment, turnover, and/or profit (i.e., direct economic additionality) (Boocock & Shariff, 2005; Gozzi & Schmukler, 2016). If growth is limited by the availability of external finance, firm performance should be affected positively after obtaining guaranteed funds (de Blasio et al., 2018).

This study focuses on employment level, which is argued to be of greater interest to policy makers. In assessing this aspect of economic additionality, it investigates arguments that CGSs induce moral hazard when explaining why guaranteed borrowers' probability of default becomes larger and/or guaranteed borrowers perform worse compared to identical, untreated firms (D'Ignazio and Menon, 2019; Lelarge et al., 2010, Uesugi et al., 2010). The design of *Kafalah* allows each such effect to be tested because it allows banks to ask for additional collateral/security. This, in turn, allows firms' performance, across those who extended collateral and those for whom *Kafalah's* guarantee is viewed as sufficient by bankers, to be compared.

The current study, therefore, addresses the following research questions:

- 1) Does *Kafalah* increase bank credit availability for SMEs in Saudi?

- 2) What economic impact does *Kafalah* have in terms of employment level in guaranteed SMEs?

Because of the lack of publicly available firm-level data on *Kafalah*'s beneficiaries, the current study employed primary firm-level data collected through a telephone survey of 124 beneficiary firms, as well as an additional 328 random SMEs who self-administered the same survey questionnaire (i.e., the sample from Chapter 4) as a control group.

The current study follows Riding et al. (2007) in assessing *Kafalah*'s finance additionality. In this way, finance additionality is assessed by employing a logistic regression model on non-*Kafalah* participants to estimate application outcome for bank finance applicants. The resulting model is then used to predict the bank decision on whether *Kafalah*'s participants would have been turned down had the *Kafalah* Program not been introduced.

The results suggest that *Kafalah*'s finance additionality is estimated (with 95% confidence) to be  $73 \pm 7.9\%$ . In this, 73.3% of *Kafalah*'s beneficiaries would otherwise have been rejected had the *Kafalah* Program not been introduced. Such estimated finance additionality is well above the average of the 30-35% that exists amongst CGSs that are properly designed and implemented (Levitsky, 1997), also, above the 60% finance additionality stressed by Bannock and Partners (1997) that should be generated by CGSs (Boocock & Shariff, 2005). Survey respondents confirm the predicted finance additionality from the econometric analysis, i.e., about 72% of *Kafalah*'s beneficiaries believe that their lending bank would not have extended finance were the *Kafalah* Program not available.

Despite such high levels of finance additionality, the effects of the characteristics of *Kafalah*'s beneficiaries, coupled with low default rates of those enrolled on the *Kafalah* Program (i.e., not exceeding 2.31%, with the exception of 2009) suggest that banks are still very cautious with regard to approving finance. In this, *Kafalah*'s beneficiaries appear to be older on average, and compared to rejected applicants, they are significantly larger in terms of employment. Furthermore, they are more likely to be involved in inter-firm relationships with large, foreign, and/or government organisations, and hence more likely to be approved for bank credit for project-financing purposes. These loans tend to have short-term maturities and are usually secured by assigning the project's proceeds to the bank.

This, in turn, provides some explanation for the findings from the subsequent economic additionality analysis which follows that by Chandler (2012). However, unlike Chandler (2012), the survey questionnaire allows for the inclusion of a fuller set of controls including human capital, i.e., education and experience, and firms' activities, i.e., innovation and exporting. In this way, simple Ordinary Least Squares (OLS) regressions are used to assess employment change across four different groups compared to *Kafalah* participants: *all SMEs*, *non-applicant SMEs*, *rejected applicants*, and *approved non-guaranteed bank finance borrowers*.

Subject to methodological limitations and the prevailing economic downturn in Saudi, the economic additionality analysis suggests that participating in *Kafalah* does not affect SMEs' growth in terms of employment, which should in fact be positively affected if growth is limited by the availability of external finance. This can be attributed to the fact that *Kafalah's* beneficiaries are typically the older and larger SMEs in the sample and their loans are mostly of short-term maturity. It can thus be argued that these firms utilised the guaranteed funds to ease working capital pressures during the difficult economic environment in Saudi.

Nevertheless, the results in the current study do not find evidence to support arguments regarding the induced moral hazard effect amongst guaranteed borrowers. In this, *Kafalah's* participants, for whom the bank perceived *Kafalah's* guarantee to be sufficient, are not statistically different in terms of employment growth compared to the other groups.

The chapter is structured as follows. Section 5.2 provides a review of the theoretical justification for CGSs and the theoretical arguments against them. Section 5.3 provides a literature review of CGS designs and evaluation measures; key issues raised in evaluating this policy; and a discussion of the findings reported by previous empirical studies. Section 5.4 describes the Saudi CGS *Kafalah* and compares its features against best practice. Section 5.5 describes the data collection process and the control group identified and provides the statistical analysis of the data obtained. Section 5.6 presents the econometrics analysis in estimating *Kafalah's* finance additionality. The analysis and results for economic additionality are provided in Section 5.7. Section 5.8 provides a set of concluding remarks and describes a number of associated policy implications.

## 5.2 Theoretical Justification and Issues against CGSs

CGSs are usually justified based on some social objectives. However, the rationale for choosing credit guarantees instead of other types of government intervention is usually left unexplained (Gozzi & Schmukler, 2016). Although market imperfection, which is consistent with credit rationing, is typically invoked as justification for such schemes (Cressy, 2002; Riding et al., 2007), there is a wide debate on whether the difficulties facing SMEs in accessing credit justify government intervention (Green, 2003; Parker, 2002). Some scholars argue that policy should by no means attempt to reverse the situation (De Meza, 2002). It is necessary, therefore, to provide a brief review of the notion of credit rationing as a form of market failure.

As mentioned in Chapter 2, both New Keynesian economics and Post-Keynesian economics suggest the possibility of credit rationing, New Keynesian economists explain the concept according to asymmetric information. Because a potential borrower's risk exposure cannot be fully identified, banks are unable to match each borrower with the appropriate risk-adjusted interest rate. Furthermore, because the pool of credit seekers may be heterogeneous, changes in interest rates can change its risk structure. That is, increasing the interest rate might drive out the less risky borrowers (adverse selection), or entice borrowers to undertake riskier projects to obtain higher returns, leading to increased probability of default (moral hazard) (Ramskogler, 2011). There is thus a ceiling to the interest rate after which banks' profits begin to depress (Hall, 2001). Hence, banks ration credit instead of demanding higher interest rates.

In contrast, Post-Keynesians have provided a considerable body of literature on endogenous money in which credit rationing is described as a divergence of credit demand and assessed creditworthiness under circumstances of uncertainty (Ramskogler, 2011). Post-Keynesians argue, that the supply of bank credit is endogenous, i.e., credit supply is demand-led. Hence, banks will always agree to fulfil the demand from firms, but only from those who are considered to be creditworthy, i.e., that meet banks' lending criteria. This in turn has something to do with the banks' liquidity preferences and the confidence they have over uncertain future. For example, banks with higher liquidity preferences will be reluctant to increase loans or accept new customers. This is particularly the case when banks are not optimistic about the future. During such times, banks will raise their lending criteria by requiring firms to have lower debt-to-equity ratios, better cash flows, and/or higher collateral requirements. Hence, a number of

borrowers will no longer be deemed creditworthy and those who decline to satisfy the collateral requirements will be rejected (Lavoie, 2009; 2014).

Under the asymmetric information framework, collateral can act as a sorting device for banks. In this way, only borrowers that represent a good risk will be happy to pledge collateral against loans because they are more confident that they will not default and hence lose their asset, while bad borrowers with risky projects are more reluctant to put up collateral because of the increased probability of losing their assets (Cowling, 2010). However, this is where the debate on credit rationing diverges. On the one hand, Bester (1985) argues that collateral can eliminate credit rationing; on the other, Besanko and Thakor (1987) argue that there are situations where good and bad borrowers are significantly different regarding their associated riskiness. The amount of collateral required from a good borrower may exceed their wealth, e.g., asset endowment. Hence, a percentage of good low-risk borrowers might be unfairly credit-rationed. This category of credit rationing, in particular, provides valid justification for the implementation of CGSs (Cowling, 2010).

Nevertheless, the existence of credit rationing has been theoretically challenged. For example, De Meza and Webb (1987) stated that asymmetric information might actually result in overlending. Furthermore, the empirical evidence on the issue is scant at best (Parker, 2002). Vogel and Adams (1997) identify two situations in which SMEs may face difficulty obtaining credit. The first occurs when the cost of lending for small businesses is too high for financial institutions to be profitable. This high cost is a component of the risk premium and fixed costs of evaluating and monitoring loans to such small firms. However, Vogel and Adams (1997) argue that these are regular elements of the way that such markets operate. The second situation is when the lender places importance on collateral availability. In this way, small firms are denied loans if they do not have the required amount, in terms of quality or quantity, of collateral. However, Green (2003) argues that the fact that many SMEs with sound viable businesses do not have sufficient collateral is not a market imperfection in itself. Banks cannot foresee the future, and therefore place a greater importance on collateral than the viability of the project/business. Therefore, it is argued that CGSs can allow some projects with a negative net present value to be funded and hence may exacerbate the problem of “overlanding” (De Meza, 2002).

Others argue that even if market imperfection exists, CGSs must prove to be the most suitable tool in addressing the root issues causing SMEs' difficulties in gaining access to credit. Under the information asymmetry framework, if the lack of information and high transaction cost associated with lending to SMEs are the root of such difficulties, then credit bureaux are seen as a superior tool, compared to CGSs (Green, 2003). Indeed, it is argued that CGSs do not directly reduce information asymmetry since the guarantor has no informational advantage over the lender (Gozzi & Schmukler, 2016); instead, they may exacerbate information asymmetry problems (Cowan et al., 2015). Arping et al. (2010) argue that such schemes may damage price signals and worsen borrower efforts to prevent bad outcomes because of moral hazard-related issues. Therefore, CGSs can weaken borrowers' commitment to repay the loan as they know that a guarantee fund will compensate the lending institution (Levitsky, 1997), i.e., even though CGSs are assumed to be a substitute for collateral (Vogel & Adams, 1997), they do not often play the role of such in deterring moral hazard where borrowers lose their assets if they default (Gozzi & Schmukler, 2016). On the lenders' side, CGSs might reduce banks' incentive to adequately monitor guaranteed borrowers, leading to increased moral hazard issues (Uesugi et al., 2010). However, Arping et al. (2010) argue that as long as the guarantee is small, the latter effect offsets the former, which translates into greater entrepreneurial effort. Hence, credit guarantee agencies should have hard budget constraints. Those schemes should not be able to provide subsidies beyond the point at which this would start to weaken entrepreneurs' incentives and cause them to substitute public for private collateral (Arping et al., 2010). This leads to the following argument on CGSs' financial sustainability.

It is argued that CGSs tend to spend their capital quickly and cannot always cover their operating costs (Vogel & Adams, 1997). While these schemes are supposedly self-sustaining, they frequently require substantial subsidies and contingent fiscal liabilities to cover losses (Beck, 2007). Indeed, CGSs are confronted with the trade-off between charging adequate premium fees to maintain operating expenses and selling their products at affordable prices (Navajas, 2001). Additionally, relatively high loan default rates are inconsistent with the principles of financial viability. As a result, CGSs usually run out of funds within a few years (Zecchini & Ventura, 2009).

Despite such scepticism by theorists, governments, donors, and bankers often advocate CGSs (Meyer & Nagarajan, 1996). Such schemes can be attractive for these agencies because of the



relatively small upfront capital commitment compared to the total volume of credit supported by CGSs. Furthermore, liabilities are contingent, and if they arise, they will do so in the future, whereas operating costs can be compensated by premiums and fees paid by beneficiaries (Honohan, 2010). It is also argued that CGSs have been employed as a countercyclical policy tool by many countries. Korea, for example, has employed them to mitigate the negative effects on SMEs during crises (Saadani et al., 2011).

Another justification provided in favour of CGSs is “learning by doing”, i.e., CGSs initiate a learning process which can alter banks’ lending behaviour in the longer term. Lenders will assemble sufficient information about these new borrowers and learn that they are not too risky. SMEs will also learn how to obtain formal finance (Meyer & Nagarajan, 1996; Vogel & Adams, 1997). Consequently, well-performing borrowers may graduate to unguaranteed bank loans, i.e., sustainable access to bank finance (Vogel & Adams, 1997). Therefore, CGSs are popular and widely used globally.

In light of these arguments, more guidance needs to be given to policy makers regarding CGSs’ effectiveness in improving SMEs’ access to bank finance. Although some studies have attempted to fill this gap by offering proposed assessments of CGSs, due to lack of data, few earlier studies have evaluated CGSs at the firm level, and such analysis remains limited at the macro-scope level (Kang & Heshmati, 2008). Furthermore, it is argued that the empirical evaluations of CGSs are still quite rare compared to the frequency of CGSs’ implementations, and the current results by scholars are mixed (Dvouletý et al., 2019). The following section provides a review of the main criteria used in assessing the effectiveness of CGSs and the findings of previous empirical studies.

## **5.3 Literature Review**

### **5.3.1 Designing Credit Guarantee Schemes: Generic Features**

The generic arrangement of CGSs implies an agency relationship between lender and guarantor. While lenders act as a delivery agent for the latter, their objectives often differ. Hence, the guarantor must align their objective (usually facilitating credit) with the lender’s objective of profit maximisation (Riding & Haines, 2001). Although there is no unique recipe for a CGS to

be effective, a number of criteria and parameters through which guarantors can manage this relationship are provided in the literature. Among the most important mentioned parameters are:

*The degree of discretion in credit decisions:* There are three approaches that CGSs follow: individual, portfolio, or hybrid. Under the individual approach, every loan application is appraised and approved by the guarantor; in the portfolio approach, however, banks are allowed to extend guarantees without consulting the scheme. The hybrid approach is a mix of elements from both approaches, i.e., lenders extend guarantees without consulting the scheme, but only to a certain limit; above this, the guarantor appraises the loan before approving (Saadani et al., 2011).

There is a trade-off between the cost of each approach and their benefits. For example, while the individual approach is costly and incurs higher operational costs, it provides better control over credit risk and ensures financial sustainability. More importantly, if the scheme has informational advantage over a banking system that is less experienced in SME lending, the provision of information and technical support exchanged can improve the banking systems' credit appraisal skills for SMEs. Nevertheless, if no such informational advantage exists, such an approach is unlikely to be cost-effective. Similarly, while the portfolio approach reduces operational and transaction costs, it involves higher risks for the scheme in the form of excessive risk-shifting to the guarantee fund. A better approach to managing such risks is to impose higher future premium payments as a penalty for lenders with high claims (Honohan, 2010). Between these two is a hybrid approach that aims to combine the advantages of those two approaches whilst overcoming their limitations (Saadani et al., 2011). According to Honohan (2010), some of the best-regarded CGSs do not carry out the individual approach. Loan losses are often larger in schemes where the guarantor selects the borrowers and recovers the debts. This can be explained by the lower experience government guarantee agencies have compared to lenders (Gozzi & Schmukler, 2016).

*Coverage ratio:* This refers to the proportion of the total loan that is guaranteed when default occurs (Honohan, 2010). It is advisable that banks assume some of the risk (Beck et al., 2010; Levitsky, 1997), because if they do not their incentive to adequately monitor guaranteed borrowers will be reduced, leading to increased moral hazard issues (Uesugi et al., 2010). However, CGSs where banks assume a higher share of the risk (i.e., less than a 50% coverage

ratio) are less attractive to induce banks to participate. This is because banks will have to require collateral from borrowers. The process and cost of appraisal involved do not justify following the procedures required to obtain the guarantee (Levitsky & Prasad, 1989). While a 100% coverage ratio might be more attractive to banks, this level of coverage ratio would just invite abuse (Oehring, 1996). The dominant view is that a 100% coverage ratio is subject to greater moral hazard on the part of both borrower and lender (Levitsky, 1997). Best practice, therefore, suggests at least 30-40% of the risk should be assumed by the lender, and never less than 20% (Levitsky, 1997).

*Guarantee Fees:* The payment of a fee or premium by borrowers is essential in terms of incentives for both lenders and borrowers, and also for the scheme's financial sustainability. Financial sustainability relies on the guarantor's ability to deal with all operating and default costs through this fee, as paid by the beneficiaries (Honohan, 2010). Most CGSs base the fee on the guaranteed amount, while a few base it on the loan amount (Beck et al., 2010; Deelen & Molenaar, 2004). High fees for guaranteed funds might deter borrowers. Therefore, it is argued that fees should not be higher than 2% as borrowers pay these in addition to the interest rate (Deelen & Molenaar, 2004) and fees should be set in relation to interest rates (Levitsky, 1997). Similarly, Saadani et al. (2011) argue that all CGSs must link the guarantee's price to the risk exposure as a basic insurance principle. Sufficiently high fees discourage banks from using the guarantee for good borrowers who can secure credit without additional guarantees (Saadani et al., 2011).

*Eligibility Criteria:* The lending criteria provided by CGSs, i.e., the categories of eligible borrowers and the lending terms, vary widely. Some CGSs have relatively broad eligibility criteria where they only impose a ceiling on the firm size measured by turnover, and a ceiling on the overall exposure to borrowers (Honohan, 2010). On the other hand, some guarantees may not be allowed for certain borrowing-related purposes. In Canada, for instance, guarantees are not provided to support working capital (Riding & Haines, 2001). Saadani et al. (2011) advise that eligibility criteria should have some flexibility and not be overly restrictive. This is because there is uncertainty about which firms are credit-constrained, and hence excessive restrictions may exclude credit constraint firms who are above the threshold. At the same time, broad criteria, for example those with no ceilings on firms' size, leave the door open to deadweight as

this may allow banks to use the guarantee for large firms, which weakens the additionality benefits of the schemes.

*Default rates:* Claim payments represent the most conspicuous cost of CGSs, much larger than its administrative cost (Honohan, 2010). Claim rates should be assessed against the amount of outstanding guarantee and be assessed after five or more years of operations, since most borrowers do not default in the first year after receiving a loan (Levitsky, 1997). While claim levels of more than 5% require some caution, a zero-claim rate would indicate overcaution in approving guarantees. Levitsky (1997) states that best practice constitutes a claim rate of 2-3%.

Overall, such criteria vary from one scheme to another based on the rationales and objectives of the scheme, which in turn affect the impact of the scheme under study. Nevertheless, they provide useful benchmarks by which to assess the Saudi CGS *Kafalah* in the coming section.

### **5.3.2 Measuring the Benefits of CGSs**

A key question in the literature is whether CGSs are an effective tool with which to promote lending to SMEs (Gozzi & Schmukler, 2016; Zecchini & Ventura, 2009); i.e., assessing whether such schemes have achieved their goals in alleviating financial obstacles for SMEs, and have contributed to the economic development of the country/region due to increased investments and projects undertaken by the SMEs so supported (Caselli et al., 2019). The acid test for the effectiveness of CGSs is *additionality*. CGSs' additionality can be measured according to two dimensions: financial and economic (Boocock & Shariff, 2005). CGSs have to show that they can at least generate financial and economic additionality to prove they are, in practice, cost-effective mechanisms (Gozzi & Schmukler, 2016).

Financial additionality refers to a situation in which the majority of enterprises receiving guaranteed loans have been unable to secure financing from alternative sources, i.e., lending under the scheme is additional to the existing credit market lending (Riding et al., 2007). It is argued that the extent to which the provision of capital that is not additional to that already available represents a waste of already scarce resources (KPMG, 1999).

Levitsky (1997) defines finance additionality as the additional loans made possible because the scheme provides a guarantee to the lender against losses; he argues that if there are few such

additional loans, and the same amount of lending to SMEs would have taken place had the scheme not existed, then one of the main justifications for such schemes would have been disproved (Levitsky, 1997). Moreover, Vogel and Adams (1997) maintain that additionality might be expressed in terms of number of loans, number of clients, or in terms of volume of funds lent to targeted groups. Vogel and Adams (1997) provide an example on the notion of additionality: assume that before a CGS was introduced, lender X was offering loans to 10 enterprises to a total amount of \$1,000. If, after participating in the scheme, lender X provided loans to 20 enterprises to a total of \$2,000, it can be concluded that the CGS results in financial additionality in both the value and number of loans extended to the target groups. Likewise, additionality might also occur when lender Y, who initially does not extend loans to small firms, later lent to 10 small firms to a total of \$1,000 under the scheme. A study by KPMG (1999) further provides two components of financial additionality:

- Full financial additionality: a situation in which an enterprise would not have been able to secure any finance through alternative sources.
- Partial financial additionality: a situation in which an enterprise would have been able to secure some, but not all, of the finance provided through the CGS from alternative sources.

Finally, financial additionality also has another dimension concerned with the depth of financing, i.e., whether the scheme allows speedier access to loans, and/or allows targeted enterprises to borrow on better terms, e.g., lower interest rates and/or longer maturities, than would otherwise be possible if the scheme did not exist (Meyer & Nagarajan, 1996).

A further question regarding the impact of these schemes is one of economic additionality. This has two components: direct economic additionality, i.e., whether any increase in access to finance contributes to improving the performance of the guaranteed firms, e.g., higher growth, investment, employment, turnover, and profit; and indirect economic additionality, which concerns the wider benefits, including positive spillovers accruing from the activities of guaranteed firms, for example, higher exporting activities, which are associated with increases in national wealth and more dynamic entrepreneurial activities in the economy (Boocock & Shariff, 2005; Gozzi & Schmukler, 2016).

It is maintained that economic additionality depends on financial additionality, i.e., if CGSs do indeed reduce credit rationing for economically viable SMEs, there should be a relationship between measures of such schemes' activities and economic growth (Craig et al., 2005). Nevertheless, it can be argued that it is possible for the latter to take place without the former, i.e., financial and economic additionality can be separate issues. For example, if a CGS is targeting exporters and those exporters could have obtained loans without the schemes (zero finance additionality) or replaced firms that used to obtain loans before the introduction of the CGS, positive spillovers and increases in national wealth because of their exporting activities can still take place; i.e., economic additionality is still generated without financial additionality.

Another benefit of CGSs is the initiation of a learning process which, in turn, can alter banks' lending behaviour in the longer term – a demonstration effect (Valentin & Henschel, 2013) – which is partly because borrowers learn how to secure formal loans and establish a close relationship with the banks. Hence, through such learning processes and the creation/intensifying of banking relationships, banks may begin to extend similar loans without guarantees and well-performing borrowers may graduate to unguaranteed bank loans, i.e., sustainable access to bank finance (Meyer & Nagarajan, 1996; Vogel & Adams, 1997).

### **5.3.3 Methodological Complexity and Key Issues in Evaluating CGSs**

As mentioned earlier, empirical evaluations of CGSs are still quite rare compared to the frequency of CGSs' implementations (Dvouletý et al., 2019). One of the main reasons for this is that measuring additionality and attributing it to a CGS is complicated and remains technically challenging (Saadani et al., 2011; Vogel & Adams, 1997). Many researchers provide key issues that limit such evaluations of CGSs. The first well-understood difficulty is the methodological complexity which arises from estimating the counterfactual, i.e., what would the borrower firms have done without the loan, compared to what was actually done with it (Meyer & Nagarajan, 1996). Nevertheless, no one can actually know with any real certainty what would have happened, and since this event did not occur, it is impossible to measure (Vogel & Adams, 1997). Therefore, proxies are often used. Usually, this involves comparing the current situation amongst guaranteed borrowers with some earlier data, and attributing some of the observed changes to guaranteed borrowing. An alternative approach is to compare the performance of borrowers using the scheme (treatment group) to non-users of the scheme (control group). Any improvement observed in the treatment group can be attributed to borrowing under the scheme

(Meyer & Nagarajan, 1996). However, identifying an appropriate control group of firms with similar characteristics remains technically challenging (Saadani et al., 2011). Section 5.5 covers this in more detail.

Furthermore, other key issues that complicate CGSs' evaluations include substitution issues, displacement issues, and regional variations in benefits from CGSs.

Vogel and Adams (1997) point to potential substitution problems that can occur within the lending institution itself (intra-portfolio substitution) and among lenders (inter-lender substitution). The former refers to situations in which CGSs may cause a lender to transfer part or all of their existing loan portfolio to the scheme and then expand lending to non-targeted groups. This can diminish additionality as the increase in guaranteed loans is offset by the decrease in non-guaranteed loans. Inter-lender substitution, on the other hand, refers to situations in which a financial institution may have access to a CGS that allows it to offer loans on more favourable terms than is otherwise possible to other lenders. As a result, this lender may be able to attract borrowers from these other lenders. When assessing net changes in the financial industry, the CGS may result in little additionality in client number if all borrower firms participating in the scheme were previously clients of other lenders (Vogel & Adams, 1997).

Similarly, Parker (2002) and Boocock and Shariff (2005) point to displacement issues that might limit the success of CGSs, i.e., SMEs financed under the scheme might displace existing firms, especially those in sectors such as retail, motor vehicle maintenance, and catering because assisted firms capture their markets. Indeed, Rhyne (1988) illustrates this perspective by quoting the US Office of Management and Budget's director, David Stockman (1987), saying that such schemes might impose unfair private economic harm as 99% of unsubsidised small businesses face downward pressure on profits, return on investment (ROI) and market shares owing to those government subsidised competitors (Rhyne, 1988).

Another issue highlighted in the literature is the differential spatial impact of nationally available schemes, as CGSs have geographically uneven impacts, i.e., considerable regional variations in the scheme's impact. Accordingly, researchers should consider the presence of and role played by regional differences in the dynamism of the business environment and in entrepreneurial

potential, in the awareness and delivery of the scheme and the existence of alternative agencies (e.g., regional development agencies), which may crowd out the use of a CGS in particular regions (Harrison & Mason, 1986).

Despite these challenges, in recent literature, several contributions were made to estimate the financial and economic additionality of CGSs (Lelarge et al., 2010). The following section provides a literature review on the findings of those empirical studies that aim to provide an evaluation of CGSs' additionality.

#### **5.3.4 Empirical Evidence on Additionality**

Countries initiate CGSs for a variety of reasons. Their rationales and design directly impact the degree of additionality, which has to be defined in terms of the objectives of the scheme (Riding & Haines, 2001; Riding et al., 2007). Designing a CGS entails a trade-off between the objectives of outreach, additionality, and financial sustainability. For example, a CGS might have strict eligibility criteria to target riskier firms. This, in turn, would positively impact additionality, but would reduce outreach and may lead to greater losses for the scheme because of the riskier nature of such a target group. In the same way, a CGS might impose high fees to improve additionality by discouraging banks from using the scheme for good borrowers. Nevertheless, the outreach of the scheme would be smaller and adverse selection effects might occur (Saadani et al., 2011).

Few schemes have attempted to evaluate additionality, while others have attempted to ensure it by only extending guarantees to first-time borrowers from each bank. This, however, was found to be restrictive. In all, some financial additionality of at least 30-35% exists in all CGSs that are properly designed and implemented (Levitsky, 1997). Nevertheless, Bannock and Partners (1997) stress that no less than 60% of guaranteed loans should be additional, preferably nearer to 80% or even 90% (Boocock & Shariff, 2005).

Due to the importance of such measurements, sample studies to evaluate CGSs should be conducted every two or three years to verify the level of additionality achieved (Levitsky, 1997). These evaluations are necessary to provide insights for policymakers on any improvements needed to certain specific criteria on the scheme's design and effectiveness (Saadani et al., 2011).



Some researchers have responded to this call and attempted to provide empirical evaluations of the impact of CGSs by employing a variety of data sources. Some studies used aggregated data to assess economic additionality. For example, Craig et al. (2008) find that districts in the US with more Small Business Administration (SBA) guaranteed lending per dollar of total bank deposits have higher employment rates. Similarly, Hancock et al. (2008) used State-level data to assess SBA-guaranteed loans during a recession and when interest rates were high. They find evidence that the scheme raised real economic activities of small firms. Larger guaranteed loans in numbers and amounts were associated with increased employment, output, wages, and salaries. Furthermore, disbursements of guaranteed loans tended to reduce business failures and bankruptcies, though only modestly. Those effects on small businesses were found to be larger when economic growth was slower or when interest rates were higher. They concluded that the scheme might be regarded as a stabilising force for the economy (Hancock et al., 2008). On the other hand, in Japan, employing a panel of annual data by prefecture for the fiscal years 1998 and 1999, Matsuura and Takezawa (2001) observed no statistically significant effect on overall bank lending to SMEs from loan guarantees (cited in Wilcox & Yasuda, 2008).

While such studies provide useful insights on the aggregate impact of CGSs, some critics indicate that the reliance on aggregate data can mask the true reactions of individual firms, which in turn makes it difficult to reach a definitive conclusion on the effectiveness of these schemes (Uesugi et al., 2010). Therefore, an increasing number of studies employing disaggregated data have attempted to quantitatively assess the effectiveness of CGSs at the firm level, including the studies described below.

Earlier studies by Rhodes (1984), the National Economic Research Associates (NERA) (1990), the Economic and Development Consultants (Pieda) (1992), and KPMG (1999) employed primary data at the firm level to assess CGSs in the UK. Rhodes (1984), NERA (1990), and Pieda (1992) find that the scheme generated additional finance and economic activity, i.e., recipient borrowers believe they could not have obtained finance in any other way. Nevertheless, Pieda (1992) points out that a high default rate was associated with cases of high financial additionality, and that economic additionality was low in firms operating in the services sector, especially retailers. Manufacturers, on the other hand, generally have a greater economic impact and create more jobs. At the national level, Pieda (1992) states that it was rare for the scheme's

participants to export or substitute for imports, i.e., less impact on indirect economic additionality.

One of the most well-known attempts to assess additionality was that undertaken by KPMG (1999) in the UK. The study found that around 70%, by number of firms, or around 60% of total loan value were additional. Moreover, KPMG (1999) found that additional employment that can be directly attributed to the scheme accounted, on average, for 2.4 jobs that were created or safeguarded per firm. Furthermore, the study found that whilst 53% of recipient firms used the guaranteed loans to finance new products/services, 25% of them used it to develop new process in manufacturing/providing services, and 32% to introduce a sector-leading technology. The study concluded, the UK's Small Firm Loan Guarantee Scheme (SFLGS) has provided much-needed financial support to a large number of small businesses, with the majority of this support being additional. Furthermore, there is a strong case for the SFLGS to keep playing a role in satisfying the needs of SMEs who lack security but have sound business propositions, based on the evident economic benefits. A number of recommendations were suggested, including equalising the level of the guarantee, encouraging new lenders to participate in the scheme, and increasing the awareness of the target group about the SFLGS (KPMG, 1999).

Similarly, in Canada, Riding and Haines (2001) find that the Canadian scheme is extremely efficient in terms of job creation, using primary data on recipient firms and a control group of non-recipient firms. Evidence of economic additionality of approximately 66,000 new jobs was found. Furthermore, about 40.6% of sampled guaranteed borrowers believed that their firms would not have obtained credit without the scheme (finance additionality). The scheme was also found to be effective in supporting start-up, growth, and the survival of new firms and risky firms. The authors, however, provided what arguably seems to be a simple calculation for financial additionality. They contend that because less than 5% of SMEs' bank loans are to young businesses (those less than a year old), the fact that over 14% of guaranteed loans under the Canadian scheme are to young businesses implies a 9% additionality (Riding & Haines, 2001). However, Honohan (2010) argues that such an assertion being regarded as plausible would be highly dependent on the rules of the scheme and the degree to which those rules were enforced.

Boocock and Shariff (2005) in Malaysia, estimated an average financial additionality of 37% as a result of the Malaysian New Principal Guarantee Scheme (NPGS) from a case study on 15 recipient firms. The authors contend that this level is below average by international standards, although it meets the minimum level of 30-35%. Nevertheless, they find a higher level of financial additionality (i.e., 54%) from a questionnaire administered to a larger set of recipients (92). They argue that this divergence of views might be attributed to response bias, e.g., the fact that the case study respondents are larger firms than those in the questionnaire sample. Since larger, more established firms generally have a wider range of funding options, financial additionality is hence understated. Nevertheless, they find evidence on economic additionality. A net increase in employment of 50% was found for beneficiary SMEs, which is far in excess of the growth in employment in the Malaysian SME sector as a whole. Nevertheless, they state that response bias has probably overstated this economic additionality. Similar to the findings of Piedad (1992), SMEs in the retail and construction sector were associated with high displacement; manufacturers, on the other hand, had a greater economic impact by investing in productive assets, and a number of them moved to the export markets, in addition to engaging in innovative activities.

Despite those positive outcomes, the below average financial additionality was found to be inconsistent with the high default rates, with a substantial portion of the losses being borne by lenders. It was concluded, therefore, that the scheme had failed to meet all objectives sought by the corporations (Boocock & Shariff, 2005). However, in Malaysia, banks are mandated to lend to indigenous SMEs; they are required to lend up to a targeted quota of guaranteed loans, which, in turn, alters the issue of additionality as this may lead banks to approve guaranteed loans for high-risk SMEs primarily to meet this requirement. The same was also found in Pakistan, India, and Indonesia (Levitsky, 1997).

Several studies exploit the increase in the availability of suitable secondary data on SMEs. Depending on the design of the scheme and the eligibility rules, more recent research has used formal econometrics methods to provide answers to questions on additionality (Honohan, 2010). For example, Riding et al. (2007) exploited a detailed dataset by Statistics Canada and found that finance additionality of 75% is estimated from the Canadian scheme. Explanatory variables, such as firm size, purpose of the loan and bank-firm relationship, were found to be factors in receiving loans. Regarding economic additionality, they concluded that the scheme appears to

be responsible for creating approximately 22,000 new full-time jobs in Canada every year. They arrived at this result by mimicking the credit scoring methods usually used by banks to appraise small businesses. Using data on bank applicants who were not eligible for guaranteed loans, the researchers estimated a loan denial function. In that way, they were able to predict how many of the enterprises that were successful in applying through the scheme would have been rejected otherwise.

Similarly, Cowling and Mitchell (2003) find evidence that the UK's SFLGS has successfully addressed a very real capital constraint for the majority of participant small firms. In the same scheme, Cowling (2010) finds support for the basic rationale of the SFLGS, namely that the majority of participants (around 76%) reported finance additionality and micro-enterprises (fewer than 10 employees) were found to be credit-rationed, were it not for the scheme. Evidence of economic additionality was also found. In this, SFLGS-supported firms in 2006 have created from 3,550 to 6,340 additional jobs and between £75m and £150m additional sales over two years. Regarding indirect economic additionality, supported firms are 6% more likely to export compared to similar non-borrowing firms and were responsible for £33m in exports per annum. Furthermore, those firms are more likely to seek to develop new products/services and are 17% more likely to use new technology compared to similar non-guaranteed borrowers.

Likewise, Zecchini and Ventura (2009) find a positive impact on the number of bank loans to SMEs when evaluating the impact of the Italian *Fondo di Garanzia CGS*; they show that financial additionality was found to be 12.4%. Moreover, they find that the scheme is an effective instrument in lowering borrower cost for beneficiary SMEs. The difference in cost is estimated to range between 16.07% and 20.32%. They concluded that well-focused CGSs can indeed contribute to easing credit rationing for SMEs; however, economic additionality was not tested in their study. A more recent study on the same scheme finds no effect on the cost of credit; nevertheless, a positive effect on credit flow to SMEs was reported (de Blasio et al., 2018).

Despite such evidence on finance additionality, there is also sizeable evidence of deadweight costs to CGSs (de la Torre et al., 2017), i.e., loss in the allocation of subsidy to borrowers that had no need of it (Honohan, 2010). For example, in Pakistan, Zia (2008) finds that almost half of guaranteed loans went to non-financially constrained firms. Such credit misallocation was

estimated to have an annual cost of 0.75% of GDP (Zia, 2008). Similar evidence was obtained on other CGSs in more developed economies. In Italy, for example, D'Ignazio and Menon (2019) find no effect on total number of bank loans to SMEs, suggesting that guarantees were largely supporting firms who are not credit-constrained. However, they find a shift in the composition of debt favouring long-term borrowing and substantial decreases in interest rates for beneficiary SMEs.

Also, Cowan et al. (2015) find that part of the guarantee in Chile is allocated to loans that would have been extended anyway. However, they find that CGSs are effective in terms of increasing the aggregated amount of credit available to Chilean SMEs. Particularly, a one-dollar increase in the guarantee available to a bank is associated with an increase of US\$0.65 in credit to SMEs (Cowan et al., 2015). In South Korea, Kang and Heshmati (2008) studied the impact of two different Korean credit schemes and find that financially unconstrained SMEs were the main users of those schemes, i.e., those schemes suffer from inefficiency in the allocation of public resources. Credit guarantees were granted to superior enterprises that have the ability to finance themselves from the market without the schemes. Furthermore, those schemes failed to differentiate between competitive and incompetent businesses, making the latter more exposed to financial shocks. The surplus in the distribution of loan guarantees, according to the authors, delays the exit of unproductive enterprises and denies new entrants access to scarce financial resources. They concluded, hence, that the goals of these schemes were only partially achieved, especially that only weak effects of the schemes were found on SMEs' sales, productivity, and employment.

More recently, Caselli et al. (2019), focusing on economic additionality, found that guaranteed SMEs under the Central Guarantee Fund in Italy experienced an increase in their profitability. However, this effect varies with SME size and sector, i.e., micro- and small-sized enterprises benefited more, given that they face greater financing gaps. The programme, therefore, was found to improve those firms' capabilities in securing bank loans. Moreover, the positive effect on profitability for guaranteed SMEs was mainly observed in the manufacturing sector. Therefore, the researchers recommended the scheme should be more customised, i.e., addressed towards firms with more financing obstacles and towards capital-intensive sectors such as the manufacturing sector, where increased investment is required to fuel profitability.

Likewise, Chandler (2012) finds evidence that the Canada Small Business Financing Programme (CSBFP) generates economic additionality; i.e., participants in the CSBFP witness increases in salary, employment and revenue by 12, 12 and 7 percentage points, respectively, when compared to applicant firms who were denied finance. Moreover, these measures of economic additionality are still positive and significant when CSBFP participants are compared to non-guaranteed finance-approved borrowers. They interpreted this result as the scheme being well designed, i.e., it effectively forces financial institutions to select risky SMEs with high growth potential instead of safe SMEs with steady cash flows who are generally preferred by banks (Chandler, 2012).

Nevertheless, there appears to be some evidence that questions CGSs' wider economic effects and suggests that they can do more harm than good. For example, in reviewing different CGSs in the Philippines, Seibel (1995) concluded that CGSs were ineffective, even damaging. Hundreds of banks in the country declared bankruptcy, particularly rural banks, as a result of social banking in the form of guaranteed funds to priority sectors. He further argues that the overall track record of CGSs in third-world countries is poor and sometimes has detrimental effects. Other researchers who investigated CGSs' economic additionality argue that such schemes might induce moral hazard. The argument extended is that such policies can have potential distortive effects (De Meza, 2002), particularly the potential for moral hazard, both from the firm's perspective (i.e., induces risk-taking behaviour) and the bank's perspective (i.e., reduced screening and monitoring efforts) (D'Ignazio & Menon, 2019). Lelarge et al. (2010) argue that when the CGS forbids banks to require additional private guarantees from firms, entrepreneurs become incentivised to adopt riskier strategies, especially as they would anticipate that banks have a lower incentive to monitor their guaranteed loans.

In this, they interpreted findings that a treated firm's probability of default becomes larger than that of an otherwise identical untreated firm as evidence of the moral hazard effect. For example, D'Ignazio and Menon (2019) find that default rates were higher in beneficiary SMEs who were mostly not credit-constrained. They argue that such firms most probably used guaranteed loans to undertake riskier projects. Similarly, Lelarge et al. (2010) find that SOFARIS, a French loan guarantee scheme, causes beneficiary firms to become more likely to default. Accordingly, they argue that the moral hazard of risk-shifting incentives represents a serious drawback to the

scheme. Nevertheless, they found evidence of a causal effect on economic additionality, as beneficiary firms were found to enjoy higher growth rates than other, similar firms.

Uesugi et al. (2010) report evidence along these lines. In that, they find that the ex-post performance of guaranteed SMEs deteriorates compared to non-guaranteed ones. Such an effect was found to be greater for those firms financed solely by guaranteed credit. They further report evidence on substitution problems on the part of banks, where banks were found to substitute non-guaranteed loans with guaranteed ones to reduce their exposure to risky assets. This was observed mainly in undercapitalised banks. Thus, Uesugi et al. (2010) argue that such negative effects of moral hazard have a direct bearing on the legitimacy of the scheme, which guarantees 100% of the risk. Saito and Tsuruta (2018) support this finding in Japan. They argue for the existence of adverse selection – banks with low capital ratios offer guaranteed loans to risky firms, and/or moral hazard – SMEs receiving guaranteed loans are more likely to default. They report a statistically significant positive correlation between default rate and the amount of guaranteed loans using bank-level data. This correlation was found to be stronger for credit guarantees with a 100% coverage ratio than for those with an 80% coverage ratio. As a result, they suggest that while the 20% self-payment can be an effective technique for alleviating the problem, it is insufficient to completely eliminate it. They concluded that guaranteed loans enhance credit supply for riskier and distressed SMEs rather than SMEs that have potential growth opportunities, but which face difficulty in obtaining bank financing during shock periods.

Factors in addition to bank capitalisation were found to induce such a substitution problem on the part of banks and the ex-post performance of guaranteed firms. Employing a firm-bank matched dataset, Ono et al. (2013) find that the firm-bank relationship may have adverse effects on the efficacy of CGSs in Japan. In this, they find that when the bank is a relationship lender, the increase in guaranteed loans is offset by a decrease in non-guaranteed loans by the same bank. Furthermore, the ex-post performance of firms that received guaranteed loans from their main bank deteriorates more than that of firms that received non-guaranteed loans. They thus argue that relationship lenders utilise their informational advantage regarding their borrowers and transfer low-quality enterprises' credit risks to the scheme.

In the same vein, de Blasio et al. (2018) find that firms' probability of being classified among bad loans significantly increases by about 50% because of the guarantee received from the *Fondo di Garanzia* scheme in Italy. They argue that the protection offered by the limited liability status of firms that dominate their sample might enhance moral hazard problems, which reflects the likelihood that the guaranteed credit turns into a bad loan. With regard to economic additionality, they find that the scheme does not affect firms' investments or sales, which should be affected positively if growth is limited by the availability of external finance. The authors attribute this to SMEs mainly using guaranteed finance for financing working capital in a context of liquidity squeeze due to the unfolding of the relevant financial crisis. However, their sample included only limited liability companies and therefore their policy implications cannot be generalised to private partnership and sole-proprietorship enterprises, which are prevalent legal structures amongst small firms (de Blasio et al., 2018).

Employing aggregated data from a selection of countries in the Organisation for Economic Cooperation and Development (OECD) to analyse CGSs' effects on the probability of SMEs' bankruptcies, Agnese et al. (2019) confirm some of the above-mentioned findings. For example, they show that their findings on Italy and Japan are consistent with the negative effects of CGSs on SMEs' probability of default, which were found by de Blasio et al. (2018) and Ono et al. (2013). Nevertheless, they concluded that no generalised statement can be easily extended on the effectiveness of these schemes. The peculiarities of each country and the structure of each CGS may play an important role (Agnese et al., 2019).

However, it can be argued that the higher probability of default or the worse ex-post performance of CGSs' recipients is not necessarily a case of moral hazard. Firms' performance is affected by a variety of external and internal factors including the purpose to which the funds are put (Boocock & Shariff, 2005). Additionally, none of these studies control for owner/manager human capital, which is argued to affect the performance of SMEs more than financial capital (Cressy, 1999).

From the literature review above, one can see that the literature studying the impact of CGSs by means of firm-level data is still scant, compared to the widespread availability of such schemes, with less focus on indirect economic additionality. Furthermore, another dimension of additionality that is less studied is the demonstration effect of CGSs. As mentioned earlier, the



demonstration effect deals with the opportunity provided by CGSs for banks to learn by doing while being ‘cushioned’, which enables the creation of a bank-firm relationship. Hence, good borrowers can later graduate to non-guaranteed borrowing, ensuring a sustainable mitigation of credit constraints for such firms (Valentin & Henschel, 2013).

The results for this dimension of additionality are also mixed. On the one hand, Cowling (2010) finds evidence that the UK’s SFLG leverages professional bank expertise in supporting the process of accessing funds by SMEs. Similarly, Valentin and Henschel (2010) find that the desired learning process occurs within German Guarantee banks. Beneficiary SMEs acknowledged that they provided information to their banks more frequently or more regularly after receiving the guaranteed loan, and that they had established a relationship with the banks. As a result, evidence for long-term credit constraint mitigation was found; however, the research could not confirm whether this is directly attributable to the scheme (Valentin & Henschel, 2013). On the other hand, Benavente et al. (2006) find that about 80% of participant firms in the Chilean credit scheme, FOGAPE, had previously obtained bank loans, and many of those obtaining guaranteed loans had already received guarantees in the past. This suggests that banks are mostly utilising FOGAPE to decrease their credit risk exposure when lending to customers with whom they are already familiar, rather than as a temporary subsidy to learn about new borrowers.

Overall, empirical findings on the measured benefits (i.e., additionality) of CGSs are inconclusive. This can be attributed to the fact that CGSs around the world vary in fundamental design features (Saadani et al., 2011). CGSs differ according to their objectives and community needs, as viewed by particular governments (Samujh et al., 2012). Countries’ own peculiarities also can influence additionality and firms’ survival (Agnese et al., 2019).

Beck et al. (2010) show large differences in the features and rules of the schemes around the world. Such differences were found not to be systematically associated with financial and economic development. Therefore, the authors call for further empirical studies on specific schemes, particularly to assess the specific programme with respect to the local conditions (Dvouletý, 2017) and, more importantly, against the stated objectives of the scheme (Samujh et al., 2012). In this, more empirical studies with country-focus, tailored to specific CGSs, are needed, with many of the current studies focusing on developed countries, making their findings

difficult to generalise. As shown in the section above, fewer studies attempted to investigate CGSs in developing countries with no independent empirical evaluation having been conducted on Saudi Arabia's CGS, *Kafalah*.

#### **5.4 The Saudi Credit Guarantee Scheme, *Kafalah***

The government of Saudi initiated its CGS, *Kafalah*, in 2006. The scheme operates under the supervision of the Saudi Industrial Development Fund (SIDF) with a capital of SR200m (US\$53m); 50% of the capital was funded by the Ministry of Finance and the remainder by cooperating local Saudi banks as a onetime support for SMEs (Shalaby, 2004). The *Kafalah* Program acts as a third-party risk coverage mechanism guaranteeing to repay a proportion of the total loan to the lending institution should the borrower SME default. In earlier years, the value of the guarantee ranged between SR80,000 and SR1.6m (US\$20,000-450,000), for terms of up to seven years.

Similarly to other CGSs, *Kafalah's* main aim is to overcome the financing constraints of economically viable SMEs that do not have the ability to provide the required guarantees to financial institutions, through guaranteeing a percentage of the risk in case the whole or part of the loan is defaulted upon. *Kafalah's* objectives can be classified at the macro- and micro-levels. At a macro-level, *Kafalah* is designed to assist in achieving national policy goals. In this way, it aims to develop the SME sector to play an important role in the national economy through its contribution to providing new job opportunities and developing those regions that are less economically active. At a micro-level, *Kafalah* is intended to assist SMEs to obtain the Islamic financing necessary for the development and expansion of their activities, and additionally to attract a new segment of SME owners that are not familiar with dealing with financing institutions. The programme is also intended to encourage financial institutions to deal with the SME sector. The scheme's mission is to facilitate SMEs' ability to obtain the necessary financing from commercial banks and various licensed financial institutions regardless of the traditional guarantee standards, and to provide products and services with quality and efficiency commensurate with the needs of the SME sector for all sectors and in the various regions of the Kingdom (*Kafalah* Program, n.d. b).

#### **5.4.1 Degree of Discretion in Credit Decisions and Eligibility Criteria by *Kafalah***

*Kafalah* does not lend directly to SMEs. Rather, it supports SMEs' owners in obtaining finance through providing the necessary guarantees to the lending institutions if required. In this, SMEs must first apply to the lending institutions partnering with *Kafalah*. The lending institutions then evaluate the loan application according to their own policy. If the application is approved but lenders need guarantees to cover the associated risks, the lending institution can then apply for *Kafalah's* guarantee along with a written approval from the owner indicating that they accept it. *Kafalah*, in turn, assesses the finance application and, if approved, the scheme will issue a guarantee to the lending institution (The Saudi Investment Bank, n.d.).

Furthermore, the *Kafalah* Program appears to target SMEs in a broad sense and does not generally restrict sectors or types of loans. In this, the scheme provides guarantees for fixed asset investments, working capital financing, letters of credit, and letters of guarantee, including those required for bidding processes to obtain contracts with other firms, and government organisations. Additionally, it guarantees all Islamic-compliant credit facilities provided by the lending institutions. Moreover, *Kafalah's* guarantees are not limited to existing firms. In this, start-ups and new firms can obtain guarantees after feasibility studies and risk assessments are approved by the lending institutions. Under *Kafalah*, lending institutions are allowed to ask for additional collateral or securities, depending on the risk assessment of the firm (*Kafalah* Program, n.d. a).

The eligibility criteria of the scheme are quite general. Nevertheless, there are certain sectors and regions of a higher priority to the scheme, including those owned by female entrepreneurs, those in promising regions within Saudi, and those in the tourism sector. In this, all economic activities qualify for the scheme except:

- Activities that are not considered within the scope of the definition of SMEs.
- Activities that are inconsistent with Vision 2030 or with State policy.
- Speculative financial or real estate activities.
- Activities that violate laws and regulations in Saudi.
- Personal and real estate loans (Monsha'at, 2020).

#### **5.4.2 Recent Trends in *Kafalah***

The take-off of the scheme in 2006 was modest compared to recent years, with only 32 guaranteed loans totalling SR31m extended to 23 SMEs (SIDF News, 2014). In 2009, the programme was subject to certain changes in the eligibility criteria as it increased the coverage ratio from 50-75% for new SMEs.

In 2016, with the launch of Vision 2030, *Kafalah* became one of the more promising national programmes in terms of enabling the achievement of a main goal of the Vision, i.e., to increase SMEs' contribution to GDP. Since then, the scheme's capital increased to SR1.7bn. The maximum guarantees increased to SR2.5m for small firms and to SR15m for medium firms. The scheme followed the SMEs' definitions provided by the recently established Small and Medium Enterprises General Authority (Monsha'at). The *Kafalah* Program has moved under the control of Monsha'at, which aims to regulate, support, and develop the SME sector in Saudi. Ever since, the scheme has been able to decrease the guarantee-issuing procedures from 17 to three working days, with increased efficiency in credit appraising. It also initiated five new products and started to cooperate with non-bank financing companies, which accounted for 12 companies in 2019. The scheme adopted more flexible pricing mechanisms for the required programme fees, maximum guarantee value, and coverage ratios (*Kafalah* Program, n.d. b). Table 5.1 shows those differences offered by different products.

**Table 5.1 Kafalah Program's Products, Coverage Ratio, and Fees**

Product's Name	Financing Institution	Targeted Enterprises	Maximum Guarantee Value	Maximum Coverage Ratio	Sector	Fees	Preferential advantages
Conventional Guarantee Product	Banks	Micro and Small enterprises.  Medium enterprises.	SR2.5m  SR15m	80%	All economic sectors	1.5%	-0.5% of fees for female entrepreneurs and promising regions.  A coverage up to 90% and -0.5% of fees for SMEs in supply chains, e-commerce and franchising.
Tourism Sector Product	Banks	Micro and SMEs	SR15m	90%	Tourism sector	1%	-
Start-ups Product	Financing institutions	Micro and SMEs	SR2.5m	First year 85%. Second and third year 90%	All sectors for firms less than 3 years old	1%	-
Working Capital Product	Banks	Medium enterprises	SR15m	80%	All economic sectors	1.5%	90% coverage ratio for some targeted sectors and promising regions
Non-bank Financing Companies Product	Financing companies	Micro and SMEs	SR2.5m	50-70%	All economic sectors	1.5%	-0.5% of fees for female entrepreneurs and promising regions.
Portfolio Guarantees Product	Leading banks	Micro and Small Enterprises	SR2.5m	%85	All sectors for firms more than three years old.	1%	-
Entertainment Sector Product	Banks	Micro and Small enterprises.  Medium enterprises.	SR2.5m  SR15m	90%	Entertainment sector	1%	-

Source: Translated from Kafalah.gov.sa

*Kafalah* summarises its recent plans and projects as follows:

- Launched special products and programme for Vision 2030 targeted sectors.
- Launched special initiatives to encourage lending for female entrepreneurs, promising areas, and start-ups.
- Increased revenues and invested all resources to decrease programme deficit.
- Cooperated with main national credit bureaux.
- Initiated cooperation with business incubators and escalators.
- Activated the role of non-financial services via providing consultation service centres.

As a result, the number of SMEs benefiting from *Kafalah* reached 2,481 in 2019. The value of guarantees issued in 2020 exceeded SR3bn, financing values exceeded SR4.3bn, the average period of guarantee is 22 months, and the coverage rate is 72%, with a growth rate exceeding 65%. In 2020, guarantees exceeded 29% compared to the previous year, and financing values exceeded 190% (Saudi Press Agency, 2020).

The Central Region in Saudi comes first in terms of number of beneficiary SMEs. Since the initiation of the programme, the Central Region has a cumulative number of beneficiary SMEs totalling 3,252, followed by the Eastern Region, and the Western Region (Saudi Press Agency, 2020). In 2020, SMEs in the trade sector gained the most benefit from the programme with a total financing of SR948,278,000, followed by SMEs in the construction sector and industrial sector (Saudi Press Agency, 2020).

There are 12 commercial banks in Saudi, 10 of which have opted to participate in the *Kafalah* Program. The major participating banks are the National Commercial Bank, Riyadh Bank, Arab National Bank, and Al-Rajhi Bank. These four together account for around 80% of total SME lending (Al-Yafi, 2020).

#### **5.4.3 The *Kafalah* Program against Best Practice Criteria**

As mentioned in the literature review above, CGSs around the world vary in fundamental design features, which in turn directly impact the degree of their additionality and outcomes. Therefore, Saadani et al. (2011) argue that CGSs should conduct comprehensive reviews on a regular basis, which include systematic assessments of the operational parameters and the designs of the

schemes against international best practices. In this section, the criteria discussed in Section 5.3.1 are used as a benchmark to assess those of *Kafalah* against what the literature considers best practice.

*The degree of discretion in credit decisions:* based on the above-described mechanism of guarantees issuance, *Kafalah* seems to follow the individual approach. Best practice suggests that if the scheme does not have informational advantage over the banking system, this approach is unlikely to be cost-effective (Honohan, 2010). Indeed, Al-Yafi (2020) suggests there is an opportunity for *Kafalah* to move towards a portfolio approach of handling bulk applications to speed-up the process.

*Default rates:* the individual approach, while costly, seems to control credit risk and ensures financial sustainability for *Kafalah*. The maximum default rate realised was in 2009 reaching a peak of 5.53%. However, if one considers cumulative default rate, the rate peaks at 2.26% (Table 5.2). This is within what best practice measures indicate (Levitsky, 1997). Nonetheless, Table 5.2 suggests that the scheme may have been overcautious in approving guarantees, especially during its earlier years. This also might reflect an overcautiousness on the banks' part since they are the ones who refer financing applications to the scheme. Indeed, Saudi commercial banks are arguably very conservative when lending to SMEs (Jeddah Chamber, 2016).

*Coverage ratio:* *Kafalah's* conventional guarantee product coverage ratio can be as high as 80%. This does not precisely lie within what is viewed as best practice in the literature but is rather at the upper threshold. Levitsky (1997) suggests a coverage ratio of between 60-70%, but never more than 80%. However, as mentioned above, the ratio is higher for some policy-targeted industries, regions, and minority entrepreneurs (e.g., female-led businesses). Setting a higher coverage ratio for riskier categories of borrowers is claimed to be a strategy to improve additionality while still allowing for some flexibility (i.e., less risky borrowers can also benefit from the scheme but with a lower coverage ratio) (Saadani et al., 2011).

*Guarantee Fees:* *Kafalah's* guarantee fees are usually 1.5% and can be 1% for targeted firms/regions. This is in line with Deelen and Molenaar (2004), who suggest that fees should not be higher than 2%. Like other countries in the GCC, the banking sector in Saudi is characterised by having high net interest margins compared to high-income countries (World

Bank Group, 2016). Hence, requiring higher fees in light of such prevailing interest rates might deter borrowers from participating in the scheme.

*Eligibility Criteria:* as mentioned above, the *Kafalah* Program appears to target SMEs in a broad sense and its eligibility criteria are quite general. While the literature provides that relaxed criteria might increase the outreach of the scheme, additionality effects might be lower. On the other hand, it is argued that in countries with limited SME financing, high outreach and high additionality can be simultaneously achieved (Saadani et al., 2011). Thus, it can be argued that such loose eligibility criteria adopted by *Kafalah* are advisable in light of SMEs' strictly limited access to bank finance (Jeddah Chamber, 2016).

**Table 5.2 Default Rate in *Kafalah***

Year	Default Rate per year	Cumulative Default Rate
2006	0.00%	0.00%
2007	0.00%	0.00%
2008	0.00%	0.00%
2009	5.53%	2.21%
2010	2.31%	2.26%
2011	0.66%	1.53%
2012	0.12%	0.93%
2013	0.60%	0.80%
2014	1.43%	1.00%
2015	1.05%	1.02%
2016	1.68%	1.16%
2017	2.03%	1.31%
2018	1.42%	1.33%
2019	1.83%	1.38%
<b>Total</b>	<b>1.38%</b>	-

Source: provided by *Kafalah* officials

## 5.5 Data Collection and Approaches Used in Previous Studies

As mentioned above, the lack of financial data on SMEs makes it difficult to measure CGSs' outcomes (Samujh et al., 2012). Therefore, some studies employ qualitative approaches from primary data relying upon opinions of schemes' stakeholders including beneficiaries, scheme managers, and/or participant banks about the functioning and impact of schemes through different tools such as surveys and case studies (e.g., Boocock & Shariff, 2005; KPMG, 1999; NERA, 1990). A principal advantage of such qualitative approaches is in providing additional



information beyond that associated with quantitative measures, which leads to a deeper understanding of the mechanisms by which CGSs' impact is achieved. They also explain how such intervention can be adjusted. This in turn allows a wide range of other information of interest to policymakers that goes beyond impact issues to be obtained (OECD, 2008).

Nevertheless, it is argued that evaluation studies that employ data on treated firms only allow one to test whether the performance of the SME has improved or otherwise after receiving the guaranteed funds, but not whether that improvement is due to policy intervention (OECD, 2017). In this, it is preferable to use a control group when evaluating CGSs. Therefore, the increase in the availability of rich, suitable, secondary data in developed economies allowed the stock of evaluation tools and methodologies that can provide estimates of econometric causal effects on the impact of CGSs to increase, taking into account selection bias when using control groups. These include resorting to a suitable instrumental variable (IV) (e.g., D'Ignazio & Menon, 2019) and/or the difference-in-differences approach (e.g., Zecchini & Ventura, 2009). Other researchers used a fuzzy regression discontinuity design to estimate the impact of a CGS at the threshold of eligibility (e.g., de Blasio et al., 2018). Likewise, others employed propensity score matching methods based on survey data (e.g., Cowling, 2010; Oh et al., 2009). Some studies relied on descriptive statistics to provide a comparison between the credit score of guarantee users and that of non-users (Saadani et al., 2011).

Nevertheless, in some cases there may be no natural, uncontaminated control group (OECD, 2008). Identifying a correct control group of firms with similar characteristics to CGS users remains technically challenging (Saadani et al., 2011). Another limitation is that one cannot fully control a host of factors other than financial support that affect firms' performance over time, e.g., entrepreneurs' human capital (Cressy, 1999). Such methodological concerns are exacerbated when measuring indirect economic additionality, particularly firms' export activities. For example, researchers have to consider the elasticity of demand, the locations of competitors, and firms' ability to move to export markets (Boocock & Shariff, 2005). Furthermore, issues of self-selection imply that firms in the treatment group might be systematically different from those in the control group. This, in turn, might imply a superior performance amongst firms in the treatment group because of those inherent differences. Moreover, there are cases where guarantees are offered as part of an integrated package that includes training and technical assistance. This creates another challenge, namely that of

disentangling the effects of the other elements of the package (Meyer & Nagarajan, 1996). Despite these issues, comparing treated firms to a control group is advisable (OECD, 2017). Therefore, the current study attempts to compare *Kafalah*'s participants to non-participants.

As mentioned in Chapter 3, because of the lack of publicly available firm-level data on guaranteed borrowers, the current research employed the designed survey questionnaire to conduct telephone interviews with a sample of *Kafalah*'s participants. Telephone interviews are argued to be most appropriate when asking structured questions where responses are required from a geographically spread sample (Bougie & Sekaran, 2016), as is the case for *Kafalah*'s participants, who are located at different geographical locations within Saudi. A sample size of 155 firms was obtained, which is considered sufficiently robust as a sample size greater than 30 and less than 500 is considered appropriate for most research studies (Harris & Hague, 2000)<sup>10</sup>.

It should be noted that only 124 responses out of the 155 were deemed appropriate for use in the following analysis as around 31 firms obtained guaranteed finance in earlier years, such as in 2015 or earlier. Also, seven respondents indicated that their latest application through *Kafalah* was turned down. Therefore, the final sample of *Kafalah*'s beneficiaries obtained was 117 responses, with the seven rejected respondents added to the control group, as described below.

### **5.5.1 The Control Group**

The control group constructed in the current research is obtained from the 328 SMEs sampled in Chapter 4. The same questionnaire survey on *Kafalah*'s beneficiaries was sent to this random sample to be self-administered. While the different tools employed for *Kafalah*'s beneficiaries (telephone survey), and the control group (self-administered) might raise some concerns, time and cost considerations limited the ability to include the control group in the telephone survey. Nevertheless, SMEs in the control group were randomly selected and closely represent the general population of Saudi. Moreover, that sample was tested for non-respondent bias. The tests suggest little problem in this regard (Chapter 3).

Around 60 firms in this control group sample indicated that they had applied for bank finance through *Kafalah*. Of those, 30 firms obtained guaranteed bank finance, so are added to the

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<sup>10</sup> More details in Chapter 3.

responses from *Kafalah* beneficiaries obtained from the telephone survey. The total sample of *Kafalah's* beneficiary SMEs therefore increased to 147 firms. Table 5.3 presents the two samples in detail.

**Table 5.3 Number of respondents in the treatment and control groups**

	<i>Kafalah's</i> beneficiary sample	Control group sample	Total
<b>Guaranteed borrowers</b>	117	30	147
<b>Non-guaranteed borrowers</b>	-	24	24
<b>Rejected applicants</b>	7	70	77
<b>Non-applicants</b>	-	204	204
<b>Total</b>	124	328	452

Source: survey data

### 5.5.2 Descriptive Statistics of Survey Data

Following Chandler (2012), to evaluate *Kafalah's* impact, four samples from all survey respondents are created. The first group consists of all SMEs, i.e., applicants for bank finance and non-applicants. The second group consists only of non-applicant SMEs; the third includes only those firms who applied for bank finance but were rejected; the final group includes only firms who were approved for non-guaranteed bank finance. Similarly to Chandler (2012), this group is included to assess whether *Kafalah* encourages banks to finance SMEs with high growth potential but that are, however, riskier than those safe SMEs with steady cash flows that are generally preferred by the banking system. Table 5.4 provides descriptive statistics across the four groups (columns I-IV) and for *Kafalah's* beneficiaries (column V).

On the basis of simple univariate tests, the results suggest a number of interesting observations. In the first instance, most of the characteristics of *Kafalah's* beneficiary firms are not statistically different from those who obtained bank finance without *Kafalah* (i.e., *non-guaranteed borrowers*) (column IV). Nevertheless, the univariate tests suggest statistically significant differences when comparing *Kafalah's* beneficiaries to the other groups (columns I-III). For example, around 65% of *Kafalah's* beneficiaries indicated that they prefer bank finance if external finance is needed. This is statistically significantly higher compared to *all SMEs* in the first group and, unsurprisingly, compared to the *non-applicants* group. This supports earlier

findings that the desire for bank credit, which is likely to include some latent demand, is not a characteristic of the general population of SMEs (Freel et al., 2012). However, the desire for bank credit is not statistically different when comparing *Kafalah's* beneficiaries to *rejected applicants* (column III) or to *approved non-guaranteed borrowers* (column IV).

With regard to firms' characteristics, on average, both *Kafalah's* beneficiary firms and *approved non-guaranteed borrowers* are older and larger in terms of employment level compared to *all SMEs* (column I), *non-applicants* (column II), and *rejected applicants* (column III). The differences between *Kafalah's* beneficiaries and the three groups in terms of age and size are significant at the 1% level. No statistically significant differences are observed between *Kafalah's* beneficiaries and *approved non-guaranteed borrowers*.

Moreover, *Kafalah's* beneficiaries are not present in the same industries as *all SMEs* and *non-applicant SMEs*, being over-represented in the wholesale/retail sector and under-represented in the personal services sector. This difference is statistically significant when comparing *Kafalah's* beneficiaries to the former two groups, but not statistically different when comparing them to *rejected applicants* or to *approved non-guaranteed borrowers*. Similarly, a statistically significant majority of *all SMEs* and *non-applicants* are unincorporated firms, i.e., sole proprietors/partnerships. In this, only 26.8% and 24.4%, respectively, of the former groups are limited liability companies. A higher percentage of applicant firms, including *Kafalah's* beneficiaries, are limited liability companies. However, no statistically significant differences are observed between *Kafalah's* beneficiaries and successful/unsuccessful applicants in terms of their legal statuses.

One of the main statistically significant differences between *Kafalah's* beneficiaries and the four groups (including *approved non-guaranteed borrowers*) is the involvement in inter-firm relationships with large, foreign and/or government organisations. This thesis defines SMEs who have subcontracting/raw material supply relationships, franchisors/franchisees, joint ventures, or cooperate in manufacturing/marketing/problem solving/technology development with large corporations, foreign and/or government organisations, as firms involved in inter-firm relationships. The majority of *Kafalah's* beneficiaries, about 73%, indicate that they are involved in such relationships, whereas significantly less than half of SMEs across the four groups indicate having such relationships.

Furthermore, both *Kafalah's* beneficiaries and *approved non-guaranteed borrowers* appear to engage more in new-to-firm innovative activities compared to the other three groups. The results are statistically significant when *Kafalah's* beneficiaries are compared to *all SMEs*, *non-applicants*, and *rejected applicants*, but not when compared to *non-guaranteed borrowers*. According to Ayyagari et al. (2011), “*applied researchers have defined new-to-firm innovation as the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation, or external relations*” (p.1549). It is argued that it is important to consider new-to-firm innovation when measuring innovation in SMEs (Carayannis & Provan, 2008; Cosh et al., 1999). This broad definition, therefore, is employed in the current research because it is of greater relevance for a developing country such as Saudi, where technological breakthrough is rare.

Moreover, no statistically significant differences are recorded for SMEs in terms of exporting activities. Overall, less than a quarter of the firms sampled indicate they directly or indirectly export (indirect export is when products are sold domestically to a third party that exports them). Such lower percentages of exporters in the sample correspond to the general population of SMEs in Saudi. The participation of SMEs is estimated at less than 5% of the total non-oil exports in the country (Monsha'at, 2017).

However, the difference in growth intentions between *Kafalah's* beneficiaries and all other groups of SMEs is significant, with the exception of the *approved non-guaranteed borrower* group. In this, around 76% of *Kafalah's* beneficiaries and around 79% of *non-guaranteed borrowers* intend to grow in the foreseeable future, whereas only 12% of the former and 13% of the latter intend to downsize. In contrast, close to a quarter of SMEs (24.7%) in the *rejected applicants* group intend to downsize in the coming three years. This could be a result of the recent contraction in the Saudi economy, which was hurt by weak oil prices and new austerity measures (Azhar, 2019). It seems that the liquidity pressures push rejected SMEs to apply for bank finance for purposes other than growth capital, e.g., to support declining cash flows. This, in turn, might result in them presenting worse risk profiles and hence banks turn down their applications. Nevertheless, the proportion of *rejected applicants* who intend to downsize is close to the average of those in the *all SMEs* (23.0%) and *the non-applicants* groups (23.5%).

Furthermore, there are no statistically significant differences between *Kafalah* beneficiaries and the four groups in terms of the human capital of their owners/managers, i.e., education and previous experience. SME owners/managers with no bachelor's degree represent a smaller percentage in the overall sample. This is supported by Coduras et al. (2019) who find that 75% of entrepreneurs and established business owners in Saudi have at the least a university degree. Similarly, more than half of sampled SMEs across the four groups indicate having employment experience. The dominance of employment experience – as opposed to small business experience – is unsurprising, and is one of the characteristics of the oil economies in the GCC region, where nationals tend to work in the public sector due to its attractive positions (Rocha et al., 2011).

Statistically significant differences, nevertheless, are observed regarding owners'/managers' gender. In this, female-led businesses are significantly underrepresented in the *Kafalah* beneficiary group and in successful/unsuccessful applicant groups, compared to the other two groups (i.e., *all SMEs* and *non-applicants*). In the former groups, the sample firms consist mainly of males, whereas female owners represent around 12% and around 17%, respectively, of the sampled firms in the latter two groups. While the percentage of female-owned enterprises is quite low in the overall economy of Saudi, i.e., 12% (Saudi Press Agency, 2018), and in the general population of *Kafalah* beneficiary firms, i.e., 4% (Saudi Press Agency, 2014), the presence of female-owned enterprises in the survey data is substantially understated, constituting a major limitation to the study.

The univariate tests, nevertheless, suggest no statistically significant differences between *Kafalah's* beneficiary owner/manager age group and the other groups, with the exception of the first group (i.e., *all SMEs*). On average, a higher percentage of *Kafalah's* beneficiaries are over 30 years old compared to all sampled SMEs.

Moreover, the univariate tests do not show statistically significant differences across the groups in terms of firms' involvement with banks over fee-based non-lending products/financial services. The results suggest that the majority of the sampled firms do not use such services from banks. However, one of the main statistically significant differences between *Kafalah's* beneficiaries and successful/unsuccessful applicant groups is the main purpose of their latest

applications. About 14% of *Kafalah*'s beneficiary firms applied for project financing purposes, whereas only 4.2% of *non-guaranteed borrowers* and only 3% of *rejected applicants* applied for this purpose. In contrast, around 13% of *non-guaranteed borrowers* and 9% of *rejected applicants* applied for start-up purposes, whereas only 1.4% of *Kafalah*'s beneficiaries applied for this purpose. In all cases, more than half of the firms in the three groups applied for working capital financing purposes. A quarter of *Kafalah*'s beneficiaries applied for fixed assets financing purposes compared to close to 30% of *non-guaranteed borrowers* and *rejected applicants*.

*Kafalah* interviewees elaborated upon what they mean by project financing. They indicated such financing is used for their project contracts with other firms and/or government organisations. Project financing includes obtaining letters of guarantee from the bank to enter into initial bidding or final bidding processes for project contracts, down payments, issuance of credit, and refinancing; i.e., such financing provides liquidity for the firm, as the firm only has to offer a deposit of 20% of the total amount of the letter of guarantee for the project and/or the down payment, rather than the full amount. The 80% of the amount in the letter of guarantee to the beneficiary and/or the down payment extended by the bank is covered by *Kafalah*.

As mentioned earlier, while *Kafalah* guarantees borrowed amounts up to 80%, banks participating in the programme are allowed to ask for additional collateral or securities depending on the firm's risk assessment (*Kafalah* Program, n.d. a). The majority of *Kafalah*'s beneficiaries did not extend additional collateral/security as *Kafalah*'s guarantee was perceived to be sufficient by the lending banks with regard to covering the risk involved. However, around 35% extended collateral/security in addition to *Kafalah*'s guarantee. On the other hand, around 50% of *non-guaranteed borrowers* extended some form of collateral/security. The Chi-squared statistics, however, suggest no statistically significant differences between the guaranteed and *non-guaranteed borrowers* in this regard.

A related issue to collateral requirements deals with why the bank suggested *Kafalah* for applicant firms initially. In this, the main rationale is for CGSs to overcome the financing constraints of economically viable SMEs who do not have the ability to provide the required collateral. Appendix 5.A shows that the majority (around 63%) were advised by their banks to apply through *Kafalah* while around 37% asked for *Kafalah*'s guarantee themselves. Appendix

5.A lists the reasons provided by banks for such advice. As shown, over a quarter of *Kafalah*'s beneficiaries (around 27%) indicated that not being able to extend sufficient collateral was one of the reasons for this advice. Nevertheless, the majority, about 77%, selected the option "other" and elaborated on these reasons in the open-ended question. The most frequently repeated sentence provided by those respondents was that "*the bank wants to ensure they will be repaid, i.e., they want to lower their risk exposure*" or "*the bank won't lend without Kafalah*". Also, around 15% indicated that the bank suggested *Kafalah* because of the firms' size in terms of revenue (i.e., because they are small firms) and hence guaranteed finance would be better for their enterprise. Interestingly, around 8% indicate that the bank approached the firm and offered finance through *Kafalah*. However, around 8% indicate they were surprised that the bank "*switched my request under Kafalah even though I used to secure non-guaranteed bank financing*".

Overall, in line with the literature, the reasons given by banks suggest that lack of collateral is one of the main impediments to accessing bank finance. Commercial banks seem particularly cautious in approving credit to smaller firms and hence prefer to lend to them under *Kafalah*. To the extent that smaller size indicates higher risk and fewer resources, the results are unsurprising. Furthermore, some respondents' answers suggest that there are targets for bankers to lend through *Kafalah*, and thus they approach firms in some cases and/or switch non-guaranteed loans to guaranteed ones. The latter can also suggest loan portfolio substitution on the part of the banks, whereby the bank advises certain firms to use *Kafalah*, even though non-guaranteed finance would not have been rejected. However, this practice does not appear to be substantial as only 8% of the total sample indicated that they used to obtain non-guaranteed loans. Hence, loan substitution should not largely diminish *Kafalah*'s role in improving SMEs' access to bank finance, especially as SMEs' share of bank loans was among the lowest averages in the world in 2016 (Jeddah Chamber, 2016), suggesting that few SMEs were actually able to obtain bank credit without *Kafalah*.

Altogether, the descriptive statistics suggest that *Kafalah*'s beneficiaries are not significantly different from *approved non-guaranteed borrowers*. In this, all firms who can obtain bank finance either through *Kafalah*, or indeed without it, are older and larger compared to the other SMEs in the sample. Moreover, a significant majority of both groups intend to grow in the near future. This suggests that Saudi SMEs who can access bank finance with or without *Kafalah*



show superior performance compared to the other SMEs. This is because during the economic downturn in Saudi, firms who intended to grow are likely to be more efficient and to have managed the economic recession more effectively and hence have more positive future prospects.

The results provide two implications. First, *Kafalah* does not seem to effectively induce banks to accept riskier SMEs with growth potential instead of the safe SMEs with stable cash flows generally preferred by commercial banks. Indeed, a significantly higher proportion of *Kafalah*'s beneficiaries operate in the trade sector, which is characterised as being well understood by banks, whereas a significant minority operate in the personal services sector, where some notable concerns argue that banks' appraisal procedures are unsympathetic towards such firms (Freel et al., 2012). Moreover, the majority of *Kafalah*'s beneficiaries in the sample are involved in inter-firm relationships with large, foreign, and/or government organisations, a significantly higher proportion of whom applied for project financing purposes. The steady cash flows from these projects with such organisations and the normal practice of assigning project proceeds to the bank as a form of security suggest that *Kafalah*'s beneficiaries are, on average, safer SMEs.

The second implication is that *Kafalah* seems to be beneficial for relatively safer SMEs when credit constraints are particularly stringent during economic recession, i.e., when banks tend to ration credit even for those SMEs who would have obtained non-guaranteed bank finance during normal times. Indeed, only 24 SMEs in the sample (i.e., around 5.3%) managed to obtain non-guaranteed bank finance, and 50% of these extended some form of collateral/security. Nevertheless, the results in this section are based on simple univariate tests and hence these apparent relationships may simply reflect a co-relation with a third variable. Therefore, in the coming section, multivariate analysis is conducted to explore the findings in this section further.

**Table 5.4 Descriptive Statistics of Survey Data – Comparison of *Kafalah* participants and non-participants**

	Non- <i>Kafalah</i> beneficiary				(V) <i>Kafalah</i> beneficiary (n = 147)	Obs.
	(I) All SMEs (n = 305)	(II) Non-applicants (n = 204)	(III) Rejected applicants (n = 77)	(IV) Approved Non-guaranteed borrowers (n = 24)		
Desire bank finance	45.9%	39.2%	61.3%	54.2%	64.6%	450
$\chi^2$ Statistics between column (V) and columns (I-IV)	<b>13.943***</b>	<b>22.066***</b>	.232	.970		
<b>Firm age group</b>						452
New (<3 years old)	21.0%	21.1%	24.7%	8.3%	8.8%	
Established (3-6 years old)	36.4%	36.3%	37.7%	33.3%	23.1%	
Old (7-10 years old)	17.0%	19.1%	13.0%	12.5%	30.6%	
Very old (> 10 years old)	25.6%	23.5%	24.7%	45.8%	37.4%	
$\chi^2$ Statistics between column (V) and columns (I-IV)	<b>27.251***</b>	<b>23.144***</b>	<b>21.536***</b>	3.671		
<b>Firm Size group</b>						452
Micro (1-5 employees)	26.6%	30.4%	23.4%	4.2%	6.1%	
Small (6-49 employees)	60.7%	58.8%	64.9%	62.5%	63.9%	
Medium (50-249 employees)	12.8%	10.8%	11.7%	33.3%	29.9%	
$\chi^2$ Statistics between column (V) and columns (I-IV)	<b>36.856***</b>	<b>41.904***</b>	<b>19.596***</b>	.220		
<b>Industry sector</b>						452
Manufacturing	15.7%	13.2%	22.1%	16.7%	17.7	
Personal services	20.0%	20.6%	15.6%	29.2%	8.2%	
Professional/logistics services	22.0%	24.0%	18.2%	16.7%	20.4%	
Wholesale/retail	28.5%	27.9%	29.9%	29.2%	40.1%	
Construction	13.8%	14.2%	14.3%	8.3%	13.6%	
$\chi^2$ Statistics between column (V) and columns (I-IV)	<b>13.090**</b>	<b>14.057***</b>	4.704	9.438		
<b>Legal status</b>						448
Sole proprietor/partnership	73.2%	75.6%	68.8%	66.7%	61.6%	
Limited liability company	26.8%	24.4%	31.2%	33.3%	38.4%	
$\chi^2$ Statistics between column (V) and columns (I-IV)	<b>6.169**</b>	<b>7.830***</b>	1.132	.222		
<b>Firm activities</b>						
Inter-firm relationships	37.0%	35.9%	42.7%	29.2%	72.8%	444

<b><math>\chi^2</math> Statistics between column (V) and columns (I-IV)</b>	<b>50.301***</b>	<b>46.072***</b>	<b>19.249***</b>	<b>17.667***</b>		
Innovative	54.8%	52.0%	54.5%	79.2%	71.4%	452
<b><math>\chi^2</math> Statistics between column (V) and columns (I-IV)</b>	<b>11.508***</b>	<b>13.504***</b>	<b>6.385**</b>	.620		
Exporting	19.3%	16.7%	24.7%	25.0%	16.3%	452
<b><math>\chi^2</math> Statistics between column (V) and columns (I-IV)</b>	.603	.007	2.271	1.073		
<b>Growth intentions</b>						452
Intend to grow	64.9%	65.2%	59.7%	79.2%	76.2%	
Intend to maintain business size	12.1%	11.3%	15.6%	8.3%	11.6%	
Intend to downsize	23.0%	23.5%	24.7%	12.5%	12.2%	
<b><math>\chi^2</math> Statistics between column (V) and columns (I-IV)</b>	<b>7.704**</b>	<b>7.272**</b>	<b>7.296**</b>	.219		
<b>Owner/manager Gender</b>						452
Male	87.9%	83.3%	96.1%	100%	98.0%	
Female	12.1%	16.7%	3.9%	0.0%	2.0%	
<b><math>\chi^2</math> Statistics between column (V) and columns (I-IV)</b>	<b>12.520***</b>	<b>19.381***</b>	.667	.499		
<b>Owner/manager age group</b>						452
Below 30 years old	8.9%	8.3%	9.1%	12.5%	2.7%	
Between 30-50 years old	77.0%	77.0%	77.9%	75.0%	80.3%	
Above 50 years old	14.1%	14.7%	13.0%	12.5%	17.0%	
<b><math>\chi^2</math> Statistics between column (V) and columns (I-IV)</b>	<b>6.127**</b>	4.906	4.733	5.148		
<b>Education Level</b>						451
No bachelor's degree	20.7%	19.2%	28.6%	8.3%	25.9%	
Bachelor's degree holder	52.3%	49.8%	54.5%	66.7%	52.4%	
Postgraduate degree holder	27.0%	31.0%	16.9%	25.0%	21.8%	
<b><math>\chi^2</math> Statistics between column (V) and columns (I-IV)</b>	2.225	4.520	.785	3.578		
<b>Previous experience</b>						446
Owned another SME	12.5%	11.1%	11.7%	29.2%	16.4%	
Employment experience	76.1%	78.4%	80.5%	58.3%	72.6%	
Student	9.8%	10.6%	7.8%	12.5%	11.0%	
<b><math>\chi^2</math> Statistics between column (V) and columns (I-IV)</b>	2.084	2.215	1.700	2.470		
<b>Bank involvement with SMEs</b>						446
User of fee-based non-lending products prior to and after applying	37.8%	39.7%	35.5%	29.2%	35.4%	
Non-user	62.2%	60.3%	64.5%	70.8%	64.6%	

$\chi^2$ Statistics between column (V) and columns (I-IV)	.247	.672	.001	.352		
Main purpose of latest application						245
Start-up	3.3%	-	9.1%	12.5%	1.4%	
Fixed asset financing	9.8%	-	29.9%	29.2%	25.3%	
Working capital financing	19.0%	-	58.4%	54.2%	59.6%	
Project financing	1.0%	-	2.6%	4.2%	13.7%	
$\chi^2$ Statistics between column (V) and columns (I-IV)	<b>196.840***</b>	-	<b>14.139***</b>	<b>10.417**</b>		
Extended collateral (only for borrowers)	50.0%	-	-	50.0%	34.9%	170
$\chi^2$ Statistics between column (V) and columns (I-IV)	2.006	-	-	2.006		

Notes: This table presents the number of observations and details the number of respondents in each variable for each subsample. \*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.

## 5.6 Estimating *Kafalah*'s Finance Additionality

In this section, *Kafalah*'s finance additionality level is estimated following Riding et al. (2007). In this, the survey data are used in a two-stage process to measure finance additionality. In the first stage, a logistic regression model is employed to estimate bank lending decisions for non-*Kafalah* beneficiary applicants. The second stage uses the resulting model to classify *Kafalah* beneficiaries as to whether the sampled beneficiaries would have been turned down had the *Kafalah* Program not been introduced.

### 5.6.1 First Stage: Logistic Regression on Non-*Kafalah* Participants

The logistic regression estimated for applicant firms who did not obtain guaranteed finance (i.e., non-*Kafalah* beneficiary) is conducted on a sample of 101 bank applicant SMEs. The dependent variable is the dichotomous variable on bank decision where 1= obtained bank finance; 0= bank finance rejected. Many of the explanatory variables (e.g., firm's age, size, legal status) have been used in other studies on small business financing. Table 5.5 provides findings from previous studies that have been used when selecting these explanatory variables for bank decisions. The definitions of these variables and the expected sign of their effect on lending decisions are presented in Appendix 5.B.

Tests for multicollinearity using Spearman's correlation coefficient are presented in Table 5.6. In computing the correlations between the variables, Spearman's correlation coefficient was chosen over Pearson's correlation. The reason is that the former is more appropriate for the data obtained, i.e., appropriate for both continuous and discrete variables, including ordinal variables (Muijs, 2012). According to Tabachnick and Fidell (2014), caution should be exercised when including two variables with a bivariate correlation of .70 or more in the same regression. Spearman's correlation matrix suggests little problem in this respect; there are no bivariate correlations above .38.

**Table 5.5 Previous studies' findings on bank decision for applicant SMEs**

<b>Variable</b>	<b>Study</b>	<b>Findings on Banks' Lending Decisions</b>
<b>Firm age</b>	Brown et al. (2010)  Love et al. (2011)	Firm age is positively related to the use of bank finance by SMEs and negatively related to the use of informal funds such as those provided by family and friends.
<b>Firm size</b>	Treichel and Scott (2006)	Banks are less willing to provide loans to smaller firms because of the higher costs and relatively lower profit margins from the smaller amounts typically requested by such firms.
<b>Industry sector</b>	Beck et al. (2008b)  Daskalakis and Psillaki (2008)	Manufacturer SMEs are the greatest users of bank finance.  Firms with large investments in tangible assets have smaller financial distress costs. Therefore, manufacturers often receive better terms of credit than those in the services sector.
<b>Legal status</b>	Cassar (2004)  Cowling and Mitchell (2003)  Freel et al. (2012)	Banks may consider SMEs' incorporation as a good indicator of credibility and formality of operations and may represent a signal of future growth or growth potential.  Limited liability firms default more frequently than sole proprietors or partnerships.  Empirical evidence is more ambiguous on the effect of limited liability status.
<b>Firms' growth intentions</b>	Freel et al. (2012)	Firms with growth ambitions are likely to be viewed positively by potential lenders, as such intention indicates optimism about the project.
<b>Firms' previous performance (employment change)</b>	Lee et al. (2015)	Firms with declining performance find it harder to access finance.

<b>Inter-firm relationships</b>	de la Torre et al. (2010)  Navas-Alemán et al. (2012)	Banks outreach promising SMEs involved in inter-firm relationships with other corporations in the bank's portfolio.  Financial flow for SMEs in inter-firm relationships can be facilitated by: (a) the reputational effect of such engagement, which increases the default cost to such SMEs (regarded as a kind of collateral); (b) the steady future cash flow and orders from those large firms; or (c) the large firm might be willing to offer guarantees to its supplier SME.
<b>New-to-firm innovation</b>	Lee et al. (2015)  Mina et al. (2013)	Innovative firms are more likely to encounter absolute credit rationing from all sources.  In the US, firms who introduce new products, processes or organisational innovation are more likely to secure finance than other firms. This was not found in the UK.
<b>Exporting</b>	Freel (2007)  Brown et al. (2011)	Exporter firms enjoy loan application success.
<b>Entrepreneur's gender</b>	Freel et al. (2012)  Carter et al. (2007)	It is argued that it is the business structure rather than owner's gender that is the main determinant of access to bank finance.  There is still a residual gender effect in accessing finance. The structure of the business does not fully account for such differences between male-led and female-led businesses.
<b>Entrepreneur's age</b>	Gibb and Ritchie (1982)  Deakins et al. (2010)	Owner's own resources are important to his/her ability to raise additional finance. The age of the entrepreneur is argued to be associated with accumulated human capital and asset formation (i.e., more resources).  Bankers argue that in the case of older entrepreneurs, succession planning should be in place. For younger ones, lack of experience could be a factor.
<b>Entrepreneur's education and experience</b>	Gamage (2011)  Abdulsaleh and Worthington (2013)	Entrepreneurs' education is associated with access to bank finance.  The educational attainment and experience of the SME owner/manager, (i.e., human capital), is found to be related to bank finance usage.
<b>Using fee-based non-lending products/services</b>	de la Torre et al. (2010)	The sale of such products and services deepens banks' involvement with SMEs and can facilitate increased lending to this segment.
<b>Main purpose of application</b>	Kotey (1999)	Banks avoid lending SMEs long-term funds because of the high cost and risk associated with such loans.

Source: previous research findings

**Table 5.6 Correlation matrix of variables used in regression analysis (Spearman's  $\rho$ )**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Main purpose	1.000														
2 Firm age	0.225	1.000													
3 Firm size	-0.003	0.293	1.000												
4 Industry	0.332	0.142	-0.043	1.000											
5 Legal status	0.099	0.037	0.358	-0.149	1.000										
6 Employment change	-0.080	-0.351	0.275	-0.100	0.222	1.000									
7 Growth intent	0.137	0.117	-0.051	0.206	-0.131	-0.324	1.000								
8 Inter-firm R'ship	0.217	0.118	0.146	0.082	0.129	0.042	-0.098	1.000							
9 Innovative	0.021	0.079	0.243	-0.220	0.267	0.231	-0.273	0.152	1.000						
10 Exporter	-0.048	0.003	0.003	-0.212	0.137	0.016	-0.153	0.051	0.199	1.000					
11 Gender	0.017	0.069	0.106	0.028	0.072	0.008	-0.025	0.170	0.097	0.087	1.000				
12 Owner's age	0.046	0.250	0.087	-0.028	0.001	-0.115	0.066	0.018	-0.032	0.026	0.101	1.000			
13 Education	0.037	-0.122	-0.041	-0.171	0.162	0.071	-0.008	0.040	0.132	0.139	-0.032	0.026	1.000		
14 Experience	-0.092	-0.037	-0.011	0.092	-0.087	-0.037	-0.041	-0.038	-0.039	-0.082	-0.169	-0.260	-0.047	1.000	
15 User non-lending	0.037	0.058	0.222	0.015	0.226	0.063	-0.017	0.057	0.095	-0.010	0.042	-0.057	0.053	-0.026	1.000

Table 5.7 reports the results of the logistic regression model of bank decision as a function of all the explanatory variables presented in Appendix 5.B. The full model containing all predictors is statistically significant,  $\chi^2 (26, N= 98) =39.31, p<.05$ , indicating that the model is able to distinguish between respondents who have been approved for bank finance and those who were rejected. It must be noted that because the sample consists mainly of male applicants, the model omits the three responses by female owners/managers. The total number of observations, therefore, is 98.

Nevertheless, the model in Table 5.7 retains predictors that were not statistically significant in explaining loan outcomes. Therefore, standard practice is to re-estimate the models, iteratively deleting the one or more variables that are not statistically significant at each stage (Riding et al., 2007). The result is the more parsimonious “reduced model” presented in Table 5.8. As in the first iteration, overall model fit is significant, indicating the model is able to distinguish between the two types of respondents ( $\chi^2 (17, N= 101) =36.14, p<.001$ ).

Table 5.8 shows that in line with the common refrain in the small business literature, size matters. The results suggest that smaller firms, in terms of employment level, i.e., micro- and small-sized firms, are less likely to be approved for bank finance compared to medium-sized firms. The literature provides that larger firms have more assets in place, which in turn provides more assurance to lenders (Nguyen et al., 2020), and therefore gives them better access to bank finance. Similarly, the results suggest that younger firms, particularly newly established ones (<3 years old), are less likely to obtain bank credit compared to very old firms. To the extent that older firms are better known, have proved themselves viable, and have established banking relationships (Avery et al., 1998), it is unsurprising that young firms are more likely to be denied finance. The result, nevertheless, is only significant at the 10% level.

Table 5.8 confirms the univariate tests in Section 5.5.2 on the significant effect of firms’ growth intentions. In this, firms who intend to grow in the foreseeable future are more likely to be approved for bank finance compared to those who intend to downsize. Furthermore, unsurprisingly, some of the entrepreneurs’ characteristics also appear to have significant effects on banks’ lending decisions. In the first instance, the results suggest that younger entrepreneurs are more likely to obtain bank finance compared to their older peers (i.e., above 50 years old);



this result, however, is only significant at the 10% level. This is interesting because the age of the entrepreneur is argued to be associated with accumulated human capital and assets (Gibb & Ritchie, 1982), and hence a greater ability to obtain bank finance by older entrepreneurs. Nevertheless, the result is consistent with Vos et al. (2007), who find that loan approvals are more likely for younger entrepreneurs. Furthermore, in line with arguments that bankers conflate education with capabilities (Freel et al., 2012), Table 5.8 suggests that less-educated owners/managers, i.e., those with no university education, are less likely to be approved for bank finance compared to more educated ones, particularly postgraduate degree holders.

**Table 5.7 Full logistic regression model of loan application outcomes**

	Coefficient estimate	Standard error	Z-Score
Main purpose: Start-up	.1381965	2.477519	0.06
Main purpose: Fixed asset financing	-.5446328	2.289065	-0.24
Main purpose: Working capital financing	-.6511875	2.198565	-0.30
Firm age: New (<3 years old)	-2.367152	1.220776	<b>-1.94*</b>
Firm age: Established (3-6 years old)	-1.57847	.972257	-1.62
Firm age: Old (7-10 years old)	-1.32157	1.121798	-1.18
Firm size: Micro (1-5 employees)	-4.124085	1.766195	<b>-2.34**</b>
Firm size: Small (6-49 employees)	-2.50468	1.072927	<b>-2.33**</b>
Industry: Manufacturing	-.0539529	1.56237	-0.03
Industry: Personal services	1.756238	1.522552	1.15
Industry: Professional/logistics services	1.090912	1.51134	0.72
Industry: Wholesale/retail	1.603119	1.457933	1.10
Legal status (Ltd.)	-1.192206	.9585165	-1.24
Employment change	.015186	.0367289	0.41
Growth intent: Grow	1.936318	1.229269	1.58
Growth intent: Maintain business size	.2342246	1.545222	0.15
Inter-firm relationships	-.3816264	.7474121	-0.51
Innovative	.0686826	.8489205	0.08
Exporter	-.5890784	1.064921	-0.55
Owner age: below 30 years old	2.650595	1.757114	1.51
Owner age: between 30-50 years old	1.610661	1.276018	1.26
Education level: no bachelor's degree	-3.031977	1.430488	<b>-2.12**</b>
Education level: bachelor's degree holder	.2151266	.869135	0.25
Experience: owned another SME	1.232851	1.524238	0.81
Experience: employment experience	-.4633286	1.291327	-0.36
Use of non-lending products/services	-.100718	.7845843	-0.13
Constant	-.3601495	2.223721	-0.16
No. of observations	98		
$\chi^2$	<b>39.31** (26df)</b>		
Pseudo R <sup>2</sup>	0.3603		

Notes: the table reports the results from the full logit model for the dependent dummy variable *obtained bank finance* on sampled non-Kafalah beneficiary bank applicant firms. All variables are defined in Appendix 5.B.

\*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.

**Table 5.8 Reduced logistic regression model of loan application outcomes**

	Coefficient estimate	Standard error	Z-Score
Firm age: New (<3 years old)	-2.067358	1.099006	<b>-1.88*</b>
Firm age: Established (3-6 years old)	-1.192215	.7921979	-1.50
Firm age: Old (7-10 years old)	-.9763297	.9451227	-1.03
Firm size: Micro (1-5 employees)	-3.459496	1.513281	<b>-2.29**</b>
Firm size: Small (6-49 employees)	-1.936229	.8524485	<b>-2.27**</b>
Industry: Manufacturing	-.2277671	1.331063	-0.17
Industry: Personal services	1.85221	1.188528	1.56
Industry: Professional/logistics services	.8286547	1.18848	0.70
Industry: Wholesale/retail	1.659026	1.234289	1.34
Growth intent: Grow	1.918684	.9459961	<b>2.03**</b>
Growth intent: Maintain business size	.1481742	1.288622	0.11
Owner age: below 30 years old	2.576552	1.466461	<b>1.76*</b>
Owner age: between 30-50 years old	1.326523	1.113552	1.19
Education level: no bachelor's degree	-2.587541	1.250784	<b>-2.07**</b>
Education level: bachelor's degree holder	.0468003	.7844469	0.06
Experience: owned another SME	.9334415	1.263682	0.74
Experience: employment experience	-.4352292	1.00609	-0.43
Constant	-1.797452	2.013432	-0.89
No. of observations	101		
$\chi^2$	<b>36.14***(17 df)</b>		
Pseudo R <sup>2</sup>	0.3263		

Notes: the table reports the results from the reduced logit model for the dependent dummy variable *obtained bank finance* on sampled non-*Kafalah* beneficiary bank applicant firms. All variables are defined in Appendix 5.B.

\*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.

### 5.6.2 Second Stage: Predicting Bank Decisions for *Kafalah* Participants

Moving to the main purpose of conducting these logistic regressions models, following Riding et al. (2007), the reduced logistic regression model in Table 5.8 is then used to estimate *Kafalah*'s finance additionality by applying it to *Kafalah* beneficiary firms in the sample, i.e., the 147 respondents. In this way, the regression model is used to predict bank decisions for these beneficiaries had the *Kafalah* Program not been introduced, using the PREDICT Y\_HAT command in STATA<sup>11</sup>.

Of those 147, 146 respondents provided sufficient data to apply the model. Based on these responses, the reduced logit model classifies that 107 (73.29%) of *Kafalah*'s beneficiaries would have been refused bank finance if it were not for the scheme; i.e., with a 95% confidence interval, *Kafalah* financed additionality is estimated to be  $73 \pm 7.9\%$ .

The results, therefore, suggest that *Kafalah* results in high level of finance additionality, well above the average of 30-35% which exists in all CGSs that are properly designed and implemented (Levitsky, 1997) and also above the 60% finance additionality stressed by Bannock and Partners (1997) that should be generated by CGSs (Boocock & Shariff, 2005). In this, only 28% of the *Kafalah* beneficiaries sampled would have been approved for bank finance had the *Kafalah* Program not been introduced.

The predicted finance additionality is closely in line with *Kafalah*'s beneficiaries' views about their ability to access bank finance had the programme not existed. In this, an overwhelming majority of about 72% of sample firms believe that their lending bank would not have extended finance if it were not for *Kafalah*; only about 22.4% believe that the bank would have otherwise lent to them. Of those, about 18% elaborated in the open-ended questions that "*the bank switched my application to Kafalah even though I used to secure non-guaranteed bank financing before Kafalah*". A small percentage of sample firms (around 5%) indicated that they do not know what the bank would have done in the absence of *Kafalah* (Appendix 5.C).

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<sup>11</sup> Y\_HAT is the predicted value of y, which is the dependent variable in a regression equation. It can be considered to be the average of the outcome variable.

*Kafalah* also seemed to generate finance additionality relative to alternative sources of bank finance. In this, nearly two-thirds of the respondents (65.3%) indicated that they would not have been able to obtain finance from alternative sources of funds. In that, over one-third (35.3%) claimed they would not have been able to raise financing from any other source in the absence of the programme. Such circumstances tend to be associated with *full finance additionality* according to KPMG (1999). The remainder of those indicating the existence of finance additionality, though only partially, account for approximately 30% of the sample. In that, they believe they would have raised a lower amount than that obtained through *Kafalah* had the programme not existed (*partial finance additionality*). On the other hand, around 31% of participants believed that finance is available for them from sources other than banks even were the programme not available (*zero finance additionality*). A minority of approximately 3% indicated that they did not know if they could have obtained the same amount raised through *Kafalah* from alternative sources (Appendix 5.C).

Altogether, the findings suggest that the scheme has been successful in overcoming the financing constraints of SMEs who might not have the required collateral to obtain bank finance. The findings thus provide support for arguments that *Kafalah* was a decisive factor in increasing SMEs' share of bank loans from 2% in 2016 to 5.8% in 2018, with a surge in SME credit during the Covid-19 pandemic where SMEs accounted for 8% of bank loans in 2020 (Arab News, 2021).

### **5.6.3 Characteristics of *Kafalah's* Beneficiaries**

The results in the simple univariate tests (Section 5.5.2) suggest that *Kafalah's* participants are not statistically different from those who obtained non-guaranteed bank finance across the majority of firm and entrepreneur characteristics. However, there are some statistical differences between *Kafalah's* participants and rejected applicant SMEs who applied through *Kafalah* or otherwise.

In this section, analysis is conducted within a multivariate framework to compare *Kafalah's* beneficiaries with SMEs who applied for bank finance through *Kafalah* but were ultimately rejected. The total sample in this analysis is 184 applicants through *Kafalah*, amongst whom 147 were successful. In doing so, a logistic regression is employed for the dependent variable where 1= obtained bank finance; 0= rejected. The same sets of explanatory variables as in the

above analysis are used. Table 5.9 reports the results of the full estimated logistic regression. Table 5.10 reports those for the more parsimonious ‘reduced model’.

Table 5.10 shows some of the multivariate regression results support the simple univariate tests. In the first instance, SMEs who apply for purposes other than project financing are less likely to be approved for bank finance, even for applications for working capital financing purposes. This suggests that even with *Kafalah*, banks prefer to lend for the former type of applicants where the assignment of project proceeds is usually extended as a form of security. More importantly, SMEs’ structural characteristics, particularly their size, have significant effects on banks’ lending decisions, even through *Kafalah*. In this, despite the reduction in the associated risk, banks are still reluctant to lend to micro- and small firms who are usually more credit-constrained than medium-sized firms. Furthermore, although the results regarding SMEs’ age are not statistically significant, the signs of the coefficients suggest that younger firms are less likely to be approved for guaranteed bank loans compared to older ones.

The industry sector in which SMEs operate also affects firms’ ability to obtain bank finance. Firms in the construction sector are less likely to obtain guaranteed loans compared to other sectors, particularly trade, professional/logistics services sectors and manufacturers; however, the results are only significant at the 10% level for the latter. While firms in the construction sector are similar to manufacturers in terms of fixed assets availability to be pledged as collateral, and hence more likely to be approved, the recent economic downturn affected SMEs in the construction sector more severely (Al-Watan, 2017). This could explain banks’ greater reluctance to approve applications from construction SMEs, even through *Kafalah*. The results confirm the univariate tests’ finding that *Kafalah*’s beneficiaries are overrepresented in the wholesale/retail sector.

Moreover, the results suggest that firms with growth aspirations are more likely to obtain bank finance through *Kafalah* compared to those who intend to downsize their businesses in the future. As mentioned earlier, the latter type of firm is more likely to have a worse risk profile than the former because firms with positive future prospects during economic downturns are likely to be superior. Additionally, the results confirm banks’ preference for firms with relatively steady cashflows who are involved in inter-firm relationships with large, foreign, and/or government organisations. The results for the main purpose of application also provide support

for this argument. In this, applications for purposes other than project financing are less likely to be approved. This suggests that even with *Kafalah*, banks prefer to lend to applicants who can assign projects' proceeds to the bank, which provides higher assurance of repayment (i.e., for project financing purposes) and hence provides further explanation regarding why firms in inter-firm relationships are more likely to be approved.

The same analysis is conducted to compare *Kafalah's* beneficiaries with rejected bank applicants generally, i.e., through *Kafalah* or otherwise. The total sample is 224 including *Kafalah's* successful applicants. The results of the "reduced model" for this analysis are provided in Appendix 5.D. Overall, the results confirm those obtained above; i.e., *Kafalah's* beneficiaries are more likely to be larger in terms of employment level. They are also more likely to be involved in inter-firm relationships with large, foreign, and/or government organisations, and are hence more likely to obtain finance for project-financing purposes. The results in Appendix 5.D further confirm the above findings that *Kafalah's* beneficiaries are more likely to operate in the trade sector.

Rejected applicants were asked to provide the reasons given by banks for rejecting their applications; Appendix 5.E presents their answers. As shown, the highest proportion of respondents indicated that lack of sufficient collateral was among those reasons provided by banks. Around 19% also indicated that they had been rejected because the project was not guaranteed by *Kafalah*. Since *Kafalah* acts as a substitute for collateral, the survey data suggest that the majority of SMEs are rejected due to insufficient collateral.

**Table 5.9 Characteristics of *Kafalah*'s beneficiaries compared to rejected applicants through *Kafalah***

	Coefficient estimate	Standard error	95% CI for odds Ratio		
			Lower	Odds ratio	Upper
Main purpose: Start-up	-2.522	2.002	.002	.080	4.058
Main purpose: Fixed asset financing	-1.923	1.649	.006	.146	3.702
Main purpose: Working capital financing	<b>-3.062**</b>	1.493	.003	.047	.873
Firm age: New (<3 years old)	-1.313	.931	.043	.269	1.668
Firm age: Established (3-6 years old)	-.394	.725	.163	.675	2.794
Firm age: Old (7-10 years old)	.358	.789	.305	1.430	6.719
Firm size: Micro (1-5 employees)	<b>-3.443***</b>	1.272	.003	.032	.387
Firm size: Small (6-49 employees)	<b>-2.054**</b>	.985	.019	.128	.883
Industry: Manufacturing	1.505	1.093	.529	4.505	38.398
Industry: Personal services	.552	1.153	.181	1.737	16.645
Industry: Professional/logistics services	<b>1.908*</b>	1.118	.754	6.741	60.281
Industry: Wholesale/retail	<b>2.524**</b>	1.038	1.632	12.482	95.458
Legal status (Ltd.)	-.533	.592	.184	.587	1.872
Employment change	.021	.032	.959	1.021	1.087
Growth intent: Grow	<b>2.092***</b>	.773	1.782	8.103	36.850
Growth intent: Maintain business size	1.272	.963	.540	3.567	23.546
Inter-firm relationships	<b>1.525**</b>	.602	1.411	4.595	14.964
Innovative	-.185	.586	.264	.831	2.619
Exporter	-1.032	.668	.096	.356	1.320
Owner gender: female	.292	1.387	.088	1.339	20.313
Owner age: below 30 years old	-1.264	1.454	.016	.282	4.879
Owner age: between 30-50 years old	.829	.765	.511	2.290	10.264
Education level: no bachelor's degree	-.898	.826	.081	.407	2.056
Education level: bachelor's degree holder	-1.071	.735	.081	.343	1.447
Experience: owned another SME	-1.790	1.502	.009	.167	3.167
Experience: employment experience	-2.082	1.410	.008	.125	1.976
Use of non-lending products/services	.152	.611	.351	1.164	3.858
Constant	4.660**	2.358		105.617	
No. of observations	178				
$\chi^2$	<b>59.707*** (27 df)</b>				
Cox and Snell R <sup>2</sup>	.285				
Nagelkerke R <sup>2</sup>	.449				

Notes: the table reports the results from the full logit model for the dependent dummy variable *obtained bank finance* to compare *Kafalah*'s beneficiaries to rejected applicants through *Kafalah*. All variables are defined in Appendix 5.B.

\*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.



**Table 5.10 Reduced logistic regression model of *Kafalah*'s beneficiaries' characteristics compared to rejected applicants through *Kafalah***

	Coefficient estimate	Standard error	95% CI for odds Ratio		
			Lower	Odds ratio	Upper
Main purpose: Start-up	-2.584	1.876	.002	.075	2.986
Main purpose: Fixed asset financing	-2.113	1.602	.005	.121	2.792
Main purpose: Working capital financing	<b>-3.193**</b>	1.451	.002	.041	.705
Firm age: New (<3 years old)	-.881	.782	.090	.414	1.916
Firm age: Established (3-6 years old)	-.071	.665	.253	.931	3.428
Firm age: Old (7-10 years old)	.663	.739	.456	1.941	8.266
Firm size: Micro (1-5 employees)	<b>-3.878***</b>	1.244	.002	.021	.237
Firm size: Small (6-49 employees)	<b>-2.250**</b>	.996	.015	.105	.742
Industry: Manufacturing	<b>1.821*</b>	1.038	.807	6.176	47.248
Industry: Personal services	1.021	1.083	.332	2.777	23.204
Industry: Professional/logistics services	<b>2.050**</b>	1.034	1.024	7.764	58.871
Industry: Wholesale/retail	<b>2.739***</b>	.980	2.266	15.467	105.563
Growth intent: Grow	<b>2.052***</b>	.723	1.885	7.784	32.139
Growth intent: Maintain business size	1.171	.928	.523	3.226	19.887
Inter-firm relationships	<b>1.328**</b>	.550	1.284	3.772	11.077
Innovative	-.339	.553	.241	.712	2.105
Exporter	-1.078	.669	.092	.340	1.263
Owner gender: female	-.468	1.230	.056	.626	6.981
Education level: no bachelor's degree	-.598	.784	.118	.550	2.558
Education level: bachelor's degree holder	-.774	.686	.120	.461	1.767
Experience: owned another SME	-1.580	1.356	.014	.206	2.938
Experience: employment experience	-1.602	1.259	.017	.201	2.376
Use of non-lending products/services	.057	.536	.370	1.058	3.027
Constant	4.620	2.064		101.485	
No. of observations	179				
$\chi^2$	<b>55.870*** (23 df)</b>				
Cox and Snell R <sup>2</sup>	.268				
Nagelkerke R <sup>2</sup>	.423				

Notes: the table reports the results from the reduced logit model for the dependent dummy variable *obtained bank finance* to compare *Kafalah*'s beneficiaries to rejected applicants through *Kafalah*. All variables are defined in Appendix 5.B. \*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.

## **5.7 Kafalah's Economic Additionality**

Another dimension by which to assess CGSs' impacts is that of economic additionality, which may be considered a more important objective by most CGS designers (Boocock & Shariff, 2005). Empirical studies on CGS evaluations usually measure economic additionality through two main sets of indicators: the first focuses on firms' growth, the second on their profitability. Studies concerned with firms' growth usually deal with impacts on employment levels and revenues, which consequently can affect a country's GDP (Kang & Heshmati, 2008; Oh et al., 2009). Studies concerned with firms' profitability use measures such as return on investment (ROI), return on equity (ROE), and profit margins.

While it is argued that such profitability measures ensure sustainable growth in the long term, and hence are more reliable performance indicators compared to growth measures (Caselli et al., 2019), previous research in Saudi suggests that SME owners/managers are reluctant to provide such financial data about their firms; additionally, they themselves place little reliance on such ratios (Waked, 2016). Similarly, KPMG's (1999) study provided that questions on profit margins were the least-answered question by participant SMEs. Boocock and Shariff (2005) faced similar issues because such financial data were sometimes omitted as respondents were reluctant to share such information. Therefore, the traditional growth measure, namely, growth in employment, is adopted in the current research to avoid the missing data problems that are highly associated with other measures that require financial data. More importantly, this growth measure is usually used by governments as it is an important indicator of job creation dynamics, and is readily visualized and non-controversial from a research point of view or from the participant's point of view (Delmar, 1997; Kotey, 1999; Pandula, 2011).

### **5.7.1 Measuring Employment Growth**

Survey participants were asked to provide the number of employees in the year the survey was undertaken, i.e., 2019 and five years earlier in 2014, or at start-up if the firm was more recently established. However, similarly to the above arguments concerning which performance indicator to use, there are a number of theoretical discussions regarding the choice of an appropriate growth index (Janssen, 2006). According to Delmar (1997), growth measures can be calculated as an absolute growth or relative growth. However, while relative measures will bias the results in favour of small firms, an absolute measure will favour growth in larger ones.

Indeed, Westhead and Birley (1995) argue that the former would be particularly problematic in samples of start-up with three or less employees.

Despite this, the conventional growth measure that is most frequently used in the SME literature is in relative measures (percentage change) i.e., “*change in employment as a percentage of employment in the first period*” (Wooden & Hawke, 2000, p.95) and is calculated as follows:

$$\frac{E_t - E_0}{E_0} \times 100$$

where:  $E_t$  is the current employment and  $E_0$  is previous employment.

However, to adjust for skewness in the sample, the current study follows Varum and Rocha (2013) and employs the approximate percentage change of the above conventional growth measure which is “*measured by the difference between the employment of firm  $i$  in  $t$  and in  $t-1$ , in log terms*” (Varum & Rocha, 2013, p.13), calculated as follows:

$$\text{Ln}(E_t) - \text{Ln}(E_0) \times 100$$

where:  $E_t$  is the current employment and  $E_0$  is previous employment.

Since the mean and median for previous employment (i.e.,  $E_0$ ) of the current study’s sample are large (i.e., 29.3 and 10 employees, respectively) (Table 5.11), issues raised against using percentage change in samples of three or less employees and, hence, the approximate percentage change should not severely affect the measure employed.

**Table 5.11: Descriptive Statistics of Previous Number of Employees (E0)**

Mean	29.37
Median	10.00
Std. Deviation	48.592
Range	248
Minimum	1
Maximum	249
N = 450	
Missing values = 2	

Source: survey data

Table 5.12 shows employment growth rates across the four groups identified in Table 5.4, i.e., *all SMEs*, *non-applicants*, *rejected applicants*, *non-guaranteed borrowers*, and *Kafalah* beneficiaries. Interestingly, the simple univariate tests suggest no statistically significant differences in terms of employment growth between *Kafalah* participants and the four other categories of SMEs (non-*Kafalah* participants).

While the average growth rate of *Kafalah* participants (i.e., 48%) is higher than that of approved *non-guaranteed borrowers* (around 43%), *rejected applicants* (around 38%) and the *all SMEs* group (around 46.5%), the *non-applicant* group outperformed *Kafalah* participants in terms of employment growth (i.e., their growth rate is around 50%). This is unsurprising since the firms in the *non-applicant* group are significantly younger and smaller than *Kafalah* beneficiary firms (Table 5.4). There is a general agreement in the literature that the potential for job-generation of new firms is most apparent during their initial phase (Westhead & Birley; 1995). Furthermore, smaller firms can grow considerably by hiring only a few employees. Nevertheless, the differences in employment growth rates are not statistically significant, suggesting that there are perhaps other characteristics, including firm age and size, that account for such growth.

**Table 5.11 Descriptive statistics on employment growth across *Kafalah* participants and non-participants**

	Non- <i>Kafalah</i> beneficiary				(V) <i>Kafalah</i> beneficiary (n = 147)
	(I) All SMEs (n = 303*)	(II) Non- applicants (n = 204)	(III) Rejected applicants (n = 75*)	(IV) Non- guaranteed borrowers (n = 24)	
<b>Employment growth</b>	46.45%	49.99%	38.01%	42.79%	48.23%
<i>t</i> -test between column (V) and columns (I-IV)	0.158	-0.144	0.644	0.214	-
<b>Two-sided P-value</b>	0.875	0.886	0.521	0.831	-

\*Two missing responses

### 5.7.2 Variables Selection

As mentioned above, the employment growth rates are likely to be driven by some firms'/entrepreneurs' characteristics. Therefore, a simple ordinary least square (OLS) regression is employed within a multivariate framework to assess *Kafalah*'s economic impact, controlling for a set of firm characteristics and entrepreneurs' human capital. The fact that *Kafalah*'s beneficiaries are larger and older than the average SME in the sample indicates that the growth rates used would not exaggerate the impact of the programme. The analysis conducted follows that by Chandler (2012), who used survey data on the Canada Small Business Financing Programme (CSBFP) to estimate its economic impact.

Similarly to Chandler (2012), the key variable to explain employment growth rates is participation in *Kafalah*. To ensure that the participation in *Kafalah* dummy variable captures the majority of the impact of the scheme, a number of controls are used. First, since Table 5.4 shows that the desire for bank credit is a characteristic of a smaller number of total SMEs, this variable is used to control for self-selection into the programme, i.e., those who indicate that bank finance is a preferable source of external funds are more likely to self-select into *Kafalah*, compared to those who do not desire bank finance. Second, the growth intentions of SMEs owners/managers in the coming three years are controlled for because such businesses are expected to grow more than those with no growth aspirations.

Also, since some studies attribute SMEs' worsened performance to the moral hazard effect induced by CGSs, the current study controls for the requirement for collateral/security in addition to *Kafalah's* guarantee, as the scheme's design allows banks to have such requirements depending on firms' risk evaluation. Furthermore, control variables for a set of firm characteristics are included, namely firm age, size and industry sector, legal status, in addition to SMEs owners'/managers' education, and previous experience. While many of these control variables are standard explanatory variables in the SMEs growth studies (Varum & Rocha, 2013), the control variables employed in the current research include a fuller set of controls than those in Chandler (2012). For example, unlike Chandler (2012), the data obtained allow controlling for firm's legal status which is argued to influence failure rates (Storey, 1994b). Also, the data allow controlling for firm activities (i.e., inter-firm relationships, innovation and exporting), in addition to entrepreneurs' human capital, which is argued to affect SMEs' performance to a greater extent than financial capital (Cressy, 1999). In this, it is expected that highly educated SME owners/managers and those with previous small business experience are more likely to witness increases in employment levels. In the following, the selection of control variables is justified more closely.

First, while there is no agreement concerning the relationship between firm size and growth (i.e., both positive and negative relationships have been reported), empirical results in previous studies have been more persistent with regard to the relationship between firm age and growth; most research reports a negative relationship between the two (Kachlami & Yazdanfar, 2016). Nevertheless, similarly to Chandler (2012), both firm age and size are expected to have a negative effect on growth (i.e., smaller firms can grow relatively faster by hiring only a few employees). Moreover, the industry sector in which SMEs operate should have an impact on their growth rate. As mentioned earlier, the construction sector in Saudi was severely hit by the drop in oil prices and stands at the threshold of historical losses (Al-Watan, 2017). Accordingly, SMEs in this sector are expected to witness employment losses.

The evidence from previous studies in terms of legal status effect on SMEs' growth is inconclusive. On the one hand, firm incorporation, i.e., limited liability status, was found to be associated with increased growth in new firms (Storey, 1994a). However, there is empirical evidence that limited liability firms default more than unincorporated firms when analysing the UK SFLGS, which was attributed to reduced borrower commitment to repay due to the

protection offered by their limited liability status (Cowling & Mitchell, 2003). It is expected, therefore, that limited liability firms are more likely to witness lower employment growth compared to sole proprietors/partnerships.

Moreover, the current study controls for three different SME activities: involvement in inter-firm relationships, new-to-firm innovation, and exporting activities. It is expected that SMEs engaged in such activities are more likely to report higher employment growth. Some studies argue that firms conducting these activities are superior SMEs and associated with higher growth (Bourletidis & Triantafyllopoulos, 2014; Brown et al., 2011; Franicevic & Bartlett, 2000; Lee et al., 2015). Appendix 5.B provides definitions of all variables.

### **5.7.3 Empirical Strategy**

Following Chandler (2012), the identified four samples in Section 5.5.2 are used to evaluate *Kafalah*'s economic impact. The first combines *Kafalah*'s beneficiaries and all sampled SMEs; this sample is the one usually used by impact studies, and it is argued that CGSs' impacts are larger in such samples because of self-selection bias issues. The second combines *Kafalah* beneficiaries and SMEs who have never applied for bank finance, i.e., the *non-applicant* group. As mentioned earlier, unlike in other impact studies, *Kafalah*'s impact cannot be exaggerated because SMEs in the *all SMEs* group and the *non-applicant* group are younger and smaller than *Kafalah* participants. The third combines *Kafalah* beneficiaries and applicant SMEs who were refused bank finance. The difference in employment growth between these two groups can be attributed to *Kafalah* when controlling for the above-mentioned variables since those who received funds will necessarily do better than those who did not. The final sample combines *Kafalah*'s beneficiaries and *approved non-guaranteed* bank finance borrowers. Chandler (2012) argues that if the CGS is well designed, banks will be more induced to select riskier SMEs but with high growth potential instead of safe ones generally preferred by banks. Hence, if this is the case, then *Kafalah* participants should outperform *non-guaranteed borrowers*. However, the analysis in Section 5.5.2 suggests that *Kafalah* participants are indistinguishable from *non-guaranteed borrowers*. In some cases, *Kafalah* participants seem to be relatively safer SMEs with relatively more steady cash flows, as a significant majority of them are involved in inter-firm relationships and apply for project finance where assignment of project proceeds is usually extended as a form of security.

It must be noted that empirical testing will be imperfect for three main reasons. First, Saudi national employees represent only around 16.2% of SMEs' total employment in Saudi (General Authority for Statistics, 2018a). Therefore, employment created by sample firms may include employment of foreign labour. Due to the illegal practices of some firms within Saudi, where they claim they have more Saudi nationals in their workforce than they actually do to reach the required level of Saudisation<sup>12</sup>, questions on how many Saudi nationals are actually working in the firms were deemed to be highly sensitive and could potentially raise certain legal concerns. Second, the data collected do not enable the survival or non-survival of *Kafalah's* beneficiary firms to be tested since only surviving firms were interviewed. Firm survival, of course, may be important since the demise of a firm means losses to the scheme. As noted earlier, however, *Kafalah's* default rate is within what best practice suggests, and indeed is sometimes lower, indicating a degree of overcaution in approving guarantees. Moreover, such survivorship bias also affects the comparison groups, thus one would anticipate the growth comparison to still be valid. Third, the survey coincided with/followed a period of economic recession in Saudi. This, in turn, would have a considerable effect on SMEs' growth. Nevertheless, the growth comparison would still be valid since this economic cycle also affected the comparison groups.

#### **5.7.4 Results**

Table 5.13 provides four sets of results for the estimated OLS regression models across the above-mentioned four samples. The results confirm the simple univariate tests in Table 5.12 that participation in *Kafalah* does not have statistical power in terms of explaining employment growth in SMEs. However, unlike the univariate tests, Table 5.13 suggests that *Kafalah's* participants witnessed a decline in employment by 0.07 percentage points compared to the *all SMEs* group and by 0.13 percentage points compared to the *rejected applicants* group. However, Table 5.13 shows that when including all control variables, *Kafalah* participants' employment growth is higher when compared to the *non-applicant* group; and, in line with the univariate tests, *Kafalah* participants' employment growth is higher when compared to *approved non-guaranteed borrowers*. Overall, however, none of these results are significant at standard significance levels, suggesting that participation in *Kafalah* does not have any real effect on employment growth rates of guaranteed firms.

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<sup>12</sup> Saudisation is a Saudi nationalisation scheme issued by the Ministry of Labour and Social Development whereby Saudi firms are required to fill their workforce with Saudi nationals up to certain levels depending on industry type and company size.



Some control variables, however, appear statistically significant in terms of explaining SMEs' employment growth. In the first instance, as expected, SME owner/manager growth intentions are significant in explaining employment growth; those with growth ambitions are more likely to witness employment growth compared to those intending to downsize. Furthermore, *Kafalah's* participants who were required to provide additional collateral/security are more likely to report declines in employment levels, compared to the *non-applicants* group. It is argued that banks tend to ask relatively riskier borrowers to pledge collateral (Bellier et al., 2012). The results, therefore, provide support for this argument. Nevertheless, *Kafalah* participants who did not extend additional collateral (i.e., for whom the bank perceived the *Kafalah's* guarantee to be sufficient) are not statistically different in terms of employment growth compared to the other groups. The results, therefore, do not find evidence for arguments that CGSs induce moral hazard and thus that guaranteed borrowers perform worse because they do not extend collateral of their own (Lelarge et al., 2010; Uesugi et al., 2010); indeed, the results suggest that a host of firm characteristics are significant in explaining declines in employment growth.

For example, in line with findings that new firms less than six years old are the main creators of new jobs (Storey, 1985), the results suggest that younger firms are more likely to witness employment growth than those who have been operating for more than 10 years. Such a relationship, however, is reversed when it comes to firm size. Small- and micro-firms are, in employment terms, less likely to witness employment growth compared to medium-sized ones. One possible explanation for this observation might be the recent austerity measures introduced in Saudi, including significantly higher fees on expatriate workers (Fahim, 2019). Smaller firms may thus have been forced to lay off some of their expat workers because they could not handle the imposition of such higher fees, as opposed to larger SMEs. Also, it can be argued that medium-sized firms are likely to be more dynamic than smaller ones especially microenterprises; and, hence, are able to manage the economic downturn better.

Furthermore, the results suggest that SMEs in the professional services/logistics services and those in the trade sector are more likely to witness higher employment growth compared to those in the construction sector. As mentioned, the latter was hit more severely by the drop in oil prices than other industry sectors in Saudi. Moreover, consistent with the studies on the

importance of innovative small firms in helping the economy to recover by creating new markets and achieving rapid growth (Lee et al., 2015), the results suggest that SMEs who engage in new-to-firm innovation are more likely to witness growth in employment, compared to non-innovative firms. Last but not least, the results do not support arguments regarding the importance of human capital on SME performance (Cressy, 1999). In this, neither the education level of entrepreneurs nor their previous experience is significant in explaining employment growth.

By implication, the results provide some insights into the types of SMEs that are less likely to grow in terms of employment level. Unsurprisingly, the results suggest that firms with downsizing intentions are less likely to grow. Similarly, riskier borrowers, for whom the bank perceived *Kafalah*'s guarantee to be insufficient and, hence, were required to pledge additional collateral, are more likely to witness a decline in employment. Very old firms who have been operating for more than 10 years are also less likely to report growth in employment level, which is in line with most research examining the relationship between firm age and growth (Kachlami & Yazdanfar, 2016). While Kachlami and Yazdanfar (2016) argue that there is no agreement in the literature concerning the relationship between firm size and growth, the current study's findings are consistent with those reporting a positive relationship between the two. In this, micro and small firms are more likely to witness a decline in employment. Interestingly, the results suggest non-innovative firms who have not engaged in new-to-firm innovative activities in the past three years are less likely to report employment growth.

Overall, the results suggest that participation in *Kafalah* does not seem to affect employment growth, which should be affected positively if growth is limited by the availability of external finance. In this, the results are in line with arguments that the levels of employment in SMEs are affected by a variety of external and internal factors, including the purpose to which the funds are put (Boocock & Shariff, 2005). This can be attributed to the fact that *Kafalah*'s beneficiaries are, on average, older compared to the other SMEs in the sample and their loans are mostly of short-term maturity. It can thus be argued that these firms utilised the guaranteed funds to ease working capital pressures during the difficult economic environment in Saudi. The results obtained are consistent with those found by de Blasio et al. (2018), who observed a positive effect of the Italian Scheme, *Fondo di Garanzia*, on credit flow to SMEs but no effect

on firms' investments or sales; they attributed this to SMEs mainly using guaranteed loans to finance working capital in the context of liquidity squeeze due to the unfolding financial crisis.

**Table 5.12 *Kafalah*'s impact on growth in employment**

	(1) All SMEs	(2) Non-Applicants	(3) Rejected Applicants	(4) Approved non-guaranteed borrowers
<i>Kafalah</i> participation	-0.07 (0.13)	0.03 (0.14)	-0.13 (0.23)	0.22 (0.23)
No desire for bank finance	0.12 (0.09)	0.13 (0.10)	0.17 (0.14)	0.05 (0.17)
Intend to grow	<b>0.45***</b> <b>(0.12)</b>	<b>0.29**</b> <b>(0.14)</b>	<b>0.57***</b> <b>(0.19)</b>	0.22 (0.24)
Intend to maintain size	-0.13 (0.16)	<b>-0.35**</b> <b>(0.19)</b>	0.10 (0.24)	-0.15 (0.31)
Extended collateral	-0.21 (0.16)	<b>-0.42**</b> <b>(0.17)</b>	-0.16 (0.22)	-0.19 (0.17)
No collateral	0.06 (0.15)		0.26 (0.21)	
New (<3 years old)	<b>1.24***</b> <b>(0.15)</b>	<b>1.27***</b> <b>(0.17)</b>	<b>1.37***</b> <b>(0.23)</b>	<b>1.53***</b> <b>(0.30)</b>
Established (3-6 years old)	<b>1.11***</b> <b>(0.12)</b>	<b>1.13***</b> <b>(0.13)</b>	<b>1.12***</b> <b>(0.18)</b>	<b>1.45***</b> <b>(0.20)</b>
Old (7-10 years old)	<b>0.57***</b> <b>(0.13)</b>	<b>0.57***</b> <b>(0.14)</b>	<b>0.48***</b> <b>(0.18)</b>	<b>0.58***</b> <b>(0.19)</b>
Micro (1-5 employees)	<b>-1.01***</b> <b>(0.18)</b>	<b>-1.16***</b> <b>(0.20)</b>	<b>-0.94***</b> <b>(0.28)</b>	<b>-1.33***</b> <b>(0.37)</b>
Small (6-49 employees)	<b>-0.61***</b> <b>(0.13)</b>	<b>-0.71***</b> <b>(0.15)</b>	<b>-0.65***</b> <b>(0.18)</b>	<b>-0.76***</b> <b>(0.18)</b>
Manufacturing	0.15 (0.18)	0.16 (0.20)	-0.02 (0.26)	0.06 (0.32)
Personal services	-0.04 (0.17)	0.08 (0.20)	-0.14 (0.29)	0.06 (0.34)
Professional/logistics services	<b>0.32**</b> <b>(0.16)</b>	<b>0.46***</b> <b>(0.17)</b>	0.13 (0.24)	0.39 (0.28)
Wholesale/retail	<b>0.48***</b> <b>(0.15)</b>	<b>0.57***</b> <b>(0.17)</b>	0.34 (0.23)	<b>0.52**</b> <b>(0.26)</b>
Legal status (Ltd.)	0.03 (0.11)	-0.04 (0.12)	0.02 (0.15)	-0.17 (0.17)
Inter-firm relationships	-0.09 (0.10)	-0.05 (0.11)	-0.16 (0.15)	-0.07 (0.18)
Innovative	<b>0.32***</b> <b>(0.10)</b>	<b>0.30***</b> <b>(0.11)</b>	<b>0.52***</b> <b>(0.15)</b>	<b>0.55***</b> <b>(0.18)</b>
Exporter	-0.02 (0.13)	-0.05 (0.15)	-0.04 (0.19)	-0.03 (0.23)

No Bachelor's degree	-0.15 (0.13)	-0.17 (0.15)	-0.05 (0.20)	-0.24 (0.23)
Bachelor's degree	-0.15 (0.11)	-0.16 (0.12)	-0.12 (0.17)	-0.07 (0.20)
Previous experience: Owned another SME	0.03 (0.18)	0.22 (0.21)	0.16 (0.27)	0.12 (0.30)
Employment experience	0.03 (0.15)	0.18 (0.17)	0.01 (0.24)	-0.14 (0.26)
Constant	-0.24 (0.25)	-0.20 (0.28)	-0.40 (0.37)	-0.30 (0.47)
Observations	428	333	215	168
$R^2$	0.359	0.395	0.396	0.438

Notes: the table reports the results of OLS regressions across four samples. The dependent variable is the continuous variable calculated to measure employment growth rate. Standard errors are in parentheses. Some responses are missing from one or more independent variables. Therefore, the number of observations is lower.

\*\*\*, \*\*, \* denote significance levels at 1%, 5% and 10% respectively.

## 5.8 Conclusion and Policy implication

Despite their popularity and long history, both economic theory and empirical evidence are inconclusive as to the net effect of CGSs (Dvouletý et al., 2019). The current research contributes to this debate in the literature and responds to calls for further CGS evaluations with specific country focus (Beck et al., 2010). In this, the current study assesses the impact of the Saudi CGS, *Kafalah*, which has never previously been subject to independent empirical review.

The current study attempts to assess *Kafalah's* impact in terms of *finance* and *economic additionality*, which are argued to be the acid test for the effectiveness of CGSs (Boocock & Shariff, 2005). Because of the lack of publicly available firm-level data, the current study employed primary firm-level data collected through a telephone survey of 124 of *Kafalah's* beneficiary firms. A control group was constructed from the responses of the 328 SMEs in Chapter 4, who self-administered the same survey questionnaire.

The approach to assess *Kafalah's* finance additionality follows that of Riding et al. (2007) and is assessed according to a two-stage process. The first stage employs a logistic regression model on non-*Kafalah* participants to estimate application outcomes for bank finance applicants. The resulting model is then used to predict the bank decision for the *Kafalah* participants had the scheme not been introduced, i.e., whether *Kafalah's* participants would have been rejected in the scheme's absence.

The results suggests that *Kafalah's* finance additionality can be estimated (with 95% confidence) to be  $73\pm 7.9\%$ . In this, 73.3% of *Kafalah's* beneficiaries would have been rejected had the *Kafalah* Program not been introduced. Such estimated finance additionality is well above the average of 30-35% that exists in all CGSs that are properly designed and implemented (Levitsky, 1997), and is also above the 60% finance additionality stressed by Bannock and Partners (1997) that should be generated by CGSs (Boocock & Shariff, 2005). Survey respondents confirmed the predicted finance additionality from the econometric analysis. An overwhelming majority of about 72% of *Kafalah's* beneficiaries indicate that their lending bank would not have extended finance had the *Kafalah* Program not been available. Less than one-quarter of the firms (22.4%) believed that the bank would have lent to them even had the *Kafalah* Program not existed. The implications of such findings that might at first glance seem reasonable

are that the scheme has been highly successful in overcoming the financing constraints of economically viable SMEs who lack the collateral required to obtain bank finance.

Nevertheless, when characterising *Kafalah's* beneficiaries, they appear on average older and when compared to rejected applicants are significantly larger. Furthermore, they are more likely to be involved in inter-firm relationships with large, foreign, and/or government organisations, and hence more likely to be approved for bank credit for project-financing purposes. These loans tend to have short-term maturities and are usually secured by assigning projects' proceeds to the banks. Such results, coupled with low default rates in *Kafalah's* population (i.e., not exceeding 2.31%, with the exception of 2009), suggest that banks are highly cautious in approving finance, even for larger and older SMEs.

This can be attributed to two factors. First, the banking sector in Saudi is regarded as being geared towards financing large corporations, and its involvement with SMEs is relatively recent (IMF, 2018a; World Bank Group, 2016). Therefore, even the larger and older SMEs cannot obtain bank credit without *Kafalah* and/or collateral under the current banks' business models. Second, because of the recent economic downturn in Saudi, banks are not optimistic about the future, their response to which is to raise their lending criteria, i.e., require firms to have better debt-to-equity ratios, better cash flows, and/or higher collateral requirements (Lavoie, 2014). This, in turn, impedes even the larger and older SMEs from accessing finance without *Kafalah* (i.e., *Kafalah's* finance additionality is overstated because of the difficult economic situation).

This, however, appears to have some consequences with regard to economic additionality. In this, following Chandler (2012), this thesis assesses *Kafalah's* economic additionality in terms of employment growth amongst *Kafalah* participants using simple OLS regressions across four different groups: with *all SMEs*, with *non-applicants*, with *rejected applicants*, and with *approved non-guaranteed bank finance borrowers*. Participation in *Kafalah* is taken into account to determine the scheme's contribution to the growth of its participants. Self-selection bias is controlled for by including a variable that captures the desire for bank finance, which is a characteristic of a relatively smaller number of SMEs. Moreover, the extension of additional collateral/security is controlled for to assess arguments that CGSs induce more hazard and, hence, guaranteed borrowers' ex-post performance deteriorates (Lelarge et al., 2010; Uesugi et al., 2010). Unlike Chandler (2012), the data allow for the inclusion of a fuller set of controls,

including human capital, i.e., education and experience, and different firms' activities, e.g., innovation and exporting.

Subject to methodological limitations and the prevailing economic downturn in Saudi, the economic additionality analysis suggests that participating in *Kafalah* does not affect SMEs' growth in terms of employment, which should be affected positively if growth is limited by the availability of external finance. SMEs' employment growth was found to be more affected by certain firm characteristics, the growth intentions of their owners/managers and firms' innovative activities. This can be attributed to the type of firms (i.e., older and larger SMEs) and loans extended (i.e., short-term loans) by commercial banks through *Kafalah*. It can thus be argued that these firms utilised the guaranteed funds to ease working capital pressures during the course of the difficult economic environment in Saudi. Such findings are paralleled by de Blasio et al. (2018), who find no effect from the Italian *Fondo di Garanzia* scheme on guaranteed firms' investments or sales, despite the scheme's positive effect on credit flow to SMEs. Similarly to the extended argument, de Blasio et al. (2018) attribute this to SMEs mainly using guaranteed loans to finance working capital in light of the financial crisis. Nevertheless, the results in the current study do not find any apparent evidence for arguments on induced moral hazard effects amongst guaranteed borrowers. That is, *Kafalah* participants for whom the bank perceived *Kafalah's* guarantee to be sufficient (i.e., who did not extend additional collateral) are not statistically different in terms of employment growth compared to the other groups.

It can thus be concluded that *Kafalah* has not fully achieved its goals. In this, despite evidence of high levels of financial additionality induced by the scheme, guaranteed bank finance is largely distributed to relatively safer SMEs with the stable cash flows that are generally preferred by the banking system. Furthermore, such firms can generally obtain loans with short-term maturities, regardless of the reduction in risk exposure to the banks. Similarly, despite the different products offered by *Kafalah* with higher coverage ratios to induce banks to lend to relatively riskier firms, banks still seem reluctant to lend to smaller and younger SMEs who can grow faster in a relative sense compared to older firms.

As for policy implications, the results suggest that the banking system in Saudi might still need more time to develop appropriate skills in appraising younger and smaller SMEs. After all, while



*Kafalah* was introduced in 2006, its role was only truly activated in 2016 under Vision 2030, which aims to induce a more active role on the part of SMEs in terms of contributions to GDP. Attempts to increase guarantee fees and/or lower the coverage ratio on loans to larger SMEs to induce more lending to smaller and younger ones, might not be warranted. The results suggest that even firms with an assumed diminishing risk (larger and older SMEs) would have been rejected without *Kafalah*. Moreover, *Kafalah*'s eligibility criteria are quite general and its guarantees not limited to existing firms. Start-ups and new firms can obtain guarantees based on feasibility studies, if approved by the lending institutions. Therefore, there may be room for more government-directed lending programmes to provide finance to younger and smaller SMEs as the results suggest that what the banking system in Saudi can do for them at the moment is somewhat limited in scope. Accordingly, Saudi Arabia's decision to set up a bank dedicated to SMEs and the setting up of a government fund, a "Fund of Funds", which will invest in venture capital and private equity funds targeting start-ups, seems promising.

Despite the relevance of the results achieved, in that this study represents the first attempt to analyse the effects of CGSs on SMEs in Saudi at the firm level, the empirical analysis inevitably suffers from certain limitations. First, the inherent bias issues identified in post hoc methodologies such as telephone surveys cannot be ruled out (Mason & Stark, 2004). Nevertheless, the use of primary data is inevitable in light of the lack of adequate data published on SMEs in general and on *Kafalah* participants in particular. Second, issues of selecting an appropriate control group may be augmented by the two different tools employed to administer the questionnaire survey among *Kafalah* participants (telephone surveys) and the control group (self-administered survey). Time and cost considerations limited the ability to include the control group in the telephone survey. Nevertheless, it is preferable to use a control group than to employ data on treated firms only (OECD, 2017). Furthermore, the current study only uses employment growth to assess *Kafalah*'s economic impact. Therefore, depending on data availability, future lines of research could expand the focus by also analysing other performance indicators such as sales, investments, value creation, and profitability in assisted SMEs, which are argued to ensure sustainable growth in the long term. Moreover, the survey coincided with/followed a period of economic recession in Saudi, i.e., when credit constraints for SMEs were particularly stringent. Studies undertaken in normal times after the economy recovers may be able to understand whether certain variations exist in terms of finance and economic additionality from *Kafalah*. Finally, the underrepresentation of female-led businesses amongst

*Kafalah's* participant sample constitutes another study limitation. In this, the study does not speak directly to specific instances of credit rationing among female-led businesses and hence does not allow *Kafalah's* effects on such entrepreneurs to be tested. Other studies could aim to improve our understanding in this regard, depending on data availability and female entrepreneurs' willingness to take part.

## Appendices to Chapter 5

### Appendix 5.A: *Kafalah*'s beneficiaries' responses: who advised for *Kafalah* and why

#### Who advised for *Kafalah*?

How did you apply for financing through “ <i>Kafalah</i> ” program?	No. of Firms	Percent
The bank advised me	92	62.6%
I asked the bank for financing through <i>Kafalah</i> .	55	37.4%
<b>Total</b>	<b>147</b>	<b>100.0%</b>

Source: survey data

#### Reasons Provided by Banks why Firms Have to Apply through *Kafalah*

Reasons why the bank advised the firm to apply through <i>Kafalah</i>	Responses		
	No. of Respondents	Percent	Percent of Cases
Insufficient collateral	27	26.7%	29.3%
Insufficient track record/credit history	6	5.9%	6.5%
High risk of the project /losses in previous period	5	5.0%	5.4%
<b>Details from those who selected “other” reasons:</b>			
Respondent did not explain/bank did not give a reason	15	14.9%	16.3%
The bank wants to ensure repayment/ Banks won't lend without <i>Kafalah</i>	19	18.8%	20.7%
Financing through <i>Kafalah</i> would be better for your enterprise/firm size is small and qualifies for <i>Kafalah</i>	15	14.9%	16.3%
The bank switched my request under <i>Kafalah</i> even though I used to obtain non-guaranteed loans	7	6.9%	7.6%
The Bank approached and offered guaranteed finance	7	6.9%	7.6%
<b>Total</b>	<b>101</b>	<b>100</b>	<b>109*</b>

\*Percentage does not add up to 100% because it is a multiple response question. Total number of cases is 92

## Appendix 5.B: Description of Variables in Cross-Sectional Data

This appendix presents descriptions of the variables used in the regression analysis.

Variable name	Description	Expected bank decision
<b>Firm Characteristics:</b>		
Firm age group	Categorical variable indicating the age of firms: “new” = firms that have been in business for <3 years; “established” = firms that have been in business for 3-6 years; “old” = firms that have been in business for 7-10 years, with “very old” = firms that have been in business for more than 10 years as the reference group.	-
Firm size	Categorical variable indicating the size of firms in terms of employment level: “micro” = firms employing 1-5 employees; “small” = firms employing 6-49 employees, with “medium” = firms employing 50-249 employees as the reference group.	-
Industry sector	Categorical variable indicating the sector in which firms operate: “manufacturing”; “personal services”; “professional/logistics services”, “wholesale/retail”; and “construction” as the reference group.	Capital-intensive firms in manufacturing and construction are more likely to be approved because of fixed assets availability.
Legal status	Binary dummy variable where 1= limited liability company; 0= Sole proprietorship/partnership.	Empirical evidence is not clear-cut.
Employment change	Continuous variable calculated for change in number of employees five years ago, i.e., in 2014 or at establishment if the firm is more recently established as in Storey (1994a): $\frac{E_t - E_0}{T}$	+
Growth intentions	Categorical variable indicating growth intention of firms: “intend to grow”; “maintain the business size”, with “downsize the business” as the reference group.	+

<b>Owner's/manager's Characteristics:</b>		
Owner's/manager's gender	Binary dummy variable where 1= female; 0= male	Empirical evidence is not clear-cut.
Owner's/manager's age group	Categorical variable indicating "below 30 years old"; "between 30-50 years old"; and "above 50 years old" as the reference group.	-
Owner's/manager's education level	Categorical variable indicating the owner's highest level of education: "No Bachelor's degree"; "Bachelor's degree holder"; with "postgraduate degree holder" as the reference group.	-
Owner's/manager's previous experience	Categorical variable indicating: "small business experience"; "employment experience"; with "student" as the reference group.	+
<b>Firm activities:</b>		
Involved in inter-firm relationships	Binary dummy variable where 1= if the respondent indicated having a subcontracting/raw material supply relationship, franchisor/franchisee, joint venture, or cooperates in manufacturing/marketing/problem solving/technology development with large corporations, foreign and/or government organisations; 0 otherwise.	+
Innovation	Binary dummy variable where 1= firm introduced/significantly improved product or process of manufacturing/providing services in the last three years; 0 otherwise.	-
Exporting	Binary dummy variable where 1= the firm directly or indirectly export; 0= otherwise.	+
<b>Bank involvement with the firm and finance application:</b>		
Desire bank finance	Binary dummy variable where 1= bank finance is among the preferred sources of external finance if funds are needed in the future; 0= bank finance is not among the preferred sources of external finance if funds are needed in the future.	Not related to bank decision. Used to control for selection bias.

Usage of non-lending products and financial services	Binary dummy variable indicating if the firm uses bank's fee-based non-lending products/financial services where 1= "yes, prior applying for bank finance" or "yes, after applying for bank finance" or "yes, prior and after applying; with 0= "No, I do use such products/financial services".	+
Main purpose of latest application	Categorical variable indicating the main purpose for applying for bank finance in the latest application: "start-up"; "Fixed asset investment/expansion"; "Working capital financing", with "project financing" as the reference group.	Working capital and project financing applications are more likely to be approved because of their short-term maturity.
Extended additional collateral/security	Categorical variable where 0 = the firm pledged collateral/security; 1= the firm did not pledge collateral/security; 2= the firm did not borrow as the reference group.	Banks are more likely to require collateral from riskier firms.
<b>Dependent variables:</b>		
Bank decision (application outcome)	Binary dummy variable where 1= if the respondent indicated he/she was given the amount requested or was given less than the amount requested; 0= loan application was rejected.	
<i>Kafalah</i> -participation	Binary dummy variable where 1= the firm belongs to <i>Kafalah</i> 's participant; 0 otherwise.	
Employment growth%	Continuous variable calculated for employment growth rate at the firm level as in Varum and Rocha (2013): $\text{Ln}(E_t) - \text{Ln}(E_0) \times 100$	

## Appendix 5.C: *Kafalah*'s beneficiaries' view on finance additionality

### Access to Bank Finance in Absence of *Kafalah*

If the " <i>Kafalah</i> " programme was not available, do you think the bank would have agreed to your request for financing?	Frequency	Percent
No	106	72.1%
Yes	33	22.4%
I do not know	8	5.4%
Total	147	100.0

Source: survey data

### Firm's Ability to Raise Finance from Alternative Sources in Absence of *Kafalah*

If the " <i>Kafalah</i> " programme was not available, would you have been able to raise the same amount of financing from alternative sources	Frequency	Percent
No, I would not have been able to raise any financing (Full finance additionality)	52	35.4
No, I would have raised a lower amount (Partial finance additionality)	44	29.9
Yes, I would have raised the same amount (zero finance additionality)	46	31.3
I do not know	5	3.4
Total	147	100.0

Source: survey data

## Appendix 5.D: Reduced Logistic Regression for Characteristics of *Kafalah's* beneficiary compared to all rejected applicants

	Coefficient estimate	Standard error	95% CI for odds Ratio		
			Lower	Odds ratio	Upper
Main purpose: Start-up	-3.118**	1.366	.003	.044	.643
Main purpose: Fixed asset financing	-2.371**	1.044	.012	.093	.723
Main purpose: Working capital financing	-2.235**	.967	.016	.107	.712
Firm age: New (< 3 years old)	-.912	.605	.123	.402	1.315
Firm age: Established (3-6 years old)	-.633	.485	.205	.531	1.373
Firm age: Old (7-10 years old)	.643	.550	.648	1.903	5.591
Firm size: Micro (1-5 employees)	-2.419***	.777	.019	.089	.408
Firm size: Small (6-49 employees)	-.870*	.526	.149	.419	1.176
Industry: Manufacturing	1.146	.757	.713	3.144	13.867
Industry: Personal services	.551	.803	.360	1.735	8.363
Industry: Professional/logistic services	1.220	.741	.792	3.386	14.482
Industry: Wholesale/retail	2.090***	.715	1.992	8.087	32.836
Growth intent: Grow	1.748***	.526	2.049	5.746	16.115
Growth intent: Maintain business size	.619	.649	.521	1.858	6.626
Inter-firm relations	1.115***	.390	1.420	3.050	6.551
Innovative	.274	.401	.600	1.316	2.886
Exporter	-.747	.502	.177	.474	1.268
Owner gender: female	.558	1.043	.226	1.746	13.488
Education level: no bachelor's degree	-.518	.559	.199	.596	1.783
Education level: bachelor's degree holder	-.300	.499	.278	.741	1.972
Experience: owned another SME	.177	.790	.254	1.194	5.614
Experience: employment experience	-.232	.671	.213	.793	2.954
Constant	1.110	1.187		3.035	
No. of observations	218				
$\chi^2$	79.177***(22 df)				
Cox and Snell R <sup>2</sup>	.305				
Nagelkerke R <sup>2</sup>	.421				

The dependent variable in this table is the dummy variable *obtained bank finance*. All variables are defined in Appendix 5.B. \*\*\* denotes significance at 1% level; \*\* denotes significance at 5% level; \* denotes significance at 10% level



## Appendix 5.E Reasons provided by banks for turning down applicants

Reasons Provided by Banks for Turning Down Applicants	Responses		% of Total Cases
	No. of Respondents	Percent	
Insufficient collateral	40	31.0%	57.1%
Project not guaranteed by <i>Kafalah</i>	13	10.1%	18.6%
Low credit score	9	7.0%	12.9%
No credit history	17	13.2%	24.3%
No track records	16	12.4%	22.9%
High risk of the project	5	3.9%	7.1%
Project considered unprofitable	10	7.8%	14.3%
Other	19	14.7%	27.1%
<b>Total</b>	129	100%	184.3%*

\*Percentage does not add up to 100% because this was a multiple response question. Total number of cases is 70.

# Chapter 6: Bank lending to SMEs: Supply-side Perspective

## 6.1 Introduction

The financial constraints of SMEs compared with large corporations and the role of banks as major suppliers of finance are well documented in the literature (Stephanou & Rodriguez, 2008). Indeed, central to SMEs' financial constraints are the restrictions they encounter when accessing bank credit (an issue that, as Baas and Schrooten (2006) recognise, is a global phenomenon), though the causes of this are complex and multidimensional. In this, SMEs' access to credit can be addressed from both the bank/supply-side perspective (e.g., banks' business models and banking industry structure) and the firm/demand-side (e.g., structure and characteristics of SMEs) but also via broader non-financial considerations (informality, taxation, business environment, etc.) (Stephanou & Rodriguez, 2008). Such complexity suggests that policymakers perhaps need more, and even more specific, guidance on how best to address this financing gap for SMEs.

This effort to investigate further SMEs' financing gap is especially relevant for oil-rich Arab monarchies of the Gulf Cooperation Council (GCC), where SMEs are particularly financially constrained, given that the average share of SME lending amounts to only 2% of total loans, which is among the lowest averages in the world (Rocha, 2011). As with other resource-dependent countries, the banking sector in these countries is dominated by large banks. These banks' business models orient towards financing large corporations, while small-scale banks, who are advantaged in terms of lending to small firms because of their reliance on relational lending, face restricted entry in the market of these economies, which creates an especially challenging environment for SMEs. To bridge the gap SMEs face regarding financial access, market-activist policies – prominently in the form of credit guarantee schemes (CGSs) – have been launched across the GCC countries. Such initiatives have become more pronounced since the decline of oil prices in 2014 as these countries articulated a vision to diversify their productive base from the hydrocarbon sector to the private sector through a more active role of SMEs (IMF, 2018a; World Bank Group, 2016).

The World Bank (WB), however, warns that these State-sponsored initiatives may interfere with a level playing field in the banking industry and distort competition, thereby aggravating challenges for SMEs' financial access. For example, the WB provides that weak competition in the banking sector of the GCC countries, particularly from foreign-owned banks, is a key supply-side factor that constrains SMEs' access to bank credit (World Bank Group, 2016). Accordingly, they call for policies that target increased competition in the banking sector and assessments to ensure that State-sponsored initiatives do not distort competition, which would help avert the aforementioned consequences. While the theoretical and empirical evidence on the effect of banking sector structure and competition for SMEs' access to finance remains ambiguous, certain research paradigms argue that competition and openness to foreign banks can help ease SMEs' financing constraints if the necessary institutional frameworks are in place (Beck, 2013). Such paradigms are in contrast to conventional wisdom which has long argued that a sizeable presence of small-scale banks is necessary to promote credit availability for SMEs because of their reliance on relationship lending based on soft information (Berger & Udell, 2006; Berger et al., 2007; de la Torre et al., 2010). They argue that large and foreign-owned banks are just as able to lend to opaque SMEs as small-scale banks, and have a comparative advantage in terms of lending to SMEs through arms-length lending technologies such as credit scoring. Specifically, different lending technologies allow the application of different incentive-compatible mechanisms to increase the likelihood of repayment, which in turn compensates for weaknesses in the institutional environment. Furthermore, these banks derive income from cross-selling various fee-based non-lending activities that allows diversifying risk in terms of lending to new types of firms such as SMEs. Therefore, State-sponsored initiatives such as CGSs have become less essential for large and foreign banks in reaching out to SMEs (de la Torre et al., 2010).

Nevertheless, such a research paradigm does not clearly address if such business models are able to identify and be more long term-focused in supporting the most sustainable business propositions (Bateman, 2000). Bateman (2017) argues that only certain types of enterprises drive growth and economic development. He provided the term "right" SMEs to describe the type of SMEs who should be supported by local financial systems to achieve economic development. These enterprises include SMEs whose projects are based on renewed local production which involves high specification work, employment of new technology, promotion of innovation and orientation towards exports, also enterprises that can innovate and create new

organisational routines. Furthermore, most of what Bateman (2017) calls “right” enterprises come from the successful models for SMEs development involving extensive inter-firm co-operation and SMEs clustering. The literature highlights the importance of inter-firm networks as tools for contributing to the development and growth of small firms. Those networks have been found to assist SMEs in sourcing finance, obtaining information and advice, supplementing internal sources, increasing innovation and ability to compete (Carter & Jones-Evans, 2012).

This chapter therefore contributes to this debated literature on the banking sector structure by examining if and how large banks’ business models can cater for SMEs in resource-reliant countries (where SMEs are particularly financially constrained), what type of SMEs these banks can serve, the scope for further SME lending and whether market-friendly policies to induce competition are more warranted than direct government interventions in the credit market. The study is particularly pertinent for Saudi Arabia, the largest country in the GCC. Saudi has articulated a Vision 2030 agenda whereby it switches its engine of growth from the public to the private sector, within which SMEs are central. A core goal of Vision 2030 is to support SMEs to increase their contribution to GDP from 20% to 35%, and a means of achieving this is to increase bank lending to SMEs from around 2% to 20% by 2030 (IMF, 2018b; Vision 2030, n.d.).

Answering these questions involves interviews with commercial banks to examine the realities of their practices and their relatively new involvement with the SME market. Interacting with commercial banks’ employees through field research is actually recommended and gaining credibility as a means of conducting research in economics (Feldstein, 2000; Helper, 2000). In fact, Feakins (2004) argues that this is especially important in studying transition economies as it can offer distinct contributions to understanding changes in decision-making where large-scale development of new organisational responsibilities takes place. While such an argument is often extended in the context of post-socialist transition countries in Central and Eastern Europe, it can be relevant for those transitioning away from a resource-dependent economy.

### **6.1.1 Relevance**

Despite this topic’s importance, relatively less research on the supply-side of bank finance to SMEs than the demand-side has graced the literature, particularly in the developing countries of the MENA region (Rocha et al., 2011). Moreover, of those extant studies on this topic, many

employ data from developed countries, hence, their findings do not explain the credit granting processes in contexts with different institutional structures. This is especially the case for developing countries (Zambaldi et al., 2011), particularly those transitioning to diversified economies – as is happening with the GCC countries. More research is clearly needed to understand exactly how banks underwrite SME loans around the world (Uchida et al., 2008) and the effectiveness of specific financing forms and policy interventions (Beck, 2013), and more importantly, if banks are supporting the “right” type of SMEs essential for economic development.

As noted, a central economic reform priority in the GCC countries, particularly Saudi, concerns developing the SME sector. In turn, this requires not only improved access to finance for SMEs but also greater diversification in the variety of financial products offered to this sector, in addition to changes in banks’ lending criteria (Hutchinson & Xavier, 2006). Indeed, such transformation requires a development-oriented financial system which is not excessively short-term focused and more committed to supporting SMEs with wider positive externalities (Bateman, 2000). While changes within commercial banks are expected under the economic reforms that call for greater SME representation at community and national levels, the literature is not substantially dedicated to the qualitative analysis of such changes (Feakins, 2004). Among the topics discussed in the literature on GCC countries are the importance of financial and institutional development, the need for greater financial inclusion, the need for improving banking sector competition from foreign banks and the need to encourage access to finance for SMEs (Caggiano & Calice, 2016; IMF, 2018a; World Bank Group, 2016). The focus on such topics seems to assume that commercial banks within the financial system will develop adequate and appropriate tools for their lending to SMEs if they are exposed to appropriate development and regulatory measures. Nevertheless, how large banks adapt their actual engagement with SMEs under such measures within economic reforms is less prevalent. More importantly, if their business models allow achieving sustainable economic development and growth through supporting the “right” SMEs is an important issue to investigate.

The substantive contribution of the current study concerns verifying and investigating the variations in large banks’ approaches and procedures for lending to SMEs under economic reforms that call for increased bank credit to this segment. Such an endeavour provides a different but complementary form of research to the existing studies on SMEs’ credit-seeking

practices (i.e., demand-side studies) and to supply-side studies on banking industry structure from other developing countries with different institutional and political settings (de la Torre et al., 2010). While the current study serves Saudi Arabian policymakers responsible for improving SMEs' access to credit, it is also relevant to discussions about the nature of finance available to and used by SMEs in countries where small-scale banks are less prevalent and/or in countries where the banking industry is going through massive consolidation. It therefore sheds much light on the specific problems of bank credit to SMEs and how large banks adapt their lending practices under different direct and indirect government interventions.

The rest of the chapter is organised as follows. Section 6.2 critically appraises supply-side studies that deal with commercial banks' SME lending practices. Section 6.3 traces the recent history of the banking sector in Saudi, including providing an overview of Saudi's Vision 2030. Section 6.4 presents an overview of the data collected from the semi-structured interviews and describes the analysis and validation process. In Section 6.5, the empirical results are presented. Section 6.6 covers the discussion and the study's policy implications.

## **6.2 Literature Review**

As mentioned in Chapter 2, the framework to which most economic literature adheres, regarding how various financial institutions and markets fund SMEs, is that they do so by employing different lending technologies in which they have comparative advantage, and that there are mainly two types of lending technologies, *relationship lending technology* and *transaction lending technology* based on "hard" and "soft" information (Berger & Udell, 2006). According to Berger and Udell (2006), "*Hard and soft technologies are defined by the principal or most critical source of information employed in the screening, underwriting, and monitoring of the credit*" (p.726). These lending technologies are argued to be the key channel through which government policies and national financial structures affect credit availability for SMEs (Berger & Udell, 2002; 2006). This is based on the view that different financial institutions employ different lending technologies that allow optimising lending costs and risks (Beck, 2007).

Under this common conceptual framework, large banks, on the one hand, are argued to have a comparative advantage in employing "hard" information technologies based on factual data that is independent of the quality of the relationship between banks and businesses – *transaction*

*lending technologies* (Moro & Fink, 2013). Large banks are, hence, advantaged in lending to large, transparent firms because “hard” quantitative information may credibly be communicated through many managerial layers within the bank. The comparative advantage arises from the economies of scale large banks have in the processing and transmission of such “hard” information and their ability to diversify the portfolio risks associated with hard-information loans (Berger & Black, 2011).

On the other hand, small banks use techniques based primarily on “soft” qualitative information that is difficult to be quantified and communicated, such as personal knowledge about the firm, its owner and its management – *relationship lending technology* (Berger & Udell, 2002; Stein, 2002). Berger and Black (2011) postulate “judgement lending” as a soft information technology that is associated with weak banking relationships. In this, lending is primarily based on the loan officers’ judgement, relying on their experience and training, as well as any other available hard and soft information. Judgement lending is argued to be the principal source of information when lending to small firms that do not possess significant hard information and have not established a strong banking relationship. The loan officer’s authority in the decision-making is greater under such lending technology which requires a small closely-held form of organisational structure with few managerial layers within the bank (Berger & Udell, 2002). Because it is not uncommon for small firms to have a short history, lack of formal records or a deficiency of formal control systems (i.e., opaque), small-scale banks are advantaged in overcoming such opaqueness using “soft” proprietary borrower information. Such information allows banks to learn about borrowers’ creditworthiness and to adjust lending terms accordingly. Therefore, the conventional wisdom in the literature of SME financing has long argued that relationship lending is the most appropriate lending technology for banks to lend to opaque SMEs (Beck et al., 2017).

Nevertheless, some supply-side studies have challenged such conventional wisdom and questioned whether a sizeable presence of small banks is needed for overall SME credit availability (Berger & Udell, 2006). This view is based on the criticism that the above-mentioned conceptual framework tends to group all hard lending technologies together and often assumes that hard technologies are represented by the single technology of financial statement lending. Accordingly, conventional wisdom argues that only larger firms with higher-quality financial statements can obtain finance from large banks who are advantaged in such

lending technology (Berger & Black, 2011). Berger and Udell (2006), however, acknowledge the possibility that financial statement lending may not be representative of all hard technologies, and that other hard lending technologies may be particularly effective for lending to the smallest, least transparent firms. For example, as long as the firm has a good credit score as determined by its owner's credit history then credit scoring for small firms can be applied even when information about a firm's overall quality is limited. Similarly, fixed-asset lending can be employed for firms with high-quality fixed assets (e.g., real estate or equipment) that may be leased or extended as collateral, even if the small firm is not necessarily transparent based on other hard information (Berger & Black, 2011).

Some empirical evidence supports this view. For example, Berger et al. (2007) find that large banks are just as able as small banks to extend credit to opaque SMEs. In this, large and foreign banks serve SMEs through a number of cost-effective transaction lending technologies and through organisational set-ups such as creating dedicated organisational units for SME banking. Moreover, they can compensate for weaknesses in the institutional environment as transaction lending technologies can use different types of hard information other than firms' financial statements; for example, information from credit bureaux, reliable accounts receivable which can underpin factoring and the value of the assets pledged as collateral, and provide greater assurances of repayment. These mechanisms can free banks from relying on government subsidies to lend to SMEs. To the extent that these products and services gain importance, the institutional environment, including credit contract writing and enforcing, becomes less constraining (de la Torre et al., 2010; Rocha et al., 2011). Indeed, it is argued that the advent of computer-based systems employed in transactional lending such as credit scoring and financial modelling has reinforced the view that entrepreneurs should not be disadvantaged in seeking bank finance by any particular characteristic such as gender, race, age, sector, new and fast growth (Deakins et al., 2010).

Accordingly, policy makers can affect credit availability for SMEs through market-enabling policies such as fostering competition – for example, by removing restrictions on the market entry of foreign banks, who are advantaged in many transaction lending technologies. Policy makers can also do so through market-developing policies such as improving lending infrastructures, which include the information environment and the legal, judicial and bankruptcy environments (Beck, 2007; Berger & Udell, 2006). Other forms of direct



government intervention in the market, including directed lending programmes and CGSs, are viewed negatively by some economists and not clearly desirable (e.g., Cressy, 2002; Parker, 2002), which implies that commercial banks will develop adequate and appropriate tools for their lending to SMEs if they are exposed to appropriate development and regulatory measures. Many heterodox economists, however, do not share this view. In particular, Post-Keynesians advocate active government intervention in the development of markets. Indeed, historical experience, in terms of the successful post-war reconstruction of Western Europe, suggests that active State influence and guided markets that support firms' initiatives (Marangos, 2003).

Overall, this conceptual framework in the economic literature focuses on the information type (soft-vs.-hard information) and its primary source (financial statements, credit scoring and asset valuation) that different banks use when underwriting SME loans. What it does not show, though, is how soft and hard information interact with each other or where managerial information (i.e., human capital, borrower character and market information) fits within transaction lending technologies. Indeed, there is evidence that banks distinguish between good and bad firms (or projects) and good and bad character (borrower's honesty) (Koford & Tschoegl, 1997), which explains why the borrower's character has been found to be critical in loan decisions. Such a soft-vs.-hard information distinction by this conceptual framework is therefore perhaps too simple, and one lending technology is not used at the exclusion of other technologies (Uchida et al., 2008). Furthermore, studies that measure the effect of hard technologies may be biased from the inadvertent presence of the effects of soft technologies other than relationship lending (Berger & Black, 2011). Actual lending practices to SMEs may thus be inconsistent with academic research (Uchida et al., 2008).

The entrepreneurship and management literature deals with these issues in more depth and illustrates the micro level of SME-focused bank lending decisions. This strand of literature adheres to the information asymmetry framework by mainstream economists (e.g., Stiglitz & Weiss, 1981) which is argued to create two types of risk for bankers: moral hazard (monitoring entrepreneur's behaviour) and adverse selection (making errors in lending decisions). Banks will find it difficult to overcome these problems because of the low margins on small business lending i.e., the information costs involved are substantial and significant (Binks et al., 1992). Accordingly, banks seek to formalise and standardise the information gathering process and the loan officer's decision process. However, an element of subjectivity on the part of the loan

officer will exist in the credit granting decision-making because it is a process of interaction between banks' rules and the loan officer's experience (Fletcher, 1995). This, in turn, results in inconsistency in the decision-making across loan officers despite objective lending criteria (Bruns et al., 2008). The general lending criteria set by banks is broadly categorised into *the going concern approach/prospects-based approach* or *the gone concern approach/capital gearing approach*.

The former is more concerned with collecting information about the future prospects of the SME via interviews and by studying business plans, accounting information and market/industry data (Berry et al., 2004). It requires similar information to that required by equity finance providers, including information to ascertain the quality of the management, or as Binks and Ennew (1997) call it, the human capital factor, which is so important because it determines not only business performance but also the very survival prospects of a business (Cressy, 1996; Lucas, 1978). Emphasising this factor also fosters trust in banks and improves the working relationship between banks and SMEs (Deakins & Hussain, 1994). Deakins and Philpott (1993) demonstrated this when finding that German bank officers place importance on entrepreneurs' abilities, qualifications and experience, while German banks make considerable investment into building close working relationships with start-ups (as cited in Deakins & Hussain, 1994). Such an emphasis on entrepreneurs' human capital is highly influenced by the human capital of the loan officers themselves – for example, their lending experience and training (Bruns et al., 2008). Despite these positives, the information cost of such an approach is substantial, so banks tend to default to the main alternative approach of *the gone concern approach/capital gearing approach* (Binks & Ennew, 1997).

Under the *gone concern approach/capital gearing approach*, bankers focus on securing repayment from the pledged assets against borrowing in case of default. In this, the availability of collateral tends to be more important than a full evaluation of the proposed project (Berry et al., 2004). Therefore, while collateral signals confidence and commitment, more practically it is a fail-safe method for the bank to recover losses in case of default (i.e., addresses adverse selection problem at loan origination) (Deakins & Hussain, 1994). Nevertheless, collateral also incentivises borrowers to perform to the best of their ability (i.e., addresses moral hazard problem after the loan has been granted) (Bester, 1987), so this approach sees less concern with future projections and management accounting information (Berry et al., 2004; Binks & Ennew,

1996). This approach corresponds largely to fixed-asset lending as a type of transaction lending technology identified in the economic literature in which large banks are advantaged (e.g., Berger & Black, 2011; Berger & Udell, 2006).

Researchers find evidence that such an approach is employed by banks in the UK (Berry et al., 1993). In this, bankers place considerable emphasis on financial information and security. Information on the market and entrepreneurs' capabilities are generally of secondary importance to bankers (Mason & Stark, 2004). As such, entrepreneurs' capabilities are largely discounted when evaluating a business plan from a start-up venture (Deakins & Hussain, 1994). There are nevertheless differences, though. For instance, Scottish bankers do focus on financial information and security, but this is evidenced as lower than that of English bankers (Fletcher, 1995). Despite this focus, Scottish bankers were also more interested in assessing the abilities, qualities and experience of the entrepreneur than the English were, which was attributed to the closer relationship between banks and small businesses in Scotland (Fletcher, 1995).

Nevertheless, it is argued that under the gone concern approach/capital gearing approach some categories of entrepreneurs will experience difficulties in accessing bank finance, with particular examples being the smaller, younger, more entrepreneurial firms (e.g., manufacturing SMEs with new products and/or new technology), firms with younger founders and/or founders from deprived communities, and firms with rapid growth aspirations. Besides concerns about the risky nature of such firms and albeit often secondary concerns about entrepreneurs, insufficient accumulated assets to extend as collateral (Binks and Ennew, 1997) and relatively unusual proposals by start-ups that fail to fit banks' own internal guides on benchmarking for a sector (Deakins et al., 2010), are key barriers to funding. Moreover, essential information on micro, small and/or new firms, such as previous experience, age and credit history of the entrepreneur, are likely to be credit scored, which reduces the extent of loan officer discretion and flexibility. This renders such firms' loan applications as difficult to accept, especially if such proposals are referred to a central credit department for final approval – a typical procedure for banks with centralised decision-making (i.e., large banks) (Deakins et al., 2010). Other arguments state that banks under such approach might not be induced to invest more in their loan officer's training and financial skills, which, may negatively affect banks' ability to distinguish between firms with and without adequate growth prospects needed for economic development (Beck et al., 2017).

Mac an Bhaird (2013) similarly finds that the probability of receiving bank credit is determined by firm size and age but not growth, which he attributed to this lending approach advancing credit based on collateral rather than growth and predicted cash flows. Given this, he suggests that lending decisions are better when made on investment appraisal (i.e., the going concern approach/prospects-based approach), with the practical example he gave being that reduced bank lending to SMEs in Ireland is a consequence of credit rationing rather than better lending practices (Mac an Bhaird, 2013). Deakins et al. (2010) also find evidence of finance credit gaps in the UK. Despite banks having sophisticated financial modelling and market intelligence, the authors say, circumstances will arise when good projects are turned down because of limited collateral and/or because their propositions differed from banks' own internal guides, with their examples being manufacturing SMEs with new product/technology, at an early stage and owned by young entrepreneurs. This raises questions regarding arguments which propose that large commercial banks can lend to the smallest, least transparent firms using hard lending technologies other than financial statement lending (e.g. credit scoring and fixed-asset lending) but also on conclusions that industry consolidation may not decrease credit availability to the smallest firms. More importantly, it seems that important firms for economic development such as those with rapid growth aspirations and new technology do not fit large banks' lending criteria.

### **6.3 The Saudi Arabian Situation**

As happens in other GCC countries, banks dominate Saudi's financial sector despite its relatively low number of active banks – only 12 listed commercial banks and one non-listed operate in the country. Although the Saudi Arabian Monetary Agency has granted 12 foreign banks licences to establish a branch in the country, foreign branches continue to be niche players. Accordingly, the banking sector is largely domestically owned and is moderately concentrated, with the three largest banks accounting for 45% of total assets. Moreover, State ownership is fairly extensive as it has shares in all five major local banks (Al-Hassan et al.,2010; World Bank Group, 2016). It owns majority shares only for the National Commercial Bank and does so through the Public Investment Fund (PIF) (44.3% of shares) and the Public Pension Agency (10% of shares). For the other four banks, the State owns minority shares. Of particular

mention is Riyadh Bank, of which the PIF owns 21.8% of total shares while the Pension Agency owns 9.2% (World Bank Group, 2016).

Generally, the banking sectors in the GCC countries operate under monopolistic competition and are among the least competitive in the world. Furthermore, while the initial capital requirements to license banks are lower in Saudi than in other GCC countries, the licensing procedures are not clear enough and it is not possible to appeal a rejection decision. This may discourage the entry of small-scale banks given that they are subject to greater constraints (World Bank Group, 2016). Indeed, the smallest listed commercial bank in Saudi recorded a total asset of US\$25.22bn in 2021, which is well above the threshold of US\$10bn or less in total assets, as a definition of a small-scale bank (Miller & Brunk, 2019). The implication, then, is that small-scale banks are absent from Saudi. Moreover, the Saudi banking sector is relatively well developed in terms of depth and efficiency. In terms of profitability, it has a lower cost-to-income ratio and higher net interest margins compared with high-income countries. Nevertheless, it has a relatively high concentration of credit to large corporates and households (accounting for 34% and 20% of total assets, respectively). In terms of financial access for SMEs, however, Saudi lags behind peer countries with an average of 2% of total loans to SMEs (World Bank Group, 2016).

While difficulties in accessing bank credit for SMEs is a universal phenomenon because of the shared challenges of this sector (Baas & Schrooten, 2006), other hurdles in Saudi further undermine SME lending. These include restrictions on entry of small-scale banks, who are advantaged in serving informationally opaque SMEs using soft information (World Bank Group, 2016). Additionally, lower financial literacy among adults compared with those in other GCC countries, as well as many developed and developing countries, may affect SMEs' credit demands. Another factor is religious reasons, which account for around 7% of Saudi adults' voluntary exclusion from the banking sector. The use of formal financial services is thus particularly low, and informal finance (from inside the workplace or within the family) remains the dominant source of financing (IMF, 2018b). Moreover, some institutional environment constraints exacerbate SMEs' access to bank finance in Saudi. For example, the coverage of credit registries is low and the country scores low in terms of legal rights compared with peer countries, meaning banks charge higher risk premia and impose strict collateral requirements that many SMEs cannot meet. Also, Saudi lacks adequate insolvency frameworks such as

bankruptcy laws; in fact, these laws have been introduced only recently (in 2018) so these banks can recover only 30-40% on defaulted loans compared with an average of 72% for advanced countries. Furthermore, stringent regulation – for instance, Saudi law allows imprisonment for debt (criminalisation of loan defaults) (IMF, 2018a:b) – have likely created a culture of cautiousness towards borrowing. Moreover, Saudi is characterised as a rentier State, and this rentier system is deeply rooted into Saudi life. As such, Saudi nationals may come to expect easy employment subsidised by oil rents in government or in State-owned enterprises (Moshashai et al., 2020), thus discouraging risk-taking in the SME sector (Rocha et al., 2011).

Amid this context, in 2016 the government of Saudi introduced Vision 2030 to diversify the economy, and in this endeavour it placed a special focus on enhancing the SME sector. Vision 2030 objectives include increasing SMEs' contribution to the economy from 20% to 35% of GDP and bank lending to SMEs from around 2% to 20%, both by 2030 (IMF, 2018b; Vision 2030, n.d.). To achieve this, the Saudi government created different programmes which have general goals of enhancing SMEs' access to finance, supporting FinTech development, fostering financial literacy, increasing national savings and promoting capital market development (IMF, 2018b) (Section 1.1 has more details on Vision 2030).

More recently, under the PIF, the government has set up a SR4bn (\$1.07bn) fund called Fund of Funds to invest in venture capital and private equity funds that are dedicated to the SME sector. Last but not least, the government has approved the creation of a bank dedicated to SMEs. Known as the Bank of Small and Medium Enterprises, this bank offers all types of financing solutions under one umbrella to help SMEs access appropriate financing (Al-Ghalayini, 2021; Al-Khudair, 2021).

## **6.4 Data Collection and Sample**

As mentioned in Chapter 3, the current study conducts qualitative research in a single case study (Saudi Arabian market) as this allows rich in-depth information about the developing structures and procedures within commercial banks regarding their lending to SMEs. In-depth semi-structured interviews are employed as the main specific research method for collecting data about commercial banks' perceptions and lending practices in relation to Vision 2030. Face-to-face interviews were chosen because they are much more conducive to reciprocal interaction

and both fuller and effective conversations that allow information to be conveyed more precisely (Zikmund, 2003). However, four of the early interview sessions were conducted via the videoconferencing services of the internet application Zoom because of social distancing requirements during the Covid-19 pandemic<sup>13</sup>.

The sample consists of 11 relationship managers and team leaders from 11 out of the 13 commercial banks in Saudi (Table 6.1). Similar personnel from the remaining two commercial banks refused to take part in the study despite efforts to encourage participation (e.g., ensuring confidentiality). The interview sessions took place between 19 April and 20 June 2021; their duration was generally 60–90 minutes.

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<sup>13</sup> For more details, refer to Chapter 3

**Table 6.1 Respondents' Job Title and Experience: Saudi Arabia April–June 2021 (n=11)**

<b>Bank number</b>	<b>Job title</b>	<b>Years of experience</b>	<b>Interview format</b>
Bank 1	SME Banking – Relationship Manager	3 years	In person (Jeddah)
	Corporate Banking	3 years	
Bank 2	Mid Corporate and SME Banking –Team Leader	4 years	Video call via Zoom
	Overall banking experience	13 years	
Bank 3	SME Banking – Relation Credit Manager	16 years	Video call via Zoom
Bank 4	SME Banking – Team Leader	More than 10 years	Video call via Zoom
Bank 5	SME Banking– Senior Relationship Manager	7 years	In person (Jeddah)
Bank 6	SME Banking – Team Leader	4 years	Video call via Zoom
	Retail Banking	7 years	
	Corporate Banking	9 years	
Bank 7	MSME Banking – Relationship Manager	2 years	In person (Jeddah)
Bank 8	MSME Banking – Relationship Manager	2 years	In person (Jeddah)
	Overall banking experience	10 years	
Bank 9	MSMEs Banking – Relationship Manager	7 years	In person (Jeddah)
Bank 10	SME Banking – Business Development Manager	5 years	In person (Jeddah)
Bank 11	SME Banking – Relationship Manager	5 years	In person (Jeddah)



### 6.4.1 Analysis and Validation of the Interviews

The interview sessions' audio recordings were later transcribed into a Word document. To ensure accurate transcripts, the researcher subsequently listened to the audio files while reading through each transcript and cross-checking, then amending accordingly. The current chapter employs a thematic analysis, which many advocate for qualitative data, irrespective of the subject area(s) being studied (Boyatzis, 1998). Braun and Clarke (2006, p.79) define this as “*a method for identifying, analysing, and reporting patterns (themes) within data*”. Thematic analysis offers flexibility, complements critical realism (Pratt, 2011) and offers a rich, detailed and complex account of data (Boyatzis, 1998). In pursuing this, the current chapter follows Miles and Huberman's (1994) three stages of data analysis: 1) reduction: obtaining data but also getting this into a suitable basic yet abstract form; 2) display: presenting the obtained data in a condensed appropriate form, which involves choosing data but also making omissions given from an abundance of qualitative information; and 3) conclusion drawing and verification: drawing conclusions from the data presented, which are initially more about deductions than end summaries. These stages also involve a verification process in which the researcher analyses the data presented to find irregularities.

Accordingly, transcribed audio files were scrutinised along with field notes so the researcher could process and mentally absorb the data, identify patterns and bring the files and notes together in a simple way by categorising the patterns identified from the data into codes (while also considering pertinent literature in this process). The researcher manually entered these codes into a Word document in a codification process that yielded broad categories from both literature theories and findings along with practical data points (i.e., the interviews). Anomalies such as the same interviewee expressing different views for different questions along with unwanted omissions were key concerns, so data were later checked again for these. The data were presented in tables to facilitate subsequent analyses, which focused on the themes revealed as important to how the banks deal with SMEs – namely, obstacles and SME lending profitability; credit granting processes in centralised large banks and soft information; channels through which Vision 2030 encouraged bank lending to SMEs; the role of the *Kafalah* Guarantee Program; the type of SMEs served by these banks; the current amount of SME lending; and the scope for further lending.

## 6.5 Results

This chapter's analysis examines the perceptions and experiences of bankers involved in SME lending in Saudi. After coding the interview transcripts, the final code structure contained four primary codes, each with discrete sub-codes that all together encompass a broad range of relationship managers' and team leaders' experiences in lending to SMEs. The analysis focuses on four recurrent and unifying themes that characterise the nature of bank credit to SMEs in Saudi from the interviews: (1) profitability and obstacles in lending to SMEs; (2) loan evaluation and approval processes; (3) government intervention (Vision 2030) and the role of *Kafalah*; and (4) the type of firms with access to bank finance, the current level of SME lending and the scope for further lending.

### 6.5.1 Banks' Profitability from the SME Market

Despite the consensus among the majority of bankers interviewed that SME lending is profitable because of the considerably higher margins charged on their loans compared to large corporates, two bankers, however, disagree. They argue that SME lending is not as profitable as lending to large corporations, especially when considering the required cost and effort of appraising SME loan applications given the risky nature of this segment; in this, bank motivation to lend to SMEs is for public relations (PR) and social responsibility purposes, but they are not as profitable for the bank. On the other hand, bankers who view lending to SMEs as profitable suggest that the high risk of these firms is compensated by charging higher margins (i.e., high risk, high return), resulting in overall profitability. In this, profit margins on SMEs' loans are higher as a percentage, compared to the amount of the loan extended. These contrasting views can be glanced from the following statements:

*“Lending to SMEs is profitable. New clients, for example, are charged 12-13%. We are talking about 13% in less than a year. Large corporations, on the other hand, are charged only 1-2%, or even lower as they can fiercely negotiate such interest rates.”*

(Relationship Manager at Bank 11)

*“I think one should consider the motive for banks to lend to SMEs when asking why the share of SMEs' loans is low in the country. To be honest, I think lending to this segment is for public relations and for social responsibility purposes. SMEs are not profitable compared to the work involved and we are basically lending to them*

*because we have to support the small business sector. If one is talking about profitability, profitability is in lending to large corporations.”*

(Relationship Manager at Bank 1)

The findings, hence, confirm firm-level data from Chapter 4 which show that perceived high interest rates on the potential loan is the major reason affecting SMEs' credit demand. As a result, the majority of firms sampled (i.e., around 62%) indicate that they have never applied for bank finance. Indeed, the credit markets of the GCC countries are characterised by high net interest margins, compared to high-income countries (World Bank Group, 2016).

### **6.5.2 Obstacles in Lending to SMEs**

One of the most important issues the interviewees discussed is why the share of loans to SMEs is substantially low in Saudi. On this, respondents identified the main obstacles in lending to SMEs and noted their roots. Some are supply-driven and more related to a bank's own lending policy and its previous strategic focus on serving large corporations; others relate more to the uncertainty and risky nature of SMEs, as previously documented in the literature (Ayyagari et al., 2017); and certain ones are more specific to the Saudi context but have been exacerbated by a weak informational and legal environment, particularly issues of commercial fronting.

#### **A. Banks' Own Policies**

Regarding the commercial banks, the interviews show that bank conservatism in lending to SMEs has been bolstered by the profitability of lower-risk markets, particularly the large corporation market. Experienced interviewees who have been working in banks for the past 16 years argue that before 2005 banks in Saudi did not have focus or orientation towards SMEs but, enticed by the higher profitability and lower risk in catering to another particular markets, instead focused mostly on lending to large corporations. The Team Leader at Bank 6 describes the earlier situation as follows:

*“In the past, banks' financial statements were divided between two divisions: household and business. SMEs did not constitute a big portion under the business division. Banks had no orientation nor appetite to allocate large assets to this sector.”*

Such arguments are supported by previous descriptions of commercial banks in the GCC who lend to large corporates, as enjoying stable interest margins because of their good ratings and largely stable and cheap deposits. As a result, these banks are less interested in SME lending (IMF, 2018a). As mentioned earlier, in the case of Saudi, commercial banks' lending to large corporates accounts for 34% and to households accounts for 20%, while lending to SMEs is very low, with an average of 2% of total loans (IMF, 2018b).

The interviews, therefore, reveal that under such a business model, any firm with commercial registration is treated as a large company and hence a typical bank policy requires 2–3 years audited financial statements with net profit from SMEs. These SMEs, however, lack or cannot afford audited financial statements, and those with financial statements might have negative financial ratios. This prevents relationship managers and team leaders from extending finance as per banks' policy. This issue is deemed a main obstacle to banks' lending to SMEs by all interviewees and is supply-side driven. The issues regarding banks' requirement for audited financial statements and why they constitute a barrier to SMEs was explained as follows:

*“The issue from the start is that banks always ask for 3 years of audited financial statements with profits. Therefore, we find that firms who have been in business for 1 to 2 years fail as they cannot get financial support. That is, by the time they reach the requirements of 3 years' market existence, the firm will incur losses and hence does not become a target market for banks.”*

(Relationship Manager at Bank 3)

Such reliance on financial statement lending – a transactional lending technology which the literature has long indicated is reserved for relatively informationally transparent firms (Berger & Udell, 2006), implies that commercial banks in Saudi are mainly in a position to service older SMEs who have been operating for more than two years, and have informative financial statements that demonstrate a strong financial position, as seen by the financial ratios calculated from these statements. This in turn, confirms earlier findings from firm-level data in Chapter 4 that younger SMEs, particularly newly established ones, are rationed out of the credit market in Saudi.

## **B. The Risky Nature of SMEs**

Despite these issues on the banks' side, all respondents mention the risky nature of the SME market as a major deterrent to banks' lending to SMEs. Indeed, respondents see lending to SMEs as high risk, and there are other factors of concern here. Even if banks do proceed with SME lending, for example, they need to invest a disproportionate amount of time, effort and resources on investigating and seeking to mitigate such risks. For this issue to be addressed the main sources of this higher risk of SME lending need identifying and understanding, and participants noted three main ones.

First is the market structure itself. Interviewees argue that the SME market is messy, less organised and consisting mainly of micro-enterprises. A particular issue discussed in this regard is the prevalence of commercial fronting within the SME sector, which is illegal in Saudi and anyone found guilty of it will be sentenced to a maximum of five years in prison and a maximum fine of SR5m (Ministry of Commerce, 2021). Commercial fronting is identified as an arrangement whereby the ultimate beneficiary is a non-Saudi national who did not obtain a foreign investment licence to conduct business in Saudi, particularly in certain activities that are reserved for nationals, but nevertheless does so through their Saudi partner whose name is provided to legally register the business (Ministry of Commerce, 2021). According to those bankers, few small firms are actually owned by Saudis, and that commercial fronting created alliances of non-Saudi workers that dominate the market illegally which in turn creates unfair competition for real Saudi business owners. Bankers, further, argue that this situation makes it more difficult to pursue the real owner in case of default. On this, the IMF (2008a) notes that when expatriate SME owners default many often flee the GCC region rather than resolve their debts. Additionally, the dominance of cash transaction dealings within these firms exacerbates the complexity of this market in Saudi and renders it difficult for bankers to monitor SMEs' activities. In this regard, past experiences of moral hazard issues were mentioned. Five interviewees argue some SMEs misused bank facilities by using the loan to buy real estate and/or enter into the stock market. This in turn resulted in high default rates and hence higher provision requirements on the part of the banks. Therefore, three bankers stated that lending in cash, by which the amount is deposited in the borrower's bank account, is particularly risky because of moral hazard activities. These bankers, instead finance the borrowing firm's invoices by directly paying its suppliers. Issues on cash transactions were explained as follows:

*“High cash in circulation where these individuals buy and sell in millions through cash transactions does not allow you to know where the loan has been put, where the loan has been used, and can raise issues of money laundering under some practices of commercial fronting.”*

(Relationship Manager at Bank 1)

Indeed, numbers suggest that commercial fronting in Saudi can be as high as 250,000 cases. Of these only 450 cases were caught, since revealing such cases requires a large number of employees by the authority in charge and needs specialised courts to pursue individuals with such illegal practices. Commercial fronting is remarkably high in the retail sector, i.e., around 41% of businesses practice commercial fronting, and amounts to 16% in the wholesale sector. Because of this around SR100bn is managed in cash by expatriates, leading to tax evasion, and does not allow obtaining real financial data on small businesses (Al Murki & Al Bawadri, 2020; Mubasher, 2017).

Second, the type of SME owners within the market also constitutes obstacles to bankers. Most interviewees mentioned that small firm owners are less professional, and lack the required capabilities, knowledge and experience in running businesses. They also argue that small firms lack appropriate management structure and that in them the owner takes all the decisions, which, considering the previous point, can bring issues of competence besides a dearth of perspectives and input. Some interviewees say small firm owners do not have adequate growth plans or market studies and most businesses were created without prior planning, which makes them less able to absorb market and economic shocks leading to business failure and, hence, high default rate. The lack of proper planning and short-term objectives make these owners mainly consider banks as rescuers (i.e., they reach out to banks only when they face financial difficulties), which in turn makes it difficult for bankers to accept their lending applications. Interviewees argue that the lack of capabilities also reflect on owners’ knowledge about bank dealings and document preparation, and this places more demands on and requires more effort from the relationship manager.

*“So you are going to waste your time in a one million loan with a micro company. So you are going to educate your client. You are going to spend so much time with your client.*

*You are going to basically become a CFO for that company because they don't have one. They have an accountant that doesn't know anything about banking and financing.”*

(Relationship Manager at Bank 7)

Third, in line with literature on SME lending, seven interviewees said SMEs' riskiness varies by industry sector, but this not as straightforward as listing what are more and less riskier sectors for all banks. As these seven personnel say, this is not uniform as the classification of riskier sectors varies among banks (i.e., what constitutes a risky sector for one bank is an acceptable sector for another). As the Relationship Manager at Bank 1 explicitly explains, this *“sector risk varies across banks according to the bank's own orientation”* and adds that *“each year the bank reviews the market industries and updates us with what constitutes a target market and what does not”*. For example, one banker stated that firms in the Information Technology (IT) sector are non-target markets because of the high risk involved; another banker, however, claims that they target such sectors. These personnel further explained that past experiences of high default rates within certain industries is one of the determinants banks consider when deciding on target markets. Familiarity with the industry and its operations by the bank and its personnel also contributes to decisions on target markets. The Relationship Manager at Bank 3 explains, *“firms' propositions from industries that differ from bank “norms” are highly avoided and of course the bank would not lend to them, as they have never been subject to industry analysis and, therefore, we are less familiar with their operations, financial ratios and market information”*.

Interviewees indicate that one mechanism through which high risk is mitigated is usually collateral, but as SMEs usually lack collateral, in terms of the quality or quantity required, this constitutes a major obstacle in lending to this segment. Weaknesses in the institutional environment exacerbate this issue, as discussed in the coming section.

### **C. Legal and Information Environment**

The institutional environment in Saudi was perceived as weak and hence constitutes further impediments to lending to SMEs. Issues with Saudi's legal system were highlighted. Four

interviewees mentioned lengthy legal procedures in liquidating assets and pursuing defaulters as barriers to lending to SMEs. This leads banks to impose strict collateral requirements with some banks favouring more liquid assets such as stock portfolio or real estate with proceeds. This implies that less wealthy entrepreneurs are more constrained in terms of accessing bank finance – an institutional barrier to creditors’ rights demonstrated in the following statement:

*“The overall goal is to make profits at the same time to avoid the headache of going to courts. Take it as a rule: no bank wishes to go to court because it will take a long time and things will get complicated.”*

(Relationship Manager at Bank 10)

Indeed, Saudi scores very low compared to other countries on the strength of the legal rights index from the Doing Business Report by the WB, which measures the degree to which bankruptcy laws and collateral protect borrowers’ and lender’ rights (IMF, 2018b). Interviewed bankers, therefore, confirm this as a barrier to lending to SMEs and the findings in Chapter 4, where survey data suggest that the majority of rejected bank applicants (around 76%) were turned down because of insufficient collateral, while the majority of approved borrowers (approximately 73%) extended some form of collateral.

Furthermore, the lack of a strong information environment, particularly regarding accounting standards and credible auditors, aggravates problems with lending to SMEs in the view of bank’s reliance on financial statement lending. Notably, half the interviewees mentioned that even when SMEs have audited financial statements, these statements cannot be trusted because of issues concerning manipulation. For instance, some small firms collude with unprofessional auditors and accountants to produce less accurate financial statements with some inflated numbers which allows obtaining bank finance, and hence different financial statements are provided to different organisations (e.g., banks vs. Zakat, Tax and Customs Authority). According to these interviewees, banks therefore have an internal ranking list of audit firms based on their own experience with and conduct of these firms, resulting in them consequently deeming audit firms low- or high-trust institutions. This list is described as follows:



*“We have an internal ranking list of audit firms classified as A, B, C and those audit firms which are unlisted based on previous problems we encountered because of fake financial statements they audited. Of course, we prefer audited financial statements by those audits classified as A i.e., the Big Four because they are more professional. However, audit firms ranked as B and C are acceptable.”*

(Team Leader at Bank 2)

Overall, the findings from this section suggest that banks charge higher interest rates on SMEs' loans to compensate for the higher risk involved. Furthermore, impediments to lending to SMEs are in line with arguments that the causes and roots of SMEs' lower access to bank credit are complex and multidimensional (Stephanou & Rodriguez, 2008). In this, the interviews provide that many dimensions contribute to these obstacles bankers face when catering to SMEs. While respondents confirm that some supply-driven factors like the strategic focus on lending to lower-risk markets, particularly to large corporations, and lending policies which rely on financial statement lending, play a major role in this, other factors more related to the market structure, firms' and owners' characteristics, in addition, to non-financial considerations concerning the institutional environment were also identified.

### **6.5.3 Loan Evaluation and Approval Process**

This section presents the credit granting decision-making process by bankers in Saudi. It starts with the lending process along with the role of relationship managers and team leaders in the decision-making. It then discusses the main source of information used in loan evaluations and banks' lending criteria, and shows the interaction between soft and hard information and the tools banks use to overcome deficiencies in the information and legal environment. Next, it addresses the role of the bank–borrower relationship in improving loan terms and conditions and the support offered to these firms during less favourable conditions because of such relationships. Finally, it shows the type of loans SMEs obtain from banks in Saudi and how interest rates and collateral are decided.

#### **A. Relationship Manager's Role and Discretion**

The divorce in decision-making between business units, which include relationship managers and team leaders, and decision-making units, which provide the final approval on loan applications, is a main characteristic of centralisation in large banks.

It is unsurprising, then, that relationship managers and team leaders within these business units have low discretion in approving loan requests under such large forms of organisational structure. According to all interviewees, relationship managers conduct a thorough analysis in appraising loan applications by SMEs, and prepare proposals based on the assessment conducted to be sent to team leaders to review and give recommendations. Team leaders then send the proposal to the regional head, then to the country head (depending on a bank's level of centralisation), for further review and recommendations. The proposal then goes to the credit risk department, where a committee makes the final decision. According to one interviewee:

*“I do not have the authority to approve any loan. I can only reject loan applications based on the ratios calculated from the financial statements. Even the team leader cannot approve loans. Loan approval has to be given by a committee which involves credit risk managers.”*

(Senior Relationship Manager at Bank 5)

The proposal prepared by relationship managers is indeed thorough. Interviewees state that they must provide a wide variety of information from the potential borrower's name, his/her net worth, the commercial registration of the business, when it started and if the applicant is an existing client with the bank and for how long. Additionally, they must provide a background on the business and check its stability. After such information is collected, a deep financial ratio analysis is conducted to ensure that the requested loan would positively impact on the business's financials and to project when such an impact would take place. These inputs provided in the proposal form the base upon which all subsequent personnel involved in the decision-making reject or approve loan applications.

However, despite relationship managers and team leaders within business units not being directly involved in the final decision, their personal traits and experience seem to affect their decision to pursue with the loan application. This, in turn, confirms arguments that regardless of the different tools bankers employ when evaluating loan applications and the general criteria set by banks, an element of subjectivity will always exist (Fletcher, 1995; Lavoie, 2014). The Team Leader at Bank 2 explicitly explains this as follows:

*“While we all base our recommendations and decisions on the same data collected on the loan application, there exists some variation according to one’s previous experience, the length of such experience and own character. A relationship manager who is risk averse, for example, might reject an application if he/she had experienced bad outcomes from a business with similar activities a risk taker, however, would not. In fact, as a team leader, I might approve to send a loan application to the regional head based on my experience, while the relationship manager is not encouraged and recommends rejecting the application.”*

Indeed, during the interview sessions, the researcher can observe some differences in the attitudes and views of the bankers interviewed towards the SMEs sector in general and the preferred industries. As mentioned earlier, while higher managerial levels within the bank decide on the sectors that are considered target markets, how enthusiastic relationship managers are about evaluating loan proposals from businesses that differ from the bank’s “norms” have varied enormously. In this, some are very reluctant about such applications and prefer evaluating those from sectors in which they are experienced. Others, in contrast, are more excited to explore different proposals and learn about new industries. A statement provided by the Relationship Manager at Bank 1 confirms such an observation:

*“There are some old-fashioned relationship managers who have been with the bank for 30-40 years; and, therefore, prefer loan applications from traditional industries with which they are perfectly familiar and have deep understanding about the nature of their operations, their cash cycles, and financial ratios.”*

## **B. Transactional Lending and Soft Information**

As previously noted, the interviews reveal that a typical bank policy for lending to SMEs requires 2–3 years audited financial statements. All interviewees shared how a financial statement ratio analysis is the main cornerstone in loan evaluation, which implies that financial statement lending is the main transaction lending technology employed by commercial banks in Saudi. Small business credit scoring is also mandatory and is based on hard data obtained from the Saudi Credit Bureau SIMAH about the firm and its owner. Bankers enter such hard quantitative data into a loan performance prediction model that generates a score or summary statistic for the loan.

However, the score is used with discretion in conjunction with soft information gathered from personal interactions with the owner. The system thus gains a qualitative evaluation aspect based

on each banker's subjective opinion about issues such as the owner's knowledge of the business and experience (besides years of establishment), management structure, business model and market analysis. The weight of subjective vs. hard data ratios is based on banks' internal ranking of the audit firm.

*“The calculated scoring ratios’ weight differ depending on the internal rank of the audit firm. For example, for unlisted audit firms the subjective part will weigh 100%, whereas if the audit firm is ranked A class, the subjective part will weigh 20% and the calculated scoring ratios will weigh 80%.”*

(Team Leader at Bank 2)

The interviews reveal that soft qualitative information plays an important role in loan evaluation despite the employment of hard information technologies. All interviewees stressed that loan evaluation does not focus only on a firm's financial statements as, for example, the SME owner's character is a crucial factor. Bankers try to distinguish between honest/dishonest borrowers and hardworking/manipulative borrowers. As some bankers said, interviewing the client is part of the loan evaluation but so is what may broadly be deemed background checks:

*“We do full research about the client to see if it makes sense or not to move forward with this client based on the character, based on credit history, based on his knowledge, based on the willingness to pay **not** the ability to pay. Willingness to pay goes back to character.”*

(Relationship Manager at Bank 7)

*“By the way the character of the client is extremely important more than you can imagine. Some clients, for example, might have solid records in terms of the company's financials and fit the criteria required perfectly, but character-wise they are difficult to deal with and, hence, we turn down their loan applications.”*

(Team Leader at Bank 4)

Weaknesses in the institutional environment, the lack of trust in small businesses because of commercial fronting issues and previous experiences of moral hazard practices seem to force bankers into developing different mechanisms to check the reliability and credibility of SME owners. Such mechanisms include firm visits every three months:

*“We have to visit the client every three months to make sure that the business actually exists, and the owner actually goes to work. By doing so, you do not give him room to manipulate or escape.”*

(Relationship Manager at Bank 10)

Additionally, half of the interviewees stressed the importance of a firm’s reputation in the market. Bankers contact suppliers to check a firm’s creditability in terms of paying back trade credit. They also check a firm’s client type (known clients/unknown clients) as it gives a sense that the business is real. Similarly, some interviewees mentioned that they ask for bank statements to check a firm’s financial statement accuracy. They also check a borrower’s reputation with other banks as part of the loan evaluation process. This implies that such mechanisms form a source of soft information gathering – an important part of evaluating loan requests.

*“We do thorough check about the potential borrower through contacting different parties with whom the client is doing business, to check if he is committed in repaying them. Indeed, I sometimes informally visit stores next to his and ask about his operations and customer flow. I also in different social gatherings pay attention to what people are saying about business owners in the market, so I become more aware of ones people are warning against dealing with them”*

(Senior Relationship Manager at Bank 5)

Although three bankers believe that quantitative information is the first thing to consider and that soft information only adds comfort and merely serves a purpose in background checks when evaluating loan requests, most interviewees disagree. They stress that quantitative and qualitative information are equally important and complement each other. As one interviewee puts it:

*“Can you live with a heart without lungs? Quantitative information is very important but character is not less important. They complement each other. If you have one quality and do not have the other, then you are not worth financing.”*

(Relationship Manager at Bank 9)

The interviews suggest that hard and soft information technologies highly interact and support earlier evidence from demand-side studies that one lending technology is not used to the exclusion of other technologies. The current chapter’s findings, hence, confirm the conclusion

from the above-mentioned evidence that the precise distinction between soft-vs.-hard information under the conceptual framework in the economic literature is perhaps too simple (Uchida et al., 2008), and that bankers employ soft information technologies other than relationship lending (Berger & Black, 2011).

Despite banks' reliance on transactional lending, some benefits of relationship lending exist. Interviewed bankers say they distinguish between existing and new borrowers, and among the former they distinguish between committed and sneaky borrowers. Personal knowledge of the firm's owner is, therefore, very important. All this considered, old, committed borrowers with good character influence the lending proposal positively, and some interviewees even said they step in to support such borrowers in difficult times by extending payment periods. Others argue that such borrowers are offered better loan pricing, lower collateral requirements and increased lending facilities when requested, compared with new clients. According to them, new clients need more studying and represent greater risk. Hence, new clients are charged higher loan prices. The following statements highlight such benefits:

*“If I have a committed honest client whom I know very well, I know the nature of his business, his clients and suppliers, I step in to help him during difficult times by rescheduling the loan repayment. You know most businesses face times of liquidity squeeze because of delays in collecting receivables or late project proceeds. I, therefore, have to help him overcome this situation because of the positive previous experience I encountered in dealing with him.”*

(Relationship Manager at Bank 3)

*“We start to build trust in each other. For example, I had a client to whom I lent one million and throughout the year he showed commitment, he deposited with us, he gave us everything we wanted, he became trustworthy. If he asks for another million, we give him that million; if he asks for a million and a half, we give him a million and a half; if he asks for two million, we give him two million, within certain limits, of course. There are some clients who have been with us for 13 years, and I personally lend to them without guarantees. There is trust.”*

(Relationship Manager at Bank 11)

### **C. Type of Loans, Terms and Conditions**

All of the above-mentioned obstacles and the different mechanisms employed by banks (e.g., firm visits) suggest that banks are very cautious and to some extent suspicious when lending to

SMEs. This is reflected in the type of loans available to this segment, with the interviews revealing that the main one for SMEs is for working capital purposes typically of short-term maturity (i.e., less than one year). Fixed-asset financing loans are less prevalent and mainly extended to medium-sized firms, not small ones – but never without collateral.

Most interviewees indicate that the maturity of working capital loans is decided based on the financing gap in a firm's cash cycle by days, to avoid over-financing issues. Such loans represent most banks' financing objectives and targets in the SME market. As the Team Leader at Bank 4 claims,

*“Generally, we focus much more on working capital loans; hence, you will find that working capital loans, particularly ones with revolving limits, represent a much higher percentage in this sector.”*

Long-term financing with 7–10 years maturity is mainly extended to large corporations. Medium-term loans with 3-5 years maturity can be extended to medium-sized firms for capital expenditure (CapEx), though collateral on such loans is usually required. However, banks are generally not keen on such loans, as the following statement indicates:

*“We can barely convince the credit risk department to accept such loans.”*

(Team Leader at Bank 6)

As mentioned earlier, the lack of trust and suspicions about this segment explain why banks are reluctant to extend medium-term loans. In this, the interviews suggest that evidence on borrower commitment must be assured before extending CapEx loans and, hence, are never extended to first time borrowers. Two bankers explained a bank policy by which firms who wish to obtain these CapEx loans must first use short-term facilities for at least one year. It is a means of understanding borrowers' commitment levels. Such findings confirm those obtained from Chapter 4 which suggest that firms applying for purposes other than project financing, which is usually of short-term nature, are less likely to be approved, particularly those who apply for start-up or fixed assets investments purposes.

Interestingly, however, two interviewees indicated that the ratio of working capital to CapEx loans varies across relationship managers. Hence, once again, the interviews suggest that there

exists some interaction between the personal traits and experience of these personnel and banks' general lending policy.

*“I cannot give you an exact percentage on the ratio of CapEx to short-term loans as they vary from one portfolio to another. For example, I might have 20 clients, of these 19 obtained working capital loans while only one obtained a CapEx loan. In contrast, the relationship manager next to me might have more clients with CapEx loans in his portfolio. Therefore, there exists some variation; however, I think working capital loans constitute the higher percentage of financing offered by the bank overall.”*

(Relationship Manager at Bank 9)

*“As relationship managers we try to avoid CapEx loans for small firms as much as possible because they require approval from higher managerial levels. I mean, you have many layers. For example, a 3 million loan request will go through the credit officer. This credit officer will argue that a 3 million loan is too risky and recommends making it a 2 million loan. The person in the next layer would also recommend lowering the amount. It is not worth it after the effort one has put in writing and explaining the proposal. Therefore, many relationship managers try to avoid such loans.”*

(Relationship Manager at Bank 1)

The findings, therefore, imply that the efforts relationship managers are willing to put into a loan proposal and the risk he/she is willing to take with borrowers are also important. In this, the interviews reveal that such personnel have targets at the end of each year, among which is the percentage of defaulters in their portfolios. It appears, therefore, that risk-averse managers aim to lower the risk of having many defaulters by structuring the portfolios in a way that decreases such risk (e.g., portfolios consist of mainly short-term loans).

A related issue to the risk encountered when lending to SMEs deals with the terms and conditions under which loans are typically extended. As mentioned earlier, respondents state that SMEs loans are usually charged high interest rates and bankers usually require collateral as one mechanism through which high risk is mitigated. Accordingly, bankers were asked about the process of determining loans' terms. While the interviewees indicate that interest rates are typically decided based on a firm's risk rating obtained according to the credit scoring system, there are some exceptions and room for negotiation with some clients, e.g., old ones.



*“Particularly, for new clients we employ Moody’s system where we enter all the data we have on him and his business. The system then ranks the client and accordingly the loan price is provided. Of course, we can make some exceptions for good clients, depending on the authority the banker has. However, the pricing is decided by Moody’s.”*

(Relationship Manager at Bank 11)

*“When the client has a very solid deal, offers good collateral, good assignments of project proceeds, has clear sources of repayment and is a well-known name in the market, I cannot pressure him in loan pricing because if he leaves then other banks will take him in no time.”*

(Team Leader at Bank 4)

Furthermore, as already mentioned, collateral is mainly required on medium-term loans, but banks also seem cautious about approving working capital loans that have less than one-year maturity. Most such loans, therefore, are backed by the government CGS *Kafalah* (*Kafalah* and its role are discussed in more detail in the coming section). Also, firms with deteriorated financial statements are required to pledge collateral on working capital loans, as they are deemed particularly risky. Contrasting views, however, emerged on the type of collateral required. Although some bankers do, others not prefer to use real estate as collateral given the difficulties in and lengthy procedures of liquidating this, so real estate can be used as a support rather than a first way out. These bankers instead see stock portfolio or real estate with proceeds as preferable collateral. However, all bankers agree that *Kafalah’s* guarantee is the ultimate collateral.

*“What small firm wants to pledge a collateral? What bank needs such a headache? It is not a preferable thing. It entails so many problems in case of default. You see, it is very difficult for the bank to liquidate real estate. It could take years to find a buyer the bank and the client agree on. And even if the bank sells the real estate, the client might claim that the bank underestimated the real estate’s value and sue the bank for selling it for less than its value.”*

(Relationship Manager at Bank 1)

The Relationship Manager at Bank 10 provided some explanation on the value of collateral banks require: *“When a real estate is pledged as collateral, its value should cover at least 150% of the value of the credit facility. If cash deposits are provided, it should cover at least 95% of the loan amount. For stock portfolio, the coverage ratio should be at least 200%”*. The findings,

hence, do not support those by de la Torre et al. (2010) who argue that large banks can compensate for weakness in the institutional environment by using incentive-compatible mechanisms including the pledging (as collateral) of assets such as real estate. It seems that weakness in the institutional environment has forced some banks to require more liquid assets to be extended as collateral, which most SMEs often lack. Indeed, findings from Chapter 4 suggest that the majority of rejected bank applicants (around 76%) were turned down because of insufficient collateral.

The interviews further revealed that a typical requirement in the loan granting process is promissory notes, which serve as a security document in case of default (proof of indebtedness). As the Team Leader at Bank 4 explains, “*Promissory notes are one of the most important documents to be signed by the borrower before extending the loan. No loan shall be extended without these signed notes*”. These promissory notes allow banks to pursue defaulters in court, and under Article 46 the enforcement judge may imprison the debtor.

#### **6.5.4 Government Intervention**

As mentioned in Section 6.3, the SME sector has become an important element in Saudi’s Vision 2030 economic diversification plan. Under this plan, the SME sector now receives much publicity as a national priority but has also received various financial support measures to enhance these firms’ productivity, hence, their contribution to GDP. This section presents the topics that emerged from the interviews on the role of Vision 2030 in increasing bank finance to SMEs or, specifically, the three main channels through which the effects of the Vision can be observed: first pressuring commercial banks to improve their internal policies accordingly in terms of facilitating lending to this segment; second, activating and establishing institutions to support this segment and provide financing solutions , i.e., the Saudi CGS *Kafalah* and the Small & Medium Enterprises General Authority (Monsha’at); and third, implementing various market reforms with the intention of restructuring the SME sector and improving the institutional environment.

#### **A. Vision 2030 and Bank Lending Policies**

The role of Vision 2030 in incentivising commercial banks to lend to SMEs was a prominent topic addressed in all interviews. Indeed, all bankers view the Vision as a means of providing

much insight into this sector and even as a turning point in doing business with SMEs. Vision 2030 plays a significant role in pressuring banks to focus on and support SMEs as a new national priority. As one banker commented:

*“Banks now have an appetite for this. All banks are entering into this segment. What happens is that when you see the government is announcing its support for SMEs by many means, putting effort and confidence in this market, banks become obliged to support them.”*

(Relationship Manager at Bank 8)

As banks now show higher devoted assets to SMEs on their financial statements, each bank’s management have increased targets for relationship managers in terms of lending to SMEs. These managers are also encouraged to lend to sectors they did not previously lend to, such as the agriculture sector and other sectors compliant with Vision 2030 (e.g., logistics and entertainment sectors). This in turn diversifies the loan portfolio.

*“Lending will increase. For example, if this year the bank allocates one billion, next year they would allocate one and a half billion, two billion. Lending must increase because of government and Central Bank orientations towards the SME sector. It is possible that the Central Bank would impose obligations on banks to direct, for example, 5% of their assets to this sector. I have not seen it yet, but I started to feel pressure from the Central Bank to increase facilities to SMEs.”*

(Team Leader at Bank 6)

As mentioned earlier, bankers acknowledge that financial statement lending represents a major obstacle in lending to SMEs, so under Vision 2030 some banks have recognised the strategic value of adopting new and innovative approaches to serving SMEs. This includes creating new products and credit programmes to facilitate such lending.

Five interviewees talked about these new products, with the example product of Point of Sales Financing being a major solution as demonstrated by banks heavily competing on offering it. According to these bankers, no audited financial statements or collateral are requested under such a product, and banks can extend finance up to 25% of firms’ sales based on point of sales transactions. The only condition imposed is exclusive use of the bank’s point of sales, which serves as a source of secure repayment, though two relationship managers mentioned that the

pricing of such a product is high compared with other loan types. The reason for this is explained as follows:

*“The interest rate charged on this product is high compared to other loans. The higher risk involved in financing through this product is why we charge higher rates. This higher risk is due to the fact that no collateral is pledged against the amount extended. If something happens and the store went out of business nothing can compensate the bank. Also, the loan is deposited directly into the borrower’s account instead of paying the borrower’s supplier, as with some other products. Lending in cash is particularly risky.”*

(Relationship Manager at Bank 8)

Other banks have introduced credit programmes that accept 2-3 year in-house financial statements and aim to both ease out the requirement of audited financial statements for first time borrowers and require less paperwork from borrowers. They also have predetermined criteria, which gives higher discretion for the business line as relationship managers and team leaders can more readily approve loans for firms meeting these criteria. Hence, the approval process is expedited, which is especially important also because approval speed is another dimension in which banks are competing.

Additionally, banks are now entering different forms of collaboration and partnership with different government funds, the government and semi-government organisations, to extend loans for their SME suppliers. For example, such organisations extend third-party credit line to integrated SMEs. Furthermore, although having a specialised unit for SME banking was imposed by the central bank before Vision 2030, four interviewees said precise segmentation with specialised teams was initiated to focus on SMEs only as a response to and means of overcoming an issue as detailed by one banker:

*“A slight overlap between SMEs and corporates existed in the past. For example, some firms with sales above the definition of SMEs, which means more than SR200 million, might have a ticket size that is considered too small for large corporates. When relationship managers serve micro, small, medium and this grey area, they will put less effort into SME clients. For example, if relationship managers have targets to get SR100 or SR70 million why should he/she go for 10 SME clients while he/she can reach the target from one firm in this grey area? Therefore, many banks started to close this grey area by following the idea that as an SME unit you should only serve SMEs.”*

(Team Leader at Bank 4)

Interestingly, to the extent that increased lending to SMEs has become a priority, the cross-selling of fee-based non-lending products and financial services to SMEs remains small but is gaining importance. Some bankers maintain that there is a movement towards cross-selling as they try to obtain clients from A-Z. The income from such non-lending activities gives some room for lower loan pricing, as the total profitability from the client does not decrease. Advantages other than profitability discussed are increased customer loyalty, which can facilitate a healthy lasting relationship with the client. More importantly, such products provide trusted data and history on clients; hence, they can be used for monitoring purposes.

*“Cross-selling is a strong channel. During the last 5 to 8 years banks did not focus much on it, but the bank discovered that cross-selling increases profitability hugely. Hence, from recently, management requires the lending proposal to include cross-selling in addition to the finance extended to the client.”*

(Relationship Manager at Bank 8)

Nevertheless, lending remains more important and more profitable compared with cross-selling.

*“As a relationship manager I try to reach the target in the shortest way. It is like I am in a game. Each of these things have weight. For example, cross-selling has its own weight and funded products have their own weights. The weight of funded products is of course bigger, which means higher profitability for me as a relationship manager.”*

(Relationship Manager at Bank 1)

Interestingly, however, two interviewees mentioned that no fundamental change in bank policy occurred and that some banks still insist on the requirement of audited financial statements. One interviewee explained that SME lending varies from bank to bank. Some banks are very generous with SMEs, depending on bank's liquidity. In this, smaller banks cannot risk devoting a higher proportion of their assets to this segment. This, in turn, supports arguments about the effect of bank's liquidity preferences and credit rationing (Lavoie, 2014).

## **B. The Role of Kafalah and Monsha'at under Vision 2030**

As mentioned in Chapter 5, in 2006 the Saudi government initiated its CGS *Kafalah*. Similar to other CGSs, *Kafalah* acts as a third-party risk coverage mechanism that guarantees up to 80% should the borrower SME default. Although the scheme did encourage bank lending to SMEs back then, the take-off of *Kafalah* was actually modest (SIDF News, 2014). In 2016 under Vision 2030, however, *Kafalah* became one of the most promising national programmes for improving SMEs' access to credit. Indeed, *Kafalah* was a decisive factor in increasing SMEs' share of bank loans from 2% in 2016 to 5.8% in 2018, with a surge in SME credit during the Covid-19 pandemic where SMEs accounted for 8% of bank loans in Q3 2020 (Arab News, 2021).

The interviews confirm the importance of *Kafalah* which is perceived as the milestone in SME lending. All interviewees talked about its role in encouraging banks to lend to SMEs by lowering risk exposure. This in turn has given banks comfort to lend so hence encourages the approval of more loans compared with banks' original policy (i.e., finance additionality). A more experienced banker who has been working with SMEs for 16 years observed the following:

*“The increase in lending to SMEs started since 2006 with the initiation of Kafalah. While lending to SMEs has jumped after Vision 2030, Kafalah from its start till now encouraged lending to SMEs and changed the previous situation enormously. It can be considered as the only means through which SMEs' share of bank loans has increased. Many bank policies have been changed to comply with Kafalah including sectors that under the bank's original policy were avoided.”*

(Relationship Manager at Bank 3)

As discussed in Chapter 5, the acid test in measuring the effectiveness of CGSs is *additionality* (Boocock & Shariff, 2005). The interviews demonstrate that *Kafalah* has yielded finance additionality. Five interviewees mentioned that very few small firms would have obtained bank finance had the *Kafalah* Program not existed. Three interviewees said 30-40% of the extended loans under *Kafalah* would not have been approved if it were not for the scheme. Only one respondent claimed that 50% of guaranteed loans would have been extended had the programme not existed. The majority of respondents, hence, support findings in Chapter 5 where *Kafalah*'s finance additionality was estimated as well above the average 30-35% that exists in all CGSs that are properly designed and implemented (Levitsky, 1997).

Other advantages of *Kafalah* discussed by half of the interviewees concern its role in expediting approval processes within banks and easing out bank requirements. They explained that *Kafalah* allows greater discretion from relationship managers and team leaders as guaranteed loans do not require credit risk department approval.

*“Kafalah solved the huge problem of guarantees. The bank now is lenient with SME clients, and it agrees to take them as new clients if they do not have financial statements. Previously, financial statements were a must, but when there are guarantees (i.e., Kafalah) risk decreases. When risk decreases, the bank softens its requirements.”*

(Relationship Manager at Bank 11)

A remarkable boom in the role of and outcomes from *Kafalah* occurred in 2020 during the Covid-19 pandemic when *Kafalah* and the Central Bank initiated the Guaranteed Finance Program, which guarantees 95% of the loan at a fixed price of 4%, including administrative fees. One banker said the bank extended facilities amounting to SR200m to new SME clients in only three months during the pandemic under this programme. Some of the largest banks in the market also benefited from a recent initiative under *Kafalah* whereby they can approve loans less than SR3m without the need to obtain *Kafalah*'s approval (Portfolio Guarantees Product), so they can speed up the lending process. This, in turn, support arguments that bank credit to SMEs during the Covid-19 pandemic increased significantly (Arab News, 2021).

Altogether, Chapter's 5 findings in addition to the findings from this chapter on *Kafalah*'s role and importance for bankers contrasts with findings from other developing countries that large banks view CGSs as less essential in reaching out to SMEs (de la Torre et al., 2010). What the current findings, therefore, say is that without direct government intervention in the credit market then bank credit to SMEs would have been limited to certain entrepreneurs, particularly those who can afford audited financial statements and have accumulated sufficient assets to be pledged as collateral.

Moreover, in 2016 the Saudi government established Monsha'at with the aim of regulating, supporting and developing the SME sector. Monsha'at plays a twofold role: one deals with creating and fostering a culture of self-employment, entrepreneurship and innovation; the other

is to diversify the funding sources available to SMEs by helping establish companies that specialise in funding but also activating and encouraging banks to lend to SMEs (Monsha'at, n.d. a). A strong channel through which Monsha'at does this is the recent initiation of the Monsha'at lending platform, as most interviewees note; this is an electronic platform that connects public and private financial institutions with SMEs who have financing requests to enable the latter to choose the appropriate financing offer. This in turn provides a database on SMEs that was not available in earlier years.

*“The Monsha'at platform is a great platform. All financing requests are presented on it. The financing institution can extract the request and approach the client to decide if it wants to extend lending. Banks must update the platform on the decision, i.e., approved or not. Monsha'at follows up with us on why the client request was rejected. In case there are mistakes, they approach the client on how to edit the application. The platform is really organised. Clients now can obtain finance from home.”*

(Relationship Manager at Bank 11)

*“In the past, it was known that firms were the ones approaching banks for financing facilities. But with the support from Kafalah, especially during the pandemic, the opposite is true. We now approach clients in need of financing, find them and lend to hundreds of them through Monsha'at's platform.”*

(Relationship Manager at Bank 3)

Furthermore, Monsha'at has also had indirect effects on commercial banks' lending to SMEs by increasing SME owners' awareness in running businesses and dealing with banks. Specifically, Monsha'at provides workshops and financial advisory services to owners (Monsha'at, n.d. b), which additionally results in professional development and improved entrepreneurial characteristics for the owners but also, ultimately, evolving SMEs.

*“Previously many small firms' owners did not know what they were doing. Can you imagine some of them did not even have emails? How can you send them official documents or proposals? However, compared to the last five years there is a big difference in SME clients' culture and awareness.”*

(Relationship Manager at Bank 8)



### C. Market Reforms Under Vision 2030

As mentioned in Section 6.5.2, a key obstacle in lending to SMEs is their market, especially how it is messy, unorganised and with prevalent commercial fronting. Under Vision 2030, the government has introduced new rules and regulations as market reforms to restructure this sector, which almost all interviewees say positively influenced SME lending by commercial banks.

The major regulations that affected the market concern requiring VAT registration by small firms, imposing the use of point of sales and creating the Qawaem platform for financial filings, among other regulations. Five interviewees argue that these regulations improved the information environment (i.e., allowing more reliable and easier access to financial information about small firms). On the above specific regulations, widespread point of sales has increased the accuracy of data on SME transactions compared to when cash dealing dominated the market. Furthermore, VAT registrations and Qawaem financial filings allow the checking of SMEs' financial statements for accuracy and issues regarding manipulation. Similarly, enhancing the Saudi Credit Bureau (SIMAH) reporting has improved the assessment of firms' credit status, leading to successful lending and reduced uncertainty. This situation is described as:

*“Small firms previously had many problems. As I mentioned earlier, many of them sell and buy with cash. And many provided manipulated financial statements. These issues are decreasing. The government, frankly, has strangled them a lot. While these problems are still there, there is a great improvement. I mean, they are confined to the issue of taxes and Qawaem system. So, the market is getting organised.”*

(Relationship Manager at Bank 1)

Another important effect of these regulations deals with the quality of firms that now exist in the market. Four interviewees argue that such regulations improved SMEs' quality through massive market filtration. Many small firms with commercial fronting disappeared and higher-quality businesses remained. One interviewee added that the government's local content programme – which focuses on procurements/purchases by the government, semi-government and large corporates – will definitely increase the number of SME firms integrated with these entities, especially those of high quality.

### 6.5.5 The Current Situation

The previous sections show that banks' business models in Saudi were previously geared towards financing large corporations, though interest in SME lending started with the implementation of *Kafalah* in 2006. However, Vision 2030, initiated in 2016, was a turning point in SME lending in many ways, including the pressure it has put on commercial banks. This in turn has forced some changes within banks' internal policies such as initiating innovative lending solutions. Consequently, SMEs' loan share has increased significantly from 2% of total loans to the private sector in 2016 to 6.2% in 2019 (Yousif, 2019). Vision 2030, through activating *Kafalah* as a major enabling scheme, played a vital role in this increase. The following section investigates the type of firms who currently have access to bank finance and those for which the situation has not improved significantly. It also concerns bankers' opinions on the current situation in the credit market in relation to SME financing needs and the scope for further lending.

#### A. Type of Firms with Access to Bank Finance

Almost all interviewees view SMEs as pillars of any economy and believe in their importance, especially so in this context under the new government orientation that focuses on this segment. Most interviewed bankers say a good portion of SMEs with access to bank finance can contribute to the economy of Saudi either through job creation for nationals or through tax payments, since banks are very selective in terms of what firms to finance. The Relationship Manager at Bank 3 states, *"believe me any firm with a bank facility has undergone significant due diligence by the bank. Therefore, as long as the firm has the ability to obtain bank finance, it knows what it is doing and knows what projects to undertake"*. He then adds:

*"Indeed, such bank borrowers will have a solid reputation in the market. In this, their creditworthiness increases, and their access to bank facilities signals that they do not have any problems. And of course, their projects will contribute to Vision 2030 and benefit the country."*

Another interviewee adds that such SMEs can contribute to local investments and that this hence results in a local flow of funds instead of an outflow. He argues that under the local content programme, which increases the number of SMEs involved with government or semi-government entities either as manufacturers or service providers, the Saudi market's exposure to shocks in external international markets will decrease.

Furthermore, interviewees were asked about certain firms' activities that Bateman (2017) provides in identifying the "right" enterprises that can drive growth and economic development, through positive externalities. In this, three firm activities were particularly of interest to this study, i.e., inter-firm relationships with large, foreign and/or government information through subcontracting and different forms of cooperation; exporting; and innovative activities.

With regard to the first activity, all interviewees say that SMEs involved with government and/or semi-government organisations are deemed favourable firms and are viewed positively. These interviewees cited the secured source of payment (assignment of project proceeds) and the quality of SMEs involved with such organisations as reasons why they view them positively.

*"Not any firm can undertake government projects. Such firms are ranked by the government and must be knowledgeable. Each firm involved with the government has its own ranking. Each one is classified according to the previous works it has done. Government projects are excellent projects."*

(Relationship Manager at Bank 9)

Similarly, although half the interviewees indicated that SMEs rarely engage in exporting activities compared to large corporations, they view them positively because of their importance to the economy and they try to support them, especially under Vision 2030. Though one interviewee states that approving loan applications by exporting SMEs depends on whether the firm is a beginner in the export market and the products it is exporting. For example, this banker has higher aversions in lending to firms exporting food as issues of food expiry can arise before it enters foreign markets. Other products with no such issues can be financed.

*"We work with exporters because exporting is mainly for manufacturers. We must support them because they comply with Vision 2030. Government wants the country to be an industrial country; hence, it is our duty to support such firms."*

(Senior Relationship Manager at Bank 5)

Nevertheless, the interviews reveal that most of the loans to these "right" enterprises are of short-term maturity for working capital purposes. For example, a preferable type of financing for exporters is the issuance of letters of credit as two of the respondents indicated.

With regard to innovation and lending to start-ups, almost all interviewees agreed that banks do not lend to innovative firms with no or little track record, and thus neither to start-ups, given that financial statement lending is the main lending technology and mainly used for firms with at least two-year market existence. High risk and uncertainty are among the reasons for avoiding these firms as the interviewees say feasibility studies cannot be trusted.

*“Today, there is much pressure to lend to start-ups. To be honest, today no bank enters into this segment because it is more than risky. First, guarantees are almost non-existent. Second, banks build their own financial structure on existing businesses. They cannot build it on 100% projections.”*

(Team Leader at Bank 4)

Two bankers said they actually advise against bank finance for start-ups. They argue that these firms need venture capital funds with long-term focus and, more importantly, patience. They further indicate that these firms in such early stage have high burning rates long before they start generating positive cash flow. The Relationship Manager at Bank 1 contends that, *“banks are not actually the right financial institution for such firms.”* He further explains, *“the bank is not your partner. Banks lend and want their money back, despite the outcome of your project.”* Other interviewees suggest that government incubators are better suited for these firms because of their higher risk tolerance.

Nevertheless, some interviewees say start-ups may obtain bank finance under certain conditions (e.g., only if the new project complements the existing business). Others say that innovative activities for existing firms with track records are viewed positively, especially those in sectors that comply with Vision 2030 (e.g., IT solution sectors and FinTech). However, *“lending to innovative firms is still in the early stage.”* (Team Leader at Bank 6).

## **B. Banks’ Current Amount of SME Lending**

Interviewees’ responses to enquiries about the current share of bank lending to SMEs and if it is meeting SMEs’ financing needs, varied. Five bankers said the current level is not meeting SMEs’ demand, particularly those for capital expenditure, but three interviewees argue that SME lending has jumped during the last seven years, with *Kafalah* being the main reason for this. Given this, they believe SMEs’ financing needs are being met, especially those for working capital finance. The following statements demonstrate these different views:

*“[Bank lending] must go minimum double. The demand is very high and the approval for loans is very low. We are not approving. Basically, we only approve the risk-free deals. Today, any deal that is risky we try to avoid as much as possible.”*

(Relationship Managers at Bank 7)

*“I think it is good for them in terms of size. I mean, as for working capital needs, it is enough for them. Kafalah’s old ceiling was SR15 million, and many people have benefited from this old ceiling. You are talking about SMEs. As for [firms] with SR60 million in sales, having a SR15 million loan is more than enough.”*

(Team Leader at Bank 2)

Two interviewees note how SMEs now have other options than bank finance because of competition from new players in the market, such as FinTech companies, crowdfund platforms and financing companies. According to them, these new players are taking shares from banks in this sector, which in turn puts pressure on banks to rethink and reconsider risk issues in the SME market, particularly, because of higher competition in lending to medium-sized firms. More importantly, interviewees believe there is scope for further lending to this segment, particularly through entities such as Monsha’at and the recent government SME bank. As the Team Leader at Bank 6 says:

*“The growth in SME lending is a continuous trend that benefits from changes in markets, regulations, support by government, and evolving SME characters and entrepreneurs as well.”*

Similarly, Team Leader at Bank 4 believes *“there is a bigger role for the government to play through Monsha’at and the recent government Bank of Small and Medium Enterprises.”* He adds:

*“The notion that commercial banks are the only supporter for this sector is difficult because today banks are emerging from the Corona crisis, which is preceded by several crises, including the recent government reforms such as expat fees among others type of recently imposed fees. [Such a crisis] hugely pressured SMEs into reshaping their expenses. Accordingly, the notion that we should pressure commercial banks only to lend to this sector is difficult.”*

Overall, the interviews suggest that existing firms who have been in the market for 2 to 3 years – and therefore have track records mainly in the form of audited financial statements – can obtain bank finance. For example, bankers have a particular interest in existing firms involved in government projects and exporters, though their loans are mostly short-term in nature for working capital and project financing purposes. Entrepreneurs seeking to start new businesses, nevertheless, seem to be excluded from the credit market in Saudi, particularly those engaged in innovative projects, because of the lack of any trading history in addition to the higher risk involved.

## **6.6 Discussion and Policy Implications**

The current chapter has explored commercial banks' SME lending practices in Saudi after the initiation of economic reforms articulated in Vision 2030. It highlights both the main obstacles that impede lending to SMEs and changes in banks' lending policies via Vision 2030.

The dominance of large banks in the Saudi banking sector provides an interesting context in which to examine credit availability for SMEs. The literature on the effect of the banking industry structure on SMEs' access to finance is debated (Beck, 2013). Conventional wisdom has long argued that a sizeable presence of small and domestic private banks is necessary to promote credit availability for SMEs, and that more centralised organisational structures, i.e., those of large banks, can negatively impact on lending to opaque SMEs (Stein, 2002). This is based on the view that small banks are better suited to engage in relationship lending which is primarily based on soft information through direct contacts with the SMEs (Beck et al., 2011).

However, some studies have disputed this view and proposed that large and foreign banks are just as able to lend to opaque SMEs through different transactional lending technologies and centralised organisational structures, rather than relational lending. Such banks view the SME market as profitable which renders government programmes including CGSs as less essential (Berger & Udell 2006; Berger et al., 2007; de la Torre et al., 2010). The implication is that openness to foreign ownership within the banking sector is desirable while State-sponsored initiatives to support SMEs are not necessarily required, compared to market-developing policies such as improving lending infrastructures, which include the information environment and the legal, judicial and bankruptcy environments (Beck, 2007; Berger & Udell, 2006).

The current chapter contributes to such debated literature by deeply investigating the empirical realities of commercial banks' lending practices in the SME market and their ability to cater for this segment without direct government intervention, i.e., through CGSs. Therefore, the study is relevant to discussions about the nature of finance available and used by SMEs in countries where small-scale banks are less prevalent and/or in countries where the banking industry is going through massive consolidation. It also contributes to discussions about encouraging the entry of large foreign-owned banks into developing countries. The chapter does so because the findings suggest that large banks are not capable of lending to opaque SMEs, particularly young firms who often lack the 2-3 years audited financial statements typically required by these large banks, despite the employment of credit scoring systems which have been argued to allow lending to such firms based on their owner's credit history (Berger & Udell, 2006). Nevertheless, the findings show that the local knowledge and experience of loan officers when appraising loan applications is essential and used in tandem with hard data. This, in turn, raises doubts about foreign banks' ability to lend to SMEs as these banks would lack such local insights. The findings, further, suggest that government intervention in the credit market, particularly in the form of CGSs, was the milestone in improving access to credit for this segment.

Nevertheless, the findings of the current study must be treated with caution. In particular, because of the inherent problems identified in post hoc methodologies such as interviews – for instance, their vulnerability to Hawthorne Effect, as interviewees' responses might be biased towards what they think the researchers want to hear (Vogel and Adams, 1997), incomplete recall and/or interviewees' possible poor grasp of their own decision-making processes (Mason and Stark, 2004). However, as mentioned in Chapter 3, a number of measures have been taken to deal with these issues such as employing a semi-structured form of interview so participants are encouraged to talk, assuring participants about their confidentiality and conducting interview sessions within a comfortable setting for participants.

Furthermore, the study is also based on a small sample comprising 11 bankers who did not always share the same views. In this, their views mainly varied across two dimensions: whether banks' internal policies have significantly changed to better cater for SMEs as a national priority

under Vision 2030 and whether the current level of credit available for SMEs in the market is meeting these enterprises' financing demands, and the scope for further lending.

When reviewing the reasons behind these not unanimous views based on different banks' assets and ownership structure, no definite universal outcome can be reached. This is so because when similar responses are grouped to check the types of banks in which respondents work, these different opinions do not seem particularly related to banks' structure. In this, while most of the responses confirming that bank's internal policies have been modified to facilitate lending to SMEs come from bankers at major banks with high state ownership, some smaller banks with lower shares owned by the State also seem to be important players in the SMEs market. Interviewees in these smaller banks stated they witnessed some modifications and innovative lending solutions in banks' lending policy to increase credit to SMEs. It can be argued, therefore, that the objectives set by high managerial levels within banks when deciding on lending policies and target markets might be affected by factors other than banks' own structure solely. With these caveats, the results can be summarised as follows:

First, in line with studies describing the financial system in resource-reliant countries (Kurronen, 2015 ; Lin et al., 2009), this work's results suggest commercial banks in Saudi had no focus on nor orientation towards SME lending, with their lending instead being concentrated on lower-risk markets such as those of large corporates. Although interest in SMEs in this regard did commence in 2006 with *Kafalah*, for the interviewed bankers Vision 2030 was a game-changer. Indeed, bankers shared the pressure high managerial levels received to change their direction towards increased lending to the SME sector under the Vision. Hence, there is a noticeable pattern of change both in terms of how the banks regard this sector and in terms of actual increase in the share of SMEs' loans.

Second, the current study notes the role of direct government intervention through *Kafalah* in encouraging commercial banks' SME lending. While *Kafalah* was a decisive factor in kick-start lending to SMEs back in 2006, its role has been significantly activated under the Vision, and hence can be viewed as a strong channel through which Vision 2030 affected credit availability for SMEs. Statistical figures on the SME market in Saudi support this result (Arab News, 2021).



Moreover, in line with conventional wisdom, the results suggest that large banks' business models appear to be suitable mainly for transparent firms with audited financial statements, despite the employment of credit scoring, which is argued to be suitable for opaque firms (Berger & Udell, 2006). These transparent firms, however, can mainly rely on banks for securing short-term loans for working capital purposes. Medium-term loans for capital expenditure may be extended to medium-sized firms if the appropriate collateral is in place, but never long-term loans of 7-10 years maturity, which is only approved for large corporations. Indeed, bankers state that such transactional lending appears to constitute a major obstacle; partly because most SMEs do not have or cannot afford audited financial statements, but also because of suspicions about these statements' accuracy in light of the weak information environment, and the less organised SME market that has a high level of commercial fronting covered by the dominance of cash transactions. Therefore, market-developing policies under Vision 2030 were deemed very useful in filtering the SME market and in checking the accuracy of financial information. Such policies include the requirement of VAT registration from SMEs, the mandatory use of point of sales and the creation of Qawaem platform for filing audited financial statements by limited liability companies.

While studies disputing the conventional wisdom argue that the pledging of assets (e.g., real estate) as collateral can serve as an incentive-compatible mechanism, which makes weak institutional environment less constraining for large and foreign banks when lending to SMEs (de la Torre et al., 2010), the results in this chapter, however, suggest that such weaknesses have actually forced some banks to demand more liquid assets (e.g., stock portfolios and/or real estate with proceeds) which SMEs usually lack. Therefore, *Kafalah* provided a major solution for this by effectively providing a substitute for collateral. This allowed banks to lend much more to SMEs than what their original policy would have allowed. This, in turn, raises doubts on arguments whereby CGSs are less essential for large and foreign banks to reach out to SMEs (de la Torre et al., 2010).

Interestingly, the results suggest that transaction lending occurs not in a vacuum but in synergy with soft information, similarly to findings from a demand-side study by Uchida et al. (2008). In that way, bankers screen applicants and collect both hard and soft information via interviewing the potential borrower, firm visits, and by contacting SMEs' suppliers and clients. The results also show that soft information about SME owners' character,

knowledge/experience and market reputation play a huge role in the credit granting process. Bankers indeed distinguish between existing and new clients despite the employment of hard information technologies, and hence some benefits usually associated with relationship lending do exist. For example, bankers indicate that for existing SME clients things will move faster and loan terms (e.g., loan price and collateral requirements) might be eased. This raises questions on policy recommendations for a greater representation of foreign banks within the financial industry structure (Berger & Udell, 2006), particularly those provided for the GCC countries (World Bank Group, 2016). Such banks would lack the local experience and knowledge required for collecting such soft information, which tends to be used in tandem with financial information.

Furthermore, evidence has emerged that suggests the credit granting process also relates to the personal characteristics of the relationship managers themselves, including their risk tolerance. For example, the efforts these personnel are willing to put into a loan proposal and the risk they are willing to take with borrowers are also important, since these impact on targets assigned to them concerned with, in addition to lending, the number of defaulters they have within their portfolio. It appears, therefore, that risk-averse managers aim to lower the risk of having many defaulters by structuring the portfolios in a way that decreases such risk (e.g., portfolios consist of mainly short-term loans).

Overall, the empirical findings raise some questions on large banks' ability to cater for SMEs without direct government intervention in the form of CGSs, but they also suggest scope exists for further lending. This is particularly so for capital expenditure, which requires long-term loans to support investment and economic development in Saudi. Currently, the loans commercial banks offer to SMEs are of a short-term nature and mainly for working capital purposes – despite *Kafalah* guaranteeing loans for up to seven years. The results further suggest that banks have reservations about approving even medium-term loans (with 3–5 years maturity) for small firms, and when these are approved they are mainly for medium-sized firms, but not without collateral and not for first time borrowers. Additionally, commercial banks' transaction lending technologies seem to discriminate against lending to entrepreneurs who are seeking to start new businesses – especially those with innovative activities, which economic history shows to be essential for economic development through knowledge spill-over and technological upgrading. Banks are particularly reluctant to lend to such firms even though *Kafalah* has

created a product tailored for start-ups that has lower fees and higher coverage ratio compared to their conventional products to SMEs (i.e., established ones) (Kafalah, n.d. a).

Such results cast doubts on arguments that large banks are just as able to extend credit to opaque SMEs as small banks are through transaction lending and hence the government can play a role mainly through market-enabling and market-developing policies which affects the legality and profitability of employing different transactional lending technologies (Beck, 2007; Berger et al., 2007; de la Torre et al., 2010). Nevertheless, the results suggest there is room for government-directed lending programmes to provide finance that is of a long-term nature and for start-ups, given that this study's evidence implies what the commercial banks sector can do for SMEs in such regard at the moment is limited. The banking system currently does not seem to have the characteristics Bateman (2000) regards as essential for the transformation Vision 2030 aims to reach. He describes such a financial system as being development-oriented, not excessively short-term focused and more committed to supporting SMEs with wider positive externalities. Accordingly, Saudi Arabia's decisions to set up a bank dedicated to SMEs and establish a government fund (i.e., 'Fund of Funds') that will invest in venture capital and private equity funds which target start-ups, seem promising.

## Chapter 7: Conclusion

Limited access to bank credit, in particular for SMEs, is viewed by many policy-makers and academics as a major growth constraint for emerging and developing economies (Brown et al., 2011). The key issue concerns the extent to which SMEs are credit-rationed, i.e., they are unable to access bank credit at any price (Stiglitz & Weiss, 1981). Two motives underlie the importance of this topic. First, SMEs are usually regarded as an engine of innovation and growth. There is evidence that they contribute greatly to job creation and hence help reduce poverty (Ayyagari et al., 2014; Beck, 2013). Nevertheless, such a significant role by SMEs was sometimes refuted by studies on developing countries (Beck et al., 2005; Wennekers et al., 2005).

Within the notion that finance is critical for growth, some researchers attribute this mixed evidence on the importance of SMEs to economic growth, to the higher financing constraints faced by SMEs in developing countries (Ayyagari et al., 2017). There is evidence from some emerging and developing countries that SMEs rejected by banks have lower levels of labour productivity compared to those who obtained finance (Motta, 2020). Similarly, there is evidence of a significant negative effect of financial constraints on SMEs' exporting activities (Pietrovento & Pozzolo, 2019).

Other researchers attributed this mixed evidence to the heterogeneity amongst SMEs, both with regard to their profiles and financing needs. SMEs include varied enterprises, ranging from handicraft makers, to machine shops, restaurants, and computer software businesses, that have a wide range of sophistication and skills, and function in very distinct markets and social environments. Some of those enterprises are growth-oriented, innovative and dynamic, others are "lifestyle" traditional enterprises that are not growth-oriented and satisfied to continue small (Hallberg, 2000). Similarly, Gries and Naudé (2010) distinguish between necessity entrepreneurship and opportunity-driven entrepreneurship; they show that the latter can drive structural transformation towards a modern manufacturing and service-based economy through innovation. It is essential, therefore, to differentiate between formal and informal SMEs when investigating both their contribution to economic development and their financing needs to devote more resources to those proven to contribute more to the development of the country. Accordingly, this thesis is only concerned with formal businesses, including formal

microenterprises, registered with the specific authority as per country regulations. Additionally, it only focuses on formal finance from banks as opposed to microfinance institutions.

The second motive for the ongoing efforts to investigate credit availability for SMEs is that the causes for lower access to bank credit are complex and multidimensional. SMEs' access to bank credit can be addressed from bank/supply-side perspectives and market failure in the form of credit rationing (e.g., banks' business models, lending technologies and the banking industry structure), firm/demand-side (e.g., structure and characteristics of SMEs) and broader non-financial sector considerations (e.g., informality, taxation, business environment etc.) (Stephanou & Rodriguez, 2008). Accordingly, policy recommendations have varied depending on where the main problems reside. For example, if difficulties in access to credit are supply-driven, some researchers call for market-developing and market-enabling policies in less developed countries. The former deal with improving lending infrastructures including reforms in the contractual and informational frameworks, while the latter deals with policies to increase competition in the credit market, particularly removing restrictions on the entry of foreign-owned banks who can bring in much-needed technology and experience to developing countries (Beck, 2013; Berger & Udell, 2006; The World Bank Group; 2016). Others argue that if the access problem is demand-originated, programmes that emphasise raising financial literacy among SMEs within developing countries would be appropriate (Beck et al., 2007).

Nevertheless, the most popular policy initiative worldwide is public CGSs (Boocock & Shariff, 2005; Cowling & Mitchell, 2003; OECD, 2017), where the guarantor, i.e., the government agency, pledges to repay some or the entire amount of the loan to lenders in cases where borrowers default, and hence effectively provide a substitute for collateral (Gai et al., 2016; Valentin & Henschel, 2013). However, such direct government interventions are viewed negatively by some economists (e.g., Cressy, 2002; Parker, 2002), despite evidence from historical experience on the successful post-war reconstruction of Western Europe in which active states influenced and guided markets that support firms' initiatives (Marangos, 2003).

This thesis, hence, using three empirical chapters (i.e., Chapters 4, 5, and 6) considers both supply- and demand-side factors when examining the extent and prevalence of credit rationing in a developing country, namely Saudi Arabia. In doing so, it also assesses the role of government intervention in the credit market, i.e., the Saudi CGS *Kafalah*, by employing both

quantitative and qualitative primary data. The local conditions in the country provide an interesting context in which to contribute to the debate on credit availability for SMEs and the banking industry structure, while incorporating demand-side factors. This is so because large banks dominate the banking sector in Saudi and despite being highly-capitalised (Das Augustine, 2017), the average share of banks' loans to SMEs in 2016 was only 2% (Jeddah Chamber, 2016). In a recent report about the obstacles to Saudi SMEs' development, lengthy bureaucratic procedures and licensing were found to be the major obstacles (Jeddah Chamber, 2016). This is interesting because one would expect access to finance to be the main obstacle for SMEs since bank loans, which are the main source of external finance for SMEs around the globe (Ayyagari et al., 2010; Berger & Udell, 1998), are particularly low. The thesis, therefore, assesses the type of SMEs large banks' business models can cater to, and how banks adapt to different direct and indirect government interventions in the credit market, with a particular focus on evaluating the impact of *Kafalah*.

The thesis was motivated by contrasting evidence on the effect of the banking industry structure (i.e., large vs. small, foreign vs. domestic, and State-owned vs. private banks) on credit availability for SMEs, through lending technologies different types of bank employ. However, despite the inconclusive evidence, among the policy recommendations provided for developing countries is the importance of openness to large foreign-owned banks (Berger & Udell, 2006). Indeed, more recent evidence highlights the importance of domestic small banks for local firms' growth through relationship lending, which was particularly important for smoothing the effects of economic downturns. Therefore, several commentators have advised banks in developed countries to go "back to basics" and put more weight into relationship lending (Beck et al., 2017).

The thesis was also motivated by Vision 2030, recently introduced in Saudi. The Vision aims to decrease the overreliance on oil revenue through activating the role of SMEs and increasing their contribution to GDP from 20% to 35% (Saudi Vision 2030, 2017). Such transformation requires a development-oriented financial system that is able to identify and be more long-term-focused in supporting the most sustainable business propositions (Bateman, 2000). While the thesis aims to serve Saudi Arabian policymakers, it is also relevant to discussions about the nature of finance available to, and the type of SMEs supported by, the financial system in countries where small-scale banks are less prevalent, and/or in countries where the banking

industry is going through massive consolidation. The findings are also relevant to resource-reliant countries transitioning towards a more diversified economy and to other Muslim countries where SMEs are argued to be constrained by their religious beliefs (IFC, 2014).

Overall, the main findings suggest that SMEs in Saudi are constrained in their access to bank finance and these constraints are mainly supply-driven. Younger and smaller firms are particularly credit-rationed by high interest rates and/or collateral requirements, with the latter playing a major role in banks' lending decisions. The findings, hence, suggest that large banks cannot cater to the needs of these highly uncertain firms. Furthermore, larger and older SMEs can mainly rely on banks for loans of a short-term nature. The *Kafalah* Program was a milestone in encouraging large banks to engage with SMEs, and such engagement is considered relatively recent, motivated mainly by Vision 2030 introduced in 2016.

The findings show, particularly in Chapter 4, that supply-side constraints appear to play a major role in deterring SMEs from actually seeking bank finance. Religious and cultural reasons were found less important, but high interest rate on the potential loans was the major reason why firms do not apply for bank finance. Furthermore, the findings do not find evidence that large banks' involvement with SMEs over fee-based non-lending products/services facilitates access to bank credit. Nevertheless, there is evidence on the important role *Kafalah* plays in improving access to bank credit; in Chapter 5, the findings confirm the importance of *Kafalah*. Indeed, *Kafalah* appears to generate high finance additionality for SMEs, who would have been credit-constrained had the scheme not been introduced. The results, however, do not find evidence on economic additionality in terms of employment growth from *Kafalah*. This was attributed to the type of loans typically extended and the type of firms banks agree to lend to through *Kafalah*. In Chapter 6, concerns were turned to how commercial banks respond to Vision 2030, which calls for higher support for SMEs as a new national priority. Furthermore, the main obstacles in lending to SMEs were identified by interviewed bankers. While demand-side constraints, i.e., the type of firms which exist in the market and the weak institutional environment were highlighted, supply-side constraints in the form of heavy reliance on financial-statement lending and credit scoring was one of the main obstacles identified in lending to SMEs. Nevertheless, bankers highlighted the importance of soft information about business owners. The following three subsections provide a brief conclusion for each empirical chapter.

Despite the relevance of the empirical findings, the empirical analysis suffers from some limitations and hence the findings of this thesis have to be considered in light of these limitations. First, the quantitative data employed is based on self-reported firm responses, hence response bias cannot be ruled out. However, the use of such primary data is not uncommon in small firm studies in general and CGSs' evaluations in particular, in light of the lack of adequate secondary data on private unlisted firms (Ayyagari et al., 2017; Boocock & Shariff, 2005). Second, the survey coincided with/followed a period of economic recession in Saudi, i.e., when credit constraints for SMEs were particularly stringent and the market was going through massive economic reforms. Different austerity measures were introduced and can directly impact on SMEs both in terms of credit demand and how they are viewed by banks. Third, issues of selecting the right control group to evaluate CGSs' outcomes may be augmented by the two different tools employed to administer the questionnaire survey among *Kafalah's* participants (telephone surveys) and the control group (self-administered surveys). Time and cost considerations did not allow including the control group in the telephone survey. Nevertheless, it is preferable to use a control group than to employ data on treated firms only (OECD, 2017).

Furthermore, *Kafalah's* economic additionality was assessed only in terms of employment growth. Some researchers argue that profitability measures are more reliable performance indicators compared to growth measures (Caselli et al., 2019). Nevertheless, previous studies which aimed to assess these measures encountered a rather high number of missing responses on financial data because respondents were reluctant to share such information. Also, the data on *Kafalah's* participants suffer from underrepresentation of female-led businesses which constitutes a major limitation of the thesis. Last but not least, the third empirical chapter is based on semi-structured interviews on a rather small sample comprising 11 bankers, although this disadvantage is not uncommon in qualitative approaches. Researchers are usually confronted by issues that their samples may risk being unrepresentative of the population. Attempts to increase the number of participants can affect the quality of depth of the interviews, in addition to cost considerations (OECD, 2008). Furthermore, the inherent problems identified in post hoc methodologies such as interviews which include Hawthorne Effect, incomplete recall and/or poor grasp that interviewees might have about their own decision-making processes, cannot be ruled out (Mason & Stark, 2004; Vogel & Adams, 1997). Nevertheless, some measures were in place to help overcome the aforementioned issues as identified by Al-Yateem (2012) (See



Section 3.2.1). With these caveats, the following conclusions can be drawn from the three empirical chapters.

## **7.1 Are SMEs self-rationed or credit-rationed when large banks dominate? Evidence from Saudi Arabia**

Chapter 4 investigates the existence and prevalence of credit rationing in banking sectors where large banks dominate while incorporating demand-side factors. In this, it examines arguments that large banks' involvement with SMEs, through cross-selling non-lending products/financial services, facilitates increased lending to this segment and hence CGSs are less essential for these banks to reach out to SMEs.

In light of the lack of adequate secondary data on SMEs, a tailor-made questionnaire has been designed to acquire first-hand information from a sample of 328 SMEs who self-administered it. The findings from the multivariate analysis suggest that relatively lower share of SMEs in Saudi actually apply for bank finance (38%). However, loan rejection rates are high, i.e., over half of sampled applicant firms (54%) are credit-rationed. More importantly, the results do not find evidence that large banks' involvement with SMEs through cross-selling, fee-based, non-lending activities facilitate SMEs' access to bank finance. In this, the findings do not find evidence that large banks are just as able to extend credit to opaque SMEs as small banks (Berger et al., 2007). Highly uncertain firms such as younger and smaller SMEs were credit-rationed. Moreover, banks' collateral requirements, which were publicised as an incentive-compatible mechanism large banks employ to increase repayment likelihood in countries with weak institutional environment (de la Torre et al., 2010), were found to constitute a major barrier in accessing bank finance. The majority of rejected firms (around 76%) were turned down because of insufficient collateral, while the majority of approved borrowers (approximately 73%) extended some form of collateral. Of those, around 55% were guaranteed by *Kafalah*. Indeed, the findings provide evidence on the usefulness of *Kafalah* in improving access to bank credit.

Supply-side constraints also appear to play a major role in deterring SMEs from actually seeking bank finance. While the majority of sampled SMEs (around 62%) indicate that they have never applied for bank finance, Henry Garrett's ranking technique suggests that the top three reasons for this decision are supply-side driven. Perceived high interest rates on the potential loan is the

highest cited reason for refraining from seeking bank finance. Indeed, there is evidence that this perception reflects the reality of the credit market in Saudi (World Bank Group, 2016). Interestingly, the results suggest that the stringent laws that incriminate defaulters seem to constitute an institutional barrier in seeking bank credit through creating high levels of risk aversion in entrepreneurs.

The chapter further examines how the reasons for not applying are related to firms' and entrepreneurs' characteristics by focusing mainly on firms with potential financing needs. Supply-side constraints were found as the main reasons why highly uncertain firms do not seek bank finance, particularly younger and unincorporated (sole proprietor/partnership) firms with a desire and possible need for external finance. Self-rationed firms, however, were found less likely to prefer bank finance even though they possibly need external financial support. These firms were found to be significantly older and incorporated. To the extent that increasing age suggests lower risk and since incorporated firms in Saudi are mandated to have audited financial statements, the findings suggest that such firms could obtain bank finance if they wanted to; they simply appear to have no preference for it.

## **7.2 Impact Evaluation of Credit Guarantees to Support SMEs in Saudi Arabia**

Chapter 5 provides impact evaluation on the Saudi CGS *Kafalah* which has never been subject to independent empirical evaluation. The research, therefore, responds to calls for further empirical studies on specific schemes as their design and, hence, impact, vary across countries (Beck et al., 2010). *Kafalah's* impact assessment addresses its ability to generate finance and economic additionality which is the acid test in evaluating CGSs (Boocock & Shariff, 2005). The former type refers to the share of borrowers that would not have gained access to bank credit were it not for the CGS (Beck, 2007); the latter deals with whether any increase in access to finance contributes to improving the performance of the guaranteed firms (Gozzi & Schmukler, 2016). The research further investigates arguments that CGSs induce moral hazard because guaranteed borrowers do not extend collateral of their own (D'Ignazio and Menon, 2019, Lelarge et al., 2010, Uesugi et al., 2010). The design of *Kafalah* which allows banks to ask for additional collateral allows each such effect to be tested.

Because of the lack of publicly available firm-level data, the current research employed primary data collected through telephone surveys on 124 firms of *Kafalah*'s beneficiaries. The responses of the 328 sampled SMEs in Chapter 4 were included to construct a control group. *Kafalah*'s finance additionality assessment followed that by Riding et al. (2007), and suggests that *Kafalah* results in high finance additionality well above the average of 30-35% which exists in all CGSs that are properly designed (Levitsky, 1997). In this, *Kafalah*'s finance additionality is estimated (with 95% confidence) as  $73 \pm 7.9\%$ , i.e., 73.3% of *Kafalah*'s beneficiaries would have been rejected were it not for the scheme. Survey respondents confirm this finding obtained from the econometric analysis which employed a logit model to predict bank decisions for *Kafalah*'s beneficiaries had the scheme not been introduced. An overwhelming majority of about 72% of guaranteed borrowers believe that their lending bank would not have extended finance were it not for *Kafalah*. However, subject to methodological limitations and the recent economic downturn in Saudi, the economic additionality analysis suggests that participating in *Kafalah* does not affect SMEs' growth in terms of employment which should be affected positively if growth is limited by the availability of external finance. This analysis follows that by Chandler (2012) and employs simple OLS regressions to assess employment growth. The lack of evidence on economic additionality can be attributed to the fact that *Kafalah*'s beneficiaries are on average older and significantly larger compared to the rest of SMEs; their loans are also mostly of short-term maturity. It can be argued hence that these firms utilised the guaranteed funds to ease working capital pressures during the difficult economic environment. It was concluded hence that *Kafalah* did not fully achieve its goals. Nevertheless, the findings do not find evidence for arguments on induced moral hazard. In this, *Kafalah*'s participants, for whom the bank perceived *Kafalah*'s guarantee as sufficient, are not statistically different compared to the other groups of SMEs in terms of employment growth.

### **7.3 Bank lending to SMEs: Supply-side Perspective**

Chapter 6 investigates the realities of commercial banks' involvement with SMEs and how they adopt their lending policies to this segment under Vision 2030 which publicises SMEs as a national priority. It looks into the drivers and obstacles banks encounter when lending to this segment, the type of SMEs these large banks can cater for and the scope for further lending. Therefore, it contributes to the debated literature on the banking industry structure and the appropriate public intervention, by investigating large banks' ability to cater to this segment

without direct government intervention, as de la Torre et al. (2010) imply. The findings, however, do not support such an argument. Large banks were found mainly able to serve transparent firms with audited financial statements. Furthermore, weaknesses in the institutional environment have forced banks to impose strict collateral requirements, hence *Kafalah* was found to be a major solution in improving SMEs' access to credit. This chapter gathers hitherto unavailable information on commercial banks' lending practices in the SMEs' market in Saudi from 11 face-to-face interviews with the "ultimate" bank insiders: relationship managers and/or team leaders of SME banking.

The findings suggest that Vision 2030 was a game changer in banks' engagement with the SME sector. While such interest started in 2006 with the initiation of *Kafalah*, banks before that had no focus on nor orientation in the SME business. Vision 2030 appears to have pressured banks into creating new products and credit programmes to cater to opaque SMEs since commercial banks' typical transactional lending was found to constitute a major obstacle for such firms, as interviewees argued. Nevertheless, transaction lending does not occur in a vacuum but in synergy with soft information about business owners and local market information, which in turn raises doubts about recommendations for greater presence of foreign-owned banks (Berger & Udell, 2006).

Moreover, the findings show that *Kafalah* was a milestone in encouraging banks to lend to this segment, hence, allowed lending to many more SMEs than what banks' original policy would have permitted (i.e., finance additionality). The empirical findings, therefore, raise some questions on large banks' ability to cater to SMEs without government intervention. Overall, the findings suggest that banks' current business models cannot cater for younger firms, and older firms can mainly rely on banks for securing short-term loans for working capital purposes. This in turn can result in under-capitalisation in the SME sector due to insufficient long-term funds. Such undercapitalised firms cannot be the substitute engine of growth which Vision 2030 aims to reach.

## **7.4 Policy Implications and Future Research**

The findings from the three empirical chapters have important policy implications. First, the findings suggest that interventions to address supply-side gaps are the main actions that should

be considered. Large banks' business models which have been geared towards large corporations for decades seem unable to cater to younger SMEs, who are the main creators of new jobs (Storey, 1985). These banks might need more time to develop different skills, products and programmes to do that. The results, however, suggest that what the banking system in Saudi can do in this regard at the moment is limited.

The *Kafalah* Program seems to play an important role in improving access to bank credit; however, there is no evidence that it is associated with economic additionality in terms of employment growth. This can be attributed to the finding that guaranteed bank finance is largely distributed to relatively safer SMEs, who are older and larger, with stable cash flows generally preferred by the banking system. Furthermore, such firms can mainly obtain loans of short-term maturities regardless of the reduction of risk exposure for banks. Utilising guaranteed funds mainly for working capital purposes seldom led to sustainable rises in employment and output (Boocock & Shariff, 2005). Nevertheless, attempts to increase guarantee fees and/or lowering the coverage ratio on loans to older SMEs to induce more lending to younger ones, might not be warranted. The results suggest that even firms with assumed diminishing risk (large and older SMEs) would have been rejected without *Kafalah*. Overall, SMEs seem unable to count on these large banks to secure capital required for long-term investments which can impact growth in terms of both employment and output (GDP). This in turn flags some concerns about the recent consolidation in the banking sector in Saudi (Al-Ghalayini, 2020) where large banks already dominate and operate under monopolistic competition (World Bank Group, 2016). This suggests that policy recommendations for greater presence of large foreign-owned banks in developing countries (Berger & Udell, 2006) might not be warranted in the context of Saudi Arabia.

Importantly, issues of under-capitalisation in the SME sector can be addressed by activating the role of already existing government lending institutions which offer interest-free, medium and long-term loans, since the findings suggest that commercial banks in Saudi are mainly in a position to lend loans for working capital purposes. Publicising these public credit institutions can provide alternative sources of funds, particularly for SMEs in need of long-term financing. The current efforts, nevertheless, seem to focus on publicising *Kafalah* and its different financing solutions offered through commercial banks (Monsha'at, n.d. c). Additionally, while *Kafalah* targets start-ups who are assumed to boost innovation, the findings suggest that banks are particularly reluctant to lend to such firms as per banks' lending policies. Therefore, there

may be room for more government-directed lending programmes to support start-ups. Saudi Arabia's decision to set up a government fund, i.e., "Fund of Funds" which will invest in venture capital and private equity funds targeting the start-ups and the SME sector, seems promising.

Market-developing policies that aim to improve bankruptcy laws and protect borrowers' and lender' rights also seem important. Therefore, the drafted new regulations that call for the cancellation of the executive imprisonment of the defaulter are also promising (Al-Shibrawy, 2021). Such regulations could result in lower risk aversion in entrepreneurs in a country where nationals view risk-taking in the SME sector as not particularly appealing, compared to easy employment in government or in State-owned enterprises (Moshashai et al., 2020; Rocha et al., 2011).

Moreover, improving small businesses' owners' quality and awareness about bank dealing and document preparation may be another important step, given the lower financial literacy among adults in Saudi (IMF, 2018b). Therefore, the Monsha'at academy can be an important demand-side intervention (Monsha'at, n.d. b).

That said, policies aimed at supporting the creation of 'good' SMEs to facilitate structural transformation in Saudi are important. Creating a culture for opportunity-driven entrepreneurship, as opposed to simply starting a new business, requires a strategy that touches upon many areas. These include developing a conducive business environment with suitable infrastructure and service delivery to SMEs through capacity building in business services, both in public and private executing institutions (OECD, 2004). Some argue that older government agencies in Saudi are often staffed with civil employees who tend to be reluctant to accept new thinking; and, hence, do not always provide a smooth ride for SMEs (institutional inertia) (Almoaibed, 2021). Moreover, improving the labour market with sufficient skilled labour which, in turn, requires a supportive educational and training system, is important. Indeed, in a more recent report, availability and capability of labourers was ranked as a major obstacle by the highest percentage of medium-sized enterprises in Saudi (General Authority for Statistics, 2018a). Likewise, policies should enable and encourage SMEs to implement competitive business strategies and operating practices (OECD, 2004), particularly those that support innovation among SMEs. Indeed, this thesis finds evidence on the importance of innovative

firms in helping the economy to recover by creating new jobs. Increasing government financial support for innovative SMEs can be an important step, given that barriers to innovation clearly affect small firms because of their more limited recourse base (Madrid-Guijarro et al., 2009). In 2018, only around 4% of innovative small firms and around 8% of innovative medium-sized firms received government financial support, compared to 13% of innovative large firms (General Authority for Statistics, 2018b). This can be important because the same report states that Saudi innovative establishments spend only around 3% of their revenue on innovation.

Last but not least, more efforts to establish appropriate secondary databases for SMEs by government statistical offices can allow advancing more research on this segment and provide better understanding on credit availability and flow for SMEs.

The findings of this thesis also point to avenues for future research. First, clearly the reliance on primary data can result in response bias which might impact the current study's findings. Depending on secondary data availability, research can be conducted to confirm the generalisability of the current findings. Second, studies undertaken in normal times after the economy recovers may be able to understand if some variations exist, particularly in terms of finance and economic additionality from *Kafalah*. Third, the study does not address specific instances of rationing, such as those in female-owned businesses. Depending on female entrepreneurs' willingness to take part in similar studies, future lines of research could assess this issue further and the effect of *Kafalah's* products targeting female entrepreneurs, given the inconclusive literature on female-led businesses' access to credit. Moreover, depending on data availability, future research could enhance our understanding in assessing *Kafalah's* economic impact in terms of other performance indicators that are argued to ensure sustainable growth, such as investments, value creation and profitability of guaranteed borrowers. Obviously, there is scope for much future research, given that the entrepreneurial credit journey is a dynamic recurrent process, and it is hoped that this thesis provides some basis for this.

# Appendices to Chapter 3

## Appendix 3.A: Questionnaire survey in English

### Start of Block: Participant Information Sheet

#### Analysis of Credit Rationing

**Researcher Details:** Rawaa Muhandes is a Saudi national PhD student at Adam Smith Business School, University of Glasgow, United Kingdom.

**Study Title:** Credit Rationing Across Small and Medium-Sized Enterprises (SMEs) in Saudi Arabia.

**Purpose of the study:** This study aims to analyse credit rationing across SMEs in Saudi Arabia and the reasons for their low access to bank finance. It investigates whether certain factors – e.g. the "Kafalah" programme, engagement in inter-firm relationships, and engagement in innovation or exporting activities – could improve access to bank financing. After some general questions about your enterprise and yourself, the questionnaire asks about sources of finance utilised and the experience you had in dealing with lenders, if applicable. The questionnaire is also concerned with the enterprise's operations. The survey should take approximately 15-20 minutes.

**Do I have to take part?** Participation is entirely voluntary. You have the right to withdraw at any time without providing a reason.

**Will my participation be anonymous and confidential?** You will not be asked to provide your name or your enterprise's name. All information provided will be anonymised and treated with confidentiality. No information will be disclosed to any third party.

The survey is for academic purposes and may be published in academic journals. Data will be archived securely for 10 years for reuse in future research according to University of Glasgow Guidelines.

Please note that assurances on confidentiality will be strictly adhered to unless evidence of potential harm is uncovered.

**Who can I contact for more information?** Should you require information, please contact me at 2365418m@student.gla.ac.uk, or my supervisor Dr. Alberto Paloni at Alberto.Paloni@glasgow.ac.uk. If you have concerns regarding the project, please contact the Ethics Officer, Dr. Muir Houston, at Muir.Houston@glasgow.ac.uk.

I would be most grateful if you could spare time from your busy schedule to complete this questionnaire.

Sincerely,

Rawaa Muhandes

- I agree to take part in this study.
- I do not agree to take part in this study.



**Start of Block: A. Enterprise Characteristics**

Q1 Is your enterprise formally registered?

- Yes.
- No.

*Skip To: End of Survey If Is your enterprise formally registered? = No.*

Q2 What year did the business start? \_\_\_\_\_

Q3 Which best describes your core business activity?

- Manufacturing.
- Personal services (e.g. beauty salons and restaurants).
- Professional services (e.g. financial services, consulting, business services).
- Logistics services.
- Agriculture.
- Education.
- Healthcare.
- Wholesale and retail trade.
- Construction and home repair.
- Hospitality (e.g. hotels).
- Other (please specify) \_\_\_\_\_

Q4 Where in Saudi Arabia is your enterprise located?

- Western region.
- Central region.
- Eastern region.
- Southern region.
- Northern region.

Q5 What is the legal status of your enterprise?

- Individual establishment.
- Single-owner limited liability company.
- Limited liability company.
- Limited partnership.
- Subsidiary of a holding company.
- Other (please specify) \_\_\_\_\_

Q6 What is the estimated total annual revenue of your enterprise?

- Less than SR3 million.
- From SR3 million to SR40 million.
- From SR40 million to SR200 million.

Q7 What is the **current** total number of paid employees (full or part time) in your enterprise?

\_\_\_\_\_

Q8 What **was** the total number of paid employees (full or part time) **five years ago**: in 2014 (or at start-up if more recent)? \_\_\_\_\_

Q9 During the **next 3 years**, do you intend to: *(Check all that apply.)*

- Significantly increase production/service levels.
- Open new locations.
- Introduce new goods/services.
- Maintain the same business size.
- Downsize the business.

#### **Start of Block: B. Characteristics of Entrepreneur**

Q1 How many founders of the enterprise? \_\_\_\_\_

Q2 What is your gender?  male.  Female.

Q3 What is your age group?  Below 30  Between 30 and 50.  Above 50.

Q4 What is your **highest** level of education?

- High school.
- Bachelor's degree.
- Postgraduate degree.
- Other (please specify) \_\_\_\_\_

Q5 What was your **previous** occupation?

- Owned another SME.
- Employee in the public sector.
- Employee in the private sector.
- Student.
- Other (please specify) \_\_\_\_\_

**Start of Block: C.1. Sources and Uses of Funds**

Q1 How did you finance your enterprise at start-up? *(Check all that apply.)*

- Personal savings.
- Relatives or friends.
- Bank business loan.
- Bank personal loan.
- Government funds (please specify): \_\_\_\_\_
- Equity financing by angel investors/venture capitalists.
- Other (please specify): \_\_\_\_\_

Q2 What sources of finance do you use to run your business? *(Check all that apply.)*

- Own savings.
- Relatives or friends.
- Previous profits.
- Purchases on credit from suppliers and advances from customers.
- Bank business loan.
- Bank personal loan.
- Leasing through banks.
- Government funds (please specify): \_\_\_\_\_
- Other (please specify): \_\_\_\_\_

Q3 Should your enterprise need **external finance in future**, what source(s) would you **prefer**? *(Check all that apply.)*

- Conventional bank financing.
- Sharia-compliant bank financing.
- Government funds.
- Loan from family or friends.
- Equity financing by angle investors /venture capitalists.
- Other (please specify) \_\_\_\_\_
- I prefer not to use external finance.

**Start of Block: C.2. Screening**

Q1 Have you ever applied for bank finance for business purposes?

- Yes.
- No.

*If "Yes", skip to Q2. If "No", skip to Q3*

Q2 Was your application for bank finance through "Kafalah" programme?

- Yes.
- No.

Q3 Have you heard of "Kafalah" programme?

- Yes.  No.

**Start of Block: C.3. Entrepreneurs without Bank Loans**

Q1 Do you have a **close** relationship with the bank: repeated interactions with the bank's employee for a long time; so that he knows you and your business **very well**?

- Yes.  
 No.

Q2 Do you use **fee-based non-lending** products/services from banks (e.g. collection of receivables, payroll services, etc)?

- Yes.  
 No.

Q4 If you did **not** apply for bank financing, what were the **main** reasons? (*Please assign a number to **rank the main reasons only** in order of importance from 1 where 1 is the most important*)

- \_\_\_\_\_ Debt covenants might result in bank's involvement in the decision making. (2)  
\_\_\_\_\_ Bank loans involve high risk of losing personal assets. (3)  
\_\_\_\_\_ I did not think my application would be successful. (4)  
\_\_\_\_\_ Religious and cultural reasons. (5)  
\_\_\_\_\_ There are no current needs for external finance. (6)  
\_\_\_\_\_ Other sources of finance are available if needed. (7)  
\_\_\_\_\_ To avoid indebtedness. (8)  
\_\_\_\_\_ Complexity of application / the long duration of the process. (9)  
\_\_\_\_\_ Interest rates are not favourable. (10)  
\_\_\_\_\_ Loan terms are too short. (11)  
\_\_\_\_\_ Collateral requirements are too high. (12)  
\_\_\_\_\_ Other reasons (please specify) (13)  
\_\_\_\_\_ Limited experience in dealing with banks and the financial services provided. (14)

Q5 Do you think having a unit for SMEs banking within banks would make it easier for your enterprise to obtain bank financing?

- Yes (please explain) \_\_\_\_\_  
 No (please explain) \_\_\_\_\_  
 I do not know.

**Start of Block: C.4. Government Credit Guarantee Scheme “Kafalah”**

Q1 How many times did you **apply** for bank financing through the “Kafalah” programme? \_\_\_\_\_

Q2 How many times did you **obtain** bank financing through the “Kafalah” programme? \_\_\_\_\_

Q3 Referring to your **most recent** application for bank financing through “Kafalah”, what was the **main** purpose?

- Starting up the business.
- Fixed asset investment.
- Working capital.
- Other (please specify): \_\_\_\_\_

Q4 What type of financing did you request in that application? (Check all that apply.)

- Conventional short-term loan.
- Conventional medium- or long-term loan.
- Short-term Sharia-compliant loan.
- Medium- or long-term Sharia-compliant loan.
- Line of credit.
- Overdraft.
- Business credit card.
- Leasing.
- Other (please specify): \_\_\_\_\_

Q5 In what year was that application? \_\_\_\_\_

Q6 What was the outcome of that **most recent** application?

- I was given the amount I requested.
- I was given less than the amount I requested.
- My loan application was turned down.

*Skip To: Q8 If What was the outcome of that application? = I was given the amount I requested. Skip To: Block C.6. If What was the outcome of that application? = My loan application was turned down*

Q7 If you did not obtain the amount requested, what reasons did the bank provide? (Check all that apply.)

- Insufficient collateral.
- No credit history.
- The business/project was considered unprofitable.
- High risk of the project.
- Insufficient track record.
- Your business/project is not guaranteed by the (Kafalah) programme.
- Low credit scoring at the Credit Bureau (SIMAH).
- Other reasons (please specify): \_\_\_\_\_

Q8 What type of collateral did you provide in that application? (Check all that apply)

- I was not required to provide collateral (please explain why) \_\_\_\_\_
- Land, building under the establishment's ownership.
- Machinery and equipment.
- Personal assets (e.g. house).
- Other (please specify) \_\_\_\_\_

Q9 How did you apply for financing **through** "Kafalah" program?

- The bank advised me.
- I asked the bank for financing through "Kafalah".

Q10 Why did the bank advise you to apply through "Kafalah"? (check all that apply)

- Insufficient collateral.
- Insufficient track record.
- High risk of the project.
- Low credit scoring at the Credit Bureau (SIMAH).
- Other reasons (please specify) \_\_\_\_\_

Q11 After obtaining bank finance through "Kafalah":(A) the annual revenue of your enterprise has:

- Increased by 1- 5%.
- Increased by 6 - 10 %.
- Increased by more than 10%.
- Not changed.
- Decreased (please explain) \_\_\_\_\_
- It is too early to say.

Q12 (B) employment in your enterprise has:

- Increased by 1-5 employees.
- Increased by 6- 10 employees.
- Increased by more than 10 employees.
- Not changed.
- Decreased (please explain) \_\_\_\_\_
- It is too early to say.

Q13 How would your enterprise have developed **without** “Kafalah” program?

- It would have developed as it did.
- It would not have developed as much as it did.
- It would have contracted or shut down.
- I do not know.

Q14 **After** obtaining finance through “Kafalah”, did you get **additional** financing from banks **without** “Kafalah” program?

- Yes, I obtained additional bank financing without "Kafalah" program.
- No, banks declined to provide additional financing without “Kafalah” program.
- No, I have not applied for additional financing without "Kafalah" program.

Q15 If “Kafalah” program was **not** available, do you think the bank would have agreed to your request for financing?

- Yes.
- No.
- I do not know.

Q16 If “Kafalah” program was **not** available, would you have been able to raise the **same amount** of financing from alternative sources?

- Yes, I would have raised the same amount.
- No, I would have raised a lower amount.
- No, I would not have been able to raise any financing.
- I do not know.

Q17 “Kafalah” program allowed me to borrow at lower interest rates and longer maturities:

- Yes.
- No.
- I do not know.

Q18 **After** using bank finance **through** "Kafalah", my enterprise has own market share from:  
(check all that apply)

- Competitor firms within same region.
- Saudi firms from outside the region.
- International firms.
- It is too early to say.

Q19 **After** receiving finance **through** "Kafalah," are you required to provide information about your business to the bank (e.g. annual accounts, business assessment, capital budgeting, etc.)?

- Yes, on quarterly basis.
- Yes, on bi-annual basis.
- Yes, on annual basis.
- Other (please specify) \_\_\_\_\_
- I am not required to provide information on a regular basis.

**Start of Block: C.5. Bank Financing without the Government Credit Guarantee Scheme "Kafalah"**

Q1 How many times have you applied for bank financing **without** "Kafalah" program?  
\_\_\_\_\_

Q2 How many times have you succeeded in obtaining bank financing? \_\_\_\_\_

Q3 Referring to the most **recent** application for bank financing, what was the **main** purpose?

- Starting up the business.
- Fixed asset investment.
- Working capital.
- Other (please specify) \_\_\_\_\_

Q4 What type of financing did you request in that application? (Check all that apply)

- Conventional short-term loan.
- Conventional medium-long term loan.
- Short-term Sharia compliant loan.
- Medium- long-term Sharia compliant loan.
- Line of credit.
- Overdraft.
- Business credit card.
- Leasing.
- Other (please specify) \_\_\_\_\_



Q5 In what year was that application? \_\_\_\_\_

Q6 What was the outcome of that application?

- I was given the amount I requested.
- I was given less than the amount I requested.
- My application was turned down.

*Skip To: Q8 If What was the outcome of that application? = I was given the amount I requested. Skip To: Block C.6. If What was the outcome of that application? = My loan application was turned down*

Q7 If you did **not** obtain the amount requested, what reasons did the bank provide? (*Check all that apply*)

- Insufficient collateral.
- No credit history.
- The business/project was considered unprofitable.
- High risk of the project.
- Insufficient track record.
- Your business/project is not guaranteed by (Kafalah) program.
- Low credit scoring at the Credit Bureau (SIMAH).
- Other reasons (please specify) \_\_\_\_\_

Q8 What type of collateral did you provide in that application? (*Check all that apply*)

I was not required to provide collateral (please explain why)

- Land, building under the establishment's ownership.
- Machinery and equipment.
- Personal assets (e.g. house).
- Other (please specify) \_\_\_\_\_

Q9 After obtaining bank financing:(A) the annual revenue of your enterprise has:

- Increased by 1- 5 %.
- Increased by 6- 10 %.
- Increased by more than 10%.
- Not changed.
- Decreased (please explain) \_\_\_\_\_
- It is too early to say.

Q10 (B) employment in your enterprise has:

- Increased by 1-5 employees.
- Increased by 6- 10 employees.
- Increased by more than 10 employees.
- Not changed.
- Decreased (please explain) \_\_\_\_\_
- It is too early to say. (8)

Q11 How would your enterprise have developed **without** bank financing?

- It would have developed as it did.
- It would not have developed as much as it did.
- It would have contracted or shut down.
- I do not know.

Q12 **After** receiving bank financing, are you required to provide information about your business to the bank (e.g. annual accounts, business assessment, capital budgeting etc.)?

- Yes, on quarterly basis.
- Yes, on bi-annual basis.
- Yes, on annual basis.
- Other (please specify) \_\_\_\_\_
- I am not required to provide information on a regular basis.

#### **Start of Block: C.6. Applicant-Bank Relationship**

Q1 Do you have a **close** relationship with the bank: repeated interactions with the bank's employee for a long time; so that he knows you and your business **very well**?

- Yes, prior my application.
- Yes, after my application.
- Yes, prior and after my application.
- No, I do not have such a relationship.

Q2 Do you use **fee-based non-lending** products/services from banks (e.g. collection of receivables, payroll services, etc)?

- Yes, prior my application.
- Yes, after my application.
- Yes, before and after my application.
- No.

Q3 Do you think having a unit for SMEs banking within banks has make it easier for your enterprise to obtain bank financing?

- Yes (please explain) \_\_\_\_\_
- No (please explain) \_\_\_\_\_
- I do not know.

*Display The following Questions: If What was the outcome of that application? = My loan application was turned down.*

Q5 If your application was **rejected**, what reasons did the bank provide? (Check all that apply)

- Insufficient collateral.
- No credit history.
- The business/project was considered unprofitable.
- High risk of the project.
- Insufficient track record.
- Your business/project is not guaranteed by (Kafalah) program.
- Low credit scoring at the Credit Bureau (SIMAH).
- Other reasons (please specify)

Q6 Did you offer the bank to pay higher interest rate to obtain financing?

- Yes, but the bank still refused.
- No, I did not.

#### **Start of Block: D.1. Inter-Firm Relationships**

Q1 Are you involved in any of the following types of inter-firm relationships? (Check all that apply)

- Subcontracting relationship with other firms.
- Raw materials/inputs supply relationship.
- Franchisor or franchisee.
- Joint venture.
- Co-operation in manufacturing activities.
- Co-operation in marketing/distribution activities.
- Problem solving and technology development.
- Other (please specify) \_\_\_\_\_
- I am not involved in any inter-firm relationship.

*Skip To: End of Block If Are you NOT involved in any of these types of inter-firm relationships?*

Q2 What type of firms are you involved with? (Check all that apply)

- Large domestic firm(s): more than 250 employees or sales exceeding SR200 million.
- Medium domestic firm(s): 50 -249 employees or sales SR40 million - SR200 million.
- Small domestic firm(s): 6 -49 employees or sales SR3 million - SR40 million.
- Foreign corporation(s).
- Public sector organisation(s).

Q3 For how long have you been involved in inter-firm relationships?

- Less than 1 year.
- 1-5 years.
- More than 5 years.

Q4 Do you think bank financing facilitated your enterprise's involvement in inter-firm relationships? (Check all that apply)

- Yes (please explain) \_\_\_\_\_
- No, other sources of external finance were more important in facilitating inter-firm relationships (please specify those sources) \_\_\_\_\_
- No, internal finance (e.g., previous profits) was more important in facilitating inter-firm relationships.
- I do not know.

Q5 Did your involvement in inter-firm relationships strengthen your enterprise's ability to obtain bank financing?

- Yes, the bank took this into consideration when evaluating my application (please explain) \_\_\_\_\_
- No, the bank did not take this into consideration (please explain) \_\_\_\_\_
- Most probably yes, but I have not applied for banks.
- Most probably no, but I have not applied for banks.

**Start of Block: D.2. Firm's Innovation**

Q1 During the **last three** years, did your enterprise introduce **new** or **significantly** improved **product(s) or service(s)**?

Examples: a factory used to produce bar soap introduces liquid soap or a restaurant introducing a new menu with food for diabetics.

- Yes.
- No.

Q2 During the **last three** years, did your enterprise introduce **new** or **significantly** improved **processes** of manufacturing products/offering services? **including** new delivery or distribution methods.

Examples: a factory introducing new automation equipment for work previously done by hand or a restaurant beginning to use electronic records billing.

- Yes.
- No.

*Display the following two Questions:*

*If during the last three years, did your enterprise introduce new or significantly improved product (... = Yes.*

*Or during the last three years, did your enterprise introduce new or significantly improved processes... = Yes.*

Q3 Do you think bank financing facilitated your enterprise's ability to innovate? *(Check all that apply)*

- Yes (please explain) \_\_\_\_\_
- No, other sources of external finance were more important in facilitating innovation (please specify those sources) \_\_\_\_\_
- No, internal finance (e.g., previous profits) was more important in facilitating innovation.
- I do not know.

Q4 Did such innovation activities strengthen your enterprise's ability to obtain bank financing?

- Yes, the bank took this into consideration when evaluating my application (please explain)
- No, the bank did not take this into consideration (please explain) \_\_\_\_\_
- Most probably yes, but I have not applied for banks.
- Most probably no, but I have not applied for banks.

**Start of Block: D.3. Exporting Activities**

Q1 Does your enterprise directly or indirectly export? (indirect exports are products sold domestically to a third party that exports them)

- Yes.
- No.

*Skip To: End of Survey If Does your enterprise directly or indirectly export? (indirect exports are products sold domestica... = No.*

Q2 Do you think bank financing facilitated your enterprise's ability to export? (Check all that apply)

- Yes (please explain) \_\_\_\_\_
- No, other sources of external finance were more important in facilitating exporting (please specify those sources) \_\_\_\_\_
- No, internal finance (e.g., previous profits) was more important in facilitating exporting.
- I do not know.

Q3 Did your exporting activity strengthen your enterprise's ability to obtain bank financing?

- Yes, the bank took this into consideration when evaluating my application (please explain) \_\_\_\_\_
- No, the bank did not take this into consideration (please explain) \_\_\_\_\_
- Most probably yes, but I have not applied for banks.
- Most probably no, but I have not applied for banks.

THANK YOU FOR YOUR COOPERATION AND PRECIOUS TIME

## Appendix 3.B: Questionnaire survey in Arabic

تفاصيل الباحث: رواء مهندس طالبة دكتوراه سعودية في كلية آدم سميث للأعمال، جامعة جلاسكو، المملكة المتحدة.  
عنوان الدراسة: تحليل التقنيين الائتماني على أنواع مختلفة من المنشآت الصغيرة والمتوسطة في المملكة العربية السعودية.  
الغرض من الدراسة:

هذا الاستبيان يهدف إلى تحليل مصادر التمويل المستخدمة في المنشآت الصغيرة والمتوسطة (SMEs) في المملكة العربية السعودية. يركز الاستبيان على التمويل البنكي وأسباب انخفاض استخدامه من قبل هذه المنشآت ويبحث أيضًا عن تأثير بعض العوامل (مثل برنامج "كفالة" الحكومي أو المشاركة في العلاقات الداخلية بين الشركات أو في أنشطة الابتكار أو التصدير) في تحسين الوصول إلى التمويل البنكي.

يتضمن الاستبيان بعض الأسئلة العامة حول مؤسس وطبيعة المنشأة، ويبحث في مصادر التمويل المستخدمة ونوع التجارب مع المقرضين إن وجد. هناك أيضًا أسئلة حول عمليات المنشأة مثل المشاركة في العلاقات الداخلية بين الشركات والابتكارات وأنشطة التصدير إن وجد. يتكون الاستبيان من أسئلة مغلقة ويستغرق 20-30 دقيقة تقريبًا.

هل يجب علي المشاركة؟

المشاركة تطوعية تمامًا، ولديك الحق في الانسحاب في أي وقت دون تقديم سبب، ويكون ذلك من خلال عدم إعادة الاستبيان الورقي، بالنسبة للإلكترونية يمكنك ببساطة إغلاق المتصفح حيث لن يتم تسجيل بياناتك.

هل ستكون مشاركتي مجهولة وسريّة؟

لن يُطلب منك تقديم اسمك أو اسم منشأتك وسيتم التعامل مع جميع البيانات بأكبر قدر من السرية ولن يتم كشفها لأي طرف ثالث.

جميع المعلومات ستكون مجهولة المصدر وستستخدم للأغراض الأكاديمية فقط ويمكن نشرها في المجالات الأكاديمية، وسيتم أرشفتها بشكل آمن وسري لمدة 10 سنوات لإعادة استخدامها في الأبحاث المستقبلية وفقًا لإرشادات إدارة البيانات بجامعة جلاسكو.

يرجى ملاحظة أنه سيتم الالتزام الصارم بضمانات السرية ما لم يتم اكتشاف دليل على ارتكاب أي ضرر محتمل في مثل هذه الحالات قد تكون الجامعة ملزمة بالاتصال بالهيئات القانونية ذات الصلة.

يمن يمكنني الاتصال لمزيد من المعلومات؟

إذا كنت بحاجة إلى أي معلومات فالرجاء عدم التردد في الاتصال بي على 2365418m@student.gla.ac.uk أو على مشرف البحث الدكتور البيروتو بالوني على Alberto.Paloni@glasgow.ac.uk

إذا كانت لديك مخاوف بشأن هذا الاستبيان فيرجى الاتصال بمسؤول أخلاقيات كلية العلوم الاجتماعية الدكتور موير هيوستن على Muir.Houston@glasgow.ac.uk

سأكون ممتنة للغاية لو تفضلتم بتخصيص الوقت من جدول أعمالكم المزدحم لاستكمال هذا الاستبيان وإعادته في أقرب وقت ممكن. مقدرة لك وقتك ودعمك.

تحياتي،

أوافق على المشاركة في هذه الدراسة البحثية.

لا أوافق على المشاركة في هذه الدراسة البحثية.

أ. خصائص المنشأة:

1. هل منشأتك مسجلة بشكل رسمي؟

نعم.

لا.

2. في أي عام بدأت المنشأة نشاطها؟ .....

3. ما هو أفضل وصف للنشاط التجاري الأساسي لمنشأتك؟

الصناعة.

الخدمات الشخصية (مثل صالونات التجميل و المطاعم)

الخدمات المهنية (مثل الخدمات المالية ، الاستثمارات و خدمات الأعمال).

الخدمات اللوجستية.

الزراعة.

التعليم.

الرعاية الصحية.

تجارة الجملة والتجزئة.

البناء وإصلاح المنازل.

الضيافة (مثل الفنادق).

غير ذلك (يرجى التحديد) .....

4. في أي من مناطق المملكة العربية السعودية تقع منشأتك؟

المنطقة الغربية.

المنطقة الوسطى.

المنطقة الشرقية.

المنطقة الجنوبية.

المنطقة الشمالية.

5. ما هو الكيان القانوني للمنشأة؟

مؤسسة فردية.

شركة الشخص الواحد ذات المسؤولية المحدودة.

شركة ذات مسؤوليه محدودة.

شركة تضامنيه.

شركة تضامنيه محدودة.

شركة ذات مسؤولية محدودة مختلطة.

منشأة تابعه لشركة قابضة.

غير ذلك (يرجى التحديد) .....



6. بالرجوع إلى آخر سنة مالية لديك، ما هو إجمالي الإيرادات التقديرية لمنشأتك؟

- أقل من 3 مليون ريال سعودي.  
 من 3 مليون ريال سعودي إلى 40 مليون ريال سعودي.  
 من 40 مليون ريال سعودي إلى 200 مليون ريال سعودي.

7. ما هو العدد الإجمالي الحالي للموظفين بأجر (بدوام كامل وبدوام جزئي) في منشأتك: \_\_\_\_\_.

8. كم كان إجمالي عدد الموظفين بأجر (بدوام كامل وبدوام جزئي) في منشأتك قبل خمس سنوات، أي في عام 2014 (أو عند التأسيس إذا كانت المنشأة أكثر حداثة): \_\_\_\_\_.

9. خلال السنوات الثلاث القادمة هل تنوي القيام ب: (اختر كل ما ينطبق)

- زيادة كبيرة في مستويات الإنتاج أو الخدمات.  
 فتح مواقع جديدة للمنشأة.  
 تقديم سلع أو خدمات جديدة.  
 الإبقاء على حجم المنشأة وعملياتها التجارية كما هو.  
 تقليص حجم العمل.

**ب- مواصفات صاحب المنشأة:**

1. كم عدد مؤسسي المنشأة: \_\_\_\_\_.

2. يرجى تحديد جنسك:

- ذكر.  
 أنثى.

3. يرجى تحديد فننك العمرية:

- أقل من 30.  
 بين 30 و 50.  
 فوق 50.

4. يرجى تحديد أعلى مستوى تعليمي لديك:

- المرحلة الثانوية.
- درجة البكالوريوس.
- شهادة عليا.
- دبلوم مهني.
- غير ذلك (يرجى التحديد) \_\_\_\_\_.

5. يرجى تحديد مهنتك السابقة:

- مالك لمنشأة صغيرة أو متوسطة أخرى.
- موظف براتب في القطاع العام.
- موظف براتب في القطاع الخاص.
- طالب.
- غير ذلك (يرجى التحديد) \_\_\_\_\_.

ج- مصادر التمويل وشروط التمويل:

ج.1. مصادر واستخدامات الأموال

1. ما هو مصدر أو مصادر التمويل التي حصلت عليها لتأسيس منشأتك؟ (اختر كل ما ينطبق)

- مدخرات شخصية.
- الأقارب أو الأصدقاء.
- قرض بنكي تقليدي.
- قرض بنكي متوافق مع الشريعة الإسلامية.
- بطاقة (بطاقات) الائتمان الشخصية.
- بطاقة (بطاقات) ائتمان تجارية.
- الاستثمار المقدم من المستثمرين الملائكيين أو أصحاب رأس المال الجريء.
- الائتمان التجاري (Trade Credit).
- قرض من مؤسسات أو صناديق حكومية (يرجى التحديد) \_\_\_\_\_.
- غير ذلك (يرجى التحديد) \_\_\_\_\_.

2. ما هي مصادر التمويل التي تستخدمها لتشغيل منشأتك؟ (اختر كل ما ينطبق)

- مدخرات شخصية.
- الأقارب أو الأصدقاء.
- قرض بنكي تقليدي.
- قرض بنكي متوافق مع الشريعة الإسلامية.
- الاستثمار المقدم من المستثمرين الملائكيين أو أصحاب رأس المال الجريء.
- التأجير.
- المشتريات على الحساب من الموردين ودفعات مقدمة من العملاء.
- قرض من مؤسسات أو صناديق حكومية (يرجى التحديد) \_\_\_\_\_.
- غير ذلك (يرجى التحديد) \_\_\_\_\_.

3. إذا احتجت إلى تمويل خارجي لمنشأتك في المستقبل، ما هو مصدر أو مصادر التمويل الخارجية الذي تفضلها؟  
(اختر كل ما ينطبق)

- التمويل البنكي التقليدي.
- التمويل البنكي المتوافق مع الشريعة الإسلامية.
- تمويل المؤسسات أو الصناديق الحكومية المختصة.
- قرض من الأسرة أو الأصدقاء.
- تمويل عن طريق الاستثمار المقدم من المستثمرين الملائكيين أو أصحاب رأس المال الجريء.
- أفضل عدم استخدام التمويل الخارجي.
- غير ذلك (يرجى التحديد) \_\_\_\_\_.

### ج.2. التمويل البنكي

1. هل سبق لمنشأتك التقدم بطلب للحصول على تمويل تجاري من البنوك؟

- نعم .
- لا.

[إذا كانت الإجابة "لا"، الرجاء الانتقال الى السؤال رقم 3]

2. هل كان طلبك للتمويل البنكي من خلال برنامج "كفالة"؟

- نعم.
- لا.

[إذا كانت الإجابة "نعم"، الرجاء الانتقال الى القسم ج.5.]

3. هل سمعت عن برنامج "كفالة"؟

- نعم.
- لا.

### ج.3. المنشآت الغير مستخدمة للتمويل البنكي

1. هل لديك علاقة وطيدة مع البنك: أي تعامل متكرر مع موظف البنك لمدة طويلة؛ بحيث أن الموظف يعرفك و يعرف أعمالك عن قرب؟

- نعم.
- لا.

2. هل تستخدم أيًا من منتجات وخدمات البنك المالية الغير اقرضية والقائمة على الرسوم (مثل تحصيل المستحقات وخدمات كشوف المرتبات والمدفوعات للموردين والجهات الخارجية، إلخ)؟

- نعم.
- لا.

3. هل تعتقد أن وجود قسم لمصرفية المنشآت الصغيرة و المتوسطة في البنوك قد يسهل على منشأتك الحصول على التمويل البنكي؟

- نعم (يرجى التوضيح) \_\_\_\_\_
- لا (يرجى التوضيح) \_\_\_\_\_
- لا أعرف.

4. إذا لم تتقدم بطلب للحصول على تمويل بنكي تجاري، فما هي أهم الأسباب الرئيسية؟
- شروط الفروض قد تؤدي إلى مشاركة البنك في اتخاذ القرارات في المنشأة.
- تشتمل الفروض البنكية على مخاطر عالية قد تعرض الأصول الشخصية لفقدانها لصالح البنك.
- لم أعتقد أن طلبتي للتمويل البنكي التجاري سيكون ناجحاً.
- أسباب دينية وثقافية.
- لا توجد احتياجات حالية للتمويل الخارجي.
- وجود مصادر تمويلية بديلة في حال الحاجة إلى التمويل.
- عدم تحبب فكرة الدين.
- تعقيد طلب الحصول على تمويل بنكي تجاري أو طول المدة التي تستغرقها العملية.
- أسعار الفائدة مرتفعة.
- آجال الفروض قصيرة للغاية.
- متطلبات الضمان مرتفعة للغاية.
- خبرتي محدودة في التعامل مع البنوك وأشكال الخدمات المالية المقدمة.
- أسباب أخرى (يرجى التحديد): \_\_\_\_\_.

#### ج.4. التمويل البنكي بدون برنامج الدعم الحكومي "كفالة"

1. كم مرة تقدمت بطلب للحصول على تمويل بنكي تجاري بدون برنامج الدعم الحكومي "كفالة"؟

\_\_\_\_\_

2. كم مرة نجحت في طلبك للحصول على تمويل بنكي تجاري بدون برنامج الدعم الحكومي "كفالة"؟

\_\_\_\_\_

3. بالنسبة إلى آخر طلب تقدمت به للحصول على قرض بنكي تجاري بدون برنامج الدعم الحكومي "كفالة"، ماذا كان الغرض الرئيسي لهذا الطلب؟

- تأسيس المنشأة.
- تمويل أصول ثابتة.
- تمويل رأس المال العامل.
- غير ذلك (يرجى التحديد) \_\_\_\_\_.

4. بالنسبة إلى آخر طلب تقدمت به للحصول على قرض بنكي تجاري بدون برنامج الدعم الحكومي "كفالة"، ما هو نوع التمويل البنكي الذي طلبته؟ (اختر كل ما ينطبق)
- قرض تقليدي قصير الأجل.
- قرض تقليدي متوسط إلى طويل الأجل.
- قرض قصير الأجل متوافق مع الشريعة الإسلامية (يرجى تحديد ذلك على سبيل المثال المراجعة)
- قرض متوسط إلى طويل الأجل متوافق مع الشريعة الإسلامية (يرجى التحديد) .
- حد التسهيلات الائتمانية (line of credit).
- تسهيلات السحب على المكشوف (Overdraft).
- تمويل الذمم المدينة ( Account receivable financing ).
- بطاقة ائتمان تجارية ( Business credit card ).
- التأجير.
- تمويل التجارة الدولية.
- غير ذلك (يرجى التحديد) .

5. بالنسبة إلى آخر طلب تقدمت به للحصول على قرض بنكي تجاري بدون برنامج الدعم الحكومي "كفالة"، في أي عام تقدمت بهذا الطلب؟

6. بالنسبة إلى آخر طلب تقدمت به للحصول على قرض بنكي تجاري بدون برنامج الدعم الحكومي "كفالة"، ماذا كانت نتيجة هذا الطلب؟

- حصلت على المبلغ الذي طلبته.
- حصلت على أقل من المبلغ الذي طلبته.
- تم رفض طلبي.

[إذا كانت الإجابة "حصلت على المبلغ الذي طلبته"، الرجاء الانتقال إلى السؤال رقم 8]

7. إذا لم تحصل على المبلغ المطلوب أو إذا تم رفض طلبك، ما الأسباب التي قدمها البنك؟ (اختر كل ما ينطبق)

- عدم وجود ضمان كافي (collateral)
- عدم وجود تاريخ ائتماني (credit history)
- البنك اعتبر المنشأة أو المشروع غير مربح أو غير قابل للتطبيق.
- مخاطر المشروع عالية.
- عدم وجود معلومات مالية كافية.
- عدم وجود سجلات كافية للعمليات السابقة للمنشأة (track record).
- المنشأة أو المشروع غير مضمون ببرنامج الدعم الحكومي (كفالة).
- لأن التقييم الائتماني منخفض لدى جهة المعلومات الائتمانية السعودية (سمة).
- لأن المنشأة تحت التأسيس.
- أسباب أخرى (يرجى التحديد) .
- البنك لم يعط أي سبب.

[إذا "تم رفض طلبك"، الرجاء الانتقال إلى السؤال القسم ج.6]

8. بالنسبة إلى آجر طلب تقدمت به للحصول على قرض بنكي تجاري بدون برنامج الدعم الحكومي "كفالة"، أي من أنواع الضمانات التالية قمت بتقديمه؟ (اختر كل ما ينطبق)

- أرض أو مباني تحت ملكية المنشأة.  
 آلات ومعدات.  
 أصول شخصية (مثل المنزل).  
 غير ذلك (يرجى التحديد) \_\_\_\_\_.  
 لم يكن مطلوباً مني تقديم ضمان (يرجى توضيح السبب) \_\_\_\_\_.

9. بعد الحصول على تمويل بنكي تجاري بدون برنامج الدعم الحكومي "كفالة"، الإيرادات السنوية لمنشأتك:

- زادت بنسبة 1-5 في المئة.  
 زادت بنسبة 6-10 في المئة.  
 زادت بنسبة 11-15 في المئة.  
 زادت بنسبة 16-20 في المئة.  
 زادت بأكثر من 20 في المئة.  
 لم تتغير.  
 انخفضت (يرجى التوضيح) \_\_\_\_\_.  
 لا يزال الوقت مبكر لتحديد مثل هذا التغيير.

10. بعد الحصول على تمويل بنكي تجاري بدون برنامج الدعم الحكومي "كفالة"، مستوى التوظيف لمنشأتك:

- زاد بي 1-5 موظفين.  
 زاد بي 6-10 موظفين.  
 زاد بي 11-15 موظفين.  
 زاد بي 16-20 موظفين.  
 زاد بأكثر من 20 موظف.  
 لم يتغير.  
 انخفضت (يرجى التوضيح) \_\_\_\_\_.  
 لا يزال الوقت مبكر لتحديد مثل هذا التغيير.

11. هل تعتقد أن منشأتك كانت ستتطور بنفس القدر التي عليه الآن في حال لم تحصل على تمويل بنكي تجاري بدون برنامج الدعم الحكومي "كفالة"؟

- نعم، كانت ستتطور منشأتني بنفس القدر التي عليه الآن.  
 لا، كانت ستتطور منشأتني بأقل من القدر التي عليه الآن.  
 كنت سأضطر إلى تقليص أو إغلاق المنشأة.  
 لا أعرف.

12. بعد استلام التمويل البنكي التجاري بدون برنامج الدعم الحكومي "كفالة"، هل أنت مطالب بتزويد البنك بمعلومات عن عملك (على سبيل المثال: الحسابات السنوية وتقييم الأعمال والميزانية الرأسمالية)؟

- نعم، على أساس شهري.  
 نعم، على أساس كل ثلاثة أشهر.  
 نعم، على أساس نصف سنوي.  
 نعم، على أساس سنوي.  
 غير ذلك (يرجى التحديد) \_\_\_\_\_.  
 لست ملزم ما بتقديم معلومات للبنك بشكل منتظم.

ج.5. التمويل البنكي من خلال برنامج الدعم الحكومي "كفالة"

1. كم مرة تقدمت بطلب للحصول على تمويل بنكي تجاري من خلال برنامج الدعم الحكومي "كفالة"؟

\_\_\_\_\_.

2. كم مرة تمكنت من الحصول على تمويل بنكي تجاري من خلال برنامج الدعم الحكومي "كفالة"؟

\_\_\_\_\_.

3. بالنسبة إلى آخر طلب تقدمت به للحصول على قرض بنكي تجاري من خلال برنامج الدعم الحكومي "كفالة"، ماذا كان الغرض الرئيسي لهذا الطلب؟

- تأسيس المنشأة.  
 تمويل أصول ثابتة.  
 تمويل رأس المال العامل.  
 غير ذلك (يرجى التحديد) \_\_\_\_\_.

4. بالنسبة إلى آخر طلب تقدمت به للحصول على قرض بنكي تجاري من خلال برنامج الدعم الحكومي "كفالة" ما هو نوع التمويل البنكي الذي طلبته؟ (اختر كل ما ينطبق)

- قرض تقليدي قصير الأجل.  
 قرض تقليدي متوسط إلى طويل الأجل.  
 قرض قصير الأجل متوافق مع الشريعة الإسلامية (يرجى تحديد ذلك على سبيل المثال المرابحة)  
 قرض متوسط إلى طويل الأجل متوافق مع الشريعة الإسلامية (يرجى التحديد) \_\_\_\_\_.  
 حد التسهيلات الائتمانية (line of credit).  
 تسهيلات السحب على المكشوف (Overdraft).  
 تمويل الذمم المدينة (Account receivable financing).  
 بطاقة ائتمان تجارية (Business credit card).  
 التأجير.  
 تمويل التجارة الدولية.  
 غير ذلك (يرجى التحديد) \_\_\_\_\_.

5. بالنسبة إلى آخر طلب تقدمت به للحصول على قرض بنكي تجاري من خلال برنامج الدعم الحكومي "كفالة"، في أي عام تقدمت بهذا الطلب؟ \_\_\_\_\_.

6. بالنسبة إلى آخر طلب تقدمت به للحصول على قرض بنكي تجاري من خلال برنامج الدعم الحكومي "كفالة"، ماذا كانت نتيجة هذا الطلب؟

- حصلت على المبلغ الذي طلبته.
- حصلت على أقل من المبلغ الذي طلبته.
- تم رفض طلبي.

[إذا كانت الإجابة "حصلت على المبلغ الذي طلبته"، الرجاء الانتقال إلى السؤال رقم 8]

7. إذا لم تحصل على المبلغ المطلوب أو إذا تم رفض طلبك، ما الأسباب التي قدمها البنك؟ (اختر كل ما ينطبق)

- عدم وجود ضمان كافي (collateral)
- عدم وجود تاريخ ائتماني (credit history)
- البنك اعتبر المنشأة أو المشروع غير مربح أو غير قابل للتطبيق.
- مخاطر المشروع عالية.
- عدم وجود معلومات مالية كافية.
- عدم وجود سجلات كافية للعمليات السابقة للمنشأة (track record).
- المنشأة أو المشروع غير مضمون ببرنامج الدعم الحكومي (كفالة).
- لأن التقييم الائتماني منخفض لدى جهة المعلومات الائتمانية السعودية (سمة).
- لأن المنشأة تحت التأسيس.
- البنك لم يعط أي سبب.
- أسباب أخرى (يرجى التحديد) \_\_\_\_\_.

[إذا "تم رفض طلبك"، الرجاء الانتقال إلى السؤال القسم ج.6]

8. بالنسبة إلى آخر طلب تقدمت به للحصول على قرض بنكي تجاري من خلال برنامج الدعم الحكومي "كفالة"، أي من أنواع الضمانات التالية قمت بتقديمها؟ (اختر كل ما ينطبق)

- أرض أو مباني تحت ملكية المنشأة.
- آلات ومعدات.
- أصول شخصية (مثل المنزل).
- غير ذلك (يرجى التحديد) \_\_\_\_\_.
- لم يكن مطلوباً مني تقديم ضمان (يرجى توضيح السبب) \_\_\_\_\_.

9. كيف تقدمت بطلب للحصول على تمويل بنكي من خلال برنامج الدعم الحكومي "كفالة"؟

- نصحتني البنك بذلك.
- طلبت أنا شخصياً من البنك تمويل عن طريق برنامج "كفالة".



10. لماذا نصحك البنك باستخدام برنامج "كفالة" ؟

- عدم وجود ضمان كافي (collateral).
- عدم وجود سجلات كافية للعمليات السابقة للمنشأة (track record).
- مخاطر المشروع عالية.
- لأن التقييم الائتماني منخفض لدى جهة المعلومات الائتمانية السعودية (سمة).
- البنك لم يعط أي سبب.
- غير ذلك (يرجى التحديد) \_\_\_\_\_.

11. بعد الحصول على التمويل البنكي من خلال برنامج "كفالة" (أ) كيف تأثرت مبيعاتك السنوية؟

- زادت بنسبة 1-5 في المئة.
- زادت بنسبة 6-10 في المئة.
- زادت بنسبة 11-15 في المئة.
- زادت بنسبة 16-20 في المئة.
- زادت بأكثر من 20 في المئة.
- لم تتغير.
- انخفضت (يرجى التوضيح) \_\_\_\_\_.
- لا يزال الوقت مبكر للتحديد.

12. كيف تأثر مستوى التوظيف في منشأتك؟

- زاد بي 1-5 موظفين.
- زاد بي 6-10 موظفين.
- زاد بي 11-15 موظفين.
- زاد بي 16-20 موظفين.
- زاد بأكثر من 20 موظف.
- لم يتغير.
- انخفض (يرجى التوضيح) \_\_\_\_\_.
- لا يزال الوقت مبكر للتحديد.

13. هل تعتقد أن منشأتك كانت ستتطور بنفس القدر التي عليه الآن بدون تمويل بنكي تجاري من خلال برنامج "كفالة"؟

- نعم، كانت ستتطور منشأتي بنفس القدر التي عليه الآن.
- لا، كانت ستتطور منشأتي بأقل من القدر التي عليه الآن.
- كنت سأضطر الى تقليص أو اغلاق المنشأة.
- لا أعرف.

14. بعد الحصول على تمويل بنكي من خلال "كفالة"، هل حصلت على أي تمويل إضافي من البنوك بدون "كفالة"؟

- نعم، حصلت على تمويل إضافي بدون البرنامج .
- لا، رفضت البنوك تقديم تمويل إضافي بدون البرنامج .
- لا، لم أقدم بطلب للحصول على تمويل إضافي بدون البرنامج .

15. هل تعتقد أن البنك كان سيوافق على طلبك للتمويل إذا لم يكن برنامج "كفالة" موجوداً؟  
 نعم.  
 لا.  
 لا أعرف.

16. في حال لم يكن برنامج "كفالة" موجوداً، هل تعتقد أنه كان بإمكانك الحصول على نفس مبلغ التمويل البنكي الذي حصلت عليه من خلال برنامج "كفالة"؟  
 نعم، كنت سأحصل على نفس المبلغ من مصادر تمويل بديلة.  
 لا، كنت سأحصل على مبلغ أقل من مصادر تمويل بديلة.  
 لا، لم أكن لأتمكن من الحصول على أي تمويل.  
 لا أعرف

17. هل ساعدك برنامج "كفالة" على الاقتراض بأسعار فائدة منخفضة ولأجل أطول؟  
 نعم.  
 لا.  
 لا أعرف.

18. بعد استخدام برنامج "كفالة" هل كسبت منشآتك حصه سوقيه من منشآت مثل:  
 شركات سعودية من خارج المنطقة.  
 شركات سعودية من داخل المنطقة.  
 شركات دولية.  
 لا يزال الوقت مبكر للتحديد.

19. بعد استلام التمويل من خلال برنامج "كفالة"، هل أنت مطالب بتزويد البنك بمعلومات عن عملك (على سبيل المثال: الحسابات السنوية وتقييم الأعمال والميزانية الرأسمالية)؟  
 نعم، على أساس شهري.  
 نعم، على أساس كل ثلاثة أشهر.  
 نعم، على أساس نصف سنوي.  
 نعم، على أساس سنوي.  
 لست ملزماً بتقديم معلومات للبنك بشكل منتظم.  
 غير ذلك (يرجى التحديد): \_\_\_\_\_.

#### ج.6. علاقة المتقدم بطلب التمويل والبنوك

1. هل لديك علاقة وطيدة مع البنك: أي تعامل متكرر مع موظف البنك لمدة طويلة؛ بحيث أن الموظف يعرفك و يعرف أعمالك عن قرب؟  
 نعم، قبل طلبي للحصول على تمويل بنكي تجاري بدون برنامج "كفالة".  
 نعم، بعد طلبي للحصول على تمويل بنكي تجاري بدون برنامج "كفالة".  
 نعم، قبل وبعد تقديمي بطلب للحصول على تمويل بنكي تجاري بدون برنامج "كفالة".  
 لا، أبداً.

2. هل استخدمت أيًا من منتجات وخدمات البنك المالية الغير اقرضية والقائمة على الرسوم (مثل تحصيل المستحقات وخدمات كشوف المرتبات والمدفوعات للموردين والجهات الخارجية، إلخ)؟

- نعم، قبل طلبي للحصول على تمويل بنكي تجاري بدون برنامج "كفالة".  
 نعم، بعد طلبي للحصول على تمويل بنكي تجاري بدون برنامج "كفالة".  
 نعم، قبل وبعد تقديمي بطلب للحصول على تمويل بنكي تجاري بدون برنامج "كفالة".  
 لا، أبداً.

3. هل تعتقد أن وجود قسم لمصرفية المنشآت الصغيرة والمتوسطة في البنوك قد سهّل على منشأتك الحصول على التمويل البنكي؟

- نعم (يرجى التوضيح) \_\_\_\_\_  
 لا (يرجى التوضيح) \_\_\_\_\_  
 لا أعرف.

#### د. عمليات المنشأة

##### د.1. العلاقات الداخلية بين الشركات:

1. هل لدى منشأتك أي من الأنواع التالية من العلاقات الداخلية بين الشركات؟ (اختر كل ما ينطبق)

- العمل كمتعاقد باطني لصالح شركات أخرى (subcontractor)  
 مورد رئيسي لمواد خام رئيسية تستخدم في الإنتاج من قبل شركات أخرى.  
 حق الامتياز (franchising).  
 مشروع مشترك (joint venture).  
 التعاون في أنشطة التصنيع.  
 التعاون في أنشطة البحث والتطوير (R&D).  
 التعاون في أنشطة التسويق أو التوزيع.  
 اتفاقات مع شركات أخرى للحصول على تراخيص الخبرة وبراءات الاختراع.  
 التعاون على حل المشكلات وتطوير التكنولوجيا.  
 منشآت غير مشاركة في أي شكل من أشكال العلاقات الداخلية بين الشركات.  
 غير ذلك (يرجى التحديد) \_\_\_\_\_.

[ إذا لم تكن مشاركًا في أي شكل من أشكال العلاقات الداخلية بين الشركات ، فالرجاء الانتقال إلى السؤال

قسم د.2.]

2. ما نوع هذه الشركات؟ (اختر كل ما ينطبق)
- شركات كبيرة محلية يزيد عدد موظفيها عن 250 موظف أو مبيعاتها السنوية تزيد عن 200 مليون ريال سعودي.
- شركات متوسطة محلية يتراوح عدد موظفيها بين 50-249 موظفًا أو مبيعاتها السنوية تتراوح بين 40 مليون إلى 200 مليون ريال سعودي.
- شركات صغيرة محلية يتراوح عدد موظفيها ما بين 6-49 موظف أو مبيعاتها السنوية تتراوح بين 3 ملايين ريال سعودي و 40 مليون ريال سعودي.
- شركات أجنبية.
- مؤسسات القطاع العام (حكومية).

3. منذ متى نشأت هذه العلاقات الداخلية المشتركة بين منشأتك والشركات الأخرى؟
- أقل من 1 سنة.
- من 1 إلى 5 سنوات.
- أكثر من 5 سنوات.

4. هل تعتقد أن التمويل البنكي التجاري كان عاملاً مكنّ مشاركة منشأتك في العلاقات الداخلية بين الشركات (على سبيل المثال، من خلال تمكين شركتك من اكتساب قدرات خاصة)؟ (اختر كل ما ينطبق)
- نعم (يرجى التوضيح) \_\_\_\_\_
- لا، بالنسبة لمنشأتنا مصادر التمويل الخارجية الأخرى كانت عوامل أكثر أهمية في تمكين المشاركة في العلاقات الداخلية بين الشركات (يرجى تحديد هذه المصادر) \_\_\_\_\_
- لا، بالنسبة لمنشأتنا التمويل الداخلي (مثل الأرباح السابقة) كان عامل أكثر أهمية في تمكين المشاركة في العلاقات الداخلية بين الشركات.
- لا أعرف.

5. هل أدت مشاركتك في علاقات داخلية مع شركات أخرى إلى تعزيز قدرة منشأتك في الحصول على تمويل بنكي تجاري؟
- نعم.
- لا.
- على الأرجح نعم ، لكنني لم أتقدم بطلب للحصول على تمويل بنكي تجاري.
- على الأرجح لا، لكنني لم أتقدم بطلب للحصول على تمويل بنكي تجاري.

#### د. استحداثات/ابتكارات المنشأة:

1. خلال السنوات الثلاث الماضية، هل ابتكرت منشأتك منتج أو خدمة جديدة أو محسنة بشكل كبير؟ مثال: مصنع كان ينتج قوالب صابون وأصبح ينتج صابون سائل أو مطعم أصبح يقدم قائمة طعام لمرضى السكر؟
- نعم.
- لا.

2. خلال السنوات الثلاث الماضية، هل استحدثت منشأتك طرق جديدة في تصنيع المنتجات أو تقديم الخدمات بما في ذلك طرق جديدة للتوزيع و التوصيل؟ مثال: مصنع أصبح يستخدم آلات جديدة للعمل الذي كان ينجز يدوياً أو مطعم بدأ في استخدام السجلات الإلكترونية في الفوترة؟
- نعم.  
 لا.

[إذا لم تستحدث أي منتج أو خدمة أو عمليات جديدة أو محسنة بشكل كبير، الرجاء الانتقال الى قسم د.3]

3. إذا استحدثت منتج أو خدمة أو عمليات جديدة، هل تعتقد أن التمويل البنكي التجاري كان عاملاً مكن منشأتك على الاستحداث/الابتكار؟ (اختر كل ما ينطبق)
- نعم (يرجى التوضيح) \_\_\_\_\_.
- لا، بالنسبة لمنشأتني مصادر التمويل الخارجية الأخرى كانت عوامل أكثر أهمية في تمكين منشأتني على الاستحداث/الابتكار (يرجى تحديد هذه المصادر)
- لا، بالنسبة لمنشأتني التمويل الداخلي (مثل الأرباح السابقة) كان عاملاً أكثر أهمية في تمكين منشأتني على الاستحداث/الابتكار.
- لا أعرف.

4. هل أدت هذه الاستحداثات/الابتكارات إلى تعزيز قدرة منشأتك في الحصول على تمويل بنكي تجاري؟

- نعم (يرجى التوضيح) \_\_\_\_\_.
- لا (يرجى التوضيح) \_\_\_\_\_.
- على الأرجح نعم، لكنني لم أتقدم بطلب للحصول على تمويل بنكي تجاري.
- على الأرجح لا، لكنني لم أتقدم بطلب للحصول على تمويل بنكي تجاري.

### د.3. أنشطة التصدير:

1. هل تقوم منشأتك بالتصدير بشكل مباشر أو غير مباشر؟ (الصادرات غير المباشرة هي تلك المنتجات التي تباع محلياً لطرف ثالث يقوم بتصديرها)
- نعم.  
 لا.

[إذا كانت الإجابة "لا" فهنا ينتهي الاستبيان بالنسبة لك]

2. إذا كنت تقوم بالتصدير المباشر أو الغير مباشر، هل تعتقد أن التمويل البنكي التجاري كان عاملاً مكن منشأتك على التصدير؟ (اختر كل ما ينطبق)
- نعم (يرجى التوضيح) \_\_\_\_\_.
- لا، بالنسبة لمنشأتني مصادر التمويل الخارجية الأخرى كانت عوامل أكثر أهمية في تمكين منشأتني على التصدير (يرجى تحديد هذه المصادر)
- لا، بالنسبة لمنشأتني التمويل الداخلي (مثل الأرباح السابقة) كان عاملاً أكثر أهمية في تمكين منشأتني على التصدير.
- لا أعرف.

3. هل عزز نشاطك التصديري من قدرة منشأتك على الحصول على تمويل بنكي تجاري؟
- نعم (يرجى التوضيح) \_\_\_\_\_ .
- لا (يرجى التوضيح) \_\_\_\_\_ .
- على الأرجح نعم ، لكنني لم أتقدم بطلب للحصول على تمويل بنكي تجاري.
- على الأرجح لا ، لكنني لم أتقدم بطلب للحصول على تمويل بنكي تجاري.

شكرا لك على المشاركة في هذا الاستبيان

## Appendix 3.C: College of Social Sciences Research Ethics Committee Approval (1)



College of Social  
Sciences

27/02/2019

Dear Rawaa Fouad Muhandes

College of Social Sciences Research Ethics Committee

**Project Title:** Access to Finance by Small and Medium Enterprises (SMEs) in Saudi Arabia  
**Application No:** 400180117

The College Research Ethics Committee has reviewed your application and has agreed that there is no objection on ethical grounds to the proposed study. It is happy therefore to approve the project, subject to the following conditions:

- Start date of ethical approval: 28/02/19
- Project end date: 31/12/20
- Any outstanding permissions needed from third parties in order to recruit research participants or to access facilities or venues for research purposes must be obtained in writing and submitted to the CoSS Research Ethics Administrator before research commences. Permissions you must provide are shown in the *College Ethics Review Feedback* document that has been sent to you.
- The data should be held securely for a period of ten years after the completion of the research project, or for longer if specified by the research funder or sponsor, in accordance with the University's Code of Good Practice in Research: ([https://www.gla.ac.uk/media/media\\_490311\\_en.pdf](https://www.gla.ac.uk/media/media_490311_en.pdf)) (Unless there is an agreed exemption to this, noted here).
- The research should be carried out only on the sites, and/or with the groups and using the methods defined in the application.
- Any proposed changes in the protocol should be submitted for reassessment as an amendment to the original application. The *Request for Amendments to an Approved Application* form should be used: <https://www.gla.ac.uk/colleges/socialsciences/students/ethics/forms/staffandpostgraduateresearchstudents/>

Yours sincerely,

Dr Muir Houston  
College Ethics Officer

Muir Houston, Senior Lecturer  
College of Social Sciences Ethics Officer  
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## Appendix 3.D: Results of the non-response bias tests

The following table reports the results of the Chi-square tests for each question in the questionnaire survey for testing significant differences of the early and late respondents.

Question	N	df	X <sup>2</sup>	p-value (raw)	p-value (adj.)
Categorical Variables (Pearson Chi-Square)					
Gender	328	1	.302	.582	.607
Bank Finance Preference	326	1	.158	.691	.737
Applied Or Not	328	1	.925	.336	.358
With/Without <i>Kafalah</i>	328	2	2.304	.316	
Inter-firm Relationships	320	1	1.776	.183	.200
Exporting Activity	328	1	.310	.577	.681
Industry Sector	328	5	11.694	<b>.039</b>	
Legal Status	328	4	8.546	.074	
Growth Intent	328	2	4.298	.117	
Previous Experience	328	3	1.423	.700	
Application Outcome	124	2	2.204	.332	
Collateral Type	53	1	.074	.786	1
Application Main Purpose	123	3	6.439	.092	
Banking Relationship	324	3	3.406	.333	
Fee Based Lending Products	322	3	.277	.964	
Innovation Activities	328	3	5.384	.146	
Firm Size (Revenue)	328	2	5.917	<b>.052</b>	
Education Level	328	5	2.357	.798	
Owner Age Group	328	2	.095	.954	
	<b>N</b>	<b>Mean Rank</b>	<b>U</b>	<b>p-value</b>	
Continuous Variables (Mann-Whitney-U)					
Year of Establishment					
Early Responder	190	165.3			
Late Responder	138	163.2	12.9	.848	
Firm Age					
Early Responder	190	163.7			
Late Responder	138	165.5	13.2	.862	
Current Employment Level					
Early Responder	190	166.5			
Late Responder	138	161.7	12.7	.652	
Previous Employment Level					
Early Responder	180	162			
Late Responder	135	152.6	11.4	.366	
Number of Founders					
Early Responder	190	166.7			
Late Responder	137	160.1	12.4	.482	
Applying Year					
Early Responder	76	63.1			
Late Responder	48	61.5	1.7	.805	

Notes: due to the presence of cells with count less than 5 in some cases, the p-values were computed either using Fisher's exact test (where df =1) or using 1 million Monte Carlo simulations (where df >1).

One is advised to refer to the adjusted p-values because they account for multiple comparisons. The adjustment was done using the Benjamini-Hochberg procedure.



## Appendix 3.E: Kafalah Statistics on Authorised Guarantees in Q4 2019 by Economic Sector

Authorized Guarantees in Q4 2019 by Economic Activities		
Economic Activity	Number of SMEs	Percentage
Wholesale/retail	273	39.3%
Construction	184	26.5%
Manufacturing	58	8.3%
Catering	57	8.2%
administrative and support services	36	5.2%
professional, technical and scientific activities	25	3.6%
Logistics services	20	2.9%
Community services	11	1.6%
Education services	8	1.2%
Information and communication services	7	1.0%
Entertainment services	5	0.7%
Other services	6	0.9%
Agriculture and fishing	1	0.1%
Water supply, sanitation activities and waste management and treatment	3	0.4%
Insurance and financial services	1	0.1%
<b>Total</b>	<b>695</b>	<b>100%</b>

Source: Translated from *Kafalah* Statistical Report 2019

## Appendix 3.F: Semi-Structured Interviews in English

### Interview Questions

**Opening statement:** One of the aims of Vision 2030 is to increase the contribution of SMEs to 35% of Saudi Gross Domestic Product. An important means to achieve this objective is greater funding of SMEs. While the share of bank lending to SMEs in 2019 has increased to 6.2% from the previous 2%, it is still low by international standards.

1. In your opinion, why bank lending to SMEs remains low by international standards? Are these reasons still the same as those before Vision 2030 i.e. when the share of SMEs loans was only 2%?

A. What about:

- Profitability aspects compared to household loans, large corporations, and the government.
- The evaluation techniques for SMEs with no track records
- The very nature of SMEs including lack of collateral and the high rates of delinquency
- Demand-side factors by SMEs

B. Do you think the current modest increase in the share of bank lending to SMEs is meeting SMEs financing needs? If not, what else could be done i.e. are there incentives/government initiatives other than the Kafalah program which could result in more bank lending to SMEs?

2. Has Vision 2030 made a difference regarding SMEs lending at your bank?

A. In what ways and why?

B. Do you now have a target for lending to SMEs as a result of Vision 2030, what about before the Vision?

C. What about changes in bank structure, operational procedures, or other aspects? What is the main objective of these changes if they occurred?

D. Do you think the type of SMEs who have access to bank loans have the capability to significantly contribute to the economy of Saudi Arabia? How?

3. What are the main services that your bank provides to SMEs? Are those services provided within a separate unit dedicated for SMEs?

4. What are the main types of loans you provide to SMEs?
  - A. Can you give a ratio or a percentage of these types of loans?
  - B. What about loans to start-ups?
  - C. How likely are willing to provide personal loans to SMEs owners instead of business loans? Why?
  
5. Please describe the appraisal process of loan applications by SMEs.-----
  - A. What are the key factors in the appraisal? What factors increase and reduce risk?
  - B. What about firm activities such as exporting, innovative activities and being a supplier or outsourcer for large corporations or the government?
  - C. How do the key factors change with the type of the loan (i.e., if it is for working capital, for fixed capital investment or for startups)?
  
6. Please describe the decision-making process following a positive appraisal of the loan application. -----
  - A. What are the key factors affecting your approval?
  - B. What about firm activities such as exporting, innovative activities and being a supplier or outsourcer for large corporations or the government?
  - C. What is the degree of discretion do you have as a loan officer in approving SMEs loans? In what circumstances (what type of loans) do you have to involve other people? Who are those people?
  
7. Please describe how your bank sets the terms of the loan to SMEs i.e. collateral, interest rate, maturity and non-/late payment charges?
  - A. How is interest rate set? Can you rank the interest margin over the cost of funds for SMEs compared to households, large corporates and the government?
  - B. How are collateral requirements set?
  - C. How is the maturity decided?
  - D. Do these terms depend on the nature of the loan (i.e., if it is for working capital, for fixed capital investment or for startups)?

8. How do factors such as your personal knowledge of SMEs and the level of trust you have in their owners affect loan appraisal process, decision-making process and the setting of loan terms?
  - A. How does this differ for first-time borrowers?
  - B. How does this differ for clients whom you know on personal capacity?
  
9. How important is the existence of a client-bank relationship with an SME/its owner (e.g., holding of deposit account, loan repayment history, user of non-lending services) relative to 'harder' information (such as the owner's credit score, the firm's financial ratios, the availability of good-quality collateral) in the setting of loan terms, the appraisal process, the decision-making process?
  - A. Why do you think it is more important i.e. benefits/costs? What about monitoring costs and quality of lending decision?
  
10. In your opinion, is Kafalah a successful program in encouraging your bank to lend SMEs?
  - A. In your opinion, what are the main advantages and disadvantages of participating in the Kafalah program for your bank? What about for SMEs?
  
11. What proportion approximately of loans to SMEs by your bank are guaranteed under the Kafalah program?
  - A. Does your bank have a target for Kafalah supported loans?
  - B. What proportion approximately of Kafalah supported loans would have your bank made if Kafalah had not existed?
  
12. In what circumstances, following a funding application from an SME, would you seek a guarantee from Kafalah?

13. How does a loan guaranteed under Kafalah differ from a normal (non-guaranteed) SME loan in terms of:

- collateral provided
- interest rate offered
- track record of recipient
- loan maturity
- purpose of the loan
- sector of activity

- A. Do you think that the recipients of Kafalah's loans perform any different in their projects than other SMEs normal loan recipients? What about the default rates of both types of recipients?
- B. Do SME owners who benefited from the Kafalah programme normally remain clients of the bank?

14. What changes do you think would help make the Kafalah program more effective?

15. Has there been a strategic decision by your bank to focus more on and/or strengthen the offer of non-lending products/services compared to lending products/services?

- A. Why? What proportion of income from SME business is approximately attributed to lending and non-lending services?
- B. What range of non-lending products/services does your bank offer to SMEs?

16. How significant is the probability that an SME client of non-lending services would subsequently apply for a loan? Vice versa, how significant is the probability that an SME borrower would subsequently also be a client of non-lending services?

## Appendix 3.G: Semi-Structured Interviews in Arabic

القسم الأول من المقابلة: نظرة على قطاع المنشآت الصغيرة والمتوسطة في المملكة العربية السعودية

يتمثل أحد أهداف رؤية 2030 في زيادة مساهمة المنشآت الصغيرة والمتوسطة إلى 35% من الناتج المحلي الإجمالي السعودي، ومن الوسائل المهمة لتحقيق هذا الهدف هي زيادة اقراض هذه المنشآت. رغم أن حصة قروض المنشآت الصغيرة والمتوسطة من إجمالي قروض القطاع الخاص ارتفعت من 2% إلى 6.2% في عام 2019 إلا أنها لا تزال منخفضة وفقاً للمعايير الدولية.

1. من وجهة نظرك، لماذا يظل الإقراض البنكي للمنشآت الصغيرة والمتوسطة منخفضاً وفقاً للمعايير الدولية؟ وكيف تختلف هذه الأسباب عن تلك الأسباب في فترة ما قبل الرؤية أي عندما كانت حصة الإقراض للمنشآت الصغيرة والمتوسطة 2% فقط؟

أ: ماذا عن جوانب الربحية مقارنة بالقروض الشخصية وقروض الشركات الكبيرة والقروض الحكومية.

- ماذا عن تكنيات التقييم للمنشآت الصغيرة والمتوسطة التي ليس لها سجلات متابعة أو تاريخ ائتماني.

- ماذا عن طبيعة المنشآت الصغيرة والمتوسطة بما في ذلك الافتقار إلى الضمانات وارتفاع معدلات التأخر في السداد.

- ماذا عن عوامل جانب الطلب من قبل المنشآت الصغيرة والمتوسطة.

ب. هل تعتقد أن الزيادة الحالية في حصة الإقراض البنكي للمنشآت الصغيرة والمتوسطة تلبّي احتياجات الإقراض لهذه المنشآت؟

ج. إذا لم يكن الأمر كذلك، ما الذي يمكن فعله؟ أي هل هناك حوافز / مبادرات حكومية أخرى غير برنامج كفاءة والتي يمكن أن تؤدي إلى مزيد من الإقراض البنكي لهذه المنشآت؟

2. كيف أثرت رؤية 2030 على اقراض المنشآت الصغيرة والمتوسطة لدى البنك الذي تعمل به؟

أ. هل لديكم الآن هدف (target) لإقراض هذه المنشآت نتيجة لرؤية 2030، ماذا عن فترة ما قبل الرؤية؟

ب. هل تم استحداث تغييرات في هيكل البنك أو الإجراءات التشغيلية أو أي جوانب أخرى لخدمة هذه المنشآت؟ ما هو الهدف الرئيسي من هذه التغييرات إذا حدثت؟ (تحسين كفاءة البنك أو خفض التكاليف أو تسهيل اقراض البنك لهذه المنشآت)؟

ج. هل تعتقد أن نوع المنشآت الصغيرة والمتوسطة التي تحصل على قروض من البنوك لديها القدرة على المساهمة بشكل كبير في تنويع اقتصاد المملكة العربية السعودية وزيادته؟ كيف؟

القسم الثاني: ممارسات البنك الإقراضية للمنشآت الصغيرة والمتوسطة

3. ما هي الخدمات الرئيسية التي يقدمها البنك الذي تعمل به للمنشآت الصغيرة والمتوسطة؟

تلميح: منتجات إقراضية مقابل المنتجات غير الإقراضية والمقدمة برسوم  
أ: هل هذه الخدمات مقدمة ضمن وحدة منفصلة مخصصة للمنشآت الصغيرة والمتوسطة؟

4. ما هي أنواع القروض الرئيسية التي يقدمها البنك الذي تعمل به للمنشآت الصغيرة والمتوسطة؟

تلميح: قروض رأس المال العامل مقابل قروض الاستثمار الرأسمالي أو قروض شخصية مقابل قروض تجارية/استثمارية  
أ. هل يمكنك إعطاء نسبة قروض رأس المال العامل إلى قروض الاستثمار الرأسمالي؟

ب. وماذا عن قروض الشركات الناشئة؟

5. هل يمكن أن تصف لي عملية تقييم طلبات قروض المنشآت الصغيرة والمتوسطة؟

6. هل يمكن أن تصف لي عملية اتخاذ القرار في طلبات قروض المنشآت الصغيرة والمتوسطة؟

أ. ما هي العوامل الرئيسية المؤثرة؟ ما هي العوامل التي تزيد أو تقلل من المخاطر؟

ب. كيف تتغير العوامل الرئيسية التي ذكرتها مع نوع القرض المطلوب (أي إذا كان لرأس المال العامل أو لاستثمار رأسمالي أو للشركات الناشئة)؟

ج. ماذا عن أنشطة المنشأة مثل التصدير، أنشطة الابتكار وكون المنشأة مورداً أو متحيداً خارجياً للشركات الكبيرة أو الحكومة؟

د. ما حدود الصلاحية التي تتمتع بها بصفك مسؤول اقراض في الموافقة على قروض المنشآت الصغيرة والمتوسطة؟ ما هي أسباب هذه الصلاحية؟ ما نوع من القروض التي يتعين عليك إشراك أشخاص آخرين في اتخاذ القرار؟ إلى أي قسم ينتمون؟

7. هل يمكن أن تصف لي كيف يتم تحديد شروط (terms) القرض المقدم للمنشآت الصغيرة والمتوسطة، أي الرهن والضمانات، وسعر الفائدة، مدة القرض، ورسوم عدم السداد/ التأخر في السداد؟

أ: كيف يتم تحديد سعر الفائدة؟ هل يمكنك تصنيف هامش الفائدة المضاف لتكلفة الأموال على قروض هذه المنشآت مقارنة بالقروض الشخصية وقروض الشركات الكبيرة والقروض الحكومية؟

ب. كيف يتم تحديد متطلبات الضمان والرهن؟

ج. كيف يتم تحديد مدة القرض؟ قرض قصير الاجل كم مدته؟ مقابل قرض طويل الاجل وكم مدته؟

د. هل تعتمد هذه الشروط على طبيعة القرض (أي إذا كان لرأس المال العامل أو لاستثمار رأسمالي أو للشركات الناشئة)؟

8. كيف تؤثر عوامل مثل معرفتك الشخصية بالمتشأة من خلال تعاملات سابقة معها ومستوى ثقته في أصحابها على عملية تقييم القرض وعملية اتخاذ القرار وتحديد شروط القرض؟

أ. كيف يختلف هذا بالنسبة للمتسآت التي لم يسبق لها الاقراض/ التعامل من البنك الذي تعمل به؟

ب. كيف يختلف هذا بالنسبة للعملاء الذين تعرفهم بصفتهم الشخصية؟

9. ما مدى أهمية المعلومات غير الكمية و الناتجة عن وجود علاقة بين المتشأة والبنك تشآت يمرور الوقت من خلال تعاملات سابقة (مثل وجود حساب ودائع ، وسجلات سداد قرض ، وكون المتشأة تستخدم منتجات و خدمات غير اقرضية و المعلومات المستمدة من الاتصالات بموردي المتشأة و عملاتها و الشركات المتنافسة لها) مقارنة بالمعلومات " الكمية " التي يمكن حسابها (مثل وجود قوائم مالية لحساب النسب المالية للشركة ووجود تقييم انتمائي للمتشأة/المالك وتوافر ضمانات و رهن ذو نوعية جيدة) في عملية تقييم القرض و الموافقة عليه من عدمه؟ وتحديد شروط القرض؟

أ: لماذا تعتقد أن هذا النوع من المعلومات أكثر أهمية، ما هي فوائد /تكاليف الاعتماد على هذه المعلومات؟ ماذا عن جودة قرار الإقراض بناء على هذه المعلومات؟

القسم الثالث: برنامج كفالة

10. من وجهة نظرك، هل يعتبر برنامج كفالة ناجح في تشجيع البنك الذي تعمل به على إقراض المتشآت الصغيرة والمتوسطة؟

أ: ما هي أهم مزايا و عيوب المشاركة في برنامج كفالة للبنك؟ ماذا عن المزايا و العيوب للمتسآت الصغيرة والمتوسطة؟

10. تقريباً، ما هي نسبة قروض المتشآت الصغيرة والمتوسطة المكفولة بكفالة البرنامج إلى نسبة القروض غير المكفولة لبرنامج كفالة في البنك الذي تعمل به؟

11. تقريباً، كم من نسبة القروض الحالية المكفولة تحت برنامج كفالة كان ممكن أن يقدمها البنك حتى لو لم يكن برنامج كفالة موجود؟

ب. هل لديكم هدف (target) لتقديم قروض تحت برنامج كفالة؟



12. ما هي العوامل التي تستدعيك بعد تقييم طلب اقراض من منشأة صغيرة أو متوسطة أن تتقدم بطلب كفالة للقرض من برنامج كفالة ؟

أ: كيف تختلف هذه العوامل بالنسبة لميدات الأعمال والشركات الناشئة والمنشآت التي تعمل في قطاع السياحة والتطاعات المستهدفة الأخرى وتلك المنشآت العاملة في المناطق الواجهة؟

ب: كيف تختلف هذه العوامل للمنشآت التي لديها أنشطة تصدير وأنشطة الابتكار وكون المنشأة مورداً أو متعهداً خارجياً للشركات الكبيرة أو الحكومة؟

13. كيف يختلف القرض المكفول تحت البرنامج عن القرض الغير مكفول من حيث:

- الرهن والضمانات المقدمة

- سعر الفائدة على القرض

- وجود سجلات وتاريخ ائتماني للمنشأة

- مدة القرض (maturity)

- الغرض من القرض

- قطاع المنشأة

أ: هل تعتقد أن أداء المنشآت المقرضة تحت برنامج كفالة يختلف عن أداء المنشآت المقرضة بدون كفالة البرنامج (قرروض عادية)؟ ماذا عن معدلات التخلف عن السداد لكلا النوعين؟ لماذا؟

ب: هل أصحاب المنشآت الصغيرة والمتوسطة الذين استفادوا من برنامج كفالة يظلون عملاء للبنك؟ مثلاً مزيد من الاقتراض تحديداً غير المكفول بالبرنامج؟ أو يصبحوا مستخدمين للمنتجات / الخدمات غير الإقراضية والمقدمة برسوم؟

14. ما هي التغييرات التي تعتقد أنها قد تساعد في جعل برنامج كفالة أكثر فعالية؟

القسم الأخير: ممارسات البنك الغير إقراضية للمنشآت الصغيرة والمتوسطة

15. ما أنواع المنتجات / الخدمات غير الإقراضية والمقدمة برسوم التي يقدمها البنك للمنشآت الصغيرة والمتوسطة؟

أ. هل هناك قرار استراتيجي لدى البنك للتركيز بشكل أكبر أو تعزيز بيع المنتجات/الخدمات غير الإقراضية المقدمة برسوم مقارنة بالمنتجات/الخدمات الإقراضية؟ لماذا؟

ب. تقريباً، ما هي نسبة دخل البنك من المنشآت الصغيرة والمتوسطة التي تُعزى إلى المنتجات/الخدمات الإقراضية وغير الإقراضية؟

16. من وجهة نظر البنك، ما مدى أهمية احتمالية أن تتقدم منشأة تستخدم المنتجات الغير إقراضية بطلب لقرض مقارنة بأهمية أن تصبح المنشأة المقرضة عميلاً لمنتجات غير إقراضية مقدمة برسوم؟

## Appendix 3.H: College of Social Sciences Research Ethics Committee Approval (2)



College of Social Sciences

College of Social Sciences Research Ethics Committee

06 April 2021

Dear **Rawaa Fouad Muhandes**

**Project Title: Bank Financing to SMEs: Survey for Loan Officers/ Relationship Managers on Lending Criteria and the Saudi Arabian Credit Guarantee Scheme Kafalah**

**Application No:** 400200125

The College Research Ethics Committee has reviewed your application and has agreed that there is no objection on ethical grounds to the proposed study. It is happy therefore to approve the project, subject to the following conditions:

- Start date of ethical approval: 06/04/2021
- Project end date: 30/04/2022
- Any outstanding permissions needed from third parties in order to recruit research participants or to access facilities or venues for research purposes must be obtained in writing and submitted to the CoSS Research Ethics Administrator before research commences. Permissions you must provide are shown in the *College Ethics Review Feedback* document that has been sent to you as the Collated Comments Document in the online system.
- The data should be held securely for a period of ten years after the completion of the research project, or for longer if specified by the research funder or sponsor, in accordance with the University's Code of Good Practice in Research: ([https://www.gla.ac.uk/media/media\\_490311\\_en.pdf](https://www.gla.ac.uk/media/media_490311_en.pdf))
- The research should be carried out only on the sites, and/or with the groups and using the methods defined in the application.
- Approval is granted for virtual methods outlined in the application however restrictions noted below should be followed for any face-to-face data collection methods.
  - ◆ **Approval has been granted in principal:** no data collection must be undertaken with the exception of methods highlighted above until the current research restrictions as a result of social distancing and self-isolation are lifted. You will be notified once this restriction is no longer in force.

Any proposed changes in the protocol should be submitted for reassessment as an amendment to the original application. The **Request for Amendments to an Approved Application** form should be used: <https://www.gla.ac.uk/colleges/socialsciences/students/ethics/forms/staffandpostgraduateresearchstudents/>

Yours sincerely,

—

Dr Muir Houston College Ethics Officer

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