# The use and impact of public financed business advice support schemes by SMEs in Saudi Arabia.

by

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# Declaration of Authorship

I …Bassam Khalid Alagil…. hereby declare that this thesis and the work presented in it is entirely my own. Where I have consulted the work of others, this is always clearly stated.

Signed : _____

Date : _____

# Abstract

This thesis explores the extent of use and the impact of the public financed support schemes using a human capital theory framework to analyse a large scale quantitative survey of 328 small and medium sized enterprises (SMEs) in Saudi Arabia. All of the businesses in the study are family businesses who employ at least one other family member in addition to the key decision maker in the businesses.

The Saudi government is focused upon moving the Saudi Arabian economy away from a dependence upon oil towards a mixed economy with a strong manufacturing and service sector. Accordingly the Saudi government has established over twenty public backed support schemes including MODON and the Saudi Credit Bank which provide a wide range of services from basic information through financial support for SMEs. There have been no independent large scale study which have analysed the level of use by SMEs of the public financed support schemes in Saudi Arabia and tested the extent to which the public financed support schemes reduce the barriers to growth, and facilitate growth.

Hypotheses linked to human capital theory including gender, education, entrepreneurial experience, the use of specific support schemes, innovation, and the nature of family involvement in the businesses are presented. The results of the analysis of the barriers to growth and employment growth allow human capital theory to be developed. The results provide a complex picture of the association between the use of public backed support schemes in reducing barriers and obstacles to growth and also facilitating growth. The results suggest that the range of public financed support schemes needs to be rationalised. The general and other specific human capital profiles are presented which show that human capital theory can be applied to Saudi Arabia.

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## List of Abbreviations

| | |
|---|---|
| ASMI | Annual survey of manufacturing industry |
| Bader | Government business support scheme established in 2005 |
| BL | Business Link Program – UK |
| BLO | Business Link Organisation – UK |
| BRJ | Bab Rizq Jameel Community Service Program |
| CBPL | Creative Business Promotion Law – Japan |
| CBR | University of Cambridge |
| CERSA | Compania Espanola De Reafianzamiento / Public Guarantee Scheme |
| CF | Centennial Fund, Government business support scheme in Saudi Arabia, established in 2000 |
| Chi-Square | Statistical Hypothesis Test – Sampling Distribution |
| DTI | Department of Trading and Industry – UK |
| Erada | Government business support scheme established in 2005 |
| ETP | Energy Technology Partnership |
| EU | European Union |
| FRST | Foundation for Research, Science and Technology |
| GCC | Cooperation Council for the Arab States of the Gulf |
| GDP | Gross domestic product |
| Hadaf | Government business support scheme established in 2000 |
| ICO | Instituto De Credito Oficial / Public Bank for Economy and Enterprise Support. |
| INJAZ | Government support scheme in Saudi Arabia- established in 2006 |
| JBV | Journal of Business Venturing |
| JSBM | Journal of Small Business Management |
| KAFALA | Government funded business support scheme, also known as 'KAFALAH' |
| KAUST | Entrepreneur Center, Part of King Abdullah University of Science and Technology |
| KCGF | Korea Credit Guarantee Fund |
| KOTEG | Korea Technology Credit Guarantee Fund |

| | |
|---|---|
| LLC | Limited Liability Company |
| MA | Master of Art Degree |
| MGI | Mutual Guarantee Institutions |
| MODON | The Saudi Authority of Industrial Cities |
| MSc | Master of Science Degree |
| NEC | The Saudi National Entrepreneurship Center- established in 2010 |
| NGO | None Government Organisation |
| NiN | The North Jutland Entrepreneurial Network |
| NZ$ | New Zealand Dollar currency |
| NZTE | New Zealand Department of Trade and Enterprise |
| OECD | 34 Member countries span the globe, from North and South America to Europe and Asia-Pacific |
| OLS | Ordinary least squares |
| OPEC | Organization of the Petroleum Exporting Countries |
| PSED II | Panel Study of Entrepreneurial Dynamics |
| R&D | Research and Development |
| $R^2$ | The Coefficient of Determination |
| RCJY | The Royal Commission of Jubail and Yanbu – Saudi Arabia |
| RIETI | Research Institute of Economy, Trade and Industry |
| SABI | Commercial Registries of Spain |
| SAGIA | The Saudi Arabian General Investment Authority |
| SAMA | Saudi Arabian Monetary Agency |
| SBDC | Small Business Development Center –UK |
| SCB | The Saudi Credit Bank |
| SEJ | Search Engine Journal |
| SIDF | The Saudi Arabian Industrial Development Fund |
| SMEs | Small and Medium Enterprises |
| TPK | Te Puni Kokiri - Service department of New Zealand charged with advising the government on policies. |

| | |
|---|---|
| TSR | Tokyo Shoko Research Data |
| T-test | Statistical Hypothesis Test |
| TTGV | Non-profit public private partnership under the legal structure of a foundation headquartered in Ankara, Turkey |
| TURKSTAT | Statistical Institute of Turkey |
| UK | The United Kingdom |
| USA | The United States of America |
| Wa'ed | The Saudi Arabian Oil Company business support initiative |

## Dedication

I would not be who I am today without the love and support of my parents and family. I would like to dedicate this thesis and everything I do to my family.

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First and foremost I want to thank my supervisor Professor Paul Robson. It has been an honour to be his Ph.D. student. He has taught me how a good research is done. I appreciate all his contributions of time, ideas, and feedback to make my Ph.D. I also thank all support schemes that helped me to produce my doctoral study.

# Chapter 1

# Introduction

## 1.1 Introduction

The purpose of this thesis is to expand our knowledge of human capital theory by providing the first large scale independent study to assess the level of use of government support schemes in Saudi Arabia; an understanding of the barriers to growth which Saudi entrepreneurs encounter; and, an assessment of the extent to which the use of Saudi government support schemes is associated with reducing the barriers encountered by Saudi entrepreneurs. Contributions to theory includes showing the extent to which human capital theory which was developed based upon American research can be applied to a resource munificent Gulf Cooperation Council Country, Saudi Arabia. Whilst for practitioners and entrepreneurs the study makes contributions by providing a better picture of the state of use of government financed business advice for small and medium sized enterprises (SMEs) and the characteristics of users, as well as a better knowledge of the impediments to growth encountered and the extent to which the government resources need to be changed, and reinforced, in order to meet the needs to create jobs for an expanding Saudi population.

In this chapter, the background of the research is provided including the rationale and objectives for the doctoral study of entrepreneurship in Saudi Arabia. This is then followed by the contributions of the study, and an overview of the structure of the thesis.

## 1.2 Background of the Research

Smallbone et al. (2001) in an early assessment of the state of knowledge on business support schemes described them as suffering from a *"lack of understanding of the types of support available, doubts about the relevance of what was offered, confusion about which*

*providers can best meet a firm's needs [and] a lack of confidence and trust in those delivering support"*(p.23). This thesis uses human capital theory to take a fresh assessment of the government support schemes in Saudi Arabia. Support for entrepreneurs and SMEs is widely viewed as playing a pivotal role in facilitating innovation, wealth creation, fostering increased competition, being conduits for innovation, increases in sales revenue, employment creation, and economic growth (Storey, 1994; Thurik and Wennekers, 2004). In the UK in the last five years there has been a sea change in the resources provided for government support schemes (John, 2010) from a Labour government to the Conservative-Liberal Democrat government which was elected in 2010 (Treasury, 2010) to the Conservative majority elected government in 2015 (Hopkin and Bradbury, 2006). In the UK the Business Link (BL) scheme in 2010 saw its resources contract and the UK government has subsequently placed its resources in a Business Support Helpline[1] which offers advice either online or over the telephone. In contrast Saudi Arabia is spending the equivalent of billions of pounds in providing abundant resources for business support schemes, and schemes which in many ways go beyond the provision of services available from the old BL scheme (Bennett, 2014; Bennett et al., 2001; Bennett and Robson, 1999; Bennett and Smith, 2004; Bennett and Robson, 2003, 2000; Mole et al., 2011). Thus, the Saudi path is more in line with the interventionary approaches which are followed in continental Europe countries in offering more generous support schemes than in the UK (Getz and Petersen, 2005), and also by the World Bank Group who provided more than $10 billion from 1998 to 2002 and approximately $1.3 billion in 2003 for small business support programmes in developing countries (Beck et al., 2005).

[1] https://www.gov.uk/business-support-helpline

The turning off of the money tap for government support in the UK can be attributed to several reasons including straightened circumstances for the UK government, combined with the disappointing results which have been found for SMEs with regard to survival, growth, and competitiveness, especially when compared to the corresponding performance and outcomes of larger sized firms (Mead and Liedholm, 1998; Bates, 1990).

Whilst the support schemes in Saudi Arabia have been running since 1974 (ESFCSO, 2015) there has been a lack of academic research to assess Saudi government funded support schemes. In other words, there is no independent study which has identified what are the barriers to growth in Saudi Arabia encountered by SMEs, what is the take up rate of government support schemes and to what extent when using multivariate analysis does government support reduce the encountering of barriers to growth. There are a limited number of empirical studies in Saudi Arabia apart from within the human resource management literature (Dwairy et al., 2006) and on looking at entrepreneurial orientation and strategic succession planning in family firms (Alrubaishi, 2015), strategic planning (Almoawi, 2011), and family business succession (Chu, 2011).

Methodologically, there are a lacuna of large-scale studies of SMEs and entrepreneurs in Saudi Arabia. There have been multivariate studies to study relationships between the use of business support against business performance in the UK (Bennett and Robson, 2000; Mole et al., 2011, 2009) and Ghana (Robson and Obeng, 2008) where the aforementioned studies provide firm and to a lesser extent entrepreneur or owner-manager characteristics; but, there is a lack of studies which have tackled the relationship between the use of business advice and whether or not such users' firms are more, or less, likely to encounter barriers to growth, either in developed or emerging nations. Furthermore, as will become apparent from the literature review of this thesis the business advice literature as well as the barriers to

growth literature is plagued by a lack of theoretical foundations, and that applies not just to Saudi Arabian studies but to the bulk of the European, North American and African studies.

From academic, policy maker and practitioner perspectives, alike, good performance by entrepreneurs and SMEs is encouraged and welcome. This thesis is focusing attention upon barriers to growth because it offers an alternative route to understanding business performance compared to traditional studies which focused primarily on employment growth (Storey 1994a). The traditional studies have largely reached an impasse and whilst the econometric techniques have become more and more sophisticated the models still provide very disappointing results with very few statistically significant relationships between characteristics of entrepreneurs, firms, strategy and location against business growth performance (Lee and Cowling, 2015, 2012; Lee and Sissons, 2016; McKelvie and Wiklund, 2010; Wiklund, Patzelt, and Shepherd, 2009). The barriers to growth framework offers an alternative way forward although it is acknowledged that this framework is not perfect. A firm may experience substantial barriers to growth and still thrive and have rapid growth and may become a gazelle (Autio and Rannikko, 2016; Geuvers, 2016). However, if we know more about the understanding of barriers to growth this may help policy makers to be better placed to help by reducing the impediments for firms, and other things being equal, it would be expected that business performance for some, but not all, firms will be improved. Equally, it is acknowledged that all entrepreneurs do not necessarily aspire to have business growth (Cosh and Hughes, 2000; Vaessen and Keeble, 1995) and for such entrepreneurs even if business barriers were diminished, or removed, they may not necessarily wish to grow their businesses. But, for some entrepreneurs who aspire to grow their businesses, the adoption of policies to remove business barriers may prove beneficial. And, for some entrepreneurs who don't aspire to grow their businesses may end up growing their businesses reluctantly or

accidentally, or in order to survive (Storey, 1994) and as such may still benefit from policies which reduce business barriers.

However, to repeat, as indicated above our theoretical and empirical knowledge and understanding of business advice and barriers to growth is very limited. This thesis seeks to fill the gaps using a survey which was gathered between January and April 2013 focusing upon a key informant approach where entrepreneurs completed an online survey where their firms had between 10 and 150 employees. The study relates to responses gathered at one point in time and thus involves cross-tabulation and regression models using cross-sectional data. Whilst there have been calls for research to use panel data to deal with causality issues this requires entrepreneurs to complete questionnaires at several points in time which is very expensive and time consuming and when carried out by independent researchers is beyond the scope of this thesis. Chapter six offers ways in which the researcher and other scholars can extend this study. Notwithstanding the aforementioned caveats it is believed that this study by performing the first large scale independent survey of entrepreneurs in Saudi Arabia does make substantial contributions. The number of usable responses 328, together with the healthy response rate of 15%, combined with the care with which the questionnaire was designed, piloted, and analysed indicate that the results are as far as possible valid.

Thus, the objectives of the thesis can be summarised as follows.

1. To identify the levels of use of government support schemes in Saudi Arabia.
2. To identify what are the barriers to growth in Saudi Arabia.
3. To see the extent to which the use of government support schemes helps to reduce the barriers and problems that entrepreneurs face in trying to grow their businesses.

4. To see the extent to which human capital theory provides a theoretical framework to allow the testing of hypotheses relating to better understanding barriers to growth in Saudi Arabia.

## 1.3 Contributions of the Research

This research makes a number of key contributions which are articulated below.

Firstly, this study provides the first large scale study to identify the levels of use of government support schemes in Saudi Arabia. Whilst several researchers have quantified the take up of Business Link (BL) and the other government backed support schemes in the UK (Bennett and Robson, 2000; Mole et al., 2011, 2009; Robson and Bennett, 2000) there have been no such studies to assess the level of use of government support schemes in Saudi Arabia.

Secondly, this study also provides the first study to use econometric techniques and a large scale study to identify the barriers to growth in Saudi Arabia. This thesis analyses access to external business support schemes and their influence overcoming small and medium enterprises to overcome barriers to growth. The path of future developments of any investment will always be unknown; however, barriers to growth must be assessed and ranked according to better understand enterprises in Saudi Arabia.

Given the large size and influence of Saudi Arabia this is an important contribution. This thesis extends the work of Robson and Obeng (2008) and Obeng (2007) who examined the barriers to growth in Ghana. A small number of doctoral studies have looked at economic development in GCC countries. Abdullah (2014) for example utilised a usable sample of 65 merchants and 77 manufacturers from Kuwait to look at SME development and Kuwait's long term development, but her study was hampered by the small sample size. Al Jassim

(2014) had a large scale study of SMEs where the data was carefully harvested but the focus of his thesis was upon the SME decision making process which is totally outside the remit of this researcher's thesis. Alrabeei's (2014) DBA of SMEs in Bahrain had a healthy number of respondents, 200 owner managers used in tandim with interviews from 19 supporting organisations, and he looked at the effectiveness of support schemes in Bahrain but his analysis did not go beyond descriptive analysis. Robson and Obeng (2008) applied Storey's (1994) framework to barriers to growth in Ghana which is a developing country in Africa. My thesis extends knowledge by studying the entrepreneurship phenomena in another developing country, Saudi Arabia.

According to Chudnovsky et al. (2006, p.267) "The relevance of the innovation process in firms doing business in developing countries is not always properly acknowledged". Also, Robson and Obeng (2008) looked at barriers to growth by analysing characteristics of entrepreneurs, their businesses and their strategies. In my study, I studied three types of entrepreneurs and how they seek external support for their businesses.

Thirdly, as indicated above the vast majority of research on entrepreneurship and small business is conducted by western researchers in the UK or the USA which suggests that there is a large research gap and a need to expand the research arena not just geographically but also culturally in order to understand entrepreneurship (Sabah et al., 2014; Sharma and Chua, 2013). Saudi Arabia is a Muslim country with a zero tax environment and this study will be able to explore the extent to which the problems of entrepreneurs and the ability of business support schemes to meet their needs are the same in munificent environment in comparison with a low tax environment such as the US or a medium tax regime such as the UK, or higher tax environment which is associated with a country such as Italy.

It is important to state that every country has its unique investment environment and businesses will grow or decline according to the business climate. However, the UK and USA have a long history of supporting SMEs and entrepreneurs. Scholars built a large number of studies and papers about the state of businesses who have and have not used business advice, as well as the extent of take up rates of support schemes in the UK (Bennett, 2014). When conducting new research to study a new context and business environment such as Saudi Arabia, I am much more confident to base my endeavours on a long history of credible literature to serve my research objectives.

Fourthly, the thesis brings together the use of government support schemes and the association with firm outcomes in a new direction, barriers to growth. Whilst there are many studies which have examined the relationship between government support and business performance the outcomes have focused upon sales revenue and employment growth. This thesis by not looking at employment growth, but instead looking at barriers to growth makes important inroads to understanding the influence of government support schemes.

Fifthly, the thesis makes contributions to methodology by showing that an online survey can be used to harvest a large scale robust data set in Saudi Arabia. This allows researchers in Saudi Arabia to thus have another methodology at their disposal, rather than being dependent upon postal surveys or face-to-face completion of questionnaires which are fraught with poor participation or are labour intensive, respectively.

Sixthly, whilst human capital theory is a popular theoretical framework which has been utilised across management studies and especially in entrepreneurship (Westhead et al., 2001) it has not been applied to Saudi Arabia or GCC countries as a whole. This study in deriving hypotheses linked to human capital theory. Thus, the thesis establishes and develops a theoretical foundation for the consideration of small business support schemes and growth

from a human capital perspective. From these foundations, the theory helps us to better understand entrepreneurs and their firms and how practitioner and policy strategies can be changed for the maximum benefit of the Saudi SME community. Support for entrepreneurs and SMEs is widely viewed as playing a pivotal role in facilitating innovation, wealth creation, fostering increased competition, being conduits for innovation, increases in sales revenue, employment creation, and economic growth (Storey, 1994). Entrepreneur skills, methods of enquiring knowledge, previous experiences in establishing businesses and other factors referred to general and specific human capital factors must be assessed and analysed in a specific context to have a better understanding of the influence of human capital factors on SMEs performance (Ruzzier; et al. 2007). Robson and Obeng (2008) provided a large scale study, which utilised the Storey (1994) framework focusing upon characteristics of the owner-managers, their strategies and their businesses. Whilst the Robson and Obeng (2008) study has provided one of the most comprehensive assessments of barriers to growth its theoretical framework can arguably be perceived as underdeveloped. The Storey (1994) theory was never designed to be a theory; instead, it was a way of presenting information on previous research. The human capital theory (Becker, 1964) is a well-established theoretical framework and by utilising that with the barriers to growth literature allows for progress in both areas. This study focuses upon gender, education, prior business experience, use of business advice, innovation, and the role of family involvement in the businesses. With regard to prior business experience the thesis focuses upon three categories novices, serial and portfolio where the later two categories have experience of more than one business. This focus was followed in order to build upon and extend the work of Ucbasaran, Westhead and Wright (2006).

Seventhly, the study makes important contributions to the family business literature, which is currently under-developed. The firms in this study are family businesses. Data from the Council of Saudi Chambers (Al Jassim, 2014) indicates that 95% of all companies in Saudi Arabia are family run businesses. Saudi Arabia places a slightly higher degree on the importance of families compared to other Middle East countries. The implication is that the results will also be able to make important contributions to debates on theory, practice, and policy in other Middle East countries. Policy makers and external support schemes are continually reviewing policies to help SMEs survive and grow in the market place. Once both entrepreneurs and policy makers are aware of the major barriers to growth a range of solutions can be developed and help better focused towards improving business performance in the SMEs business sector. The human capital theory framework provides a series of characteristics which are investigated to see if they are systematically related to barriers to growth.

Other frameworks that could answer the research questions are as follows. First, the resource-based view (RBV) as a basis for the competitive advantage of a firm lies primarily in the application of a bundle of valuable tangible or intangible resources at the firm's disposal (Mwailu and Mercer, 1983; Wernerfelt, 1984; Rumelt, 1984; Penrose, 1959). By using a resource-based view all resources of the firm including human capital could be analysed to have better understanding of SMEs methods to access and uses of external business support in Saudi Arabia. A second option was to use the Agency theory as a framework. The agency theory is about business owner giving authority to managers (agent), which empowers them to make decisions that affect the wealth of business owners (Jensen and Macking, 1976; Fama and Jensen, 1983). A third option is stewardship theory, which has

been used extensively in the family business research. Stewardship theory is an alternative to agency theory and focuses upon managers having different

No single theory or indicator can ever adequately cover entrepreneurship. For example, an indicator describing the number of innovative firms will not be able to reveal the full picture such as growth potential related to a single innovation or a group of innovations (Ahmad and Anders, 2007). However, the existing theories related to barriers to growth are limited. The Robson and Obeng (2008) study utilised a framework which utilised the Storey (1994) triple group of characteristics relating to entrepreneur/owner-manager, firm, and strategy but that is a very broad set of characteristics and there is no real justification of why those three groups of characteristics should be adopted. Human capital theory when combined with barriers to growth offers a way of advancing the theory of barriers to growth as well as extending the applicability of human capital theory.

## 1.4 Thesis Structure

This thesis consists of eight chapters. The second chapter covers the nature of business environment in Saudi Arabia. The third chapter describes and critiques Previous Evaluations of Government Support Schemes. The three main sections of the third chapter cover: reviews of business advice schemes which have included financial support in their range of services available; an assessment of previous studies which have assessed non-financial support advice; and the levels of use and satisfaction with sources of advice, including government support schemes are analysed. The fourth chapter presents human capital theory and the derivation of the hypotheses which are all linked to the aforementioned theory. Chapter five provides the research methodology. Chapter six presents the first of two chapters which present the results of the thesis. Chapter six provides the reader with

descriptive statistics and an overview of the respondents; an assessment of the headline barriers to growth; and, the levels of awareness and use of government backed support schemes in Saudi Arabia. The purpose of chapter seven is to present the multivariate regression analysis results and report whether the models find support, or no support, for each of the hypotheses which were presented in chapter 4. Chapter eight presents discussions and overall conclusions

## 1.5 Conclusion

This chapter has provided the reader with the overall introduction to the thesis. The reader has been presented with a background of the research including the rationale and objectives of the study. This was followed by indicating the contributions of the thesis and the structure which has been followed in writing up and presenting the study.

The next chapter is the first of two literature review chapters and will provide the reader with a better understanding of the Saudi business environment and the support schemes which are currently operating and funded by the Saudi government. At the time that this thesis is written in mid-September 2015 the price of oil has dropped to 45 US Dollars per barrel (OPEC, 2015). This will place strains upon the Saudi government finances and adds further weight to the need to better understand entrepreneurs and SMEs in Saudi Arabia.

# Chapter 2

# The nature of business environment in Saudi Arabia

## 2.1 Introduction

The objectives of this thesis is to explore and identify the levels of use of government support schemes in Saudi Arabia, to identify what are the barriers to growth in Saudi Arabia to see the extent to which the use of government support schemes helps to reduce the barriers and problems that entrepreneurs face in trying to grow their businesses and to see the extent to which human capital theory provides a theoretical framework to understand barriers to growth in Saudi Arabia. The main objective of this chapter is to provide the reader with background information about Saudi Arabia and the Saudi Arabian business and economic environment. In the last thirty years, Saudi Arabia has focused on empowering the private sector to contribute to the Saudi Arabian economy. This was achieved by many ways including forming support schemes for small and medium enterprises and creating economic and integrated industrial cities. In this chapter, a summary of 6 new "Saudi Economic Cities" will be shown, followed with past employment by different business sectors in Saudi Arabia.

## **2.2** Background Information about the Saudi Arabian Business and Economic Environment

Saudi Arabia is a fast developing country in the Middle East with an estimated population of approximately 30.77 million people in 2014 (20.7 million Saudi nationals or 67.3%, 10 million or 32.7% other nationalities (Saudi Arabian Monetary Agency (SAMA), 2008a) and with a work force of 11.34 million people; of which, 9.47 million or 83.5% non-

Saudi and 2.87 million or 2.87% Saudi employees (Saudi Arabian Monetary Agency (SAMA), 2008a). The workforce is distributed between gender as follows 84.5% male and 15.5% female (CDSI, 2014). Saudi Arabia covers an area of approximately 2,149,690 $km^2$ (830,000 square miles), the country's main natural resources are oil (estimated to be 26% of the world's oil reserves), natural gas, gold, uranium, coal, iron, phosphate, zinc, silver, and copper (Bhuian et al., 2001). The Saudi economy depends on oil as the main source of income, which accounts to 85% of the Saudi export(Saudi Arabian Monetary Agency (SAMA), 2008a). Crude oil and natural gas exports are estimated to generate an annual revenue of £158 billion at the end of 2011. Most of the oil, mining, and petrochemical companies are owned by the government such as Saudi Aramco; which are the sole oil and gas producers in the country; and other large companies are semi-government owned or controlled (Saudi Arabian Monetary Agency (SAMA), 2008). Saudi Arabia joined the World Trade Organization in 2005 (ESFCSO, 2015b). In 2008 the Saudi government encouraged investment in transportation, education, health care, information and communications technology, life sciences and energy. Six "Economic Cities" in various states were developed in which different regions focusing on particular two or more industries (SAGIA, 2008); Table 2.1 describes each of these new economic cities and the main goal for each of them.

**Table 2.1: Summary of the Saudi new economic cities**

| Economic Cities | Jazan | Hail | Madinah | Rabigh | Tabuk | Eastern Province |
|---|---|---|---|---|---|---|
| Size in Million square meter | 100 | 156 | 4.8 | 168 | No information was disclosed | No information was disclosed |
| Population | 250,000 | 80,000 | 200,000 | 2,000,000 | | |
| New Jobs | 500,000 | 55,000 | 20,000 | 1,000,000 | | |
| Investment in £ billion | £16.8 | £5 | £4.37 | £16.87 | | |
| Business Focus | Energy and labor intensive industries | Logistics, agribusiness, minerals, and construction material | Knowledge based industries with an Islamic focus and services | New port and logistics, light industry, and services | | |

**(SAMA 46th Annual Report, 2011)**

From Table 2.1, information was disclosed for the future plans of four out of the six economic cities (Jazan, Hael, Madinah, and Rabigh). The total investment in these cities was £43 billion and their combined total land mass is 428.8 million square meters (SAGIA, 2008). The goal is to create more than 6.75 million jobs in all economic cities by 2020. Information about Tabouk and Eastern Province economic cities were not disclosed by SAGIA. Prospective investors found these business opportunities attractive due to government subsidizing programs of water, electricity, fuel, start-up financing and development funds and tax exemption program for foreign investors (ESFCSO, 2015).

Small and medium enterprises sector in Saudi Arabia accounts for more than 96% of registered enterprises (Saudi Arabian Monetary Agency (SAMA), 2008). Moreover, 96% of Saudi enterprises employ less than 100 employees (Danish and Smith, 2012). The Industrial business sector had 5,061 factories in all the regions and 71% of industrial establishments were small and medium enterprises (Ministry Of Trade, 2014). In general small and medium enterprises contribute 28% of the total GDP (Saudi Arabian Monetary Agency (SAMA), 2008).

Saudi Arabia had a total of 785,000 registered establishments of which 764,000 or 97.3% were sole proprietorship. 72% or 550,000 enterprises were micro enterprises employing up to 9 people (ESFCSO, 2015). Saudi Arabia does not have a strong entrepreneurial economy because of the dominance of the oil sector and public sector employment. Indeed, only 4% of the population have registered a business in Saudi Arabia (Al-Asmari, 2008). In comparison the GEM (2014) study found that entrepreneurial activity was 13.8% in the USA, 8.6% in the UK, and 5.3% in Germany. The majority of recent entrepreneurial activity has come from the under forty age group, many of whom have been

the first members of their family to go to university or college (Saudi Arabian Monetary Agency, 2014).

Saudi Arabia has comparatively low rates of unemployment amongst the over 30 years old members of the labour force but a high rates of unemployment in the 20-24 years old group. Indeed, the rate of unemployment in the aforementioned age group is approaching one in three (Saudi Arabian Monetary Agency, 2014). In Europe, however, 25.9% of EU residents are unemployed, yet, actively seeking jobs. In addition, there are segment of the EU residents who are discouraged workers or people outside labour market for other reasons who could make new work opportunities. At the same time, young people express interest in starting new business despite different level of human capital that they have. Lack of confidence, lack of entrepreneurial experiences, shortage of business networking skills, difficulty raising external funding, and lack of saving and collateral discouraging young people to start their own businesses. Generally, in Europe people from ethnic minorities and immigrant coming from very entrepreneurial cultures are more likely to start businesses relying on alternative sources of funding i.e. non-bank and informal financing (Skowronski-Lutz, 2014).

In many countries small and medium enterprises accounts for the majority of businesses and contribute directly to the GDP in terms of turnover and job creation. According the UK Department for Business, Innovation and Skills (Bennett and Smith, 2004), there was approximately 4.8 million small businesses in the UK. The number has increased from 4 million businesses in 2003. The report shows that 3.6 million businesses are sole proprietorship and 1.3 million enterprises were companies. Statistics have shown that 97% of firms employed from 2 to 20 people full time staff; and, 95% employ 5 people or less.

In the UK there are more than 500,000 new businesses started every year (Luna-Martinez and Vicente, 2012). Entrepreneurial activities have increased over the years in the UK; for example, habitual entrepreneurs accounted for approximately 12% in the UK 30 years ago (Cross, 1981) and this has increased substantially to approximately 52% in 2004 (Westhead et al., 2001).

Similarly, in the US 99.7% of businesses are small and medium enterprises creating jobs for 50% of the workforce (Stanciu, n.d.). Figure 2.1 shows the average number of employees by SMEs in EU countries and this account to 75% of jobs in all EU countries (Jenkins, 2009).

**Figure 2.1 The average number of employees per enterprise in EU-15 countries in 2008**

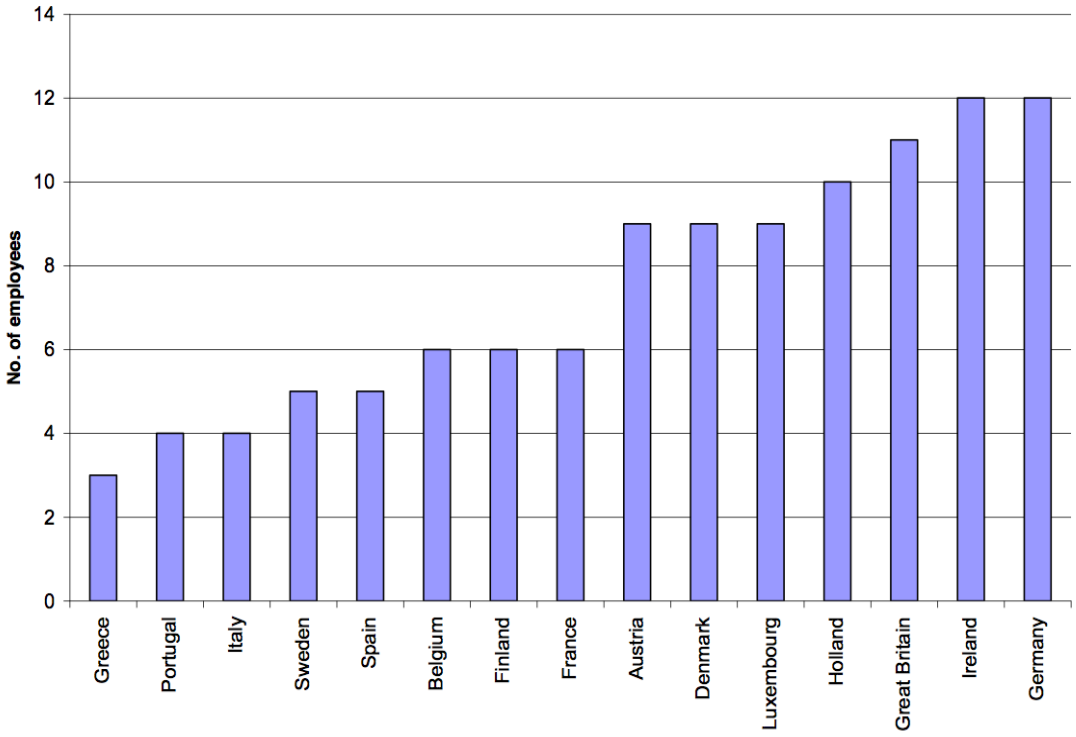


**Figure 1. The average number of employees per enterprise, in EU-15, 2008**

In Saudi Arabia, there is a lack of consensus on a definition of an SME. For example, banks and financial institutions use the annual sales revenue as a measure of the company size, which can be used as a measure of the business liquidity, working capital and cash flow needs; whilst the Central Bank of Saudi Arabia defines small enterprises with annual sales of S.R. 20 Million (£3.4 million) or less. There are many other variables, which may be used to define SMEs. One popular measure is the number of employees that firms have on their payroll. The European Union (EU) defines small and medium enterprises as economic entities with less than 250 employees and annual revenues of less than 50 million Euros (Decker et al., 2006). In contrast, small and medium enterprises is defined as any separate business entity; not a subsidiary of a large corporation, that employs 500 people or less (Storey, 2003) and have an annual revenue of $20 million (£12.5 million) or less (Adams et al., 2012; d'Amboise and Muldowney, 1988). In the US, 95% of registered enterprises are considered as small and medium size (Arend, 2006; Beekman and Robinson, 2004; Spragins and Harnish, 2004). The common definition used by government agencies and chamber of commerce in Saudi Arabia utilises the number of employees, and according to SAGIA (Hvidt, 2011) they define SME's as follows:

| | |
|---|---|
| Micro Enterprises: | 1 to 25 |
| Small Size Enterprises: | 26 to 59 |
| Medium Size Enterprises: | 60 to 99 |
| Large Size Enterprises: | more than 100 |

This research study will use the SAGIA definition of SME's because it covers almost all small businesses operating in Saudi Arabia, and most government authorities and ministries are using SAGIA definition (Syed, 2012). At the same time, banks and financial institutions are also using this definition in categorizing small and medium enterprises which will make this report data examining a sample of the large population of small businesses operating in Saudi Arabia.

**Table 2.2 The Number of Employees by Sector and Company Size in Saudi Arabia**

| Size by employee number | Finance | Electricity, gas, and water | Industry | Agriculture | Social Services | Mining | Contracting and building | Trade | PTT | Other | % Of total employment | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **0 to 4** | 7,931 | 229 | 19,188 | 523 | 14,141 | 751 | 29,288 | 58,785 | 2,253 | 5 | 4 | 133,076 |
| **5 to 9** | 8,626 | 423 | 20,872 | 595 | 14,042 | 789 | 70,218 | 87,319 | 2,250 | 18 | 6.1 | 205,152 |
| **10 to 19** | 9,004 | 792 | 28,485 | 1,455 | 19,817 | 1,183 | 119,695 | 140,862 | 3,567 | NA | 9.7 | 324,860 |
| **20 to 39** | 8,960 | 859 | 27,286 | 2,183 | 24,398 | 1,235 | 103,454 | 130,836 | 6,172 | 48 | 9.1 | 305,431 |
| **40 to 59** | 5,930 | 958 | 19,082 | 1,856 | 16,503 | 1,242 | 46,482 | 69,911 | 3,985 | NA | 4.9 | 165,949 |
| **60 to 79** | 2,788 | 770 | 13,637 | 1,228 | 18,347 | 818 | 34,217 | 51,389 | 3,698 | NA | 3.8 | 126,892 |
| **80 to 99** | 2,145 | 802 | 12,142 | 681 | 13,566 | 915 | 21,831 | 32,215 | 3,206 | NA | 2.6 | 87,503 |
| **100 to 199** | 8,719 | 3,614 | 20,572 | 3,341 | 48,182 | 2,804 | 71,394 | 100,044 | 13,677 | NA | 8.7 | 292,347 |
| **200 to 299** | 5,002 | 1,665 | 25,572 | 2,965 | 31,081 | 3,645 | 47,211 | 52,984 | 6,393 | NA | 5.3 | 176,518 |
| **300 to 399** | 3,463 | 3,015 | 24,896 | 974 | 22,132 | 1,142 | 41,705 | 43,338 | 5,067 | NA | 4.3 | 145,732 |
| **400 to 499** | 3,504 | 2,724 | 18,148 | 849 | 24,172 | 904 | 32,781 | 34,294 | 3,914 | NA | 3.6 | 121,290 |
| **500 +** | 56,357 | 42,796 | 115,957 | 27,342 | 172,780 | 695,88 | 437,220 | 316,987 | 34,455 | 1,334 | 37.9 | 1,274,816 |
| **Total** | **122,429** | **58,647** | **365,837** | **43,992** | **419,161** | **85,016** | **1,055,496** | **1,118,964** | **88,619** | **1,405** | **100** | **3,359,566** |

Source: Information excepted with permission form benchmarking SME policies in GCC: A survey of Challenges and Opportunities, (A research report for the EU-GCC Chamber Forum Project by Steffen Hertog, 2008).

Table 2.2 shows a breakdown for the contribution of small and medium enterprises to job creation in Saudi Arabia.

The following section will point out some general and specific challenges for small and medium enterprises in Saudi Arabia. As many entrepreneurs worldwide, Saudi entrepreneurs lack of saving and collaterals to pledge against commercial loans. Difficulty raising external funding may turndown business ideas that have high potential of growth and wealth creation. The next section will present overview of the financing challenges that SMEs face in Saudi Arabia.

## 2.3 General challenges for SMEs in Saudi Arabia

First, financing a start-up business or small enterprises can be a very challenging process to all parties – lenders and borrowers, alike. On one hand, banks and other financial institutions usually made their credit decision based on "hard information" or transaction based financing. Information about the borrower business, credit history, audited financial reports, and information verifiability will determine if the borrower are eligible for credit or not (Kano, Uchida, and Watanabe, 2011; Bester, 1987). On the other hand, Entrepreneurs and SME's capital needs will change depending on the stage of the venture. According to Bruno (1985), start-up businesses will need capital to develop and prove the intended business concept. After the initial stage of developing a new business concept, start-up businesses will need additional capital for manufacturing and marketing budget to introduce the new product or service to the market (Berger, 2002).

There is a large financial gap in the credit market in GCC countries, and a recent study by the EU-GCC chamber forum shows that 55% of SME's could not raise enough credit from commercial banks. In the UAE for example, 70% of credit applications from

SMEs were rejected, and only 7.5% of bank's portfolio were directed to SMEs. (World Bank, 2011; GCC SME Forum 2011).

The Saudi Central Bank reported that the total lending to the SMEs business sector from commercial banks accounts to less than 2% of total lending activities (SAMA Governor, 2011)[2]. Most of the credit rejections were due to borrowers' inability to provide loan conditions such as collaterals (Bester, 1987); a typical bank will require 150% of the loan value as collaterals during the life of the credit; these collaterals could be fixed time deposits, market securities, assets that can be liquidated with less than a year, or government bonds (Binks, 1997). From the bank point of view, start-up businesses have a very high probability of default, and entrepreneur with little or no credit history have low credit worthiness (Blackwell, 1982). Collaterals, however, can reduce information ambiguity and considered as substitute for valid information (Voordeckers and Steijvers, 2006).

In borrowing and lending business, when the borrower provides collaterals such as an asset, including property, or investment a lower loss given default will be expected. Banks will also charge a lower interest rates (Cowling 2010; Bester 1985). Also, the legal environment in Saudi Arabia does not support banks to enforce the borrower to pay in case of default (Capitas, 2011). This is elaborated upon below.

Table 2.3 shows the bank credit to the private sector in Saudi Arabia by economic activity. In general, between 2007 and 2010 little changes have been made in the proportion

[2] There are more than 20 large banks operating thousands of branches all over Saudi Arabia, at the same time hundreds of leasing companies working in Saudi Arabia. Both banks and leasing companies are receiving applications through their branches, direct sales, and online, and there is no definitive number of known applications. Accordingly, the only useful information that can be used as a proxy of loan applications from SMEs are the approved loans that are extended to clients and are reported to the central bank. The central bank issued a comprehensive report of all loans figures and according to their report we had the percentage of 2% of the total loans goes to SME sector.

that commercial bank allocate to different business sectors. For example, loans to building and construction business activities dropped from 7.8% to 6.7% of total loans extended to SMEs. Although, many entrepreneurs were starting businesses in this business sector; because of increase of government spending in construction and building such as the national railways construction projects linking the whole kingdom and overground rail in Riyadh. Banks kept the conservative approach to not over lend a sector than other. In fact, when many entrepreneurs shifted to one sector from other, either new comer to the market of moving from different sector, banks and financial institutions request more collaterals and securities from entrepreneurs before extending more facilities. Table 2.3 and 2.4 shows the proportion of loans in each economic activities, the total sum increased by 20% from SR. 557 million to SR. 716 million between 2007 and 2010, but slight change was noticed in the allocation for each business activity. This raises many questions of why financial institutions are still conservative when extending loans to SMEs' while their total assets approximately doubled; total bank assets increased by 81% from S.R.759 billion in 2007 to S.R. 1.377 trillion in 2010.

**Table 2.3 Bank Credit to the Private Sector by Economic Activity in Million Saudi Riyals**

| Year | 2007 | | 2008 | | 2009 | | 2010 * | |
|---|---|---|---|---|---|---|---|---|
| **Economic Activity** | **Amount** | **% Share** | **Amount** | **% Share** | **Amount** | **% Share** | **Amount** | **% Share** |
| **Agriculture and fishing** | 8,636 | 1.5 | 10,980 | 1.5 | 8,731 | 1.2 | 8,745 | 1.2 |
| **Manufacturing and processing** | 54,339 | 9.7 | 79,333 | 11.1 | 75,044 | 10.6 | 76,666 | 10.7 |
| **Mining and quarrying** | 3,897 | 0.7 | 4,265 | 0.6 | 5,337 | 0.8 | 4,685 | 0.7 |
| **Electricity, water, and other utilities** | 5,878 | 1.1 | 10,629 | 1.5 | 13,365 | 1.9 | 15,450 | 2.2 |
| **Building and constructions** | 43,473 | 7.8 | 54,371 | 7.6 | 44,741 | 6.3 | 48,248 | 6.7 |
| **Commerce** | 127,473 | 22.9 | 176,858 | 24.8 | 169,220 | 23.9 | 182,101 | 25.4 |
| **Transport and Communications** | 20,989 | 3.8 | 37,814 | 5.3 | 38,415 | 5.4 | 37,336 | 5.2 |
| **Finance** | 62,632 | 11.2 | 16,812 | 2.4 | 21,258 | 3.0 | 20,914 | 2.9 |
| **Services** | 28,286 | 5.1 | 32,324 | 4.5 | 46,123 | 6.5 | 32,092 | 4.5 |
| **Miscellaneous** | 201,854 | 36.2 | 289,351 | 40.6 | 286,536 | 40.4 | 290,749 | 40.6 |
| **Total** | 557,405 | 100.0 | 712,737 | 100.0 | 708,769 | 100.0 | 716,987 | 100.0 |
| *** End of first quarter** | | | | | | | | |

Source: Saudi Arabian Monetary Agency- 46th Annual Report

## Table 2.4 Consolidated Balance Sheet of Commercial Banks (End of Period)

| Year | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 * |
|---|---|---|---|---|---|---|
| **Assets** | **S.R. Million** | **S.R.** | **S.R.** | **S.R.** | **S.R.** | **S.R.** |
| Reserves | 32,646 | 52,061 | 108,614 | 97,171 | 160,118 | 131,575 |
| Foreign Assets | 91,430 | 129,796 | 147,712 | 153,986 | 210,918 | 206,976 |
| Claims on Government and non-financial public sector enterprises | 159,478 | 158,218 | 181,613 | 241,986 | 182,324 | 212,677 |
| Claims on the private sector | 435,926 | 476,020 | 577,882 | 734,557 | 734,237 | 745,758 |
| Claims on non-monetary financial institutions | 538 | 837 | 1,429 | 911 | 1,365 | 1,452 |
| Other assets | 39,058 | 44,158 | 57,971 | 73,659 | 81,296 | 78,980 |
| **Total Assets/Liabilities** | **759,075** | **861,088** | **1,075,221** | **1,302,271** | **1,370,258** | **1,377,418** |
| **Liabilities** | | | | | | |
| Banking deposits | 489,387 | 591,259 | 717,564 | 846,118 | 940,548 | 920,688 |
| Foreign Liabilities | 65,040 | 59,199 | 105,213 | 112,466 | 99,683 | 105,434 |
| Capital and reserves | 66,608 | 79,947 | 106,026 | 131,822 | 163,642 | 182,787 |
| Profits | 25,611 | 34,667 | 30,264 | 29,928 | 26,830 | 6,933 |
| Other liabilities | 112,429 | 96,019 | 116,154 | 181,937 | 139,555 | 161,575 |

* End of the 1st quarter.

Source: Saudi Arabian Monetary Agency- 46th Annual Report

Most SMEs owner managers and entrepreneurs in Saudi Arabia raise funds to meet financial business expenses through personal saving, friends and family members, and personal loans from commercial banks. In general, real estate; which most of the GCC nationals tied up their wealth in; cannot be pledged as a collateral. Central banks and Islamic courts in Saudi Arabia and other GCC countries restricted banks and other financial institutions to accept personal property as collateral. Having this situation in the credit market, many entrepreneurs and SMEs owners are forced to buy expensive cars and other vehicles in installment bases and pay interest of 10% p.a. above the central bank rates just to resell these cars in the market and get "cash" (Hertog, 2010; Mourtada et al., 2011). The total lending for motor vehicles in 2009 was above S.R. 23 billion (£3.83 billion) (Saudi Arabian Monetary Agency (SAMA), 2008a). Similarly, in the UK 53% of small businesses used credit cards to finance their businesses, the total amount was founded to be £450 million per month and the annual overdraft borrowing was approximately £12 billion in 2004 (Fraser, 2004). Also, in USA 45% of small businesses owners used personal credit cards to finance their own enterprises (Bitler et al., 2001).

Table 2.5 shows the consumer and credit card loans and how it was utilised between 2005 and 2010. Clearly, consumers' households including entrepreneurs didn't use banks loans to invest in real estates as the change in real estate loans maintained the lowest percentage of consumers loan allocation for five years with slight increase that makes no significant effect. On the same time, the total figure jumped from S.R.4,259 million to S.R. 8,641 million. Mainly, increases where channelled to buying motors, equipment, and other uses such as offset expenses incurred from business activities of entrepreneurs. Government, support schemes, and commercial banks must look into these massive new loan expenditures by entrepreneurs to avoid bankruptcy of many firms if they continue creating negative gaps

by borrowing in short-term bases to finance a long-term assets or equipment necessary to run their businesses.

**Table 2.5 Consumer and Credit Card Loans (End of period) in Million Saudi Riyals**

| Year | Consumer Loans | | | | |
|---|---|---|---|---|---|
| | Real estate | Motor vehicles and equipment | Other | Total | Credit Card Loans * |
| 2005 | 13,656 | 29,025 | 138,173 | 180,855 | 4,259 |
| 2006 | 13,690 | 34,261 | 132,726 | 180,678 | 7,349 |
| 2007 | 14,136 | 37,588 | 126,682 | 178,407 | 9,251 |
| 2008 | 14,906 | 37,261 | 121,817 | 173,984 | 9,451 |
| 2009 | 17,860 | 38,134 | 123,907 | 179,901 | 8,621 |
| * Including Visa, Master Card, American Express and Other. | | | | | |

Source: Saudi Arabian Monetary Agency- 46th Annual Report

Second, challenges facing entrepreneurs and small business in Saudi Arabia are as follows. There is a lack of skilled manpower in technical industries or non-capable employees in case of service businesses (Saudi Arabian Monetary Agency, 2014). The human resources problem is attributable to the competition that faces the SME business sector from larger corporations (Saudi Social Security, 2008). Large businesses are more attractive to quality employees for many reasons such as job security, competitive salaries and benefits, long career plans and development, and opportunity to have higher positions in large companies (Saudi Arabian Monetary Agency, 2014). Despite the government law that required 10% of SME's employees to be Saudi citizens, it was found that only 2% of employees in SMEs were Saudi (Saudi Social Security, 2008).

The contribution of jobs creation in SMEs in Saudi Arabia is viewed as very important because SMEs employ 45% or 3.35 million jobs of the workforce in Saudi Arabia (Al-

Mahmoud et al., 2012). In the UK, the private business sector enterprises employ 22.5 million people or 48.6% of the UK population (Love and Roper, 2015). Statistics have shown that 97% of firms employed from 2 to 20 people full time staff; 95% employ 5 people or less. In the UK there are more than 500,000 new businesses started every year (Love and Roper, 2015). At the same time, small and medium businesses create jobs for approximately 45% of the workforce in Japan, and 60% in France (Acs et al., 1992). Finally, the contribution of job creation from small and medium enterprises was founded to be 45% and 48% in Canada and US (Pearson and Scarpetta, 2000).

Third, bureaucratic red tape accounts for 65% of problems, which have challenged small businesses in Saudi Arabia (Torofdar and Yunggar, 2012). Saudi Arabia was ranked 97 out of 181 counties in the World Bank's global evaluation of "Government Effectiveness" (Beck et al., 2008a). Entrepreneurs and SMEs owner managers face the challenge of dealing with a cumbersome bureaucracy system to get licenses, registration, certification and other documentation needed to many government ministries and agencies related to their intended business project (Torofdar and Yunggar, 2012).

**Table 2.6 Private Sector Imports Financed Through Commercial Banks ***

| Million Saudi Riyals | | | | | | % Share | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | First Quarters | | | | First Quarters | | % Change | |
| | 2007 | 2008 | 2009 | 2009 | 2010 | 2008 | 2009 | 2009 | 2010 | Annual | Quarterly |
| Foodstuffs | 18,109 | 27,761 | 18,363 | 3,571 | 5,076 | 13.1 | 11.4 | 9.0 | 11.6 | -33.9 | 42.1 |
| Motor vehicles | 25,609 | 25,711 | 23,034 | 6,880 | 6,938 | 12.1 | 14.2 | 17.3 | 15.9 | -10.4 | 0.8 |
| Textiles and clothing | 4,626 | 4,649 | 4,597 | 1,139 | 842 | 2.2 | 2.8 | 2.9 | 1.9 | -1.1 | -26.0 |
| Machinery | 12,255 | 13,687 | 15,284 | 3,885 | 4,978 | 6.4 | 9.5 | 9.8 | 11.4 | 11.7 | 28.1 |
| Construction materials | 14,255 | 19,012 | 11,787 | 2,636 | 3,281 | 8.9 | 7.3 | 6.6 | 7.5 | -38.0 | 24.5 |
| Appliances | 4,553 | 5,777 | 4,472 | 1,142 | 1,464 | 2.7 | 2.8 | 2.9 | 3.3 | -22.6 | 28.3 |
| Other goods | 88,705 | 115,850 | 84,183 | 20,456 | 21,140 | 54.5 | 51.5 | 51.5 | 48.4 | -27.3 | 28.3 |
| Total | 168,518 | 212,447 | 161,720 | 39,709 | 43,719 | 100.0 | 100.0 | 100.0 | 100.0 | -23.9 | 10.1 |
| Ration of total import (CIF) | 49.8 | 49.2 | 45.1 | | | | | | | | |

* Including letter of credit settled and bills received for collection through commercial banks.

Source: Saudi Arabian Monetary Agency- 46th Annual Report

Table 2.6 shows the percentage of private sector imports which funded by commercial loans and letter of credit between 2007 and 2010. Table 2.6 also shows the sectors that are approved and had access to funding such as: loans used to import vehicles, 15%; foodstuffs, 11.6%; machinery, 11.4; and 7.5% to construction materials. The table provide entrepreneurs with business sectors that commercial banks extend credit facilities to.. At the same time, support schemes can understand the gap in funding according to business types. Support scheme can then focus their resources to firms which are not funded by commercial banks, yet has a high potential of growth in the future.

The Saudi government operates most of these commodities such as oil, natural gas, and minerals and limited opportunities are open to private sectors. This notwithstanding, there are many opportunities for SMEs to grow and contribute to the Saudi economy; the SME population was expected to grow widely by annual rate of 3.6% in 2010 (Dincer and Al-Rashed, 2002) and recent statistics shows a growth over 500,000 per annum (601,949 births per year, and number of deaths of 98,289 per year (SAMA, 2011). The population statistics shows that 77.6% (22.2 million) of people in Saudi Arabia are less than 39 years old and the education level is very high among them. Indeed, 50% of Saudi nationals below the age of 25 possess a degree level or higher level of education and qualifications (Goetz and Rupasingha, 2003). The Table 2.7 below shows the breakdown of the workforce in Saudi Arabia with the education level (Saudi Arabian Monetary Agency (SAMA), 2008).

The Saudi government in recent years had started several programs to support small and medium enterprises. The goals are to encourage private investment, and to attract foreign investors to establish businesses in Saudi Arabia, replacement of imported products to local manufacturing, promote non-oil exports, creation of new jobs for Saudi citizens, and promote

entrepreneurial value added projects (ESFCSO, 2015). The next section will cover attempts from the Saudi government to support the SME business sectors.

Table 2.7 shows a breakdown of labour force in Saudi Arabia using the following categories: Age, region, and education level. The main points to note from the Table 2.7 are as follows. 70% of Saudi workforce are between 15 and 24 years old. This shows that Saudi Arabia has a young nation and one of the challenges for the government is to utilise this workforce which will need jobs in the not too far future. Focusing on entrepreneurship can be one of various solutions to help provide employment opportunities for the Saudi population.

From table 2.7, three regions - Riyadh, Makkah, and the Eastern province are the major places where the Saudi Arabian work force live. Clearly other regions have a lower percentage of the work force. For example, the Northern Border region has only 70,784 people compared to Riyadh which has 2.26 million people able and willing to work. The challenge here is how the government will manage to create opportunities to these people in less developed regions, what will be the tools and incentives for people to relocate themselves to other places? How the government will be able to manage and redistribute opportunities to achieve balance in all regions of Saudi Arabia is clearly a major challenge.

Table 2.7 shows the education level among the Saudi workforce. 21.7% of the Saudi Arabian workforce have a high school level of education, 26.0% have a diploma or a Bachelors degree, 1.1% with Master degree or higher level diploma and 0.04% possess a PhD. However, the majority (50.9%) of the labour force have less than a high school level of education. And, a startling 31.8% of the workforce have a primary level of education or worse.

**Table 2.7 Breakdown of the Labor Force by age category, administrative region and education level in Saudi Arabia**

| Age Category | Labor Force | Ratio to total | Employed | Ratio to labor force | Non-employed | Ratio to labor force |
|---|---|---|---|---|---|---|
| 15-19 | 47,983 | 0.6 | 35,552 | 74.1 | 12,431 | 25.9 |
| 20-24 | 656,096 | 7.6 | 457,656 | 69.8 | 198,440 | 30.2 |
| 25-29 | 1,423,298 | 16.5 | 1,240,965 | 87.2 | 182,333 | 12.8 |
| 30-34 | 1,810,404 | 21.0 | 1,757,387 | 97.1 | 53,017 | 2.9 |
| 35-39 | 1,623,936 | 18.9 | 1,613,172 | 99.3 | 10,764 | 0.7 |
| 40-44 | 1,229,181 | 14.3 | 1,255,592 | 99.7 | 3,589 | 0.3 |
| 45-49 | 836,168 | 9.7 | 833,733 | 99.7 | 2,435 | 0.3 |
| 50-54 | 504,483 | 5.9 | 505,483 | 100.0 | 0 | 0.0 |
| 55-59 | 276,809 | 3.2 | 276,809 | 100.0 | 0 | 0.0 |
| 60-64 | 105,671 | 1.2 | 105,671 | 100.0 | 0 | 0.0 |
| 65+ | 96,972 | 1.1 | 96,972 | 100.0 | 0 | 0.0 |
| **Administration Region** | | | | | | |
| Riyadh | 2,351,492 | 27.3 | 2,267,199 | 96.4 | 84,293 | 3.6 |
| Makkah | 2,254,861 | 26.3 | 2,147,548 | 95.2 | 107,313 | 4.8 |
| AL-Madinah | 509,858 | 5.9 | 476,397 | 93.4 | 33,461 | 6.6 |
| AL-Qassim | 392,110 | 4.6 | 373,083 | 95.1 | 19,027 | 4.9 |
| Eastern | 1,303,350 | 15.1 | 1,235,779 | 94.8 | 67,571 | 5.2 |
| Asir | 560,568 | 6.5 | 534,170 | 95.3 | 26,398 | 4.7 |
| Tabuk | 228,719 | 2.7 | 215,549 | 94.2 | 13,170 | 5.8 |
| Hail | 179,203 | 2.1 | 166,941 | 93.2 | 12,262 | 6.8 |
| Northen Border | 84,246 | 1.0 | 70,784 | 83.0 | 14,462 | 17.0 |
| Jazan | 352,990 | 4.1 | 307,773 | 87.2 | 45,217 | 12.8 |
| Najran | 140,268 | 1.6 | 129,064 | 92.0 | 11,204 | 8.0 |
| AL-Bahah | 126,917 | 1.5 | 115,883 | 91.3 | 11,034 | 8.7 |
| AL-Jawf | 125,419 | 1.5 | 107,822 | 86.0 | 17,597 | 14.0 |
| **Education Level** | | | | | | |
| Literate | 477,964 | 5.6 | 476,566 | 99.7 | 1,398 | 0.3 |
| Read & write | 913,386 | 10.6 | 909,110 | 99.5 | 4,276 | 0.5 |
| Primary | 1,258,386 | 14.6 | 1,227,974 | 97.6 | 30,412 | 2.4 |
| Intermediate | 1,732,492 | 20.1 | 1,685,680 | 97.3 | 46,812 | 2.7 |
| High School | 1,866,232 | 21.7 | 1,744,859 | 93.5 | 121,373 | 6.5 |
| Diploma | 582,055 | 6.8 | 525,203 | 90.2 | 56,852 | 9.8 |
| Bachelor | 1,656,912 | 19.2 | 1,455,829 | 87.9 | 201,083 | 12.1 |
| Master/High Dip. | 92,041 | 1.1 | 91,238 | 99.1 | 803 | 0.9 |
| PhD | 31,533 | 0.4 | 31,533 | 100.0 | 0 | 0.0 |
| **Total** | **8,611,001** | **100.0** | **8,147,992** | **94.6** | **463,009** | **5.4** |

Source: Saudi Arabian Monetary Agency- 46th Annual Report

Policy makers in Saudi Arabia are challenged to create national programs and initiatives that channels the mass of people with various educational achievements and skills that will be needed in the future. Being encumbered with approximately one third of the workforce of whom have a primary level of education or no real formal education does make it challenging for policy makers. A clearer vision of the broad profiles of the businesses in the private sector that will be expanding will help to address supply side issues of the national workforce. However, compounding the situation is the difficulty of obtaining accurate profiles of firms and sectors that will be creating employment opportunities. Universities and other educational institutions can also help in that matter by controlling the number of people in each domain to avoid producing graduates with majors or skills which are not in tune with employers' needs.

## 2.4 SMEs support schemes in Saudi Arabia

The attempts from the Saudi government to support the SME business sector is still in its development phase, or infancy. To the best of my knowledge at the time of this thesis, there is no single government body or authority who is responsible for SME development. Every ministry, municipality, support schemes and or government authority are making their own initiatives and separate programs to help SMEs to develop. Having this situation; the aggregate output of support and development is hard to measure, and many of resources are wasted due to lack of unified planning and delegation of authorities between government bodies. It is also confusing to entrepreneurs themselves to know where they must start in each stage of their businesses.

Recently over the last 10 years a total of 32 initiative programs of specialized support schemes were opened in Saudi Arabia (Abdul-Muhmin and Umar, 2007; *Investment Climate*

*Statement*, 2015; Rahatullah Khan, 2013). One of the main goals of the Saudi Arabia national five-years development plans for the period from 2010 to 2014 was to develop the SME sector and to move towards knowledge based economy (Ramady, 2010).

There are many ways that governments can increase the supply of entrepreneurs and entrepreneurial activities by increasing the market incentives for entrepreneurs such as encouraging willingness of individuals to start their own businesses, develop entrepreneurship encouragement programs, initiate entrepreneurship educational programs in universities, reform market regulations to facilitate entry into the market, increase entrepreneurial opportunities available to women and young professionals, and improve the availability of credit and access to capital market (Burnett, 2000). In order to increase competitive capacity of small and medium enterprises government must increase advice services to this sector (Bennett and Robson, 2003).

The following section will provide summaries 8 major support schemes in Saudi Arabia and high light to reader each support scheme objectives, pervious performance, available budget (if information was available), and number of SMEs' supported by each scheme. The discussion will provide an overview of sample of support schemes from 12 different countries worldwide including USA, UK, Saudi Arabia, Japan, China, and few countries from Europe.

Surprisingly, there is no government agency responsible for SMEs issues in Saudi Arabia; all initiatives are separated and there are no clear objectives to how these support schemes can help developing the SMEs sector in Saudi Arabia (El-Hawary et al., 2004). The Saudi Industrial Development Fund (ESFCSO, 2015a) for example, supervised by the Ministry of Finance has established the “Kafala Program” in 2006 which is a support scheme for SMEs with a capital of SR.200 million (£ 33.3 million), and 50% of the capital was raised

by the Saudi government and 50% by local commercial banks.

### 2.4.1 Kafala

Kafala is a program that has many stages starting from basic feasibility studies, opportunities evaluation, book-keeping, accounting for small businesses, and how to setup small businesses (ESFCSO, 2015). Other programs are more advanced and have been designed to educate entrepreneurs on technical or technological matters that might face specific business sector such as manufacturing or high technology businesses.

The main goal of the Kafala Program is to provide loan guarantees to commercial banks to cover 50% of the loan amount for the approved SMEs project. In 2008 there were 36 different SMEs benefiting from the Kafala Program and the total guaranteed amount was S.R.49 million (£ 8.16 million). The Kafala Program's objectives are to develop and help SMEs substantiate their significant role in the national economy, create new jobs through using the least capital, promote ideal distribution of income among the people, increase the size of capitals invested in the community, increase the volume of macro production, increase goods and services available in the market, complement large size companies with small and medium enterprises business sector, develop the less economically active districts, increase non-traditional exports, and create more jobs for young generation in the market (ESFCSO, 2015).

The major segment supported by the Kafala Program are: all industrial concerns, agriculture-serving activities, commercial activities, education, tourism and entertainment, contracting business, transportation and communications, service sector, medical centres and pharmacies (Varlı, 2014). Some business activities were not covered by the Kafala Program such as enterprises that makes more than SR20 million (£3.34 million) annual sales, state-owned or controlled activities, speculative acts, for example, banking or real estate

speculations and pyramid selling schemes or financing ventures, activities not authorized by the Saudi laws and regulations and existing concerns whose business is restricted to buying and reselling goods only. The Kafala Program offers a maximum guarantee-eligible financing amount of SR2 million (£ 333,000) and the minimum guarantee-eligible financing amount is SR100, 000 (£ 16,660).

The program provides all credit facilities granted to SMEs according to Islamic Sharia-compatible laws; Islamic Sharia financing is based on sharing profit and loss in any business transaction and money will be always a medium for exchange and not an assets by its own (Obaidullah, 2005). Financing can take many types all based on profit and loss shearing but not borrowing and lending model.

Murabaha Financing is a form of Islamic financing used for financing assets for either business or personal uses. Murabaha is basically long or short term leasing agreement for a specific asset for a pre agreed price and time; in Arabic language "Murabaha" means obtaining profit (Al-Meaither and Mitchell, 2003). The process of the Murabaha contract is that the owner of capital, or usually a bank, buys an asset and resells it to an entrepreneur or an individual and receives instalments which combines principle plus profit margin, as agreed in sales contract.

The main different between Murabaha and conventional lending is that the assets remains under the banks name during the instalment period and the bank takes the risk of any capital loss; but not more than what had been paid (Napier, 2009), during the entire period of financing (Hisham Yahya et al., 2012a; Obaidullah, 2005). Musharaka Financing: "*Musharaka*" which means "*Partnership*" in Arabic language is a form of financing were the entrepreneur participates by his/her idea, time, or experience for a pre-agreed percentage of profit. On the other hand, the financer or the bank participates by funding the project of a pre-

agreed percentage of profit. In case of loss, the entrepreneur loses his time and effort but will not be liable for any capital losses. On the other hand, the bank or the financer will be liable for all capital losses (El-Gamal, 2006; Rogers, 2006; Visser, 2013).

The Kafala Program provides range of financing, all of which complies with Islamic Sharia laws, such as:

1. Short, medium and long terms of financing.
2. All types of Guarantee Letters issuance facilities.
3. Facilities for opening documentary credits (Import).
4. Purchasing fixed assets.
5. Financing working capital.

In 2011, the Kafala Program had helped 742 different projects and the total support amount was S.R. 1,284 million (£ 214 million). Also, the Kafala Program conducted 28 comprehensive education programs for guaranteed small and medium projects and 700 participants had participated in these education programs (Ramady, 2013).

### 2.4.2 Saudi Credit Bank

The Second prominent support scheme in Saudi Arabia was the Saudi Credit Bank (SCB). The SCB provides microloans (£8,000 or less) to low-income Saudis (any income below £10,153 p.a.) as its main target. The objectives of SCB are to create jobs, and encourage Saudis to start their own businesses. The maximum lending limit provided by SCB funding was set at S.R. 200,000 (£33,330). These loans are used to finance taxi drivers, producing families; mainly native Saudi females working only from home who have a talent that could be a potential source of income, micro businesses, and start-up businesses. SCB as a government owned and operated bank SCB has had a significant obstacle in defining the

target segment and enforcing repayment (Abdul-Muhmin and Umar, 2007). Information about the number of beneficiaries and total amount of support was not disclosed.

In general, poor borrowers do not maintain any accounts of their previous business or do not have any business plans. At the same time, microcredit faces the challenge of making sure that the loan amounts were used for business activities rather than other uses such as paying old obligation or family expenses. Finally, default rates increases when the borrowers know that government funding supports the bank and there are no strict laws if they do not pay back the credit amount (Beck et al., 2008). Finally, the managerial structure and norms of the scheme plays an important role of default rates, for example, the collection of payment from scheme beneficiary could be done by different staff than loan approval officers (Harper, 2003).

### 2.4.3 The Centennial Funds (CF)

The Centennial Funds (CF) was established in 2004, and it was a special initiative created by King Abdullah Ibn Abdulaziz (current King of Saudi Arabia) to support micro-enterprises of young entrepreneurs aged between 25 and 35 years old. CF provides interest free loans directly up to SR. 200,000 (£33,330) to beneficiaries of approved projects and repayment starts six months after the actual beginning of the project. The average terms of payment are five years, and the entrepreneur will have other services besides funding such as on-going training, administrative and advisory support. CF has funded 1,520 projects since 2004 with a total investment of S.R. 264.7 million (£ 44.11 million).

The CF reported that more than 17,000 loan applications were received in 2007 but only 465 projects were approved for support. Loan approval internally goes into a process of screening, due diligence, assessments of the creditworthiness of borrowers, and evaluations

of the feasibility of business plans. In this study more investigation about loan approval process and due diligence procedures will be examined to find out what exactly done before a lending decision is taken.

As reported by Dr. Al-Mutairi the CEO of CF in (Al-Mahmoud et al., 2012) CF received more than 110,000 applications since inception and the accepted loans were slightly above 3% of these loan applications. Dr. Al-Mutairi said that the total outstanding loans reached S.R. 732,000,000 (£122 million) and these supported 3,465 projects. 60% of these projects were in 160 different small developing cities and rural areas of Saudi Arabia. The distribution of these loans were 4% for industrial projects, 2% agriculture projects, 41% services, and 53% other businesses. CF charges 1.5% p.a. for the outstanding loan amount as a source of income and the maximum charges per loan was S.R. 8,000 (£1,330) over the life of the loan of 5 years. CF had supported projects that created 9,500 jobs. The CF have spent S.R. 450,000,000 (£75,000,000) as administrate and loan monitoring since inception which lead to roughly figure of S.R. 47,368 (£7,894) to create one job by supporting SMEs projects in Saudi Arabia (Al-Mahmoud et al., 2012).

### 2.4.4 Abdullateef Jameel Community Service Program (Bab Rizq Jameel)

The Abdullateef Jameel Community Service Program (Bab Rizq Jameel) is another support scheme exclusively focused on micro enterprises and home-based start-up businesses in Saudi Arabia. Bab Rizq Jameel started in 2002 by the famous Saudi Arabian Toyota car dealer (Ali, n.d.). The idea started by providing interest free loans to young entrepreneurs how would like to buy Toyota vehicle for business activity of their own such as taxi, delivery, or any other possible entrepreneurial activities.

Bab Rizq Jameel started to extend microcredit to entrepreneurs to start their

businesses and according to their annual report in 2003, 58,000 jobs were created (in all branches in the Middle East) and where 60% of these jobs were to females. Also, 6,500 small projects were supported with microcredit loans up to S.R. 150,000 (£25,000) and repaid in maximum period of 4 years. The major supported business sectors are food services, restaurant and catering, cosmetics, printing and copying centers. In 2010, Bab Rizq Jameel reported that more than 183,988 (45,010 jobs in Saudi Arabia) jobs were created in the schemes 30 branches in the Middle East and their target is to create 500,000 jobs by 2015.

By 2010, Bab Rizq Jameel had achieved a significant record among all support schemes in Saudi Arabia. The scheme competed training program to 18,096 people, financed 14,760 small business, and financed 94,790 productive families were supported, and 45,010 jobs were created in Saudi Arabia alone. No data about default rates or total investment were reported (Shehadi et al., 2011).

Literature has shown that support schemes worldwide have many common problems in their operations; a general problem is the credit worthiness of the borrowers (Hirata and Shimizu, 2003a). Microcredit borrowers usually do not maintain financial records for their previous business activities or a future business plan for their new business venture (Beck et al., 2008a). This makes banks reject applications for microcredit (Dimov, 2010). For example, a study for a microcredit support scheme in Kenya founded that following factors for default in microcredit:

1- Low profitability of business operations.

2- Business losses.

3- Borrower uses the microcredit amount to pay old obligations.

4- Borrowers used most of business proceeds to pay family and dependent expenses.

5- Monitoring microcredit amount is a very expensive and non-feasible process in microcredit lending business.

Although the microcredit scheme had created 500,000 jobs which account to 72% of jobs created by SMEs business sector and contributed around 18% to GDP, due high level of default rates of 31%, the program was closed (Barako and Brown, 2008). In lending it's important to study the character of the borrower, and several factors might be examined such as the three C's of microcredit borrower (Beck et al., 2008a).

(I) Character: It describes the person honesty and commitment of repayment of his or her debt obligations. Individual background, education level, and his or her credit history affect his character.

(II) Capacity: assessment of personal current income, future expenses, family members or dependents can affect how much an individual could pay if he or she exposed for more credit.

(III) Capital: analyzing the borrower net worth in term of current capital such as saving, properties, or other securities available to pledge as collaterals against extended loans (Baas and Schrooten, 2006).

Other studies focus on how can support schemes help SMEs access to credit by providing loan guarantees. SMEs often have problems obtaining bank loans for their businesses (Valentin and Wolf, 2013).

### 2.4.5 Modon

Modon, the Saudi Industrial Property Authority was established in 2001. Modon is responsible for the development of industrial cities with integrated infrastructure and services. Over the last 13 years, Modon developed 160 million square meters in 30 industrial cities, supported 3,000 factories, created jobs for more than 300,000 people and invested S.R.250 billion (GBP 42 billion) in supporting SMEs' in Saudi Arabia (Modon, 2014).

### 2.4.6 Sagia

The Saudi Arabian General Investment Authority (Sagia) was established in year 2000. Sagia objectives are to preparing state policies designed to promote and enhance local and foreign investment in Saudi Arabia. Sagia is also responsible to monitoring, evaluating, and improving investment climate. Sagia also provide a network of provide advisory, conducting feasibility studies and invest in human capital resources in the Saudi market place (Ramady, 2013).

### 2.4.7 SIDF

The Saudi Industrial Development Fund, established in 1974 to provide medium and long term loans to devised for the industrialization of Saudi Arabia. Since establishment, SIDF extended approximately S.R. 105.5 billion (GBP 17.5 billion) to 2,472 unique industrial firms through 3,480 loans. SIDF also provide technical, administrative, financial, and marketing advices to help SIDF beneficiaries to overcome barriers and market obstacles that they may encounter (ESFCSO, 2015).

### 2.4.8 Specialist Small Scale Providers

The following are support schemes which provide by in large specialist support on a small scale and have substantially less resources than the previously discussed support schemes: Wa'ed, Erada, Hadaf, Reyada, The Royal Commission of Jubail and Yanbu, KAUST, Dhahran Valle, National Entrepreneur Center (NEC), INJAZ and The entrepreneurs development centre at Saudi Chamber of commerce

Wa'ed is a new support scheme initiative from the Saudi Oil company (ARAMCO), Wa'ed started in 2012 with objective to provide business support and financing to growth SME's that have high potential of growth in the future. Erada is a government support scheme started in 2005 providing SMEs' and Entrepreneurs support and training. Erada is one of the support schemes that focus on innovative project grants and patent registration in Saudi Arabia. Hadaf is a government business support scheme established in 2000 to provide business advisory and human capital support including recruiting and training to SMEs. Reyada is a semi government support scheme providing training, and business support to entrepreneurs and start-up businesses in Saudi Arabia.

The Royal Commission of Jubail and Yanbu is one of the oldest government schemes to support industrial project in Saudi Arabia. Lately, the RCJY established few initiatives to support entrepreneurs by providing education, training, land long-term leasing and financing.

Rabigh Economic city is one of the future business hubs of Saudi Arabia in the west coast, over 168 million square meter of industrial lands and total investment of S.R. 187.6 billion (G.B.P. 31.2 billion), the economic city will be completed in 2020. AL Ahssa women's industrial city is the latest initiatives to support women entrepreneurs to start their industrial enterprises. The project is still new and no factory was established at the time of this study.

KAUST is an entrepreneurship center, part of King Abdullah University of Science and Technology, established in 2009 to offer support and advisory to entrepreneur to transform their innovative ideas to commercial entities (KAUST 2014). Dhahran Valle, is a Technology transfer, Innovation and Entrepreneurship R&D centre at King Fahad University of Petroleum and Minerals, established in 2006. Their main objective is provide an environment for researcher to develop, produce, and promote innovation out of academic researches (Dhahran Valle 2014). National Entrepreneur Center (NEC) is a government initiative established in 2010 to provide training and supporting entrepreneurs to transfer innovative ideas to commercial businesses. INJAZ is the first volunteerism program, established in 2006, having more than 1,000 volunteers providing strategic direction, leadership and training to youth entrepreneurs in Saudi Arabia (Fayez 2014).

The entrepreneurs development centre at Saudi Chamber of commerce, is a centre providing market information, networking events, and direct business support and training to entrepreneurs in Saudi Arabia. All of the above support schemes focus on entrepreneur development at first. They provide needed training and business advices with more attention for innovative ideas "Big Ideas". Technology based ideas are most welcome in this group of support schemes and the majority of support resources goes to funding researches and development of models and prototypes. Table 2.8 provides a summary of the support schemes included in the study.

**Table 2.8 A summary of the Support Schemes included in this study**

| Scheme Name | Scheme services |
|---|---|
| 1- MODON | Providing long-term land leasing in 20 Industrial Cities. |
| 2-SAGIA | Project financing and land leasing in 6 Economic Cities (Rabigh, Jazan, Tabuk, Hail, Madina, and Eastern Province economic city) |
| 3-SIDF | 50% to 75% of project cost financing program for 15 years or more |

| | |
|---|---|
| 4-KAFALAH | 50% loan guarantee scheme for SMEs up to S.R. 2 million. |
| 5-Saudi Credit Bank | SMEs project financing up to S.R. 3MM loans to SMEs. |
| 6-Bab Rizq Jameel | Micro project Start-up business support & financing. |
| 7-The Centennial Fund | SMEs start-up business support & financing. |
| 8-Wa'ed | SMEs start-up business support & financing from Saudi Aramco Oil company. |
| 9-Hadaf | Paying 50% of Saudi employees salaries for 2 years, and 100% of training costs. |
| 10-Erada | SMEs start-up business support and advice. |
| 11-Reyada | SMEs start-up business support & financing |
| 12-Royal commission of Jubail and Yanbu | Long term land leasing for industrial projects |
| 13-King Abdullah Economic Cities | SMEs business support and financing. |
| 14-Women's Industrial city | Long-term industrial land leasing for businesswomen. |
| 15-Bader. | SMEs start-up business support & financing. |
| 16-KAUST Entrepreneur Centre | Seed funding & Start-up business support. |
| 17-Dhahran Valley | Oil and Gas R&D Centre. |

To summarize the importance in the above group of support schemes they are ether in early stages of policy making such as Bader, AL Ahssa women's industrial city, Reyada, Erada, Wa'ed, King Abdullah Economic city and the Centennial funds or in re-evaluation stage after working on supporting SMEs' for some period of time such as Bab rizq jameel (10 years of supporting SMEs') and RCJY (over 30 years of providing external business support to SMEs'). In both cases, support schemes are evaluating market needs of external business support and composing policies that will be their guide lines for future support services.

## 2.5 Supporting Small and Medium Enterprises Worldwide and Lessons from International Loan Guarantee Schemes

In many countries a cafeteria of initiatives were established to support SMEs as they account for a significant percentage of businesses (see Table 2.10). The following table 2.9 summaries the percentage share of employees by size of firms in Canada, France, Sweden, Switzerland, and USA.

From Table 2.9 we can see that approximately 55%, and 52 % of businesses are small and medium enterprises in Canada and USA, respectively. 70% of businesses in France, 67% in Sweden, and 76% in Switzerland were also small businesses. The EU defines small businesses as enterprises with less than 250 employees. On the other hand, Canada and USA define small businesses as enterprises with less than 500 employees (Wren and Storey, 2002).

**Table 2.9 The Percentage Share of Employee by Size of Firms in Canada, France, Sweden, Switzerland, and USA**

| Country | 0 to 19 employees | 20 to 49 | 50 to 99 | 100 to 499 | 500 employees and more |
|---|---|---|---|---|---|
| Canada | 20 | 10 | 8 | 16 | 45 |
| France | 31 | 13 | 25 | | 30 |
| Sweden | 31 | 11 | 25 | | 33 |
| Switzerland | 39 | 12 | 24 | | 24 |
| USA | 20 | 18 | | 15 | 48 |

Source: OECD (2000): Table A2, p.211

The main goals for government schemes are to enable SMEs to have access to capital for their start-up businesses or expansion of current businesses, rising awareness of benefits

owning private business, and helping financial institutions assessing small firms by closing financial gap; although, it is difficult to ensure that the support will go for successful businesses only (Wren and Storey, 2002). Three players will be involved in SMEs business sector developing process: Lenders from financial institutions, borrowers from SME business sector, and different miniseries or agencies representing the government. Every player has their goal in the process and to summarize the process:

1- Entrepreneurs / SMEs owner manager: Get the required capital needed for business to start-up, growth, and survival (Cuevas et al., 1997).
2- Banks: Finance and generate income from interest and other credit services and maximize returns on investment to shareholders.
3- Government: Support a large segment of national business owners and create more jobs and stabilize the society that they serve.
4- In designing support schemes the main purpose is to develop and support small and medium enterprises rather than correct the credit market imperfection -(Mason and Brown, 2014).
5- Most of loan guarantee programs depend of government subsidies.
6- Most literature and research evaluate a portion of the costs of support schemes and the actual cost cannot be measure perfectly (Mason and Brown, 2014).

**Table 2.10: Examples of support schemes in deferent countries worldwide; showing the country, scheme name, date of establishment, target SME sector, total outstanding loans, number of supported SMEs, terms and maximum support amounts, charges and service fees (if any), and the sachem website.**

| No | Country | Scheme | Established since | Target SME sector | Total Capital in £ Million | Total Lending | Total supported projects | Lending type | Loan guarantee % | Charges p.a. | Sources |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | UK | National Loan Guarantee | 2012 | SME's with turnover less than £50million | £20 billion | Not available | 16,000 | Loan Guarantee | 75% of loan amount &1% reduction on interest rate | Paid by Banks | http://nationalloanguaranteescheme.co.uk<br>- Business Minister Mark Prisk<br>- George Osborne |
| **2** | UK | Business Finance Partnership | 2012 | Medium Size Businesses only | £1 billion | Not available | Not available | Direct Lending | No information | No information | Budget Statement; George Osborne, Chancellor of the Exchequer, 2012. |
| **3** | UK | R&D tax credit scheme | 2008/ new rules in 2011 | SME less than 500 employees | No Info. | 200% tax credit or claim relief | Advance Science Technology Projects | 100% tax relief for the amount of completed R&D project | 100% tax credit | No Charges | (BIS, 2011) |
| **4** | UK | SBRI | 2012 | SME | No info. | Max £100K | Innovative ideas and new technologies | Competition | One awarded concept only for each competition | No Charges | http://www.innovateuk.org |
| **5** | UK | FCP | 2011 | SME | No info. | No info. | No info. | Awarded idea | SME offer new innovative solution for government | Supporting innovation and new solutions. | (BIS, 2011)<br>Forward Commitment Procurement |
| **6** | UK | The Prince's Trust | 1976 | Disadvantaged young people | No info. | No info | 40,000 | Grants and training | Direct Grants | Training and | http://www.princes-trust.org.uk |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | motivation program for young people | |
| **7** | KSA | Kafalah | 2000 | SME turnover less than £3.3m | No info. | £75M | 769 | Loan Guarantee | 50% Loan Guarantee, minimum £8K and maximum £250K | 2% of outstanding loan guarantee | http://www.sidf.gov.sa/En/Kafalah |
| **8** | KSA | Saudi Credit Bank (Masarat Program) | 2006 | SMEs, microbusinesses, and home-based businesses | £5 billion | £317M | 15,200 | Direct lending to SME, innovators, and self-employed | Max: £50K for innovative projects, Max: £667K for SMEs | Interest Free, and no other fees or charges | http://www.scb.gov.sa/Loans/Small Projects |
| **9** | KSA | SIDF | 1974 | Industrial SMEs | £6.67 billion | £14.9 billion | 6,656 | Direct & loan guarantees | 50% to 75% of the project cost | 2% p.a. financing form 15 to 20 years | http://www.sidf.gov.sa/En/Pages/default.aspx |
| **10** | KSA | HDF | 2000 | All SMEs | No info. | No info. | No info. | Direct Refund 50% of salaries, and 100% of training programs | - Refund of any training program expenses for new employees up to £3,300 per employee & 50% (max: £500 per month) of all employees' salaries up | No charges or fees | http://www.hrdf.org.sa/ |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | to 24 months | | |
| **11** | KSA | The Centennial Fund | 2004 | Microbusinesses , and SMEs | £ 333.3M | £122 M | 3,465 | Maximum lending £33.3K | Up to 100% of new project cost | 1.5% p.a. | http://www.tcf.org.sa |
| **12** | KSA | Erada | 2005 | Microbusinesses , and start-ups only | No info | £ 79.3 M | 1,586 | Maximum lending £50K | Training, direct financing, and salary for entrepreneur of £500/month for 24 months | Interest free, and no other charges | http://www.riyadah.com.sa/ourPrograms.aspx |
| **13** | KSA | WA'ED | 2012 | SMEs | No info. | No info. | 5 | Maximum lending £1.34M | Non-collateralized loans and end-to-end support | Interest Free | http://www.waed.net |
| **14** | KSA | MODON | 1972 | SME industrial sector only | 76 million square meters | 23 industrial cities | 3,000 | 20 to 30 years industrial land leasing | Long term leasing for industrial lands | From annual leasing from £0.167 to £0.67 per square meter | www.Modon.gov.sa |
| **15** | KSA | KAUST | 2009 | Innovative start-up businesses | No info. | No info. | 3 | Maximum lending: £125K | High-quality job creation and industry diversification | Interest Free | http://www.kaust.edu.sa |
| **16** | KSA | Bab Rizk | 2002 | Microbusinesses | No info. | £ 33.1 M | 14,760 | Maximum | Direct | Interest | http://www.babrizqjameel.com |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jameel | | and home-based. | | | | lending: £25K over 4years repayment | lending | free | |
| **17** | Canada | Canada Small Business Financing Program (CSBFP) | 1961 | Start-ups and SMEs | No info. | £ 686.7M | 7,466 | Maximum lending: £ 333.3K up to 10 years | 90% loan guarantee | CIBC+2% p.a.+ 1.25% management fees | http://www.ic.gc.ca |
| **18** | Canada | Canadian Youth Business Foundation (CYBF) | 1997 | Start-up businesses only | No info. | No info | 4,200 | Maximum lending: £ 10,000 | 90% loan guarantee | CIBC+5.65% for the first year only+ £33 set-up fees+£10/m admin fees | - HRH The Prince of Wales<br>- http://www.cybf.ca |
| **18** | Canada | BDC | 1947 | Start-up businesses | No info | No info | 29,000 | Maximum lending: £ Up to 30 years | 100% Loan guarantee + personal guarantee | Fixed or floating rate choices | https://www.bdc.ca |
| **19** | Canada | Agricultural Innovation Program | 2012 | Start-up agricultural businesses | No info. | New program | Starting March, 2013 | Max: £2.67M for R&D, and Max: £6.67 for starting the business | Up to £2.67M R&D non payable, start-up cost payable over | 10 years interest free loan. | http://www.agr.gc.ca |
| **20** | Canada | EGP | | SMEs | No info | £ 18.12 billion | 7,800 6,169 SMEs | Max: £6.25M | 75 to 90% loan guarantee | 707,000 jobs were created | http://www19.edc.ca/publications/2012/2011ar/english/3-1.shtml |
| **21** | Australia | ENYA | 2002 | Start-up businesses | No info. | No info. | 1,600 | Maximum: £13K up to 3 years | Loan guarantee | By agreement | http://www.enya.org.au |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | repayment | | | |
| **22** | USA | SBA | 1976 | Start-ups, Exporting SME less than 500 employees, and microbusinesses | No info. | £407.5 billion | No info. | From £8K to 31K for start-ups, and up to £160K for SMEs | Up to 85% loan guarantee | By agreement | (Regulatory Flexibility Act, 2011) http://www.sba.gov |
| **23** | Korea | Korea Credit Guarantee Fund (KODIT) | 1976 | SMEs | £2 billion | £19.75 billion | 225,339 | 85% loan guarantee | 85% loan guarantee | 0.5% to 2%p.a. | Korea Credit Guarantee Fund (KODIT), (2003). |
| **24** | Japan | JASME | 2004 | SMEs | £11.77 billion | £44.86 billion | 50,000 | 80% loan guarantee | 80% loan guarantee | By agreement | (JASME, 2008) |
| **25** | Hong Kong | SME Export Marketing Fund | 1997 | SME (100 employees or less) | £625M | £1.35 billion | 144,537 | Up to £31K | 50% Loan guarantee | By agreement | http://www.smefund.tid.gov.hk |
| **26** | Hong Kong | HKSAR | 2001 | SMEs | £1.18 billion | £4.7 billion | 4,687 | Up to £1.2M loan guarantee | Up to 90% loan guarantee | By agreement | http://www.companysec.com |
| **27** | Japan | NEXI | 2005 | SMEs | £ 800 M | £ 1.93 billion | No info | Export guarantee | Up to 100% loan guarantee | By agreement | http://nexi.go.jp |
| **28** | Norway | GIEK | 1999 | SMEs | £11.5 billion | £6 billion | 12,544 | Export guarantee | 50 to 95% loan guarantee | By agreement | http://www.giek.no/en |
| **29** | EU | AECM | 2002 | SMEs | No info. | £3.5 billion | 15,000 | Loan guarantee | 50% loan guarantee | By agreement | (OECD, 2008) |
| **30** | China | Chengdu CGC's Guarantee Business | 2004 | SMEs | No info | No info. | 4,000 | Loan guarantee | 70% loan guarantee | By agreement | (Sino-Swiss Chengdu Small Enterprise Credit Guarantee Co., 2004) |

Saudi Arabia invested in six new cities as an attempt to enhance a starting point for entrepreneurs. Table 2.10 shows and disclosed future plans of four out of the six economic cities (Jazan, Hael, Madinah, and Rabigh). The total investment in these cities was £43 billion and their combined total land mass is 428.8 million square meters (SAGIA, 2008a). The goal is to create more than 6.75 million jobs in all economic cities by 2020.

From Table 2.10 a number of points are made. First, establishing a long-term relationship with the borrowers beyond the loan guarantee agreement will lead to better credit decisions and scheme performance. This was accomplished by advisory sessions and training programs that most schemes conduct as primary steps before any loan guarantee approval was made (Molnar and Kubiszewski, 2012). Second, focusing on the borrower individual characteristics rather than credit scoring results; borrower experience in the type of business, and understanding the current situation of small enterprise may lead to a better selection process and better performance in the future for the new venture (Al-Shehri et al., 2013).

Third, many of will established support schemes that in most cases leverages the capital of their schemes requires the borrower to contribute a portion of needed collateral to show some commitment in the lending process (Chrisman et al., 2004). On the other hand, established support schemes that don't provides loan guarantees or direct loans but they support small businesses by different ways such as industrial land leasing (Shiraishi and Yabe, 2014a), business advisory and consultation (Greene and Storey, 2005) looks at the entrepreneurs knowledge and seriousness in conducting business before providing any services.

Fourth, decision-making should be centralized for better controlling, consistent in decision-making. Risk rating for small businesses will be continues process and must be reviewed periodically over the life of the guarantee or loan (Ramady, 2013a). Fifth, loan guarantee program or direct lending schemes should be alert for signs of defaults such as delay

repayments or other signs; mentoring past due loans is easier than collecting bad debts, and avoiding liquidation by working out loan problem on early stages (Alfaadhel, 2011).

Sixth, support schemes that focus on one or two business sectors such as exporting schemes and start-up businesses support schemes can provide more effective results and performance are much easier to measures. In many schemes the performance was measured by the number of supported enterprises and new jobs created by each scheme. Profitability and returns on investment was not the priority of most support schemes as the main priority was to develop small and medium enterprises and provide access to funds (Mason and Brown, 2014).

## 2.6 Conclusion

This chapter provides readers with an overall background information about the Saudi Arabian business environment and economic climate. Secondly, major characteristics of SMEs' in Saudi Arabia were described including classification of their general and specific human capital characteristics. Thirdly, full statistics tables about different business sectors activities at the time of this thesis was presented. The objective was to let the reader visualise the business environment at the time of this thesis. Fourthly, an overview of the Saudi Arabian history of supporting SMEs' through government and private sector support scheme was discussed. This was complimented with a worldwide overview of other countries experiences in supporting SMEs' and highlights lessons from their experiences were pointed.

The next chapter presents a companion literature review chapter and looks at previous studies which have evaluated the impact of financial and soft support from a wide range of countries. This is accompanied with a critique of previous studies which have assessed the

levels of use and satisfaction with business advice. This then leads to the presenting of the theoretical framework and the derivation of the hypotheses.

# Chapter 3

# Previous Evaluations of Government Support Schemes

## 3.1 Introduction

Governments, practitioners and academics continue to be focused upon how to encourage the establishment, survival, and growth of SMEs. Arguably, it was the pioneering and controversial research findings presented by Birch (1979) which invigorated the debate about SMEs and employment creation. The interest in SMEs is because they are believed to contribute substantially to employment creation and social wealth, alike. SMEs are perceived to be associated with dynamic characteristics such as being flexible in organization and production structure which enables them to seize business opportunities quicker than larger firms (Kang and Heshmati, 2008).

In this chapter research centres upon studies of SMEs and entrepreneurs which have provided financial support in Japan (Honjo and Harada, 2006), South Korea (Kang and Heshmati, 2008; Oh et al., 2009), Italy (Maggioni et al., 1999; Zecchini and Ventura, 2009), Turkey (Taymaz and Üçdoğruk, 2009), and Spain (Garcia-Tabuenca and Crespo-Espert, 2010). This is complemented with a review of the non-financial support of the USA (Chrisman et al., 2005; Chrisman and McMullan, 2000a; Hopp and Stephan, 2012), Finland (Collett et al., 2014), Denmark (Rotger et al., 2012), England (Mole et al., 2011), and the UK (Wren and Storey, 2002).

The provision of financial support to SMEs, usually in the form of credit guarantee schemes has been subject to many criticisms. CGS are argued to have negative effects by impairing the development of a vibrant innovative economy and instilling a dependency culture of SMEs on government support (ENDRES et al., 2015). CGS are also argued to be

costly instruments (Mason and Brown, 2014). Meager, Bates and Cowling (Mayor et al., 2015) examined the business start-up loan assistance program for young people in the UK using matching on covariates method and found that the scheme was in general not helping the participants in raising further employment chances and earnings. In the case of Saudi Arabia, CGS and schemes which provide some form of financial assistance have still to be proved. Furthermore, as shall be seen from the research investigated in this chapter the evidence suggests that in a variety of countries the effects of CGS and non-financial support is still subject of heated debates.

However, if governments believe that capital markets do not provide the SME community with sufficient funds for new ventures, and established firms, alike, then loan assistance programs are provided (Evans and Jovanovic, 1989). The imperfections in bank credit markets are often used as a justification of financial support. Ex ante asymmetric information between bank lenders and borrowers, combined with agency problems related to the appropriate use of borrowed funds, together results in credit rationing of SME. Whilst the provision of collateral may reduce the prevalence of credit rationing and lower costs (Besanko and Thakor, 1987; Coco, 2000) this may be helped, or hindered, depending upon the legal procedures for loan recovery (Zecchini and Ventura, 2009). CGSs are viewed as providing a way to open up new access to credit (credit additionality) although this may only be effective when well-specified conditions are made clear (Boocock and Shariff, 2005; Riding et al., 2007).

One of the big problems of evaluating whether or not a scheme or programme is working is to deal with the selection problem, which implies that public provision of financial support and other payments and resources may be allocated to applicants which are judged in advance with a high probability of success. In the event that the selection problem is not

addressed there is the possibility that research may over-estimate or under-estimate the impacts of the scheme or programme (Jaffe, 2002). Oh et al. (2009) address this issue by using propensity score matching estimators which has been developed in labour economics (Heckman et al., 1997; Smith, 2000). However, it is very difficult to obtain data on variables which will facilitate Heckman sample control models.

This chapter is organised as follows. Section two reviews business advice schemes which have included financial support in their range of services available. This is followed in section three with an assessment of previous studies which have assessed non-financial support advice. In section three the levels of use and satisfaction with sources of advice, including government support schemes are analysed. Lastly, a conclusion completes the chapter.

## 3.2 Financial support business advice

Table 3.1 presents a summary of the key previous studies which have assessed the impact of access to finance provided by public support schemes. There are comparatively few studies which have evaluated credit guarantee schemes in South Korea. Hong, Park and Jeon (2003) investigated the impact of credit guarantee schemes on the Korean economy using an inter-industry framework. Lim, Park and Han (2003) utilised a modified national income distribution model and also explored the relationship of credit guarantee schemes. However, both of these studies are concerned more from a macroeconomic approach across the whole South Korean economy. In contrast, Kang and Heshmati (2008) studied the effect of credit guarantee on SMEs at the firm level. They looked at the impacts of credit guarantee on the survival and performance of SMEs were analysed at the firm level using panel data over the period 2001-2004.

Kang and Heshmati's (2008) study is commendable for the care with which they utilised applications to the Korea Credit Guarantee fund (KCGF) and Korea Technology Credit Guarantee Fund (KOTEC) over a period 2001-2004. The KCGF is a public financial institution which was established in 1976 under the provision of the Korean Credit Guarantee Fund Act. The aims of the KCGF is to lead the balanced development of the Korean economy focusing upon extending credit guarantees to promising firms where they have been lacking tangible collateral, and stimulating credit transactions through the efficient use of credit information. The KOTEC scheme was established more than a decade later in 1989. KOTEC has the objective to help the national economy by providing credit guarantees to facilitate the financing of new technology-based firms and also promoting the growth of technologically advanced SMEs and venture firms.

But their study is vulnerable because of the lack of any hypotheses. Kang and Heshmati (2008) use Gibrat's (1931) dynamic model of firms, usually termed Gibrat's Law, and Jovanovic's (1982) theory of noisy selection as the two theoretical constructs which are utilised in their paper. Whilst Kang and Heshmati (2008) provide a critique of Gibrat's Law they do not balance this with a discussion and critique of the other theoretical approaches which exist within the growth and survival literature. Thus, for example, there is no mention of Storey's (1992) model, or stage models.

Kang and Heshmati (2008) found that credit guarantee frequency enabled guaranteed firms in South Korea to achieve good performances in general. However, this was tempered against "the effect of credit guarantee amounts is ambiguous in that there is [a] difference between the contemporary effect and the lagged effect" (Kang and Heshmati, 2008).

Oh, Lee, Heshmati and Choi (2009) evaluated the effect of the credit guarantee scheme in South Korea over the period 2000-2003 using matched non-guaranteed firms. The

Oh et al. (2009) study is innovative in that they use propensity scoring to help overcome selectivity problems. They find that the credit guarantees influenced the participating firms' ability to maintain their size, and also increase their survival rate. This was tempered against their findings that participation in the schemes did not increase their R&D and investment, and accordingly there were no benefits to productivity. Another of Oh et al's (2009) findings was that because of adverse selection problems, some firms with lower levels of productivity were receiving grants.

Oh et al's. (1999) study used information from unpublished plant-level data which was assembled by the Annual Report on Mining and Manufacturing Survey in South Korea. This allowed them to produce an unbalanced panel data of between 95,000 to 109,000 plants for each year over the period 2000 to 2003. The data set was used to create two balanced panels, firms which had been in existence over four consecutive years, 2000-2003, to compare differences in growth performance of firms. Oh et al. (2009) also tested the effects of credit guarantees on survival, and excluded firms which had not existed for three consecutive years, 2000-2002, and observed whether or not they were still alive in 2003. Using the former panel focused upon employment growth they had 44,013 firms and with the later approach to examine survivability they have 50,584 firms.

Honji and Harada (2006) used a data set constructed by the Research Institute of Economy, Trade and Industry (RIETI). The aforementioned RIETI data originates with the TSR Data Bank Service which is compiled by Tokyo Shoko Research Ltd which is a commercial firm which assembles information on credit of firms in Japan and is similar to Dun and Bradstreet (D&B) in the UK and USA. Honji and Harada (2006) matched their TSR/RIETI data with another database from the Small and Medium Enterprise Agency, the Ministry of Economy, Trade and Industry.

Using their panel data set of 6,961 firms which produced 34805 observations they tested whether the SME Creative Business Promotion Law (CBPL) and financial structure affected firm growth. In April 1995, the Japanese government enacted the SME CBPL with the objective of providing support to SMEs that were pioneers in new areas of business focused upon either entries, research and development (R&D) and commercialization of research. The SME CBPL scheme provides subsidies, loans and tax breaks to SMEs engaged in the aforementioned activities and who were approved by prefectural governors. The scheme was hoped to help to invigorate the Japanese economy after the so-called bubble period dramatically ended.

Honji and Harada's (2006) study is an empirical one and whilst they review the related literature and develop their model they do not specify any hypotheses, and furthermore their paper is largely without a clear theoretical framework. They discuss Gibrat's Law and their paper generally follows that framework but as with Kang and Heshmati (2008) there is a failure to appreciate the wider theoretical frameworks which are present in the literature. If Honji and Harada (2006) had provided a stronger critique of the theoretical literature on growth this could have helped them to take their models further. Indeed, whilst they had three dependent variables and sets of parallel regression models – the difference between the logarithm of the number of employees, the difference between the logarithm of the book values of tangible fixed assets other than land, and the difference between the logarithm of sales their models, they have eight independent variables which are not linked to hypotheses[3]. Their models include year dummies and although they are focussed entirely on manufacturing firms which is fine, they do not include dummy sector variables in

[3] The eight independent variables are: (i) the logarithm of the number of employees, (ii) the logarithm of the book value of tangible assets other than land, (iii) the logarithm of sales, (iv) the logarithm of firm age, (v) Ordinary profits plus depreciation divided by total assets, (vi) Debt divided by total assets, (vii) dummy variable for the firm gone public, and (viii) Dummy variable for the firm approved by a prefectural governor under the CBPL.

their models. This is an important omission as manufacturing covers a wide range of activities from important but potentially monotonous activities such as metal bashing through to cutting edge and bespoke engineering. Also, the current number of employees is only included in the employment models and not in the assets and sales growth models. Their model only has one set of control variable, year dummies.

Honji and Harada (2006) had two main research findings and these were firstly that SMEs approved by prefectural governors under the CBPL tend to increase assets; and secondly, they found that the CBPL and cash flow have an impact on the growth of younger SMEs. They also found that whether the firm had gone public, as well as ordinary profits plus depreciation divided by total assets are not statistically significant at the 0.05 level, or better, across their models of employment, assets ad sales growth. In contrast debt divided by total assets is negatively statistically significantly related at the 0.01 level in the models of employment and sales growth, and at the 0.05 level in the assets model.

Maggioni, Sorrentino and Williams (1999) examined how the Law 44 program, designed to encourage entrepreneurship in Italy, affects several aspects of the early performance of new firms. Maggioni et al. (1999) are to be commended for matching the 45 firms who participated in the Law 44 program in Italy, against non-users based on age, location and industrial sector; and also for gathering the data from interviews with the firms. They have developed four hypotheses which they have linked to theory and the previous literature. Unfortunately, their hypotheses are more influenced by empirical considerations and accordingly the theoretical construct is obtuse.

Furthermore, their study does suffer from several major shortcomings. Firstly, the number of firms participating in the Law 44 scheme in Naples at the time of their survey was very small, and 51 firms is arguably a small number of firms to be analysing, especially as it

is centre stage of their study. Arguably Maggioni et al. (1999) would have benefited from also including firms outside of the Naples area in their study because this would have boosted the sample size to a meaningful number and also then opened up the possibility of doing regional comparisons of how the scheme was performing as an early study investigation of Law 44.

The Maggioni et al. (1999) study utilises 45 pairs of firms which are homogeneous in terms of age, location and industry, and their data analysis is restricted to t and Z tests. They find that the aided and non-aided firms do not differ with regard to growth. They discuss the issue of firm survival, and that whilst the firms may have benefited in some ways from participating in the Law 44 scheme there is no evidence that in terms of employment growth they perform better than counterparts without the benefit of resources provided by Law 44.

Taymaz and Üçdoğruk (2009) studied the drivers of R&D activities in SMEs in Turkish manufacturing industries using panel data for the period 1993-2001 period. Taymaz and Üçdoğruk (2009) do not derive and test any hypotheses, and their paper lacks a clear theoretical construct. Instead the focus upon providing background information on Turkish manufacturing firms. Thus, the paper makes empirical contributions but these are weakened because of the aforementioned weaknesses.

Taymaz and Üçdoğruk (2009) combine information from three sources of data. Firstly, they used the Annual Survey of Manufacturing Industries (ASMI) which is conducted by the Statistical Institute of Turkey (Turkstat) which consists of data on approximately 11,000 establishments per year and is available over the 1980-2001 period. Secondly they used the R&D Surveys which is also conducted by Turkstat and is available from 1992 and covers all manufacturing firms known to perform R&D activities. This included more than

300 firms per year. Thirdly, they used a data base prepared for all TTGV and TIDEB clients. Their study covers the period 1993-2001.

Taymaz and Üçdoğruk (2009) find that public R&D encourages firms to intensify their R&D efforts. Additionally, when the market share of R&D support recipients increase, other firms (competitors) tend to increase their R&D intensity as well. They also find that the impact of R&D support is stronger for small firms. This is interesting because small firms are less likely than larger sized firms to conduct R&D. Their findings, taken together, shows that SMEs in developing countries face financial and other obstacles for R&D but that public support could help them to overcome these obstacles.

Zecchini and Ventura (2009) evaluate the impact of public credit guarantees in Italy to SMEs in increasing credit availability and reducing borrowing costs, without compromising their financial sustainability. Zecchini and Ventura (2009) provide a discussion of the Italian guarantee scheme which is interesting because it mixes with a complex private and public sector combination. It does not offer a specific network agreement or legal constraint in order to bring together the mix of private and public funding. The multipillar and multilayer system of private and public funding rests upon three pillars: firstly, mutual guarantee institutions (MGI) consisting of small firms where the owner-managers or entrepreneurs are willing to mutually share their debt risk as a way to improve their access to the credit market; secondly, the banks and financial companies providing guarantee services to the enterprise sector; and thirdly, public funds set up at the State level, and Regional government level which provide various guarantees (Zecchini and Ventura, 2009).

Zecchini and Ventura (2009) use panel data on financial statements of SMEs that benefitted from the Italian State-funded guarantee schemes (SGS), and comparing them with

firms who did not receive guarantee support. Zecchini and Ventura (Zecchini and Ventura, 2009)'s study utilises data from the various funds data base. Information on SMEs' financial statements is drawn from AIDA balance sheet data. They then extracted a random sample of 11,261 SMEs consisting of firms that were eligible for the Funds guarantee (3,952 firms) but did not apply for it, and firms that were not eligible (6,066 firms) because of the European Union exclusion of some economic sectors from the guarantee. Thus, 1,243 firms received government support. They utilise an instrumental variable approach and data over the period 1999-2004.

Garcia-Tabuenca and Crespo-Espert (Garcia-Tabuenca and Crespo-Espert, 2010) evaluated the granting of guarantees to facilitate the access to a higher and cheaper long-term external financing, through the system of reciprocal guarantees for Spannish SMEs over the period 1996 to 2003. Garcia-Tabuenca and Crespo-Espert (Garcia-Tabuenca and Crespo-Espert, 2010) identify five groups of firms using three data sources: Compańía Espańola de Reafianzamiento, S.A. (CERSA), the Instituto de Credito Oficial (ICO) and the SABI database (Commercial Registries). The five groups of firms are as follows, CERSA (only guarantees), ICO (only ICO SME line), CRUCE (guarantees and ICO SME line), SABI (outside long-term financing without public support) and AUTO (without long-term debt). The aforementioned databases produced information on 23,328 firms. Garcia-Tabuenca and Crespo-Espert (Garcia-Tabuenca and Crespo-Espert, 2010) surved 1,241 firms and received 401 valid responses. They calculate and test a wide range of composite financial ratios using a combination of statistical techiques – analysis of variance, the Scheffé test and the Kolmogorov-Smirnov and Kruskal-Wallis non-parametric tests (Casas, 1997; Rohatgi, 1984) and OLS regression models. The Garcia-Tabuenca and Crespo-Espert (Garcia-Tabuenca and Crespo-Espert, 2010) study has a good sample size and a healthy response rate although they

don't present any evidence of testing for response bias between the respondents and non-respondents. They do have a large number of financial variables half their paper is confined to parametric and non-parametric bivariate tests, and combined with the multivariate analysis allows them to present an extensive set of models. Their results taken as a whole suggest that public support is relevant at three levels – financial, economic and business efficiency. The advantages of the support schemes can be observed mainly in the weakest companies, where the capacity to tackle projects is facilitated, but they do not manage to reduce their financial costs until they reach relative levels similar to those reached by companies not accessing the guarantee system.

The key findings are that Italy's scheme has reached a measure of effectiveness in reducing SMEs' borrowing costs, in the range of 16-20%; and easing their financial constraints, by precipitating an additional supply of credit by banks at a median level of 12.4%. They find a causal relationship between the public guarantee and the higher debt leverage of guaranteed firms, as well as their lower debt cost. The Zecchini and Ventura (2009) study also shows that the high degree of selectivity which is employed to target SMEs does produce benefits. Only SMEs as defined by EU regulations, and are sound economically and financially are eligible. Furthermore, many sectors are excluded – coal and steel, shipbuilding, synthetic fibres, automobile, and transport.

Morris and Stevens (2010) evaluated the impact of a New Zealand government support scheme, the Growth Services Range (GSR), over the period 2000-2006. The GSR scheme provides a combination of advisory services provided by NZTE staff, and for a minority of users, grants to purchase external advice and expertise and market intelligence and development services. They used the Longitudinal Business Database (LBD) relating to the financial years 2000-2007 (Fabling, 2009; Fabling et al., 2008). The LBD includes

participation data for all support programmes administered by New Zealand Trade and Enterprise (NZTE), Foundation for Research, Science and Technology (FRST) and Te Puni Kōkiri (TPK). Morris and Stevens (Morris and Stevens, 2010) linked 85% of participating firms in these lists to the LBD using the business names. They use two methods to deal with selection bias issues, propensity score matching (Becker and Ichino, 2002; Rosenbaum and Rubin, 1983) and dynamic panel analysis (Morris and Stevens, 2009, 2007)

Morris and Stevens (2010) quantified the direct benefits to the participating firms and compared them against the corresponding values for firms which did not receive assistance. Their main finding is that the New Zealand programme had a significant positive impact on the sales of firms but that the impact on value-added and productivity was less persuasive about the merits of the scheme. Furthermore, they find that the impact of the scheme was better for firms who received assistance before 2004.

Specifically, they find that firms in receipt of the GSR had sales which were NZ$102,000 higher, value-added which was NZ$34,100 higher and productivity per worker which was NZ$3,400 higher, in comparison to firms who did not use the GSR scheme. The weakening of the impact of the GSR scheme is explained by changes in the selection criteria followed by the scheme administrators over time. This notwithstanding the GSR was found to be overall beneficial for the New Zealand tax payers and provided additional value-added compared to the costs of approximately 134%-203%.

In both the Kang and Heshmati (2008) and Honji and Harada (2006) papers they are upfront about focusing upon firm level analysis but they both by only making use of existing data bases do not have variables which reflect the characteristics and strategic directions of the owner-managers or entrepreneurs who are making the day-to-day and key strategic decisions. Thus, gender, age, education, and previous entrepreneurial experience are not

include in the models. Furthermore, both papers do not include any measure of the geographical locations of the firms. Thus, the models whilst being commendable for having gone through a peer review process, are nonetheless in need of careful utilisation.

The Taymaz and Üçdoğruk (2009), Oh et al. (2009), Kang and Heshmati (2008), Honji and Harada (2006) studies are large scale investigations which would have benefited from surveying some, or all, of the firms included in their studies in order to obtain entrepreneur/owner-manager characteristics and enrich the firm level characteristics. Whilst the Maggioni et al. (1999) study is not dependent and limited to information provided by applicants to a scheme it also suffers from a lack of information on the entrepreneurs or owner-managers. The Maggioni et al. (1999) study is the only quantitative study which only utilised matched pairs analysis rather than a multivariate regression technique.

In summary, the previous studies' methodologies suffer from many weaknesses – some lacked hypotheses (Kang and Heshmati, 2008; Honji and Harada, 2006; Taymaz and Üçdoğruk, 2009); were too macroeconomic (Kang and Heshmati, 2008); used theories which are open to criticism – Gibrat's law (Kang and Heshmati, 2008), or largely a-theoretical (Honjo and Harada, 2006; Taymaz and Üçdoğruk, 2009); possibly mispecified models due to variable omission – sector dummies (Honjo and Harada, 2006); and, small sample size – 45 pairs of firms (Maggioni et al. 1999). Whilst other studies which used longitudinal data (Zecchini and Ventura, 2009; Morris and Stevens, 2010; Garcia-Tabuenca and Crespo-Espert, 2010) which is commendable, this researcher did not have the resources to survey entrepreneurs at several points in time. In terms of their overall results they suggest that the majority of SMEs and entrepreneurs find difficulties raising required capital for their ventures; both start-ups and existing firms. This conclusion led me to include questions about

capital needed for firms in Saudi Arabia and identifying ways of capital acquisition from external sources in Saudi Arabia.

## 3.3 Non-financial Support Schemes

There are two main types of external support. First, there is hard support (funding) where external business support schemes serve to fill the gap in the credit market. This could take many types of capital funding such as: loan guarantee, direct loan facilities, or capital investment to establish or expand a firm (Storey, 1994). Second, there is soft support; and this does not include any capital funding provided by external business support scheme. Arguably, soft support is equal in importance because it provides training, education, HR structuring, technical support, planning, marketing, and business networking (Bennett, 2014).

Table 3.2 presents a summary of the key previous studies which have assessed the impact of non-financial support (e.g. soft support) provided by public support schemes. Chrisman and McMullan (2000a) in contrast to the studies in the previous section use hypotheses linked to theory, resource-based theory, to explore why outside assistance may influence firm performance. They track the longer-term performance of two samples of entrepreneurs who received Small Business Development Center (SBDC) counselling and subsequently started businesses. The SBDC program has also been investigated by Chrisman, Hoy and Robinson (1987), Nahavandi and Chesteen (1988), Pelham (1985) and Robinson (1982) and these studies provided evidence that the SBDC may be effective in the short term, although in the longer term the benefits are less appreciable.

Users of the SBDC who have received five, or more, hours of counselling over the period 1992-1994 were surveyed in 1994 and 1996 to investigate their performance one year after they have received SBDC services. Two mail surveys were undertaken in 1997, firstly 144 individuals were approached who had received counselling in 1992, and secondly, 269

individuals who had received counselling in 1994. Chrisman and McMullan (Chrisman and McMullan, 2000a) received 54 responses from the 1992 users and 115 users of the 1994 study which represented responses of 37.5% and 42.8%, respectively. ANOVA and Chi-square tests indicated the individuals were representative of the original samples.

Chrisman and McMullan (2000a) found that 81.5% of the 1992 sample and 90.4% of the 1994 sample were still alive in 1997. They used Birch's (1987) analysis of the Dun and Bradstreet data as a yardstick, which suggested that 38% of the firms should have closed by the third year and 50% in the fifth year instead of 19% in the 1992 sample. The corresponding closure rates were 14% and 38% after one and three years in Birch's (1987) study rather than Chrisman and McMullan's (2000) 10% closure rate in the 1994 sample. Their results also showed that the user firms had higher than expected rates of growth, and innovation. The results as a whole suggest that the outsider assistance during the early stages of a venture's development in some circumstances influence the firms' subsequent development.

Wren and Storey (2002) assessed the impact of publicly provided subsidised 'soft' business support on the performance of SMEs. They considered the assistance of consultancy advice provided towards marketing under the UK Enterprise Initiative, and the performance measures they econometrically tested were sales turnover, employment growth, and survivability, and their models take into account selection effects. The Consultancy Initiatives scheme formed an important role in the 1988 Enterprise Initiative (Great Britain. and Department of Trade and Industry., 1988a) and had the specific purpose to "*improve the competitiveness of small and medium-sized enterprises by improving the quality of management through subsidised consultancy in key strategic functions*" (DTI, 1989, p. 336). The scheme offered a wide range of soft support in the areas of marketing, product and

service quality, manufacturing and service systems, and design. Furthermore, after April 1988 this was extended to include business planning and financial and management information systems. The scheme ended in September 1994.

Wren and Storey's (2002) study used a sample framework from the regional Scheme Contractors for the Marketing Initiative which covered four geographical areas – West and East Midlands, the South West of England, and South Wales. Their sample consisted of 4,326 firms who had satisfied the Business Review over the scheme's life; and for 1988-1991 for the South West. 65.7% of the aforementioned firms submitted a Final Report to their local DTI Office and received assistance, and were considered the users, or treatment group. For the 1486 non-treatment firms 944 failed to agree the Terms of Reference with the Consultant and the remaining 542 firms agreed the Terms of Reference but failed to submit a Final Report. Their firm level data utilised record cards of the sample firms held by the DTI; a questionnaire performed by the Centre for SMEs at Warwick University, and a telephone survey of non-respondents. The postal questionnaire was sent to 4326 firms, and followed up, from which 2799 firms (64.7%) were viewed as surviving firms. This group provided 1136 useable responses which represent a 40.6% response rate.

The methodological approach of Wren and Storey's (2002) study is robust to take into account and control for sample selection issues, and methodologically builds upon the earlier work of Wren (1999, 1994). Wren and Storey (2002) found that the policy had no impact on the survivability of smaller-sized SMEs, but that in contrast the UK EI was very effective for mid-sized SMEs where the recipients enjoyed increased survivability of approximately 4%, and growth rates which were approximately 10% higher than non-assisted SMEs. Taken as a whole the UK EI is found to have had a substantial positive impact.

Chrisman, McMullan and Hall (2005) build upon an emerging theory of the relationship between guided preparation and new venture performance and test that theory using firms from three cohorts of users of counselling services from the SBDC programme in Pennsylvania in 1992, 1994 and 1996. They measure aggregate absolute growth in sales and employment over a firm's formative years. In the first quarter of 2001 Chrisman et al (2005) conducted a survey of users who had more than five hours of counselling from the Pennsylvania SBDC in the years 1992, 1994 and 1996. A mail survey was distributed and a second mailing was performed to help increase the number of responses. 159 usable responses from the 576 users was achieved which represented a 27.6% response rate. Chrisman et al (2005) performed tests for representativeness and response bias. T-tests and Chi-square test found no differences between respondents and non-respondents with respect to industry, performance subsequent to the intervention, or perceptions of the benefits of SBDC counselling. Furthermore, no significant differences were found between respondents to the two waves of mailings with regard to the aforementioned variables.

Chrisman et al's (2005) results show that, after controlling for industrial sector, firm age, and the level of education and prior experience of the entrepreneurs, there are positive relationships between the time that entrepreneurs spend in guided preparation and the sales and employment of their firms 3 to 8 years after start-up. They also find that the advice given to the entrepreneurs prepares them for setting up and running a firm but that beyond some point, which they estimate at around 140 hours, guided preparation can actually be a handicap. Thus, the relationship between time in guided preparation and performance is non-linear.

Mole, Hart, Roper and Saal (2009) use programme theory underlying the Business Link (BL) scheme to address two questions, what sorts of companies receive advisory

support from BL, and what benefits do firms derive from the support. Mole et al. (Mole et al., 2009) conducted a telephone survey between May and July 2005. The users of BL data sample framework data came from Business Link Organisations (BLO), and data on non-assisted firms were drawn from the Dun and Bradstreet. The response rates were 44% among the intensively assisted group, 36% among the other assisted firms and 23% among non-assisted firms.

Mole et al's (2009) study finds strong support for the value to BL operators of a high profile take-up. They find support for the BL's market segmentation that targets intensive assistance to younger firms, as well as those firms with limited liability. Taking into account sample selection, Mole et al (2009) find no significant effects on growth from 'other' assistance but find a significant employment boost from intensive assistance. Taken together their results provide support of programme theory's assertion that BL improves business growth and strongly supports the proposition that there are differential outcomes from intensive and other assistance. The results suggest that there have been substantial improvements in the BL scheme since the earlier studies of Roper et al. (2001a) and Roper and Hart (2005).

The Mole et al's (2009) study advanced our understanding of evaluations in several ways as follows. Firstly, they look at the impact of assistance on sales and employment controlling for selection. In contrast the Chrisman and McMullan (2000) and Chrisman et al. (2005) studies did not control for the effects of selection. Earlier studies by Roper et al (2001) and Roper and Hart (2005) did control for selection but were geographically limited to urban areas. Other studies such as Bennett and Robson (2003) used perceptions of the intervention rather than a hard outcome of employment or sales revenue growth. Secondly, Mole et al (Mole et al., 2009) was the first study to evaluate BL making a distinction between intensive

and non-intensive assistance. Thus, Mole et al's (2009b) study takes forward the work of Robson and Bennett (1999) which examined BL in detail but did not distinguish between intensive and non-intensive assistance. Thirdly, Mole et al's (2009) study used the programme theory underlying the Business Link (BL) scheme to address two questions, what sorts of companies receive advisory support from BL, and what benefits do firms derive from the support. Mole et al's (2009b) study is one of the few studies linked to theory, and they are able to compare the outcomes of outside assistance with its programme theory. Thus, they build upon the earlier theory-based evaluation developed by Donaldson and Gooler (2003), Pawson and Tilley (1997) and Lipsey (1993). The majority of the studies on business advice prior to 2010 tended to either be empirically driven or draw upon Storey's characteristics model and focus upon characteristics of the entrepreneurs or owner-managers, their strategies, and their businesses which was the case with Robson and Bennett (1999).

Mole, Hart, Roper and Saal (2011) builds upon their earlier study (Mole et al., 2009) and draws upon resource dependency theory (Salancik and Pfeffer, 1978) and develop a typology of intervention strategies for BL in England which reflects differences in the breadth and depth of the support provided. At that time the government was spending approximately £600 million per annum on the BL advisory service. Mole et al. (2011) use subjective assessments by firms and econometric models to test the impacts of these alternative intervention models on client companies.

Mole et al's (2011) key empirical result is that BL's choice of intervention strategy has a substantial effect both on actual and on perceived business outcomes, with their results emphasising the value of depth over breadth. The implication of their results is that when additional resources are available for business support these need to be used to deepen the assistance provided instead of extending assistance to a wider group of firms.

Rotger, Gørtz, and Storey (2012) respond to the questioning of the theoretical case for enhanced entrepreneurship through the provision of government support schemes (Audretsch et al., 2007a; Parker, 2004) and advance the theoretical and empirical debate on government support schemes. Their contributions include developing theory by developing the 'knowledge acquisition/enhancement and badging' theoretical perspectives which underpins publicly funded support schemes. The knowledge acquisition/enhancement perspective has as its theoretical starting point that, both when the firm begins and in its early stages, the resources available to it rarely match those required. The firm therefore has to continually amend and adjust its resources according to circumstances (Eisenhardt and Martin, 2000; Teece et al., 1997). The second aspect is badging, which referred to a badge or certification that can be shown to others that is the key value; whether or not it is converted into knowledge, of guidance. Badging is therefore analytically separate from knowledge. Rotger, GØrtz, and Storey's (2012) findings suggest the following: the difference is that the knowledge element has a longer-term impact upon growth whereas badging impacts more quickly on survival.

Secondly, they test their theory using a case of a Danish scheme of guided preparation and quantify the aforementioned theoretical concepts. Entrepreneurship policy in Denmark is implemented by regional institutions in collaboration with business support authorities in the municipalities. The North Jutland Entrepreneurial Network (NiN) facilitates the provision of soft business support and promotes cooperation among the entrepreneurs in all sectors with the following exceptions – agriculture, fisheries, fur and forestry. The NiN has a budget of circa US$1 million in 2009 prices and has an intake of approximately 1200 participants.

Rotger et al. (2012) used data on all participants in the scheme between 2002 and 2006 which was combined with data from Statistics Denmark. They build upon the two-step

selection model approach used by Mole et al. (2009b), Morris and Stevens (2010) and Lopez Acevedo and Tang (2010), which uses the Heckman (1979) approach, and instead Rotger et al. (2012) use a non-parametric method to address the selection problem. Rotger et al. (2012) present research findings which shows that in Denmark their scheme contributes to the survival and size of new firms, but that the picture is mixed when the focus falls upon the impact on growth.

Hopp and Stephan (2012) use a longitudinal data set, the PSED II, which is a representative survey of entrepreneurial activities in the US that portrays individuals during their business creation process (Hechavarria and Reynolds, 2009). In 2005 nascent entrepreneurs were identified through telephone interviews with a population-representative probability sample of 31,845 individuals of which 1,214 individuals were classified as active nascent entrepreneurs. A follow up interview was undertaken in January 2006 and then annually thereafter to January 2010. Their final sample consists of 590 nascent entrepreneurs who responded to all five years.

Hopp and Stepan (2012) make several contributions as follows. Firstly, they add to the debate on the institutional embeddedness of the entrepreneurial process and especially informal institutions (Thornton et al., 2011) by adding a role for community-level cultural norms. Secondly, they investigate whether the effects of culture on firm emergence are indirect and mediated by their impact on key individual beliefs, in particular start-up motivation and entrepreneurship self-efficacy. They find that entrepreneurship is a locally embedded phenomenon and that entrepreneurs and their personal characteristics differ widely across sub-national, community cultural contexts. This suggests that the community context should be taken into account when tailoring assistance and advice to entrepreneurs. Thus, applying the Hopp and Stephan (2012) finding to Saudi Arabia suggests that whilst the Saudi

government, practitioners and entrepreneurs can benefit from the lessons from western business support schemes the cultural norms of Saudi Arabia need to be taken into account. It also implies that theories developed for western countries may change, or need to adapt, to reflect cultural differences in Saudi Arabia compared to theories developed initially for the USA, UK and other western OECD countries.

**Table 3.1 Previous studies which have assessed the impact of access to finance provided by public support schemes**

| Author/s (Year) | Country/ Region | Research Design | Sampling Technique | Sample Source | Sample Specification | Industry | Data Source/Collection Method |
|---|---|---|---|---|---|---|---|
| Garcia-Tabuenca and Crespo-Espert (2010) | Spain | Cross-sectional | Representative sample | Compańía Espańola de Reafianzamiento, S.A. (CERSA), the Instituto de Credito Oficial (ICO) and the SABI database (Commercial Registries). | 1,241 representative enterprises from 23,328 firms | Agriculture, Extractive industries, traditional manufacturing, Inter. And advanced manufacturing, Construction, Trade, Services | Not Specified |
| Zecchini and Ventura (2009) | Italy | Panel | Random sample | The government funds books of data; combined with financial statements from AIDA balance-sheet data | 11,261 random firms over the period 1999-2004 | Not specified. The following sectors are excluded – coal and steel, shipbuilding, synthetic fibres, automobile, and transport | Data extracted from the Funds books and AIDA balance sheets |
| Taymaz and Üçdoğruk (2009) | Turkey | Panel | Data from 3 merged data sources. (1) The Annual Survey of Manufacturing Industries (ASMI) over 1980-2001. (2) The R&D Surveys conducted by Turkstat from 1992. (3) Data | ASMI, Turkstat's R&D Surveys and TTGV and TIDEB clients data | Manufacturing firms over the period 1994-2001 | All manufacturing | Data extracted from ASMI, Turkstat's R&D Surveys and TTGV and TIDEB clients data |

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|---|---|---|---|---|---|---|---|
| | | | base prepared for all TTGV and TIDEB clients. | | | | |
| Oh, Lee, Heshmati and Choi (2009) | South Korea | Panel | Firms data from the Annual Report on Mining and Manufacturing Survey (ARMMS) | ARMMS | All firms in ARMMS Firms who received credit guarantees from KOTEC and KCGF over the period 2001 to 2002 identified | All manufacturing | Data extracted from ARMMS |
| Maggioni,Sorrentino and Williams (1999) | Italy | Cross-sectional | All 51 approached then the 45 replies were matched on year, location and industry with non-public support firms | Firms involved in the Naples area with Law 44, plus the Italian Chamber of Commerce | 51 firms in Naples in START scheme approached. | Not specified | Interviews with firms to go through questionnaire |
| Kang & Heshmati (2008) | South Korea | Pooled Cross-sectional/ over 2001-2004 | All applicants | Applicants to the Korea Credit Guarantee fund (KCGF) and Korea Technology Credit Guarantee Fund (KOTEC) | 200,702 applicants to KCGF and/or KOTEC. 20,165 firms could be traced over time | Mining & Quarrying (170) Manufacturing (11,495)<br><br>Construction (1472) Wholesale & Retail Trade (2264) The Others (3251) | Data extracted from application forms to KCGF and KOTEC |
| Honjo and Harada (2006) | Japan | Panel 1995-1999 | Not specified | Data constructed by the Research Institute of Economy, Trade and | SMEs are enterprises with capital stock of | Manufacturing, broadly defined | Data extracted from the RIETI/TSR data merged with a |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | Industry (RIETI) using the Tokyo Shoko Research (TSR) Data. This merged with a database from the Small and Medium Enterprise Agency, the Ministry of Economy, Trade and Industry. | not in excess of 300 million yen or 300 or fewer regular employees | | database from the Small and Medium Enterprise Agency, the Ministry of Economy, Trade and Industry. |

**Table 3.1 Previous studies which have assessed the impact of access to finance provided by public support schemes**

| Author/s (Year) | Test Non-Response Bias | Test Common Method Bias | Analysis Method | Measures of Support Policy | Performance Variables (Dependent) | Final Sample Size | Response Rate |
|---|---|---|---|---|---|---|---|
| Garcia-Tabuenca and Crespo-Espert (2010) | No | No | Parametric and Non-Parametric tests and OLS regression | SME support measures. The allocation of guarantees/preferential funding by the Spanish guarantee system. | The efficiency of SMEs in terms of profitability and productivity | 401 firms | 32.3 |
| Zecchini and Ventura (2009) | No | No | Instrumental variables regression | The state funded guarantee scheme in Italy | Borrowing costs and the credit supply to SMEs. | 1,243 guaranteed firms & 10,018 non-guaranteed firms | Not Applicable |
| Taymaz and Üçdoğruk (2009) | Not Applicable | Not Applicable | Heckman two-step selection model | Support for R&D | R&D intensity and R&D decision | 88251 | Not Applicable |
| Oh, Lee, Heshmati and Choi (2009) | Not Applicable | Not Applicable | Probit | Credit guarantee policy | Survival; productivity growth, sales growth, employment growth, investment growth, and R&D growth. | 44,013 firms to test employment growth; 50,584 to test survivability | Not Applicable |
| Maggioni,Sorrentino and Williams (1999) | No | No | T and Z tests | Direct government aid: loan with a reduced interest rate; grant | Absolute sales, sales growth, employment growth | 90 firms | 88.2% of START UP firms. Not specified for Matched firms |
| Kang & Heshmati | Not | Not | Pseudo panel | Credit Guarantee Policy | Growth of | 19689 | Not |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (2008) | Applicable | Applicable | analysis | | Sales, Employment and Productivity and Survival | | Applicable |
| Honjo and Harada (2006) | Not Applicable | Not Applicable | Not Specified (OLS) | The SME Creative Business Promotion Law (CBPL) | Employment, Assets and Sales growth | 6961 Firms provided 34805 observations | Not Applicable |

**Table 3.2 Previous studies which have assessed the impact of non-financial support (e.g. soft support) provided by public support schemes**

| Author/s (Year) | Country/ Region | Research Design | Sampling Technique | Sample Source | Sample Specification | Industry | Data Source/ Collection Method | Final Sample Size | Response Rate |
|---|---|---|---|---|---|---|---|---|---|
| Collett, Pandit, and Saarikko. (2014) | Finland | Cross-sectional | 1166 appointments between 1996 and 2002 | Finnish firms that received commencement judgements from the court for their restructuring petition, 1996-2002 inclusive | Finnish | Construction (27), Services (69), Manufacturing (56), Trading/distribution (42) | Mail survey | 228 | 228/1166= approx. 20% |
| Hopp and Stephan (2012) | USA | Longitudinal | A population-representative probability sample of 31,845 individuals of which 1,214 individuals were classified as active nascent entrepreneurs. | The PSED II data base | Interviewed nascent entrepreneurs annually between 2005 and 2009 | Retail (0.13), Consumer services (0.37), Health (0.07), Manufacturing (0.07), Real estate (0.08), Consulting (0.11), Other industries (0.16). Proportion of 590 nascent entrepreneurs in brackets | Telephone surveys of nascent entrepreneurs | 590 nascent entrepreneurs | Not Applicable |
| Rotger, GØrtz, and Storey, (2012) | Denmark, North Jutland | Longitudinal | Users of The North Jutland Entrepreneurial Network (NiN) between 2002-2006 | NiM | Users of NiN: 551 Level 1; 807, Level 2; and, 859 Level 3 over 2002-2003<br><br>573 Level 1; | Food, beverage, tobacco, textile, leather, wooden, paper, graphic; Mineral, oil, chemical, rubber, plastic, stone, clay, glass, iron or metal; | Data provided by NiN combined with data from Statistics Denmark. | 467 Level 1; 609 Level 2; and 608 Level 3 over 2002-2003.<br><br>465 Level 1; 556 Level 2; | Not Applicable |

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|---|---|---|---|---|---|---|---|---|---|
| | | | | | 734 Level 2; and, 666, Level 3 over 2004-2005. Level 1 is basic counselling provided by the local business centre. Level 2 is counselling with private-sector advisors. Level 3 is extended counselling during the start up with private-sector start consultants. | Machinery, electronics, vehicles, furniture; Construction; Hotels , restaurant; Transport; Finance, credit, real estate; Public administration, teaching; Health care, welfare | | and, 464 Level 3 over 2004-2005. | |
| Mole, Hart, Roper and Saal (2011) | England | Cross-sectional | Users of BL, matched with non-users | BL Providers | Firms assisted with BL between April and October 2003 & a comparable group of non-assisted businesses matched on size, broad sector and | Not specified | Telephone survey – May-July 2005 | 1130 intensively assisted firms, 116 other assisted firms, 1152 non-assisted firms. 3448 whole sample | 44% (intensive assisted), 36% (other assisted), 23% (non-assisted) |

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|---|---|---|---|---|---|---|---|---|---|
| | | | | | region | | | | |
| Mole, Hart, Roper and Saal (2009) | England | Cross-sectional | Users of BL, matched with non-users | BL Providers | Firms assisted with BL between April and October 2003 & a comparable group of non-assisted businesses matched on size, broad sector and region | Not specified | Telephone survey – May-July 2005 | 1130 intensively assisted firms, 116 other assisted firms, 1152 non-assisted firms. 3448 whole sample | 44% (intensive assisted), 36% (other assisted), 23% (non-assisted) |
| Chrisman, McMullan and Hall (2005) | USA | Cross-sectional | Users of the SBDC who have received five, or more, hours of counselling over the period 1992, 1994 and 1996 | The Small Business Development Center (SBDC) counselling service database covering Pennsylvania | 576 firms | Service, Manufacturing, Retail, Construction, Distribution | Mail survey | 159 usable responses | 27.6% |
| Wren and Storey (2002) | UK - West and East Midlands, the South West of England, and South Wales. | Cross-Sectional | Regional Scheme Contractors for the Marketing Initiative | Regional DTI Office's data of EI firms in three English regions and South Wales | 4326 firms | Primary and utilities (34), Metals, chemicals & extracting (214), Metal goods and engineering (1045), Other manufacturing (770), Construction (209), Distribution & hotels (755), Transport & communications | Data from Regional DTI combined with Mail Survey | 1136 usable replies | 40.6% |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | (117), Banking & financial services (883) and Other services (299) | | | |
| Chrisman and McMullan (Chrisman and McMullan, 2000) | USA | Pooled Cross-sectional | Users of the SBDC who have received five, or more, hours of counselling over the period 1992-1994 | The Small Business Development Centre (SBDC) counselling service database. | Not specified | Not specified | Mail survey | 54 responses from the 1992 users and 115 users from 1994 | 37.5% and 42.8%, of 1992 and 1994 users, respectively. |

**Table 3.2 Continued Previous studies which have assessed the impact of non-financial support (e.g. soft support) provided by public support schemes**

| Author/s (Year) | Test Non-Response Bias | Test Common Method Bias | Analysis Method | Measures of Support Policy | Performance Variables (Dependent) | Final Sample Size | Response Rate |
|---|---|---|---|---|---|---|---|
| Collett, N., Pandit, N.R. and Saarikko, J. (2014) | Not Specified | Not Specified | Factor analysis and Logit | The Finnish restructuring of enterprises act | Survival | 228 | 228/1166= approx. 20% |
| Hopp and Stephan (2012) | Not Specified | Not Specified | Probit and Instrumental variables | Socially supportive institutional environment. Nascent entrepreneurs' perception of gov support. | Start-up motivation and self-efficacy; and cash flow | 590 nascent entrepreneurs | Not Applicable |
| Rotger, Gørtz, and Storey, (2012) | Not Applicable | Not Applicable | Non-parametric method to overcome Heckman selection problem | Guided preparation (three levels of programme participation) | Firm survival, employment, ad sales | 467 Level 1; 609 Level 2; and 608 Level 3 over 2002-2003.<br><br>465 Level 1; 556 Level 2; and, 464 Level 3 over 2004-2005. | Not Applicable |
| Mole, Hart, Roper and Saal (2011) | Yes | Yes | Probit | Business advice provided by the Business Link (BL) English programme. How BL managers managed dependencies and the consequences for the effectiveness of the advice BL provided | Employment growth, sales growth and sales per employee | 1130 intensively assisted firms, 116 other assisted firms, 1152 non-assisted firms. 3448 whole sample | 44% (intensive assisted), 36% (other assisted), 23% (non-assisted) |
| Mole, Hart, Roper and Saal (2009) | Yes | Yes | Probit | Business advice provided by the | Employment growth and sales | 1130 intensively assisted firms, 116 | 44% (intensive |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | Business Link (BL) English programme | revenue growth | other assisted firms, 1152 non-assisted firms. 3448 whole sample | assisted), 36% (other assisted), 23% (non-assisted) |
| Chrisman, McMullan and Hall (2005) | Yes | Yes | OLS | Guided preparation – measured by the no. of hours spent in direct contact with a counsellor, as well as on work prompted by the advice or direction counsellors. | Employment and Sales revenue | 159 usable responses | 27.6% |
| Wren and Storey (2002) | Not specified | Not specified | Semiparametric Proportional hazards model & Parametric Regression | Marketing consultancy provided by the Enterprise Initiative | Survival, Sales turnover and employment growth | 1136 usable replies | 40.6% |
| Chrisman and McMullan (Chrisman and McMullan, 2000) | ANOVA and Chi-Squared tests applied. | Not specified | Descriptive Analysis | Firms who received at least 5 hours of counselling for pre-venture users of the SBDC scheme | Survival, Employment growth, Sales growth & Innovation | 54 responses from the 1992 users and 115 users from 1994 | 37.5% and 42.8%, of 1992 and 1994 users, respectively. |

From table 3.3 on previous studies on sources of external business advice; six studies looked at 20 different external sources of advices that entrepreneurs commonly use for their businesses. Bank, accountant, and solicitors where heavily used source of external advices among entrepreneurs in countries surveyed. For example: 79% of respondents used banks in the survey of Boter and Lundstorm (2005), at the same time 82.7% of respondents used accountant and 76.3% used solicitors in Britain (Ramsden and Bennett, 2006).

The second group of sources of external business advices mostly used by entrepreneurs where: the entrepreneur customers, business suppliers, and friend and family members. This group is characterised by being providing direct advices, continues and easy to access, and low in cost compared to other sources. Entrepreneurs tend to use their customers and suppliers for advices regarding material choices, products and/or services evaluation and other business advices needed to enhance business operations. At the same time, friends & family members considered as on-demand source of immediate opinion on how the business stands in market, 43.3% and 41.5% of respondent reported "Yes" in using friends and family as a source of external business advices for their surveyed business in Britain in Ramsdan and Bennett (2005) and Bennett and Robson (2003).

The third group of external business advices was government support schemes, chamber of commerce, and consultants. This group provides better advice quality if compered to family and friends. However, the uses of this group was lower than the first and second group due to the amount of paper work, application process time, time consuming interviews and due diligent needed before actually providing the needed services to entrepreneurs. Entrepreneurs tend to use consultants and business advice schemes when the advice needed is related to more critical business decisions.

**Table 3.3 Previous studies on sources of external business advice (Percentage of respondents reporting use).**

| Business advice source | Berry et al. (2006) | Ramsden & Bennett (2005) | Pentax Consultants (2005) | Boter and Lundström (2005) | Burke & Jarratt (2004) | Bennett & Robson (2003) |
|---|---|---|---|---|---|---|
| Customers | | 38.0 | | | + | 57.7 |
| Suppliers | | 37.1 | | | + | 42.7 |
| Family/Friends | | 43.3 | | | + | 41.5 |
| Business Associates | | | | | + | |
| Employees (Former) | | 26.7 | | | | |
| Banks | | 59.0 | | 79 | + | 58.8 |
| Accountant | 85 | 82.7 | 26.3 | 74 | + | 80.4 |
| Solicitors | | 76.3 | 22.7 | | + | 51.6 |
| Consultants | 54 | 44.3 | 5.7 | | + | 30.3 |
| Universities/Colleges | 32 | 22.1 | | | | 10.2 (LEC) |
| Trade/Professional Associations | | 34.0 | | | + | 35.9 |
| Chamber of Commerce | | 26.3 | 16.3 | | + | 23.1 |
| Business Link | | 68.2 | | 58 (EAS) | | 32.6 |
| Government Agencies: | 49 | 20.5 (DTI) | | 11 | + | 10.2 (LEC) |
| NGO/Donor Governments | | | | | | |
| Venture Capital | | 3.0 | | | | 5.4 |
| Business Angel | | 6.2 | | | | 6.3 |
| Other Sources | 66 | | | | | 95.5 |
| Definition of small business (Employees) | | 5-100 | 1-29 | | 1-30 | 1-500 |
| Number of Respondents | 140 | 194 | 300 | 1022 | 16 | 2,127 |
| Study Area | UK | Britain | Ghana | Sweden | Australia | Britain |
| Methodology | Survey | Survey | Survey | Survey | Case-study | Survey |

+ sign indicates that the level of use of business advice was not measured directly.

**Table 3.3 Previous studies on sources of external business advice (Percentage of respondents reporting use).**

| Source /Author(s) | **Jay & Schaper (2003)** | **Mole (2002)** | **Carter et al. (2002)** | **Chell & Bain (2000)** | **Verspreet & Berlage (1999)** | **Hill et al. (1999)** | **Bennett & Robson (1999)** | **Kirby & King (1997)** |
|---|---|---|---|---|---|---|---|---|
| Customers | | + | | 71 | | | 47 | |
| Suppliers | | + | | 47 | | + | 36 | |
| Family/Friends | 68 | | | | + | + | 38 | |
| Business Associates | | | | 57 | | | | |
| Employees (Former) | | | | 37 | | | | |
| Banks | 90 | + | | | | + | 62 | 77.4 |
| Accountant | 94 | + | 77.1 | | | + | 83 | 90.4 |
| Solicitors | 31 | + | | | | + | 56 | 93.5 |
| Consultants | 19 | | 7.3 | | + | + | 32 | |
| Universities/Colleges | | | | | | | | 45.1 |
| Trade/Professional Associations | 24 | | | 35 | + | | 31 | |
| Chamber of Commerce | | | | 38 | + | | 23 | |
| Business Link | 19 (SBDC) | + | 11.1 | | + | | 27 | |
| Government Agencies: | 29 | + | 14.4 (DTI) | 17 (DTI) | | + | 33.3 (LEC) | 54.8 |
| NGO/Donor Governments | | | | | + | | | |
| Venture Capital | | + | | | | | | |
| Business Angel | | | | | | | | |
| Others Sources | | | | | | | 95 | 19.3 |
| Definition of small business (Employees) | 1-4 | | | 0-9 | 2-100 | 4-28 | 1-500 | 1-50 |
| Number of Respondents | 68 | | 18561 | 104 | 140 | 5 | 2,547 | 64 |
| Study Area | Australia | Britain | UK | UK | Tanzania | N. Ireland | Britain | Britain |
| Methodology | Survey | Survey/ case study | Survey | Survey/ case study | Survey | Case study | Survey | Survey |

+ sign indicates that the level of use of business advice was not measured directly

The last group of external business sources of advices are venture capitalist, business angels, and other alternative sources of external business advice. This group has the lowest among all other external sources of business advice, percentages of uses were as follows, 3% and 6.2% for uses of venture capitalist and business angels from Ramsden & Bennet (2005) survey, 5.4% for venture capitalist and 6.3% for business angels form Bennett & Robson (2003) survey, and no uses of venture capitalist and business angels in Ghana from Pentax Consultants (2005) survey and Jarrah (2004) survey in Australia. Venture capitalist and business angels considered to be very hard to access by most of entrepreneurs. This because the nature of business ideas that venture capitals and business angels are looking for may not be in line with entrepreneurs' goal or objectives of creating business. Unless both entrepreneurs and business angels or venture capitalist came to a common land of mutual benefits, the access to advices from these sources will be limited to few number of entrepreneurs or new businesses.

From table 3.4, which shows the satisfaction level with services provided from external business advice sources, we can see that in general entrepreneurs reported high level of satisfaction of services provided. Clearly, sources were divided into two main groups: High satisfaction sources and medium satisfaction sources, none of external sources belong to low or not satisfied level. In the first group, family and friends came first in the most satisfied source of external business support used, followed by customers, suppliers, and business angels. The first group is characterised by close ties between the entrepreneur and the external source of business support. Closer ties allows a better understanding of the entrepreneur and history of business being advised, which explained the high level of satisfaction. Secondly, accountants, solicitors, and consultants came with very high level of satisfaction ranging from 84.7% to 92.2%; again the closer the relationship and the more

specific the entrepreneur seeking external business advice the better the satisfaction level of the service.

The second group in table 3.4, satisfaction level was medium to high; ranging from 63.5% to 73.8%. Business link, which was a government initiative scheme to support SMEs' in the UK, was in this category with other government support scheme in other countries. Due to the high number of entrepreneurs seeking business advices; government support schemes find it impossible to customise the service provided to each individual entrepreneur (Bennett, 2014). However, government schemes provide a wide range of needed services and business advices that entrepreneurs needs and they are satisfied with (Bennett and Robson, 1999). Government schemes have limitation of how much time and resources to allocate to each service seeker, however, more attention and focus is allocated to enterprises under risk of bankruptcy or liquidation (Mole et al. 2009). Finally, universities and colleges provides a satisfactory level of services, however, lack of resources allocated by universities to entrepreneur business advice limits its services satisfaction level (Bennett, 2014).

**Table 3.4 Satisfaction with Business Advice in Previous studies**

| Source /Author(s) | **Ramsden & Bennett (2005)** | **Pentax Consultant (2005)** | **Jay & Schaper (2003)*** | **Burke & Jarratt (2004)*** | **Bennett & Robson (2003)** | **Mole (2002)*** |
|---|---|---|---|---|---|---|
| Accountant | 92.2 | 89 | + | + | 3.0 | + |
| Solicitors | 90.1 | 85.7 | + | + | 2.7 | + |
| Banks | 84.7 | | + | + | 2.7 | + |
| Consultants | 89.9 | 70.7 | + | + | 2.9 | |
| Customers | 97.8 | | | + | 3.2 | + |
| Suppliers | 100 | | | + | 2.7 | + |
| Family/Friends | 100 | | + | + | 2.9 | |
| Venture Capital | 66.7 | | | | 2.6 | + |
| Business Angel | 100 | | | | 3.1 | |
| Business Associates | | | | + | | |
| Employees (Former) | 99.7 | | | | | |
| Trade/Professional Associations | 93 | | + | + | 2.5 | |
| Chamber of Commerce | 90.2 | | + | + | 2.2 | |
| Government Agencies: | 93.6 (TEC/LEC) | | + | + | 2.7 (LLEC) | + |
| Business Link | 63.5 | | | | 2.3 | + |
| Others | 73.8 | | + | | | |
| Universities/Colleges | 72.7 | | | | | |
| NGO/Donor Governments | | | | | | |
| Definition of small business (Employees) | 5-100 | 1-29 | 1-199 | 1-30 | 1-500 | |
| Number of Respondents | 194 | 300 | 68 | | 2,127 | |
| Study Area | UK | Ghana | Australia | Australia | Britain | Britain |
| Methodology | Survey/ Case study | Survey | Survey | Case-study | Survey | Survey/ Case study |

+ sign indicates that the level of satisfaction was not measured directly.

**Table 3.4 Satisfaction with Business Advice in Previous studies**

| Source /Author(s) | **Chell & Bain (2000)*** | **Verspreet & Berlage (1999)*** | **Hill et al. (1999)*** | **Bennett & Robson (1999)** | **Kirby & King (1997)*** | **Carter et al. (2002)** |
|---|---|---|---|---|---|---|
| Accountant | | | + | 3.1 | + | 68 |
| Solicitors | | | + | 2.8 | + | |
| Banks | | | + | 2.7 | + | 39 |
| Consultants | | + | + | 2.7 | | 18 |
| Customers | + | | | 3.2 | | 40 |
| Suppliers | + | | + | 2.8 | | 36 |
| Family/Friends | | + | + | 3.0 | | 30 |
| Venture Capital | | | | | | |
| Business Angel | | | | | | |
| Business Associates | + | | | | | 37 |
| Employees (Former) | | | | | | |
| Trade/Professional Associations | | + | | 2.4 | | 38 |
| Chamber of Commerce | | + | | 2.2 | | |
| Government Agencies: | | | + | 2.4 (LEC) | + | 10 |
| Business Link | | + | | 2.4 | | |
| Others | | | | | | |
| Universities/Colleges | | | | | + | |
| NGO/Donor Governments | | + | | | | |
| Definition of small business (Employees) | 0-9 | 2-100 | 4-28 | 1-500 | 1-50 | |
| Number of Respondents | 104 | 140 | 5 | 2,547 | 64 | 18561 |
| Study Area | UK | Tanzania | Northern Ireland | Britain | Britain | UK |
| Methodology | Survey/case study | Survey | Case study | Survey | Survey | Survey |

+ sign indicates that the level of satisfaction was not measured directly.

## 3.4 Conclusion

This chapter provide readers with an overall background information about research centres upon studies of SMEs and entrepreneurs which have provided financial and non-financial support in other countries than Saudi Arabia. Firstly, a review of studies that assessed the financial support provided by public schemes, usually in the form of credit guarantee schemes, was presented. Additionally, justification of government loan assistance programs that helps the imperfections in bank credit market was explained. Key studies the assessed public financial support in the following countries was covered: Japan, South Korea, Italy, Turkey, and Spain.

Secondly, a review of the key studies of non-financial public support to SMEs and entrepreneurs by public support schemes was presented. Non-financial support usually inform of providing entrepreneurs and SMEs training, education, HR structuring, technical support, planning, marketing, and business networking. Key studies reviewed in this chapter where in the USA, Finland, Denmark, England, and the UK.

The next chapter will present the derivation of the thesis hypotheses and provide the theoretical framework.

# Chapter 4

# Human Capital Theory and the derivation of hypotheses

## 4.1 Introduction

The purpose of this chapter is to provide the derivation of the hypotheses. The theme of human capital formation occurs all through the 18th and 19th centuries and in *The Wealth of Nations* (1776) Adam Smith formulated the basis of what was later to become the science of human capital. However, it was not for nearly two hundred years after Smith (1776) that Gary Becker brought together human capital theory in a coherent framework. The hypotheses in this thesis are linked to human capital theory which was originally developed in the field of labour economics by Becker (1975) and then Becker (1993) subsequently broadened its applicability to management and the wider social sciences. Within the entrepreneurship branch of the academy human capital theory has become a widely used framework (Ucbasaran, Westhead and Wright, 2006).

This chapter is organised as follows. The second section presents human capital theory. The second section consists of five subsections relating to gender, and entrepreneurial experience which are categorised as general human capital; and then three subsections relating to business advice, innovation, and family involvement which are categorised as specific human capital. This is followed by the third section where the hypotheses are derived by linking each of them to human capital theory. Lastly, a conclusion completes the chapter.

## 4.2 Human Capital Theory

Human capital may be viewed as capital that belongs to a person or a group of people and it is associated with a sense of being built up and accumulating over a period of time (Wang and Yao, 2003). Whilst Becker (1964) originally developed the human capital concept to labour economics it has become accepted and applied more broadly, including in the entrepreneurship branch of the academy. In the entrepreneurship literature human capital is viewed as a form of inputs that are associated with the key decision makers who bought, established or purchased entrepreneurial ventures (Ucbasaran et al 2006) and they exchange the inputs for outputs. The outputs include the performance of the business (Bosma et al. 2004), the survival of the firm (Bruderl et al. 1992), as well as benefiting from being the key decision maker (Bates, 1990). As such the human capital concept does have a broad application.

Dess and Picken (1999: p. 8) defined human capital as "generally understood to consist of the individual's capabilities, knowledge, skills and experience of the company's employees and managers, as they are relevant to the task at hand, as well as the capacity to add to this reservoir of knowledge, skills, experience through individual learning". Following Becker's (1964) original work the human capital theory predicts that broad labour market experiences as well as all forms of education – whether they are on a formal nature, are derived from learning at the workplace, or from training, can serve to increase an individual's human capital. There is a rich body of research that has utilized human capital theory to look at management experience, previous business and entrepreneurial experience as well as labour market experience (Robinson and Sexton, 1994; Bates, 1995; Gimeno et al. 1997).

In the entrepreneurship literature, the entrepreneur's own stock of human capital will be of critical importance to the performance of his or her firm (Pfeffer, 1994; Rauch and Frese, 2000). In essence, human capital may be conceptualized as a type of resource that will allow entrepreneurs to achieve the seemingly unachievable in a rather efficient manner (Bruderl et al. 1992). This stock of human capital is not only his or her education, information and support which is tapped into, as well as family, prior business experience and managerial skill but also the skills and value built up in the firm, including innovation (Gartner, 1990, Cooper et al. 1994). Although some human capital variables are not easily changed, the advantages and/or risks that are associated with each can be assessed. If human capital is well-utilised then the potential problems or weaknesses associated with a certain type of human capital can be identified and so modified accordingly, and it is believed that human capital plays an important role in improving a firm's future prospects (Cooper et al., 1994). And, in the context of this thesis human capital can be used to help overcome impediments and barriers to taking the business forward and achieving their objectives.

Literature has shown that the entrepreneur's human capital and prior business ownership could help to overcome business barriers. Entrepreneurs with prior business experience such as habitual (entrepreneurs with more than one business experience or repeated business experiences), sequential or serial entrepreneur (entrepreneurs with sequential business experiences; one after another), and portfolio entrepreneurs (entrepreneurs with more than one business ownership at the same time) all can leverage their prior experience and human capital to have access to capital, resources, business networks, and have a better opportunity to grow, expand, or sustain their business (Bennett et al., 2010). On the other hand, novice

entrepreneurs (entrepreneurs with no prior business experience) might have difficulties in rising needed capital, access to business networks, and will face the problem of newness (Westhead et al., 2001).

The characteristics of entrepreneurs which are referred to the entrepreneur demographic characteristics; they are non-intellectual elements given by birth such as gender, age, and background; but, gained by the entrepreneur education, and experience in business life (Becker, 1975; Cooper et al., 1994). These characteristics may help or become a barrier to the process of raising capital or conducting business in some cultures; for example, female entrepreneurs in Ghana were more likely to have difficulties to access to credit or other financial resources than man-owned businesses (Saffu and Manu, 2004). Previous experience in specific business sector can enhance the new venture future performance (Cooper et al., 1994). Previous business ownership experience was founded as a key resource that enable entrepreneur to introduce innovations into market (Robson, 2010). Formal education such as university degree can be a source of confidence of the entrepreneur ability to acquire knowledge, learn new skills, discipline, and have problem-solving skills needed in business (Cooper et al., 1994).

Small and medium enterprises have been a subject of concern and interest for researcher, government, and policy makers for long period of time. This importance came from job creation that SMEs generate in the economy. Governments and policy makers continually introduce range of policies to support SMEs business sector to grow in and survive in market place (Bennett et al., 2001).

SME growth can be measured in many ways, for example, government and policy makers uses job creation as a measure of growth (Storey, 1994). Secondly, financial growth or revenue growth in SMEs business sector was used by government

as evaluation of SMEs contribution to the economy (Ghoshal and Bartlett, 1994). The third measure was founded to be growth in profitability; enterprises owners used this measure to evaluate their time and capital investment in a certain businesses (Kalleberg and Leicht, 1991). Other growth measures such as return on capital invested, growth in market share, and growth in human resources development, growth in technology innovation, and growth in professional recognition (Oeser, 1992) were also used in previous literature to measure SMEs' growth.

There were many arguments in literature regarding reasons behind SMEs growth. SMEs' owner behaviours toward growth and management style that they used can be a reason of firms' growth (Davidsson, 1991). On the other hand, (Williamson, 1991) argued that profit maximization must not be the main driver for owners while running their businesses; Williamson founded that the more delegation of authority in daily business operation and profit sharing with business managers the grater overall behaviour and business performance. Other scholars linked firms' growth to long-term sustainability and competitive advantage strategies above average performance; for example, overall cost of leadership, product differentiation and business focus can be used as a long-term competitive advantage for firms' sustainability (Porter, 1985). It was founded that, at any giving time, firms' will face limitation for growth; which rose from management capacity to increase number of employees (Montgomery and Hariharan, 1991).

Finally, external economics and business climate can effect positively or negatively on firms growth; for example Westhead and Birley (1995) studied 88 variables, which can affect employment growth in small and medium enterprises. (Hitchens and O'Farrell, 1991; Porter, 1991) finding shows that the ultimate general market conditions and level of competition were main factors of growth in small and

medium enterprises. It's also important to notes that once firms become established, it may be misleading to categorize as "growth firm" (Storey, 1994a). It's important to highlight, however, that not all SMEs' are growth-oriented firms (Gibb and Davies, 1992). In SMEs', personal goals of entrepreneurs, their lifestyle, and family commitment will influence level of growth that each firm is targeting (David Smallbone et al., 1995).

The main reasons of government and private sector business support schemes existence was to fill gaps that small and medium enterprises owners had such as business funding, lack or managerial skills to run their businesses, recruiting and staff training, and development of business process (Chapman et al., 1991; Sinclair and Cohen, 1992). Users may vary in how intensively they used external business advices; according to Robson and Bennett (2001), higher uses of external advice were founded between high growth and declining firms. In Europe, studies have shown that high percentage of supported SMEs' reached their business goals (European Commission, 2010; Barajas, Huergo, and Moreno, 2012). However, Barajas at el (2012), argued that it's not possible to quantify to what extend SMEs' business support have influenced SMEs' performance.

The human capital theory represents a coherent and well established theoretical framework which has been applied in the social sciences (Becker, 1964; Ucbasaran et al. 2006). Specific elements of human capital such as gender and education have been tested in studies of the use and impact of business advice (Bennett and Robson, 1999) although the human capital theory tends not to be formally used in business impact studies with Storey's (1994) framework having been more widely used. By applying human capital theory to the barriers to growth

literature this represents a theoretical advancement on the Robson and Obeng (2008) study which utilised the Storey (1994) framework.

## 4.3 Hypotheses Derivation

Different entrepreneurial firms will need different types of support depending on the business stage when they start seeking external support (Johnson, Webber, and Thomas 2007). Credit and business advices are most needed among all types of supports for SMEs (Abdul-Muhmin and Umar, 2007; Wright et al., 2007). Entrepreneurs' with prior business ownership experiences will generally have more knowledge about available sources of funds and ways of acquiring business advices from market place (Robson 2012). Founders with industry-specific know-how will contribute to their firms growth and survival (Cooper et al., 1994). Firms established by wealthier partners will face less barriers when raising funds from financial institutions (Colombo et al., 2006).

In some contexts such as Saudi Arabia; some entrepreneurs will have more access to external supports because of their general human capital i.e. gender, background, and education level. Intellectual capital and business know-how will provide a competitive advantage for group start-up businesses were business partners will leverage their expertise to achieve desired business objectives (Sapienza et al., 2006).

In this study, a distinction between general and specific human capital have been made. By general human capital, the study refers to entrepreneurs' characteristics giving by birth such as gender, background, and general education level. On the other, specific human capital which refers to specific experiences in the industry of business

sector or specialisation by innovation or competitive advantage over competitors. Based on human capital theory, this study suggests that entrepreneurs general human capital characteristics such as gender, entrepreneurs specific human capital profile i.e. prior business ownership experiences, and number family members owning or working on the same enterprises may affect the ability of entrepreneurs or SMEs' to access to external support.

### 4.3.1. Gender

Entrepreneurs' gender could play an important role of his or her ability to access external support (Westhead et al., 2001). Early empirical studies found that women were more risk averse than men (Pettigrew, 1958). Men in general had more access to external support and funding than women i.e. in 1997, 97.5% of equity funding for new ventures went to enterprises owned by men (Carter et al., 2003), also in a study conducted by Westhead et al (2001), 87% of the founders in different types of entrepreneurs were men. In addition, most of leading positions in government and support schemes were held by men (Welter and Smallbone, 2003). Similarly, In Saudi Arabia all support schemes leaders and majority of staff are men. This is an argument in the socio-cultural status of women in Saudi Arabia, which relates family responsibility to women only. Therefore, women are facing a variety of obstacles and reduces chances of Saudi female entrepreneurs to setup their own businesses. In this thesis the hypotheses are focused upon barriers where this is viewed as barriers to growth, which as indicated in the methodology chapter has been proxied by a barrier or limit to your ability to meet their business objectives. This is consistent with the approach followed by Robson and Obeng (2008).

On the other hand, Buttner and Rosen (1992) reported that there were no significant differences in entrepreneurs' gender during loan application process. However, there is always the possibility that discrimination in applications for loans may be hidden and thus be informed by informal norms in the society. Thus, whilst the researcher reviewed all written rules and policies of all support scheme in this study there are no formal indications of discrimination between genders requesting any type of support in reality there may very well be hidden discrimination. In Saudi Arabia it continues to be a very conservative country where women are not allowed to drive a car, generally have to be chaperoned in all activity that will involve interacting with men, and where many men view that a woman's place is at home (Simmons, 1998). In those circumstances it may be expected that government officials will be more favourably disposed towards men rather than women. In accordance with the argument illustrated above, the following hypothesis is derived:

***$H_{1a:}$ Male entrepreneurs will encounter less barriers than female entrepreneurs.***

In the literature there were evidences about entrepreneurs' education level effects their enterprises performance. Some scholars positively related business success to entrepreneurs' formal education level (Yusuf, 1995). In some cases, positive relationship between entrepreneurs' education level and firms profitability, but not necessarily growth, has been shown (Jo and Lee, 1996). Hood and Young (1993), believed that entrepreneurship subject must be taught in schools as part of formal education to generate successful entrepreneurial firms in the future. On the other hand, conclusions form number of studies showed little impact on level of education and individual choices of entrepreneurship as a career (Hartog et al., 2010), for example, Cassar (2014) argued that entrepreneurial experience is a combination of

education and implementation of ideas and knowledge only can be judgmental tool for business evaluation. Finally, Bernhofer and Li (2014) argued that people with higher education might accept higher paid wages in market place than involving in risky and uncertain career as self-employed or an entrepreneur. Hence the following hypothesis:

***$H_{1b:}$ Entrepreneurs with degrees will encounter less barriers than those without degree.***

### 4.3.2 Entrepreneurial Experience

Entrepreneurial experience was a very important subject in all literatures on entrepreneurship (Gao et al., 2010). Scholars related entrepreneurial performance to various factors related to the entrepreneurs' experience, for example, Ronstadt (1989) recommended that many successful entrepreneurs started several businesses before they achieved success in their current businesses. Prior business ownership experiences that an entrepreneur have will affect his/her type of business to invest in, strategic business structure decisions, ways of acquiring knowledge and information, and ways of seeking external business support and funding (Cai et al., 2007; Fang et al., 2007; SUN et al., 2007).

According to Noel and Latham (2006) performance of start-up businesses will depends on the entrepreneur prior business experience. Owner experience, education level, qualification, and psychology influence uses of external business support (Gibb and Hannon, 2006; Rae, 2005; Storey, 1994b). SMEs that have business plans and positive orientation to growth were using external business support than other businesses (Clarke et al., 2001). Researchers reported that enterprises which was established by entrepreneurs with working experiences in the same sectors over

performed other enterprises which owners do not have such experiences (Chatterji, 2009). Prior business ownership experience can help the entrepreneur in hiring the right staff, communication with suppliers and clients in professional ways, and utilizing social capital and other resources and compete in the market. Hence the following hypothesis.

***$H_{2a:}$ Habitual entrepreneurs will encounter less barriers than novice entrepreneurs.***

On the other hand, entrepreneurs may carry bad managerial habits or business practices inherited form his or her pervious business ownership experiences. Also, liabilities from past businesses may and business failures experiences became a barrier that stops entrepreneur from undertaking the risk of establishing new businesses. In addition, credit history with financial institutions could be a positive or negative indicator to an entrepreneurs' future performance; for example, entrepreneurs who have defaulted to pay credit loans or delayed in payments schedules might be rejected by financial institutions because of their past performance track records (Wright et al., 1997).

Habitual entrepreneurs have two types, they are: portfolio and sequential (serial) entrepreneurs. Portfolio entrepreneur is defined as entrepreneur who owns or have a major or minor equity in more than one businesses at the same time. Sequential (serial) entrepreneur, however, is defined as entrepreneur who own one business after another; they sell or close one business and establish a new one (Beresford, 2000).

Portfolio entrepreneurs may out preform serial entrepreneurs due to diversification of business experiences that the involve in and owns' once they decided to directly invest in a new start-up business. From the creditors' point of view, portfolio entrepreneurs are less risky in general, due to the fact that portfolio

entrepreneurs will have better cash flow position form their portfolio business investments.

On the other hand, serial entrepreneurs may lack the ability to present collaterals or source of securities to financers (Ucbasaran, 2003). Novice entrepreneurs, with no pervious business ownership experience may find it hard to seek support from external business support or financers. Unlike experienced entrepreneurs, novice entrepreneurs tends to depend on their saving or friends and family to raise capital for their new startup ventures (Wright et al., 2007b). Hence the following hypotheses:

***$H_{2b}$: Portfolio entrepreneurs will encounter less barriers than novice entrepreneurs***

***$H_{2c}$: Sequential (Serial) entrepreneurs will encounter less barriers than novice entrepreneurs.***

***$H_{2d}$: Portfolio entrepreneurs will encounter less barriers than sequential (Serial) entrepreneurs.***

There is no evidence that habitual entrepreneurs will always succeed in their businesses. Also, novice entrepreneurs businesses may succeeded in market place and their owners became portfolio or serial entrepreneurs in later stages (Westhead and Wright, 1998). However, in the Saudi context, there was no performances to any type of entrepreneurs during application process.

### 4.3.3 Business Advice

The key role of government and private sector business advice providers to SMEs is to offer support in a form of business planning, product designs, financial and information systems, manufacturing systems, marketing, quality control system, funding, and subsidizes. The type of business advice and support will change depending on the SME needs at time of seeking support (DTI, 1989; Wren, 1999). Significant amount of eternal business support went to market research and product/service design (Bennett and Robson, 2003).

Consultation could differ in approach and delivery methods (Kirby and Dylan, 1997). Bennett and Robson (2000) shows, moreover, that location of SME affect the uses of business advices. For example, SMEs in cities were extensively using business support schemes than SMEs in rural areas. The wider the geographic markets covered by the SME and the more export orientation of the firm seeking external support, the heaviest the uses of external business support (Westhead et al., 2001b; Wolf, 2000). Positive relationship between growth and uses of external business support were shown (Johanson et al, 1998).

Common sources of business advices are banks, solicitors, and accountants. Accountants and solicitors had the most level of trust between all other external support sources (Bennett et al., 2010). Kirby and King (1997), however, argued that accountants and solicitors had limited influence in SMEs supports. On the other hand, economist worldwide recognized that market of business advice and information services as imperfect, they also shows that external business support is a characteristic of "Market Failure" (Doran and Bannock, 2000). Johnson, Webber, and Thomas (2007) argued that free and publicly available form of advice from external business sources is unlikely to provide a competitive advantage to support seeker.

Size of firm will limit the uses of external business support; for example, smaller SMEs with limited resources such as founders time will limit the time to seek external business support (Jonson et al 1998).

Finally, the level of trust in the source of external business support provider influences uses of external business support. In this thesis attention has focussed upon government funded support schemes. The Saudi support schemes as indicated in chapter two have been given vast resources to assist Saudi entrepreneurs. Given that the support is by in large free this does make the support attractive. However, that is tempered against a general tendency for Saudi citizens to be wary of government because of concerns over how government will utilise the information obtained from interactions in providing support, or concern that the civil servants may seek business favours for having helped the entrepreneur. It would thus on balance be expected that the benefits of using government business advice will outweigh the disadvantages. Hence the following hypothesis:

***$H_3$: Entrepreneurs who have used business advice from a government funded scheme will encounter less barriers than those who have not used business advice.***

4.3.4 Innovation

Innovation in SMEs' is considered a key driver of competitive advantage (Ahuja and Katila, 2001). Innovation can lead to increase market share, product/or service efficiency, increase in revenue for an SME (Shafer and Frenkel 2005). Innovation influence financial performance (Zahra et al., 2000). Keizer, Dijkstra and Halman (2002) and Tan et al. (2010) argued that innovation contributes to economic growth the SME. Important role of innovation is to provide sustainability in the

market place (Nieto and Santamaría, 2010). Innovation helps in exporting activities by opening new market for products/ services of the firm (Gillier and Piat, 2011; McDermott and Handfield, 2000; McDermott and O'Connor, 2002). In terms of the human capital framework innovation is a specific form of human capital. Investment of time and resources to develop innovation – in products or services, or in how the product or service is put together as captured by process innovation represent the fruits of entrepreneurs' endeavours to try and offer improvements in what their businesses provide.

The concept of innovation is heterogeneous and broad, there is a lack of consensus definition of innovation (Kim et al., 2011). The European Commission (EC) (Ole Lando and Commission on European Contract Law, 2003) defines innovation as follows "*The renewal and enlargement of the range of products/services and associated markets, the establishment of new methods or production, supply and distribution, introduction in changes in management work organization, working conditions and skills of workforce"*.

SMEs are fundamental to the societal transformation to knowledge and entrepreneurial economy (Audretsch et al., 2007b). However, the capacity of innovation can assist firms in the process of development of products/services to meet customers demand (Li and Mitchell, 2009; Rosenbusch et al., 2011; Verhees and Meulenberg, 2004).

Firms must learn from unsuccessful activities in developing and lunching new products/services (Chaston et al., 2001; Prieto and Revilla, 2006). SMEs capability is defined as combined and interrelated process for performing specific tasks (O'Cass and Sok, 2012). Entrepreneur consider collaboration with other external sources as a very important part of their innovation process (Massa and Testa, 2008).

These days we are witnessing a very fast moving and competitive markets, many new products/services are more likely to fail than succeed. Although, new products/services are innovated, little is known about their commercial success (Brown and Eisenhardt, 1997; Hauser et al., 2006). Overspending on innovation expenditure, or allocation of scarce resources to unsuccessful projects will not necessarily increase performance of SME's in market place (Adam, 2014). There are disadvantages of SMEs investing in multiple number of innovations at the same time, the later will lead to lack of focus and waste of scarce resources such as time and capital (Boudreau et al., 2011). Hence the following hypothesis.

**$H_{4a}$:** ***Firms which introduced a product/service innovation will encounter more barriers than those who have not used not introduced a product/service innovation.***

**$H_{4b}$:** ***Firms which have introduced a process innovation will encounter more barriers than those who have not introduced a process innovation.***

4.3.5 Family Involvement

Family ownership is a dominant form of firms ownership around the world (La Porta et al., 1999). Significant SMEs' in the UK , Europe, Asia, and the USA are family businesses, 60%, 38%,85%,and 80% respectively (Chu, 2011; Cruz et al., 2012; Faccio et al., 2011). Family business have an important role in any economy; were family business contribute positively to job creation (Olson et al., 2003). Family businesses are characterized by low employee turnover; family businesses are more likely to hire and less likely to lay off employees (Chen et al., 2008).

On the other hand, employment in family businesses have its unique problems; for example, grate influence accrues when a family member who is at the same time a

family business partner or manager in the SME, decide to employ another family member to fill a position at the firm (Aldrich and Cliff, 2003). One of the disadvantages of employing family members at the firm is narrowing the firms' pool of potential candidates that are qualified for the job position (Lansberg, 1983; Ward and Center, 1987). Some scholars, however, argued that hiring form family members can be a cost effective choice for SMEs. SMEs may not be able to afford to pay the best candidates to perform jobs at their small firm (Schulze et al., 2001).

Family involvement has been founded to affect corporate practices and mechanisms (Schulze et al., 2003). Family businesses through network ties could influence country regulatory environment and promote entrepreneurial business growth (Chua, Chrisman, Kellermanns, and Wu, 2011). Disadvantages may arise from having equity partners or employees for family members in the firm. Family values such as love, kindness, security, value of being together, and culture values might not necessarily come with same direction with economic business objectives such as revenue growth, cost reduction, and creating wealth (Akhilesh, 2014). Family businesses have longer time horizon to achieve business goals which, indeed, reduces revenue growth (Kappes and Schmid, 2013). It's been argued, that family businesses have a negative relationship with growth of revenue and employment (Campopiano and De Massis, 2014). In many studies, family businesses were less willing to invest in R&D (Berrone et al., 2010; Chrisman and Patel, 2012; Gomez-Mejia et al., 2011; Gómez-Mejía et al., 2007).

Family businesses are concerned about their reputation and social identity more than economic performance of the firm (Ali et al., 2007; Chen et al., 2010). Different generations in one family firm might have different view of how the family business should operate. In addition, decision process taking and evaluation of

business opportunities to invest in can crate conflict between family members in charged (Akhilesh, 2014). The greatest challenges for family businesses is succession planning. Who will control the family business for the next generation may affect the existing of the family business itself. The problem of succession planning will be inflated if there are many family members competing to have controlling positions in the family firm. (Akhilesh, 2014; Baek et al., 2006; Bareither and Resichl, 2005; Venter et al., 2003). Hence the following hypotheses:

**$H_{5a}$:** ***Firms which a greater number of family members employed in the business will encounter more barriers than firms employing fewer family members.***

**$H_{5b}$:** ***Firms which have a greater number of family member with equity stakes in the business will encounter more barriers than firms where there are fewer members holding equity stakes***.

## 4.4 Conclusion

In this chapter ten hypotheses have been linked to human capital theory and formally stated in five multi-part hypotheses. Hypotheses H1a and H1b are true to Becker's (1964) original view of human capital theory and test gender and education. These are general facets or parts of human capital. Hypothesis H2a focused upon habitual versus novice entrepreneurs, whilst hypotheses H2b and H2c test for differences between novices versus sequential or serial entrepreneurs, and then novices versus portfolio entrepreneurs, respectively. This form of entrepreneurial experience has been used by Ucbasaran et al. (2006) to business start-ups but not to barriers to growth. The variables focused upon in hypotheses H2a, H2b and H2c are specific forms of human capital. Hypothesis H3 focused upon the use of business

advice from a government supported scheme and that is also a specific form of human capital which is being tapped into in order to try and improve the entrepreneurs' business. Hypotheses H4a and H4b focused upon product or service innovation and process innovation, respectively. Being an innovator – in product or service or in process represented specific forms of human capital. In the context of the hypotheses which are presented these pair of hypotheses were one of the two pairs of hypotheses where it was expected that they would be associated negatively with barriers to growth. The human capital which has been built up by entrepreneurs' firms to allow them to be at the vanguard in either products and services or processes is believed to be associated with firms which are more prone to encountering barriers. Hypotheses H5a and H5b are hypotheses which focus upon two facets of family involvement in business: the number of family members employed in the business, and the number of family members with equity stakes in the business, respectively. Hypotheses H5a and H5b are two specific forms of human capital which as with the innovation variables are expected to result in the firms encountering more problems with greater family involvement. Other than hypotheses H1a and H1b the other hypotheses are focusing upon different types of specific human capital.

# Chapter 5

# Research Methodology

## 5.1 Introduction

The previous chapters have provided the reader with a review of previous research on Saudi Arabia and providing an overview of the support schemes which are provided in Saudi Arabia. The contextualisation of the study within the Saudi Business environment has also been presented in preceding chapters. The theories which have been used in the business advice literature have also been critiqued and then human capital theory has been used as the theoretical framework to derive a series of hypotheses which were presented in the previous chapter. This chapter presents the research methodology and this provides the objectives of the study, the rational for the choice of study, and the justification of picking Saudi Arabia as the country where the data was gathered.

## 5.2 Objectives of the study

As indicated in the previous chapters there is a lack of research studies which have identified the levels of use of government support schemes in Saudi Arabia. Equally, there have been very few studies which have explored the growth process and especially the barriers to growth in Saudi Arabia. Given the vast sums of money which Saudi Arabia is spending upon government support schemes, and a rising population which needs employment opportunities it is important to understand the utilisation of support schemes and the barriers to growth in Saudi Arabia.

## 5.3 The rational for the choice of the study

The previous chapters have shown that SMEs and entrepreneurs are important players in facilitating economic development, including wealth generation, the creation of jobs, the reducing of unemployment, advancing creativity and innovation, and the modernising of economies to allow stronger domestic competition and facilitate exporting opportunities. The Saudi Arabian government and their creation of support schemes and organisations especially Saudi Credit Bank and Modon, and their ongoing financial support in providing external business support needs to be investigated. For academics it is important to see whether human capital theory can be successfully applied to Saudi Arabia, and then the extent to which lessons can be learned for theory building and western developed countries. Whilst from a practitioner perspective it is important to evaluate government support schemes (Curran and Storey, 2002). The literature on growth has made limited progress in recent years (Wright al el., 2015) and barriers to growth offers a route to advance our understanding of the growth process. Storey (2000: 176) made a strong argument to justify the need to understand external business support schemes as follows, "Given the huge variety of schemes, the diversity of countries in which the schemes are found and often inflated claims on the part of those administering the scheme for their effectiveness, it is disappointing that the academic community has been rather slow in seeking to address this area". The researcher in pursuing this this doctoral thesis sought to add to the theoretical, empirical and practitioner debate in Saudi Arabia and the GCC countries where a lack of previous studies and especially a shortage of large scale studies where econometric methods have been deployed to advance our understanding of knowledge.

### 5.3.1 Research Questions

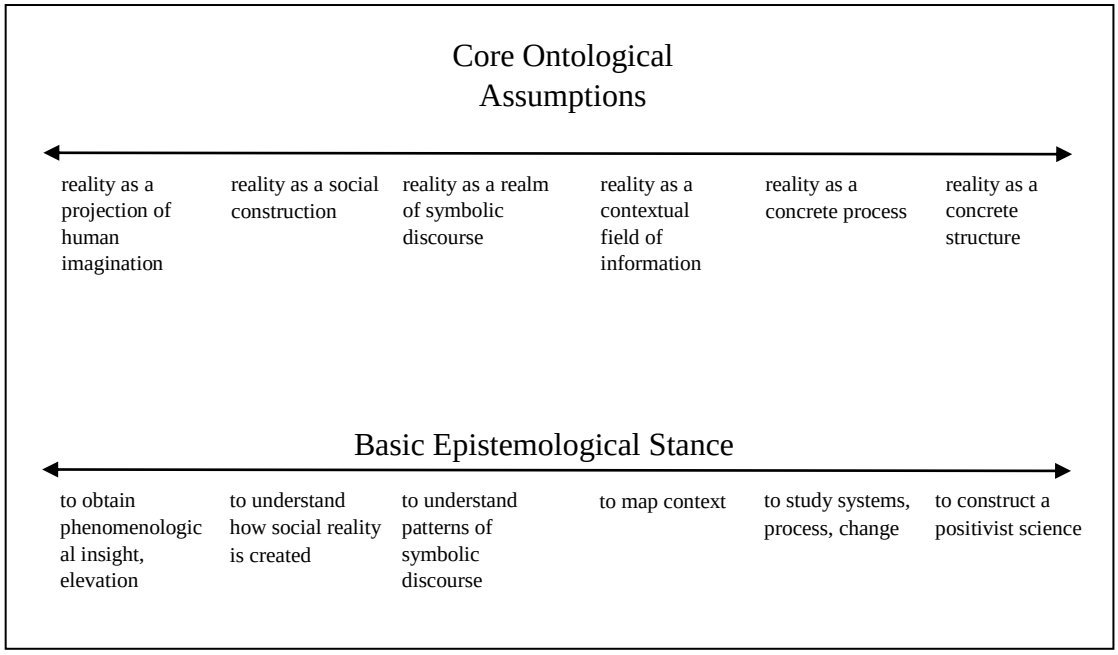
The main research questions of the study are as follows:

1. To identify the levels of use of government support schemes in Saudi Arabia.
2. To identify what are the barriers to growth in Saudi Arabia.
3. To see the extent to which the use of government support schemes helps to reduce the barriers and problems that entrepreneurs face in trying to grow their businesses.
4. To see the extent to which human capital theory provides a theoretical framework to allow the testing of hypotheses relating to better understanding barriers to growth, growth in Saudi Arabia.

### 5.3.2 Research Philosophy

Whilst this study has utilised econometric techniques which test hypotheses and can be argued to be a scientific approach it is important to place the research within a research philosophy context. Specifically, it is crucial for the researcher to articulate the social construction of reality (ontology) and the nature of social knowledge (epistemology) (Collis et al., 2003a). Critical reflections on research philosophy are also crucial to ensure that the research design which has been utilised in this doctoral study is appropriate to investigate the research questions (Easterby-Smith et al., 2012a). Academics are frequently divided on research methods, not just between quantitative versus qualitative research, but also within these two main branches. This section serves to provide the reader with the key reflections on the extreme philosophical positions of the social sciences and how this has influenced and shaped the researcher's study. The continuum of philosophical positions is shown in Figure 5.1.

**Figure 5.1 Continuums of basic philosophical assumptions**




Source: Morgan and Smircich (1980: 492)

Ontology is about the beliefs about the nature of reality, and thus it determines what can be known (Guba and Lincoln, 1994). From exploring ontology it is apparent that there are two main assumptions of reality and these are realism and relativism (Saunders and Rojon, 2011). Realism holds that reality in the world is independent from the observer, whilst relativism is based on the idea that reality is a creation of our perspectives (Morgan and Smircich, 1980). From figure 5.1 it is apparent that there are other assumptions of reality which fall between the two extremes of realism and relativism but these do not have relevance for this study.

Epistemology affects the way in which researchers access and understand the environment where they are doing their research and has a fundamental bearing upon how research studies are conducted (Crotty, 1998). The two main epistemological positions which are followed in social science are positivism and interpretivism (or social constructionism) (Cole, 2009; Collis et al., 2003b). These are arguably the most divisive areas of research methods. Positivism applies natural science methods to the

study of social science and takes the view of social reality as an objective reality. From reading the literatures on entrepreneurship and small business research it is apparent that the north American research is dominated by a positivist perspective. When this approach is followed the research questions need to be then investigated and tested using hypotheses (linked to theory) and informed by deductive reasoning. When a positivist approach is followed the researcher takes the role of an objective analyst, and should not affect, or be affected, by the subject of their research (Cole, 2009; Easterby-Smith et al., 2012).

Interpretivism is the other main epistemological position followed and this is sometimes referred to as social constructionism (Cole, 2009) and argues that individuals interpret their social world. Proponents of interpretivism place a great deal of credence on differentiating between people and the objects in natural science. Thus, they argue that the focus of investigations should be centred upon feelings and attitudes of people. Interpretivism in other words argues that rather than seeking to identify the external causes of behaviours the research should focus upon understanding the diverse experiences and perspectives of people (Easterby-Smith et al., 2012a).

Studies of SMEs and entrepreneurs rarely include an explicit epistemological statement (d'Amboise and Muldowney, 1988). This applies to the business advice literature (Borrego and Newswander, 2010) as well as the barriers to growth and growth literatures (Beckert, 2003) and has further contributed to holding back our understanding of growth and the use of business advice.

This section has presented the main philosophical positions which dominate social science research and now it is crucial to present the philosophical positions followed in this doctoral study. To repeat, the philosophical position which is

followed is shaped by both the research problem combined with the philosophical stance of the investigator (Hussey and Hussey, 1997). As indicated earlier in this chapter, the objectives of this study are: (1) to identify the levels of use of government support schemes in Saudi Arabia and see the extent to which the use of government support schemes helps to reduce the barriers and problems that entrepreneurs face in trying to grow their businesses; (2) to see whether the use of government support schemes in Saudi Arabia is associated with an increase in employment growth; (3) to identify what are the barriers to growth in Saudi Arabia; and, (4) to see the extent to which human capital theory provides a theoretical framework to allow the testing of hypotheses relating to better understanding barriers to growth, growth in Saudi Arabia. Furthermore, the researcher's personal view of reality is the realism ontological stance. This then serves as the basis for the chosen epistemological assumption in this study and consequently the choice of methodology (Holden and Lynch, 2004). The epistemological stance is a positivist one and thus the methodological choices throughout this chapter and the subsequent results and discussions chapters will therefore be presented in accordance with this underlying philosophical position of the researcher.

#### 5.3.2.1 Positivist and Anti-Positivist Perspectives

The positivist approach as a way of exploring social reality is based on the French philosopher Comte (1844), whose work was translated into English (Comte and Bridges, 1865) who placed an emphasis on observation and reason as a means of understanding human behaviour. Following Comte (1844) and Comte and Bridges (1865), true knowledge is based on experience of senses and can be obtained by observation and experiment. Positivist thinkers adopt Comte's (1844) and Comte and Bridges' (1865) scientific method as a way of knowledge generation. A positivist approach is understood within a framework of the principles and assumptions of science. Positivism believes that the world operates according to general laws. As such introspective and intuitive knowledge is rejected, as is metaphysics and theology. Positivist researchers remain detached from the participants of the research by creating a distance, which is important in remaining emotionally neutral to make clear distinctions between reason and feeling (Carson et al., 2001). Cohen et al (2000) indicates that the aforementioned assumptions are: determinism, empiricism, parsimony and generality. In brief, determinism means that events are caused by other circumstances. By understanding and accepting the deterministic assumption means that researchers need to understand such links in order to facilitate prediction and control. The second assumption of empiricism is about the collection of verifiable empirical evidence which can be used to test and either support theories or hypotheses, or to reject theories and hypotheses. The third assumption of parsimony means an explanation of a phenomena in the most efficient way feasible. The fourth assumption of generality is in essence the generalizability of the observation of the particular phenomenon to the world at large. Taken together these assumptions which are widely accepted in science have the ultimate goal to bring together and synthesise

findings which facilitate the establishment of a theory. Such a theory may be testable or it may later be proven to be a good representation of the phenomenon. This notwithstanding, theory is subject to revision or modification and when new evidence is found. A positivist approach is appealing as a method because it systematizes the knowledge generation process with the help of quantification. This is basically to enhance precision in the description of parameters (Dash, 1993).

Whilst the positivist approach continues to be dominant in science and the social sciences, including entrepreneurship, it is subject to several major criticisms which need to be noted. Firstly, positivism may be criticised because it has a lack of regard for the subjective states of individuals. More specifically, positivism may be criticised because it views human behaviour as passive, controlled and determined by their external environment (Farganis, 2011). In other words, human beings in the positivist approach are dehumanizing without their intention, individualism and freedom taken into account in viewing and interpreting social reality (Ritzer, 2011). Criticisms of positivism is associated with the anti-positivism or naturalistic inquiry (Bryman and Bell, 2015).

The anti-positivist scholars argue that social reality is viewed and interpreted by the individual, himself or herself, based upon the ideological positions he or she possesses (Farganis, 2011). Thus, anti-positivism argues that knowledge is something which is personally experienced rather than acquired from or imposed from outside (Orbe, 2009). Cohen et al. (2000) indicates that anti-positivists believe that reality is multi-layered and complex and furthermore a single phenomena may be open to multiple interpretations. In general anti-positivism may be divided into three schools of thought: phenomenology, ethnomethodology and symbolic interaction. Phenomenology is a view that argues that individual behaviour is determined by the

experience gained out of a person's direct interaction with the phenomena (Ritzer, 2011). As such this approach is believed to rule out any kind of objective external reality. Phenomenology is mainly associated with the work of Edmund Husserl and Alfred Schütz (Orbe, 2009).

Ethnomethodology is associated with the work of Harold Garfinkel (1974, 1984) and his fellow ethnomethodologists (See Bryman and Bell, 2015; Lynch and Sharrock, 2011). This approach deals with the world of everyday life. According to ethnomethodologists, theoretical concerns centres around the process by which common sense reality is constructed in everyday face-to-face interaction Garfinkel (1974, 1984). The ethnomethodology approach studies the process by which people invoke certain 'take-for-granted' rules about behaviour which they interpreted in an interactive situation and make it meaningful (Dash, 1993).

The symbolic interactionism approach was pioneered by John Dewey, Charles Cooley and George Mead (*Denzin and Lincoln, 1998).* In essence this school of thought emphasises the understanding and interpretation of interactions that take place between human beings Herman-Kinney and Reynolds (2003). The novelty and distinction of the symbolic interaction school is that human beings interpret and define each other's actions instead of merely reacting to each other's actions. Human interaction in the social world is mediated by the use of symbols such as language, which helps human beings to give meaning to objects (Dash, 1993). Thus, this school of thought claims that only by concentrating attention on individual's capacity to create symbolically meaningful objects in the world, human interaction and resulting patterns of social organisation can be understood (Berg, 2001).

The positivist and anti-positivist paradigms are concerned with two very different concepts of social reality. Whilst the positivist approach stands for

objectivity, measurability, predictability, controllability and construct laws and rules of human behaviour, the non-positivist approach in essence emphasizes an understanding and interpretation of phenomenons and making meaning out of the process. Both approaches have a valued place in entrepreneurship research and the wider social sciences and sciences. Ultimately, it is about which approach the researcher believes is valid, and the best paradigm, for the study and questions which are investigated. In this instance for the thesis the researcher believes that a positivist approach is the appropriate paradigm to follow. This notwithstanding the earlier criticisms of the positivist approach which have been provided by the anti-positivist scholars need to be acknowledged and that the positivist approach does have limitations.

## 5.4 Research Strategy

The previous section has provided the reader with reflections on the philosophical issues which were dealt with in the doctoral study. Equally contentious as philosophical issues is the research strategy to follow and in particular whether a researcher is going down the path of a quantitative study, a qualitative study, or mixed methods which uses both quantitative and qualitative research. Quantitative and qualitative research strategies offer different roles for theory – either deductive or inductive, as well as the ontological and epistemological stances followed (Cole, 2009). Quantitative research is synonymous with a positivist approach. In sharp contrast qualitative research is typically associated with an interpretivist stance (Hussey and Hussey, 1997).

Reading through research methods texts (Cole, 2009) it is apparent that the pluses and minuses associated with quantitative and qualitative research is contentious

and much debated. Quantitative research techniques are centred upon collecting and analysing large data sets, where more participants are believed to improve the quality of the analysis and discussion associated with the results. Quantitative research is also associated with hypothesis testing to see whether the results of the study are consistent, or not consistent, with the hypotheses which have been derived from theory. The main benefits of quantitative research is that a researcher is able to make generalisations from the sample results to the population of the participants studied, and with careful caveats generalisations to populations from other countries. Quantitative research also offers advantages of relatively rapid data collection, especially when combined with advances in technology and using an online survey completion method; and, the results which are based upon statistical and econometric techniques should be independent of the researcher, and a high level of credibility (Cole, 2009). This is tempered against the following detractions, quantitative research can tend to be abstract, very general, and lacks the human element and micro details which are obtainable in qualitative research (Johnson and Onwuegbuzie, 2004). Furthermore, quantitative research has been criticised for being biased and subject to confirmation bias where the researchers data mine and change variables in models until the desired results are obtained. However, if a scientific approach is followed the hypotheses are linked to theory, and the data is carefully gathered and the models are specified carefully based upon theory and past precedence and that should minimise the possibility of confirmation biases. This notwithstanding qualitative researchers continue to argue that it is inappropriate to apply scientific approaches and models to social science and management research.

Whilst numbers and the application of statistics and econometrics are the staple of quantitative research, in contrast qualitative research is dominated by the

precise use of words and providing voices for participants, and typically involves a small number of participants and organisations studied. With such an approach the findings of qualitative research offer a wealth of descriptive details, and quotations, and excellent contextual understanding of the participants. However, qualitative studies are vulnerable to several criticisms such as they are very subjective, prone to data mining where the researcher only focuses upon the quotations and findings which support their theory, are very difficult to replicate because of the unique approaches followed by researchers, and their very small scale make them very difficult to generalise across a sector, let alone to generalise to the entire population, and beyond.

The barriers to growth responses provided by the Saudi entrepreneurs are open to the criticism that the responses are not objective, and that they are in fact subjective in nature. This is an issue which applies to a large proportion of quantitative research on entrepreneurship (Storey, 1994) and business and management research (Saunders et al. 2014). Objective data which is gathered by government agencies such as through tax collection or from filed company accounts is the preferred data to utilise. Unfortunately in Saudi Arabia there is very little objective data that can be utilised and accordingly the questions on barriers to growth are thus open to criticisms of the phenomenology, ethnomethodology and symbolic interaction schools of thought that were discussed in section 5.3.2.1. This notwithstanding there is the precedent that barriers to growth have been successfully analysed before using subjective data responses (Robson and Obeng, 2008), and many other branches of entrepreneurship research have likewise utilised subjective data (Ucbasaran et al. 2007). This notwithstanding the weaknesses in the approach followed are acknowledged.

A researcher needs to take on board the strengths and weaknesses associated with quantitative and qualitative research and recognise that the research methodology

needs to fit with the research topic and questions which are being investigated (Cole, 2009). Given the nature of the research questions and in order to identify the use of government support schemes, the barriers to growth which are encountered, and the relationships between the use of business advice and barriers to growth the researcher decided to follow a research strategy of using quantitative methods and a deductive approach. When a deductive approach is followed this involves the researcher reviewing the existing literature to identify the most appropriate theoretical framework and then build hypotheses which are linked to the theoretical framework and the research questions which are being investigated. This approach has been followed in the previous chapters. The process of deduction is shown in figure 5.2.

**Figure 5.2 The process of deduction**

1. Theory

↓

2. Hypothesis

↓

3. Data collection

↓

4. Findings

↓

5. Hypotheses confirmed or rejected

↓

6. Revision of theory

Source: (Collis et al., 2003a) p.11

## 5.5 Operationalisation

The concept of operationalisation "refers to the operations by which a concept is measured" (Bryman and Bell, 2015) and thus in relation to this thesis it is important to provide a rationale for the specific quantitative methods which the researcher utilised to throw light on the research questions and objectives of the study. This will then lead to the presentation of the reasons why Saudi Arabia was selected as the country to study entrepreneurs and SMEs. The rationale for adopting the stated sample selection process will also be justified, and this will include the criteria which the researcher used as well as difficulties encountered. After that the data collection instruments are discussed, the piloting process is examined, and the administration of the survey is overviewed.

### 5.5.1 Rationale for the choice of methods

There is no official government list of entrepreneurs, or SMEs, in Saudi Arabia and accordingly it is necessary to gather information from entrepreneurs using a questionnaire which is surveyed from a carefully created sample framework. From the literature review on entrepreneurship it is apparent that using a questionnaire is the dominant methodological approach which is followed in North American studies and also in European studies, although the later does have a visible culture of also using qualitative methods. Carefully looking through JBV, ETP, JSBM, and SEJ, which are North American journals the dominance of quantitative studies is apparent. Indeed, Mullen, Budeva and Doney (Mullen et al., 2009) after assessing the methodologies used in JBV, ETP and JSBM indicated that over an eight year period 2001 to 2008 69% of studies were quantitative and 31% were qualitative. Furthermore, Mullen et al. (2009) indicated that 60% of quantitative studies used a survey methodology.

The researcher decided to use self-administered questionnaires rather than administered questionnaires for several reasons. Using self-administered questionnaires on an online platform served to minimise interviewer variance as well as reduce any possible social desirability bias. In other words, by not interacting with the entrepreneurs as they completed the questionnaire avoided him from unintentionally influencing what the entrepreneurs gave as their answers to the questions in the survey. Furthermore, using a questionnaire allowed the entrepreneurs to be able to complete the survey at a time that suited them, and at a speed which suited them. An administered questionnaire may initially be scheduled at a mutually convenient time but given the dynamic word of business an entrepreneur may then have had pressing business issues to attend to and then either re-scheduled the meeting, or rushed through the questions in order to get rid of the researcher. Whilst multi-mode methods, combining together a postal questionnaire and an online questionnaire are increasingly common in the literature (Zahra, 2012) it was felt that it was best to stick to one method – online completion. If the researcher had opted for a dual method questionnaire completion then that may have caused one group of researchers to be biased compared to other method followed.

The online method to harvest the data is becoming more common in social science research (Eboli and Mazzulla, 2012) and whether a study is a doctoral one, or a post-doc study, it offers many benefits. An online platform is available twenty-four hours each day and thus allows entrepreneurs to be able to complete the survey at a time which suits them best. Given that Riyad is a large city it would take a substantial amount of time to visit each entrepreneur and that also incurs expensive travel costs. Travel is tiring, especially travelling to new places, and it is enjoyable but draining to

meet and talk to entrepreneurs. With an online survey it enables a rapid completion of the survey without encountering the aforementioned issues.

### 5.5.2 Rationale for not choosing other methods

The previous section has alluded to some of the reasons why online completion of the survey was utilised in this study. This section reviews, for completeness, the five main ways that questionnaires may be administered: post, online, delivery and collection, telephone, and face-to-face, and explains why the other methods were eschewed. Bryman and Bell (2015) and also Saunders et al. (2014) go through these five methods and this section draws heavily on those two standard business management research textbooks. Each of the five approaches has distinct advantages and disadvantages, relating to time, response rate, privacy and accessibility, cost, and overall resource utilisation; and they need to weighed up in relation to the research questions and environment where a study is being carried out. Postal surveys dominated in the 1970s and 1980s until the first half of the 1990s and were popular because the stationary, printing, postage, and coding costs were comparatively low, and researchers could easily distribute large batches to a large number of firms. This was balanced against several disadvantages. It took several days for firms to receive the questionnaire, some questionnaires are lost in the post – either from a researcher or from a firm who have completed the questionnaire; and the coding of the questionnaire is a time consuming and monotonous task which takes a huge amount of time and the coded data needs to be checked and double checked to ensure that the data has not been coded up erroneously. Several reminder letters are often needed and that then adds to the cost of the project and also means that the survey gathering process can run for many months. Some firms dislike receiving

questionnaires in the post and can then return rubbish in the self-addressed envelope. Telephone surveys are an alternative method and they became increasingly popular in the 1990s at a time when government surveys switched from mail to telephone surveys. Telephone questionnaires allow data to be collected quicker than mail surveys, and generally offer a higher response rate. However, telephone surveys are subject to the interviewer effect and that may lead to social desirability bias, and entrepreneurs may not be willing to give honest answers if it means that they have to admit some kind of perceived failure or loss of face in relation to how their businesses are performing. Some surveys, especially government surveys such as the Small Business Survey are extremely long and demanding upon the time and energy of entrepreneurs and owner-managers. Undoubtedly, for some entrepreneurs they will become bored and/or suffer from fatigue and the quality and value of answers will become compromised once boredom or fatigue kick in. Furthermore, whilst the person or people administering the survey may have been trained by the researcher, or research team in the case of government surveys, there are dangers that the administer misinterprets how to approach one or more of the questions. The more people who administer the survey the more likely that there will be differences between how the administers have approached all of the questions. Taken together it is clear that the disadvantages outweigh the advantages with telephone surveys (Eboli and Mazzulla, 2012).

As indicated earlier the online method has been utilised. Online questionnaires are very efficient in costs with companies such as SurveyMonkey providing very competitively priced online services. Online surveys are fantastic in time terms for the researcher and participants, alike. Given that the questionnaire is dealing with barriers to growth and other problems that entrepreneurs have had in their business activities

the online method offers privacy. The main disadvantage of online surveys is that in order to participate an entrepreneur needs to have access to the internet. In other words, if an entrepreneur does not have access to the internet then he or she can not take part in the survey (Schonlau et al., 2002).

Delivery and collection and face-to-face questionnaires allow the researcher to develop a rapport with the entrepreneurs and often generate a high response rate. However, when a large survey is being carried out this means that the burden of visiting premises over a large geographic area may become too much for one researcher, or the length of time in the data gathering process may stretch to more than a year and then render it difficult to compare and contrast the early completed questionnaires with the last stage completed questionnaires. If several researchers are involved in face-to-face questionnaires then the problems associated with telephone questionnaires, especially, interviewer bias, may compromise the quality of the completed questionnaires.

To repeat, the postal, online and delivery and collection options are self-administered methods, whilst face-to-face and telephone surveys are interviewer-administered – either by one person or a team of researchers (Cole, 2009). As indicated above interviewer approaches are vulnerable to variance and social desirability bias. In the context of the research environment the researcher also had to reflect upon the implications of administering the questionnaire himself. Saudi Arabia is a gender segregated society – visibly manifested in universities for women (Achoui, 2009; Safiri and Aram, 2011) and universities for men (Reda, and Hamdan, 2015), and the same principle sadly applying to many businesses, where some occupations and roles are done entirely by one gender. A chaperone may be required for some women. These issues also had a strong influence upon the researcher's methodology

and he decided that administered questionnaires were not viable in Saudi Arabia. This meant that the options were a mail survey or online completion of the survey. The problems associated with postal services are considerable, and especially the unreliability of the postal service meant that a postal survey was ruled out.

### 5.5.3 Selecting the Sample Framework

Developing an appropriate sample framework to study entrepreneurs and SMEs is difficult in developed countries and Curran and Blackburn (2001) pointed out that there is no single public register of small businesses. As was seen in the literature review Dun and Bradstreet has often been used for a sample framework but such data bases are subject to constant churning within the small business population (Jay and Schaper, 2003) and whilst D&B offers a variety of characteristics of the owner-managers and their firms – at a price, there is nothing about entrepreneurship. In Saudi Arabia it is also difficult to identify a list of firms, and especially entrepreneurs.

List of firms were possible to be available in ministry of trade and industries, ministry of economic, and local municipalities. Unfortunately, all lists contains firm name, owner/s name, and post code addresses at the time of the licence or commercial registration were issued. Information about business sector, number of employees, annual revenue, or other information that can be useful for analysis weren't available.

As an initial trial, however, I tried to contact random sample of available lists and the majority of contacts were out dated and useless for the purpose of this thesis. The firms surveyed were drawn from Riyadh Chamber of commerce (a credible private source of information supplier), and MODON (The Saudi Authority of Industrial Cities) 2013 list, which SMEs' located in Saudi Arabia that declared and

seeks for external support. This was the best possible lists of companies available, in order to obtain a credible list of active SMEs' located in Saudi Arabia.

### 5.5.4 Criteria for sample selection

Deciding upon the criteria for sample selection was a difficult process. In small business research simple random sampling may lead to a lack of representation of the sample population (Barkham et al., 1996) and this applies particularly where there are a substantial number of firms that have less than one employee (Davidson and MacKinnon, 2004). Depending upon the specific objectives of a study there are several factors that will affect the selection of the sample size and this includes: the size of the firms, the location of the firms, and the time frame of the study (Barkham et al., 1996). In this study the following criteria were applied as follows:

Firstly, the business should employ a minimum of ten and a maximum of one hundred and fifty full-time workers at the time of the fieldwork. The minimum of ten was set to remove sole traders and all micro businesses. Furthermore, in Saudi Arabia firms with 10-150 employees are increasingly the focus of attention and in order to contribute to that policy and practitioner debate the aforementioned size of firms were chosen. Other researchers have tried to keep the number of micro businesses to a minimum (Bartlett and Bukvič, 2001; Davidson and MacKinnon, 2004) or have had a lower limit of four (Obeng, 2007). In general, micro businesses need different types of support from external support schemes, also, microbusinesses have less probability of innovation or spend on R&D for their businesses, very limited employment growth. Although, the mass number of registered business entities in Saudi Arabia were micro firms, I decided to remove them from the analysis to avoid mixing self-employed professional, small local shops, and small firms that don't have growth potentials in their strategy.

The maximum level was set at one hundred and fifty because as the number of employees reaches closer to 200 full time employees support schemes classify the entity as large firm and less support will be provided, and more services will be focused to support smaller firms. Secondly, the study was designed to cover two main groups of sectors of the economy, manufacturing and business services. Basically, this study is analysing factor of general and specific human capital factors and the business performance such as growth in employment, growth in R&D, introducing new process or innovated products or services to the firm or the market. Therefore, manufacturing, and business services; for example, engineering firms, water treatment firms, and industrial safety firms, always try to position themselves by value added products or services, introducing new process or creative ways of doing businesses, continually creating jobs in market for different level of skills of employees (none skilled, semi-skilled, and highly skilled employees). Table 2.2 shows a breakdown for the contribution of small and medium enterprises to job creation in Saudi Arabia. More specifically in this thesis the focus will be on the following business sectors:

1- Industry: Which currently accounts for 365,837 jobs; 10.8% of total jobs by small and medium enterprises. The Saudi government is encouraging industrial projects and recently invested more than £43 billion to build six different economic cities to attract industrial projects in Saudi Arabia.

2- Trade: As a driver of export market trade business sector will be included in this dissertation. Trade business sector is currently employing 33.28% of total jobs created by small and medium enterprises or 1,118,964 people in Saudi Arabia.

Thirdly, the entrepreneurs and their firms should be based in the three major industrial cities in Saudi Arabia; Riyadh, Dammam, and Jubail. At the time of this thesis, 5 million people lives in Riyadh; approximately, 16% of total population of

Saudi Arabia. In addition, the diversity of people living in Riyadh makes the market open for all types of products and services in different level, quality, and volume. The second choice was Dammam city, Dammam is the third city in population almost 2 million people lives there. Dammam city, is the main port of Saudi Arabia for exporting oil, gas, and most of products though the gulf sea. Thirdly, Jubail city or as commonly called (Jubail Industrial city) was the third city included in this study, Jubail has two industrial complex and the third phase is planned to be completed in 2019. Total investment in Jubail infrastructure projects was SR.14 billion (G.B.P 2.33).

**Figure 5.3: Map of Saudi Arabia**

## 5.6 The Research design

The purpose of this section is to indicate how the appropriate design which was followed became a reality. The data collection instruments are presented. This is followed by the piloting process which was important to avoid problems appeared in the first virgin of the questionnaire.

### 5.6.1 The data collection instrument

The importance of the questionnaire as an instrument for data collection has a long pedigree in social science research (Baruch and Holtom, 2008) and especially in entrepreneurship and small business research. The questionnaire was designed to cover the following major areas of the study as follows.

Section One – General Business Background

Section Two – Business Performance

Section Three – Support Schemes and Finance

Section one covers questions about characteristics of entrepreneurs, background information about personality, experience level in owning private business (serial, portfolio, or novice entrepreneur), ways of acquiring businesses, his or her personal satisfaction level of business achievement & goals, and assessment of SMEs growth factors in Saudi Arabia. Section two covers questions about the characteristics of business; level of innovation, creative process, ways of acquiring knowledge and technology, level of investment in R&D, uses of external advices, and general performance levels such as employment and growth in turnover in the past three years. In the last section of this questionnaire I have asked their opinions and experiences with SMEs support schemes in Saudi Arabia, and your accessing of external finance.

The appendix provides a copy of the questionnaire in English and also in Arabic.

### 5.6.2 Piloting and screening

The questionnaire was first developed in English, and then translated into Arabic, and then back translated to English. This process of back-translation is important and it means that "one bilingual translates from the source to the target language, and another blindly translates back to the source" (Brislin, 1986, p. 159). The piloted version of the questionnaire in English is presented as Appendices 1.

In the pilot version of the questionnaire age was asked in question 1.2 as a series of category responses. This took up too much space in the questionnaire. Furthermore, Saudi entrepreneurs included in the pilot indicated that they did not mind indicating their exact ages. In question 1.3 in the pilot study the entrepreneurs' highest level of education that they have attained was asked. Given the need to reduce the length of the questionnaire this question was one that could be reduced in length, especially as the hypothesis relating to education relates to whether or not the entrepreneurs possess a degree. Accordingly, the question was simplified to focus upon the attainment of a university degree.

In question 1.5 in the pilot study the entrepreneurs were asked, "What motivated you to start a private business or continue as an entrepreneur?" and were given a series of boxes which contained motivations. This question does not directly relate to the thesis core objectives and accordingly it was dropped from the final version of the questionnaire.

In question 1.6 in the pilot study the entrepreneurs were asked "Which of the following best describes your current business sector?" and they were given a series of 18 options. This proved to be too cumbersome a question and the entrepreneurs

indicated their willingness to write in words what they did. Thus, the old question 1.6 was able to be streamlined.

In section 2 question 2.4 was aimed at obtaining information on exporting activity. Specifically, question 2.4 in the pilot questionnaire asked, "Can you express your product or services activities according to the geographic market table below?" and used the 11 point likert scale from 0 = Never used to 10= Most of the time, and they were given 11 rows of options. This proved too time consuming and difficult for the entrepreneurs to relate to. Accordingly, in the final questionnaire the question asked "Can you express your product or services activities as a percentage of total annual sales according to the geographic market table below? *If Zero, please specify NIL*." By simplifying the question to focus upon the percentage of goods and services exported to each of the options allowed entrepreneurs to understand and easily answer the question.

Innovation was covered in too many questions which were time consuming for entrepreneurs to complete and again when combined with the 11 point likert scale antagonised the pilot entrepreneurs. For example, they were asked in question 2.6 in the pilot questionnaire: "If you have answered any of Q-2.5 options with "Yes", can you tell us who developed these innovative products or improved process of goods or services? {0 = Never; 10= Most of the time}". This was replaced with the question 2.5.1 in the final questionnaire which asked: "If you have answered any of Q-2.4 options with 'Yes', can you tell us who developed these innovative products or improved process of goods or services?" and were given the same sources but moving the question to a yes or no format made the question easy for them to understand.

The questions 2.8 and 2.9 in the pilot questionnaire took up too much space – about a page, were challenging for the entrepreneurs to complete and not central to

the core variables needed to test the hypotheses and thus they were dropped. This thus helped to simplify the questionnaire.

In the pilot study the question 3.1 relating to perceptions on the barriers to growth was asked using a 11 point likert scale. The entrepreneurs found the 11 options extremely annoying and felt that the question would be easier to understand and answer if the number of options was greatly reduced. Accordingly, the number of options was reduced to four categories in the final questionnaire.

In the pilot study entrepreneurs found question 3.3 irritating because of the large number of options – 11. Thus the question "Which of the following as sources of information, advice support with reference to the surveyed business have been used over the last year? And what was your satisfaction level?" when using the 11 point likert scale in Arabic took up not just a substantial amount of the length of the page but the width of the page. Again, for the final questionnaire it was necessary to simplify the likert scale to 4 options. The same problem and solution applied to the old question 3.4.

The last question in the pilot questionnaire was question 3.16 which asked, "In your opinion, how can government schemes enhance the quality of support to your business sector? From my own experience the current level of support is…{Very Dissatisfied = 0; Very Satisfied = 5}." The question contained three questions within one and thus answers were required at three points in each row, including writing in the name of the support scheme used. The entrepreneurs in the pilot study all felt that the question was asking too much and by the time they had reached the question they felt exhausted from the earlier questions. Thus, it was necessary to drop the question for the final questionnaire. This saved over a page and helped to simplify the questionnaire. Whilst the questions contained within the old question 3.16 were

interesting ones the lesson learned was that only questions which directly related to the key objectives of the study should be included in the final questionnaire.

The piloting of the questionnaire allowed the researcher to rectify several major weaknesses in the original questionnaire. In too many instances questions had been included more out of interest and they were questions of a speculative nature and this had made the pilot questionnaire too long. With hindsight it was important to think about the dependent and independent and control variables which were going to be needed to test the hypotheses. This lesson was learned and the final questionnaire worked much better. The Saudi temperament of being short tempered meant that the questions needed to be easy to follow and have a limited number of subjective response categories of 4 rather than 11. Visually, the original questionnaire because it was too long and had many questions with 11 point scales meant that several pages were visually off-putting to the Saudi entrepreneurs. If the study had not been piloted this would have jeopardised the viability of the data harvesting. The final version of the questionnaire in English is presented in appendices 2 whilst the translated version of the questionnaire in Arabic is presented in appendices 3. The questionnaire was piloted on five entrepreneurs. Their feedback was incorporated into the revised questionnaire. The revised questionnaire was given to seven entrepreneurs. In the second pilot there were no concerns over the wording of questions or what was being asked. Two of the entrepreneurs in the second pilot felt that it was too long, three of the entrepreneurs felt that the questionnaire was of an acceptable length, and two entrepreneurs suggested that if necessary a small number of questions could be added if the researcher felt that extra information was needed. It was decided that the revised questionnaire was of appropriate length and that the set of questions was appropriate.

### 5.6.3 Responses

The two lists of companies used includes 2,186 SMEs and these were stratified by size and sector (See Table 2.2). A respondent rate of 15% from a pool representing 72% of all SMEs actively seeking for external support. The sample was covering three major industrial cities in Saudi Arabia: Riyadh, Dammam, and Jubail. Respondents were in two broad business sectors: Manufacturing 52%, and businesses services 48%. Hence, it can be considered a representative list. It is important to note that, similarly two studies conducted in the UK, first, "Small and Medium Sized Business Survey" at the University of Cambridge in 1999 (Bennett and Robson, 2003c) analyzing data from Dun and Bradstreet (Reynolds, 1997), the respondents were 25% or 2,547 respondents covering the whole UK. The second study was "Survey of Enterprise in Scotland" by the University of Aberdeen, the respondent rate was 25% or 1,002 form a sample of 4,000 enterprises.

### 5.6.4 Validity

The content validity was viewed as extremely important, and a number of steps were taken to do everything which was possible to ensure validity. The structured questionnaire was translated from English to Arabic, and then back-translated from Arabic to English. This translation and back-translation was done by one female entrepreneur, one male entrepreneur, one male academic at a Saudi Arabian university, and one female academic at a UK university. In each case the four experts who translated and back-translated were fluent in Arabic and English and also had been educated in Saudi Arabia as well as overseas (either the US or the UK). The piloting of the questionnaire was done on 5 entrepreneurs in Saudi Arabia, and in addition to the language issues reported in the previous section it was found that the

first survey, shown in the appendix (Appendix 1 and 2) was simply too long and was taking too long to complete. Accordingly, a drastic reduction in the length of the questionnaire was necessary. The revised questionnaire was piloted on 2 of the entrepreneurs who completed the first pilot, plus two new entrepreneurs (See Appendix 3 and 4). All four respondents were able to complete the revised questionnaire without difficulty. The two pilot studies were done face-to-face with the entrepreneurs.

### 5.6.5 Common Methods Bias

Krishnan et al. (2007) amongst others have indicated that all reasonable steps should be made to ensure that common methods bias is not a problem. First, and foremost, all entrepreneurs were assured of anonymity. Whilst there is nothing in the questionnaire which is inflammatory – which could be the case on some topics in politics or political science in Saudi Arabia, the nature of exploring and analyzing government funded and supported schemes does require tact and diplomacy. Secondly, statement ambiguity was reduced as far as possible by pre-testing the survey on five plus four entrepreneurs; as well as two plus two academics in the two pilot studies. Thirdly, care was taken in the running order of the questions in the questionnaire and all efforts made to ensure that the questions used to build the dependent variables were not too close to the questions used to operationalize the independent variables. Fourthly, for each of the models the variables used in each one, and permutation, will be put into principal component analysis.

### 5.6.6 Sample representation

The questionnaire was sent in January to March 2013 to all firms listed in two survey lists of 2,186 SMEs who agreed to be interviewed in the pilot test and provide comments on the development of the questionnaire. By mid-March 2013, 328 completed and valid replies were received, an effective response rate of almost 15%. This is a surprisingly high response rate for a non-compulsory survey in Saudi Arabia.

Parametric (Bonferroni test) and non-parametric tests (Mann-Whitney and Chi-square tests) were performed in order to test for statistically significant response bias between the respondents and non-respondents with regard to business activity, geographical location, legal form, age of the business, and employment size with regard to the number of employees. There was no evidence at the 0.05 level, or better, of response bias with regard to the aforementioned characteristics.

## 5.7 Creation of Measures

This section alerts the reader to how the variables were created which were then used in the empirical work which is presented in the next chapter and subsequently in chapter six, discussed. Three sets of variables are created, dependent, independent and control.

### 5.7.1 Dependent variables

The starting point for the list of factors to consider were those used and validated by Robson and Obeng (2008). The six initial finance related factors that were considered were (i) access to debt finance from local banks, (ii) access to equity finance from private investors, (iii) high interest rates to SME sector, (iv) do not have collateral to secure bank loan, (v) difficult to meet loan criteria, and (vi) difficulty to raise capital

from family. The sixth finance factor was changed to: difficulty to raise capital from family and friends to relate to the Saudi environment.

The market related factors that were initially considered were: (i) inadequate demand, (ii) too many competing firms, (iii) competition from imported goods, (iv) high advertising costs, (v) inadequate market research, (vi) shortage of skilled labour, (vii) high wages for skilled labour, (viii) access to new technology (ix) inadequate financial skills, (x) inadequate marketing, (xi) management skills, and (xii) inadequate technical skills. The second market related factor was changed to too many local competing firms. The tenth and eleventh factors were combined together to form, inadequate marketing and management skills.

The production input factors that were initially considered were: (i) high cost of local raw materials, (ii) high cost of imported raw materials, (iii) inadequate supply of raw materials, (iv) outmoded equipment, (v) high cost of replacing old equipment, and (vi) difficulty in finding appropriate equipment. The fourth factor was not considered relevant to Saudi Arabia. It was replaced with high cost of fixed costs such as rent.

The economic and regulatory factors that were initially considered were: (i) high rate of inflation and interest rates, (ii) high depreciation of the Saudi currency, (iii) high tax and import duties (iv) registration/ licensing/ red tape, and (vii) corruption. The first factor was changed to high rate of inflation because in Saudi Arabia interest rates can't be high as that would go against the Muslim religion and rules of interest that Sharia law allows. The second factor was dropped because the Saudi currency has been comparatively stable and the concept of depreciation which was found in Ghana did not apply to Saudi Arabia. The third factor was also dropped because Saudi Arabia has a very low tax environment and import duties are

comparatively modest. The two factors that were dropped were replaced with two factors: Saudi labor law criteria and regulations, and secondly bureaucracy in government agencies.

The initial infrastructure factors that were considered were: (i) high cost of utility charges, (ii) lack of available industrial sites, (iii) high transport costs, (iv) low quality of electricity/ water supply, and (v) poor telecommunication networks. The third factor was changed to high transport and storage costs.

The use of business resources to support family was initially considered as a socio-economic factor but this was dropped and not included in the final sect of factors.

Thus in the questionnaire used in this thesis the respondents were asked, "From your practical experience as an entrepreneur in Saudi Arabia, which of the following factors listed below, do you perceive as a barrier or limit your ability to meet your business objectives?" They were given a list of 34 possible barriers and asked to evaluate using a four point scale of '1' not important, '2' slightly important, '3' moderately important, and '4' crucial. Six factors are categorised as finance barriers and they are 'Access to debt finance from local banks', 'Access to equity finance from private investors', 'High interest rates to SMEs sectors', 'Do not have collateral to secure bank loan', 'Difficult to meet loan criteria', and 'Difficulty to raise capital from family or finds'. The sum of the responses for each of the six finance factors was calculated (Finance).

Twelve factors are categorised as market barriers and they are 'Inadequate demand', 'Too many competition from local firms', 'Competition from imported goods', 'High advertising costs', 'Inadequate market research', 'Managerial/ Technical Know-how', 'Shortage of skilled labor', 'High wages for skilled labor',

‘Access to new technology’, ‘Inadequate financial skills’, ‘Inadequate marketing & management skills’, and ‘Inadequate technical skills’ (Market).

Six factors are categorised as production input barriers and they are ‘High cost of local raw materials’, ‘High cost of imported raw materials’, ‘Inadequate supply of raw materials’, ‘High cost of fixed cost such as rent’, ‘High cost of replacing old equipment’, and ‘Difficulty in finding appropriate equipment’ (Production Input).

Ten factors are categorised as macroeconomic barriers and they are ‘High rate of inflation and interest rates’, ‘Saudi labor law criteria and regulations’, ‘Bureaucracy in government agencies’, ‘Registration / Licensing / Red tape’, and ‘Corruption’ (Macroeconomic), ‘High cost of utility charges’, ‘Lack of available industrial sites’, ‘High transport and storage costs’, ‘Low quality of electricity / water supply’, and ‘Poor telecommunication networks’.

In order to test the internal consistency of the five main types of barriers the Chronbach’s alphas were calculated (Cronbach, 1951). The Cronbach’s alphas for finance barriers, market barriers, production input barriers and macroeconomic barriers are: 0.72, 0.71, 0.75 and 0.69, respectively. The first four Chronbach’s alphas are all above 0.70 and are ‘good’ test scores (Gliem and Gliem, 2003; Jiang et al., 2000). Notwithstanding Cronbach’s subsequent reservations about his Cronbach’s alpha test (See Cronbach and Shavelson, 2004) it is the most widely used and respected measure of internal consistency of variables (Hair et al., 2007). The later value for macroeconomic barriers is marginally less than the 0.70 recommended alpha score and is deemed acceptable (Diamantopoulos and Hart, 1993), with previous researchers having used variables with Chronbach’s alphas as low as 0.50 such as (Blesa and Bigné, 2005; Victor et al., 1988).

### 5.7.2 Independent variables

#### 5.7.2.1 Education

The general human capital of the entrepreneurs is captured with variables relating to gender, age and education (Filatotchev et al., 2009). Following established precedence the gender of the entrepreneurs was captured using a dummy variable where male entrepreneurs were coded as '1' and female entrepreneurs were allocated a value of '0' (Wright et al., 2007b). The level of education was measured by asking the entrepreneurs, "Do you have a degree?" Entrepreneurs with a degree were coded as '1' and otherwise '0' (Degree) (Laukkanen, 2000; Wynarczyk et al., 2013).

#### 5.7.2.2 Entrepreneurial Experience

Entrepreneurs for whom this was the first business that they had established or purchased were coded as '1' and otherwise '0' (Novice). Entrepreneurs who had established or purchased two or more businesses and currently owned two or more businesses were classified as portfolio entrepreneurs and coded as '1' and otherwise '0' (Portfolio). Entrepreneurs who had established or purchased two or more businesses and sold one or more business, but currently only owned the surveyed business were classified as sequential entrepreneurs and coded as '1' and otherwise '0' (Sequential). Respondents who were portfolio or sequential entrepreneurs are classified as habitual entrepreneurs and coded as '1' and otherwise '0' (Habitual).

5.7.2.3 Business Advice

The respondents were asked, "Which of the following as **sources of information**[4], advice support with reference to the surveyed business have been used over the last two years?" Entrepreneurs who had used Modon were coded as '1' and otherwise '0' (Modon). Respondents who had used Sagia were allocated a value of '1' and otherwise '0' (SAGIA, 2008b). Those of the respondents who had used SIDF were coded as '1' and otherwise '0' (SIDF). Entrepreneurs who had used Kafalah were coded as '1' and otherwise '0' (Kafalah). Respondents who had used the Saudi Credit Bank were coded as '1' and otherwise '0' (Saudi Credit Bank).

Entrepreneurs indicating that they had used Bab Rizq Jameel were coded as '1' and otherwise '0' (Bab Rizq Jameel). Those entrepreneurs who had used The Centennial Fund were coded as '1' and otherwise '0' (The Centennial Fund). The Centennial Fund started in 2004 to provide mentoring, financing and businesses advisory services to entrepreneurs in Saudi Arabia. Respondents indicating that they had used Wa'ed from Aramco were coded as '1' and otherwise '0' (Wa'ed from Aramco). Respondents who had used Hadaf were coded as '1' and otherwise as '0' (Hadaf). Those of the entrepreneurs who had used Erada were given a value of '1' and non-users were coded as '0' (Erada). Entrepreneurs who had used Reyada were coded as '1' and otherwise '0' (Reyada). Respondents who have used the Royal commission of Jubail and Yanbu were coded as '1' and non-users were coded as '0' (RC Jubail & Yanbu). Entrepreneurs who had used the King Abdullah Economic Cities- Rabigh were coded as '1' and '0' otherwise (Rabigh). Respondents who had used Women's Industrial city – AL-Ahssa were allocated a value of '1' and '0' otherwise (AL Ahssa). Entrepreneurs who had used Bader were coded as '1' and otherwise '0'

[4] The words were underlined and in bold in the questionnaire.

(Bader). Bader is a support scheme that focus on innovative project ideas and provide business advices for entrepreneurs and start-up enterprises.

Respondents who indicated that they had used the KAUST Entrepreneur Center were given a value of '1' and the non-users were coded as '0' (KAUST). Entrepreneurs who had used the Dhahran Valle – Oil and Gas R&D Center were coded as '1' and otherwise '0' (Dhahran Valle). Respondents who had used the Saudi Arabian National Entrepreneurship Center (NEC) were coded as '1' and otherwise '0' (NEC). Entrepreneurs who had used INJAZ were coded as '1' and otherwise '0' (INJAZ). Respondents who had used the SME development centres in chambers of commerce were coded as '1' and the non-users were coded as '0' (Chambers).

#### 5.7.2.4 Innovation

Entrepreneurs were asked to indicate whether the surveyed business had introduced a product or service innovation in the last two years which was new to the firm or the industry and respondents who indicated 'yes' were coded as '1' and otherwise '0' (Product/Service Innovation). Entrepreneurs were also asked whether they had introduced a process innovation in the last two years which was new to the firm or the industry and those indicating 'yes' were coded as '1' and otherwise '0' (Process Innovation).

#### 5.7.2.5 Family Involvement

Entrepreneurs were asked to indicate the number of family members who are employed in the surveyed business. All of the surveyed businesses employed at least one family member. The responses were used to create four dummy variables as follows. Entrepreneurs who employed one family member were coded as '1' and

otherwise ‘0’ (1 Family Employee). Entrepreneurs employing two or three family members were coded as ‘1 and otherwise ‘0’ (2-3 Family Employees). Respondents indicating that they employed four, or more, family members in the business were given a value of ‘1’ and ‘0’ otherwise (4 Family Employees).

Entrepreneurs were asked to indicate, “Currently, how many equity partners does this business have?” (Number Equity Partners). The entrepreneurs were then asked, “How many of the equity partners members of your family or relatives? (Number Family Equity Partners). The later variable was used to create a series of four dummy variables. Those firms which had zero family members holding an equity stake in the business were coded as ‘1’ and otherwise ‘0’ (0 Family Partners). Firms which had one family member holding an equity stake in the business were coded as ‘1’ and otherwise ‘0’ (1 Family Partner). Respondents indicating that two family members had equity stakes in the business were coded as ‘1’ and otherwise ‘0’ (2 Family Partners). Entrepreneurs who indicated that three, or more, family members had equity stakes in the business were coded as ‘1’ and otherwise ‘0’ (3 Family Partners).

### 5.7.3 Control variables

In the regression models control variables are included and they are constructed as follows. Firm size was measured using the total number of full-time employees at the time of the survey (Size). The entrepreneurs were asked, “Please indicate the year this business received its first order/customer” and that allowed the creation of the age of the business in years variable (Age Business). The age of the businesses was also used to create a series of three dummy variables. Businesses aged two to nine years old were coded as ‘1’ and otherwise ‘0’ (Young Business).

Businesses aged ten to twenty four years old were coded as ‘1’ and otherwise ‘0’ (Established Business). Businesses aged twenty-five to thirty-eight years old were coded as ‘1’ and otherwise ‘0’ (Older Business).

The entrepreneurs were asked to provide details of the main product or service that the surveyed business produced. The details were used to create five dummy variables as follows: agriculture (Agriculture no=0, yes=1), manufacturing (Manufacturing no=0, yes =1), wholesale and retail services (Services no=0, yes=1), construction (Construction no=0, yes=1), and business services (Business Services). Respondents were asked to indicate the legal status of the business. Limited liability companies were coded as ‘1’ and otherwise ‘0’ (LLC). Partnerships were coded as ‘1’ and otherwise ‘0’. Sole proprietorships were coded as ‘1’ and otherwise ‘0’. Entrepreneurs who started the business with equity partners were coded as ‘1’ and those entrepreneurs starting the businesses in a solo capacity were coded as ‘0’ (Team).

## 5.8 Problems encountered during the fieldwork

The survey questionnaire was administered as an online survey. Following established good practice the entrepreneurs who were approached to take part in the survey were guaranteed anonymity and also assured that the information they provided would only be used for academic research. In other words, the entrepreneurs were assured that their names and responses would not be given to the government agencies or released in the public domain. Despite these assurance the main problem which the researcher encountered in gathering the data was an unwillingness of entrepreneurs to take part in the survey. Saudi Arabia is a conservative country where a great degree of importance is placed upon an individual’s family name and a desire

to fit in with other members of their social and business associates. There is thus a reluctance to be perceived to be making criticisms, either directly or indirectly, against the government, even when they are assured of anonymity. Again, despite the anonymity provided to the respondents there was also a belief that their name may still somehow find its way into the public domain and thus their names would be sullied by taking part in the research study. This was then believed to lead to damage to their business standing and also their social standing in the community. This was partly alleviated by making clear to the participants that the study is for the researcher's doctoral study and that the research findings will be anonymised and only cross tabulations and regression results will be presented and thus no entrepreneur or their business will be named.

Secondly, some of the entrepreneurs indicated that they had over the last couple of years been inundated with requests to take part in studies from MA and MSc students studying at British and American universities and that they were suffering from questionnaire fatigue. Some entrepreneurs also indicated that some previous studies by MA and MSc students had named them as participants, notwithstanding assurances by the MA and MSc students of anonymity. Furthermore, some entrepreneurs indicated that some of the MA and MSc students had also used their research.

Thirdly, some of support schemes directors shows that they are interested and arrange an appointment with me after explaining the purpose of the study. At the interview, some people try to divert the conversation or even suggesting new topics to be analysed. In my opinion, they were avoiding to provide information such as the scheme budget, target SMEs to be supported, scheme policies of selecting or approving supported businesses. To overcome these attempted, I tried to tighten the

focus and re ask the participant using "Yes" and "No" questions in the area and collect as much as I can from useful information for this thesis.

Fourthly, in few cases I arrived on time to attend a pre-scheduled meeting and, unfortunately, be denied to entry by gate keeper to enter or even call the person who I have appointment with. In some cases, these problems became extremely frustrating once you reached a remote area that have no mobile signal coverage to contact any one. This problem taught me to ask the participant to leave my name at the gate or reception area.

Finally, the most common problem that researcher faces, including myself, is funding. This research would be better if I could include all SMEs' support schemes working in Saudi Arabia at the time of this study, and also, gather a larger sample of supported firms. I was paying for travelling form the UK back to Saudi Arabia, paying for transportation between Industrial cities, paying accommodation expenses, and all other expenses over the period of fieldwork. To overcame the funding problem, first, I limited the analysis to two major support schemes to be studied in depth. Second, several support schemes interviews where scheduled in the same week(s), telephone interviews as emails were used as much as I can to work with the limited budget that I had.

## 5.9 Ethical considerations

Bush and Burns (2003) presented the following definition of ethics: "*ethics may be defined as a field of enquiry into determining what behaviours are deemed appropriate under certain circumstances as prescribed by codes of behaviour that are set by society*". Taken at face value this definition suggests that ethical behaviour is not synonymous with acting within the law, it is based on the morality and behaviour

at the time research has been undertaken. Clearly, any research which is carried out either in a doctoral thesis, postdoctoral research, or commercial research, must be done legally and it needs to be done with the highest degree of integrity. Bush and Burn's (2003) definition of ethics thus serves to show that ethical behaviour does change over time, and may differ from culture to culture. This notwithstanding there are several guiding principles which the researcher has followed ad these are as follows: informed consent for all participants in the doctoral study; maintain privacy, confidentiality and anonymity; avoiding negative consequences for all of the entrepreneurs; and, ensuring that there is no exploitation or deception of the entrepreneurs (Bryman, 2004). Cloke et al. (2004) emphasised the need for the researcher to take on board the sensitivity of the research participants from a gender perspective as well as a cultural perspective. Given that Saudi Arabia is a conservative country with expected roles for men and women, and unwritten rules for communication, Cloke et al.'s (2004) points did strike a chord with the researcher. Furthermore, in applying questions, some of which originated in research in western countries and which were initially asked in English did require careful handling to ensure that the original nature of specific questions can be retained but at the same time made to resonate with the Arabic language as well as its specific application to entrepreneurs in Riyadh, Saudi Arabia.

To repeat, this research was done to the highest standards of research ethics. In essence the researcher sought to achieve the overall objectives and answer the specific research questions whilst maintaining the highest degree of quality of the research and data gathered as well as integrity. All participants were made aware of the purpose of the research, the way that the entrepreneurs had been selected, the expected amount of time that would be required to complete the questionnaire, and also had the right to

stop completing the questionnaire, or withdraw from the study at any point over a three month period. This voluntary nature of participation is important. The anonymity aspect of the research study is important because in assessing government support schemes and barriers to growth this may generate issues and points which are critical of the government. This was also minimised by the careful use of words, and no inappropriate or inflammatory language was used in the questionnaire. The ethical standards also applied to the handling of the data and the reporting of the results. Whilst a combination of cross tabulations and regression analysis has been used in the next chapter it is not possible to infer the identities of any of the entrepreneurs and their firms who participated in the doctoral study.

## 5.10 Conclusion

This chapter has outlined the research process that the researcher applied in performing the study as part of the requirements of studying for a doctorate. This analysis is based on data gathered through an online questionnaire survey. A specifically designed, customized survey was the most appropriate; and only way to collect the needed data in Saudi Arabia, as there are no secondary sources or datasets that would provide the necessary data on SMEs' and the relevant characteristics under analysis. Surveys, like other data gathering methodologies, have several limitations. In particular, studies based on surveys administered at a single point in time and answered by a single respondent can suffer from common method bias (Podsakoff and Organ, 1986; Ganotakisand Love, 2012), and indeed from memory and knowledge gaps of respondents. In order to minimize the inherent limitations imposed by the data collection method, for this research I: (i) did not use any question that would involve Likert scales (thus, avoiding respondents' perception bias, and 'social desirability'

bias; (ii) used only questions that involved accounting and economic/statistical data, e.g. number of employees, turnover, exports, R&D values; plus other objective data (year in which the company was founded and number of equity partners). The use of such non-perceptual/non-subjective variables minimized drastically the potential limitations of the methodology employed.

The two lists of companies used includes 2,186 SMEs', with a respondent rate of 15% from a pool representing 72% of all SMEs actively seeking for external support. The sample was covering three major industrial cities in Saudi Arabia: Riyadh, Dammam, and Jubail. Respondents were in two broad business sectors: Manufacturing 52%, and businesses services 48%. Hence, it can be considered a representative list. It is important to note that, similarly two studies conducted in the UK, first, "Small and Medium Sized Business Survey" at the University of Cambridge in 1999 (Bennett and Robson, 2003) analysing data from (Reynolds, 1997), the respondents were 25% or 2,547 respondents covering the whole UK. The second study was "Survey of Enterprise in Scotland" by the University of Aberdeen, the respondent rate was 25% or 1,002 form a sample of 4,000 enterprises.

# Chapter 6

# Results

## 6.1 Introduction

Small and medium enterprises have been a subject of concern and interest for researchers, governments, and policy makers worldwide. Government and policy makers continually introduce range of policies and regulations to support SMEs and start-up businesses to grow and sustain in market place (Bennett et al., 2001). Barriers to growth has been studied in literature from external factors such as credit supply in market place (Aryeetey and 2006), demand for products and services, and general business environment factors affecting SMEs' growth and sustainability. Other scholars have studied the entrepreneurs themselves. Entrepreneurs can utilize accumulated experience inherited from their pervious businesses ownership to access to external support or funding (Westhead et al., 2001b; Paul Westhead 1998; Villanueva, Van de Ven, and Sapienza 2012). Some entrepreneurs will find themselves facing barriers of growth or even establish their enterprises because of their gender, age, background, or education level (Lee and Tsang, 2001; Wright et al., 2007).

In this study the Saudi context will be analysed critically to understand the relationship between entrepreneurs' general and specific human capital and their ability to access to external business support and advises. Saudi Arabia in the last three decades invested heavily in the infrastructures, education, and oil and gas related projects. Oil and gas were main sources of government income (Aljarboua, 2009; Vincent, 2008). 92% of government revenue in 2013 was from oil and gas revenue (Saudi Arabian Monetary Agency (SAMA), 2008b). Among these investment, the Saudi government and private sector made in total 32 initiatives to support

entrepreneurs and SME's. Support from government and private sector schemes had many shapes and targeting different businesses in sectors and size. The aim of schemes were to fill market gap of funding, business advices, and technological support to small and medium enterprises. Inadequate market support, lack of information of supported entrepreneurs and SMEs', and newness of majority of SME's support schemes makes the Saudi context more complicated to reflect the role of support schemes in helping SMEs' overcoming barriers to growth.

This study will investigate: Do general human capital influence the probability of entrepreneurs to access external support? Do prior business ownership experiences encounter less barriers than novice entrepreneur? Do business advises from support schemes overcomes barriers to growth for supported businesses? To what extent do entrepreneurial ventures that introduced innovated products or services encounters less barriers than firms who do not introduce innovative products and services? Do firms that have introduced process innovations encounter more barriers than those firms who are not process innovators? Do firms which have a greater number of family members employed or who were equity partners in the business will encounter more barriers than those with fewer family members employed or holding equity stakes?

This study will make several contributions. Although Saudi Arabia is one of developing countries with surplus of £52 billion, £69.3 billion and £58.6 billion in 2011, 2012, and 2013 respectively, SMEs' were facing barriers of growth and sustainability in market place. Understanding the Saudi context and human capital factors affecting SMEs' performance will add to the knowledge of the human capital theory. In addition, analysing general human capital factors such as entrepreneurs' gender and specific human capital factors such as education and prior business

experiences will have implications to government and policy makers on what different entrepreneurs really needs to overcome barriers to growth and sustainability. Finally, testing the "quality" of supported firms rather than the "quantity" can help support schemes to focus and make considerable efforts to a small number of "high quality new or growing firms" that has greater potential to grow and create more jobs in the Saudi market.

This chapter is structured as follows. In section two the reader is reminded about the response rate achieved in the survey, and the influence of other previous studies in influencing the design of the researcher's study of Saudi Arabia. In section three the reader is presented with descriptive statistics and an overview of the respondents. In section four an assessment of the headline barriers to growth are presented. This is followed by section five which presents the levels of awareness and use of government backed support schemes in Saudi Arabia. Lastly, a short conclusion completes the chapter.

## 6.2 Response Rate and Influences of Previous Studies on Survey Design

Two similar studies were conducted in the UK; "Small and Medium Sized Business Survey" by the University of Cambridge in 1999, and a "Survey of Enterprise in Scotland" by the University of Aberdeen in 2001. Both studies looked at level of access to public funding and user satisfaction by small and medium enterprises in UK. The sampling framework of this study was influenced by the University of Cambridge survey in 1999 and the University of Aberdeen survey in 2001. Again the definition of small and medium enterprises in UK and Saudi Arabia had more similarities, which makes this study results comparable with pervious conclusions.

The total number of responses in this study was 328 completed questionnaires and this represents an overall response rate of 9.9%. The Cambridge survey used by Bennett and Robson (199b) had a 25% response rate. In contrast, the Cambridge surveys were backed by ESRC funding and a team of dedicated researchers and a university brand which is globally recognised. This in large part explains the difference between my response rate and the Cambridge response rate. Ramsden and Bennett (2005) had a 19.2% response rate which is a comparatively high response rate and again the Cambridge brand was clearly a decisive factor in the healthy interest in the survey from the business community.

Notwithstanding the previous comments by the researcher, the survey sample results of SMEs' in Saudi Arabia have many similarities in responses to previous studies of SME support schemes in the UK. For example, the three studies targeted two major sectors: manufacturing, and business services. Secondly, there was full awareness of private and government schemes and business supports services in all surveys. At the same time, the survey results came identical with Bennett and Robson

(2003) for percentage of uses of business support services; 94% and 95% respectively. This also confirms Ramsden and Bennett's finding that government support schemes were an important supplement to fill gaps in the market. Satisfaction level was 69.4% in Saudi Arabia and 73.8% survey in the Ramsden and Bennett (2005) study. Bennett and Robson (2003) added that public sector business support had lower satisfaction level between SMEs' in the UK. More analyses about uses and satisfaction level will be discussed later in this chapter.

**Table 6.1 Comparing Saudi Arabia survey results with two previous studies in the UK.**

| Categories | ALAgil (2013) | University of Cambridge (CBR)<br>Bennett and Robson (1997, and 2003) | Ramsden and Bennett (2005) |
|---|---|---|---|
| Sample Size | 3,600 | 11,483 | 1,009 |
| Responses | 328 | 2,547 or 25% | 192 or 19.2% |
| Survey method | Online survey | By mail | Telephone survey |
| Manufacturing | 48% | 58% | 50% |
| Business Services* | 42% | 42% | 50% |
| Other businesses** | 10% | - | - |
| Awareness Level | 100% | 100% | 100% |
| Used of One or more support scheme | 94% | 95% | 70.5% |
| Satisfaction (Public supports) | 69.4%*** | Lowest in public sector business support | 73.8% |

*Business Services: Including advertising, management, and professional consultancy (Accounting, Law firms, and Engineering services); **Other businesses: Includes Agriculture, trading (Import/Export), and construction; *** Overall average of 69.4%; 93.2% of MODON 192 users were satisfied, and 32.9% of SCB 150 were satisfied.

## 6.3 Descriptive Statistics and Overview of the Respondents

This section of the thesis presents the descriptive statistics and an overview of the respondents. The purpose of this section is for the reader to be able to gain a better feel for the entrepreneurs and their firms who took part in this study. The study focused on active small and medium enterprises in the market at the time of survey. In other words, the firms are all trading and are independent small and medium sized enterprises. The definitional issues associated with studies in Saudi Arabia were mentioned earlier in chapters one and two. is study defined active enterprises to whom they were searching for external funding from support schemes, involved in exporting activities, supported enterprises from government or private support schemes. In this section, will summarise the characteristics of SMEs searching for external support in Saudi Arabia.

### 6.3.1 Age of firms in Saudi Arabia

Previous literature in the USA and the UK consistently showed that younger firms tend to grow faster than older businesses. Studies have shown that there was a negative relationship between firms age and the growth rate (Dunne and Hughes 1994; Becchetti and Trovato 2002). In the UK, for example, Storey (1994) explained how SME owner manager would tend to hesitate to risk additional recourses for expansion in new market that might carry risks of losing or lowering current firm success. In the 328 observations in this thesis their average age was found to be 17 years in business. New start-up businesses were also participants in the study and the minimum age is 2 years in business. Businesses which were in the early stages of start-up and were less than 2 years old were not included in the sample framework because their needs and expectations may have been substantially different from

established and long established businesses in Saudi Arabia. The oldest businesses in the study were found to be up to 32 years in business. Results in the Saudi Arabia environment are consistent with the profiles of earlier studies of SMEs and entrepreneurs (Bennett and Robson, 2003d; Storey, 1994).

### 6.3.2 Exporting activities

The previous literature has found a positive relationship between exporting activities and growth in employment, sales revenue and profitability (Storey, 1989; Kinsella et al. 1993). This notwithstanding, Robson and Bennett's (2003) survey has shown no significant relationship between change in exporting activities and profitability per employees. In the Saudi study, the researcher found that exporting ranged from a high of 24.3% of manufacturing firms to a low of 9.1% of business service sector firms. Table 6.2 shows a comparison of the thesis finding on export activity compared to several main studies on SMEs. The firms in my sample exhibit exporting activity similar to that found by Bennett and Robson (1999, 2003).

**Table 6.2 Comparing Saudi Arabia SMEs exporting survey results with previous studies in the UK.**

| Exporting by sector | ALAgil (2013) | University of Cambridge (CBR) Bennett and Robson (1997, and 2003) | OECD research (1995) Hornby et al. (2002) |
|---|---|---|---|
| Manufacturing | 24.3% | 22.6% | 34.6% |
| Business Services | 9.1% | 10.8% | - |

6.3.3 Firms size

**Table 6.3 Firms size comparison between Saudi Arabia and the UK**

| Study Details | ALAgil (2013) | University of Cambridge (CBR) Bennett and Robson (1997, and 2003) | IDBR SME statistics for the UK, 1996, DTI | Dun & Bradstreet marketing database, April (1997) |
|---|---|---|---|---|
| Enterprise Size by number of employees | Percentage to total | Percentage to total | Percentage to total | Percentage to total |
| 1 to 50 | 6.4% | 74.2% | 96.2% | 92.3% |
| 51 to 199 | 93.6% | 21.8% | 3.1% | 6.7% |
| 200 to 499 | - | 3.9% | 0.7% | 0.7% |
| **Total** | **328** | **2,474** | **2,474** | **2,474** |
| Mean | 71.68902 | - | - | - |
| Std. Deviation | 19.33973 | - | - | - |
| Maximum | 150 | - | - | - |
| Minimum | 10 | - | - | - |

Firms' size has consistently been found to be an important variable in influencing business growth (Storey, 1994) and the use of business advice (Bennett and Robson, 1999; Bennett and Robson, 2003). Table 6.3 shows comparison between sizes of SMEs in Saudi Arabia with other studies from the UK. In this study 6.4% of the firms have 1-50 employees and 93.6% of the firms had 51-199 employees. In this study 66.6% of the firms had 80 or less employees, and 33.4% of the firms had 80-150 employees. In contrast, the Bennett and Robson (1999; 2003) studies had a higher proportion of firms with 1-50 employees (74.2%) and a lower proportion of firms with 51-199 employees (21.4%). The DTI (1989) and Dun and Bradstreet (Reynolds, 1997) data sets were dominated by firms with 1-50 employees and had 96.2% and 92.3%, respectively of the firms within the aforementioned size group.

In other words, as shown in the table 6.3 the majority of SMEs in the UK surveys were in the range of 1 to 50 employees. On the other hand, the majority of

SMEs were founded in the range of 51 to 199 employees in Saudi Arabia in the researcher's study. The mean in Saudi Arabia for SMEs size was 72 employees, the maximum was 156 and the minimum was 10 employees. Culture and business behaviours were found to very different between the two countries in setting up businesses.

### 6.3.4 Legal Status of SMEs in Saudi Arabia compared to other countries.

The legal status of a firm plays a major role in growth potentials. Literature has shown that sole proprietorship and partnerships were less likely to grow compared to limited liability companies (Storey, 1994). One of main reasons was due owner managers' hesitation to encounter obligations that might risk his personal saving because of business expansion (Dietmar et al., 1998).

In the survey of SMEs in Saudi Arabia more than 57% of SMEs were Sole Proprietorship or partnership firms compared to 28.3% in the UK (CBR, 1997). Again the registration process and government bureaucracy are considered a major barrier for SMEs owners; entrepreneurs will always choose an easier and faster form of legal status registration to avoid government bureaucracy (Dennis, 2004). Schemes and business supports had no preferences in supporting any legal form that SME had at the time of application. It also needs to be noted that bureaucracy in government agencies in Saudi Arabia was found to be one of the barriers which hold many entrepreneurs of having a serious step to register their businesses, it was reported that it takes an average of 200 days to obtain licenses in Saudi Arabia (Beck et al., 2008). On the other hand, days to obtain business licenses was found to be much lower in developed countries, for example, 3 days in Canada, 5 days in the USA, 18 days in the UK, and 20 days in Switzerland (Audretsch et al., 2007).

### 6.3.5 Prior Entrepreneurial experience

Previous research has shown that different types of entrepreneurs; novice, serial, and portfolio entrepreneurs, will behaved differently in the style of running business and seeking external support (Ucbasaran, 2007). Habitual entrepreneurs i.e serial and portfolio will utilize their previous experiences and networks in their new ventures. A lack of experience that novice entrepreneurs have will became an internal barrier to growth for the firm (Westhead and Wright, 1998). Another argument is that habitual entrepreneurs, mainly portfolio, may carry on bad managerial habits or hesitation toward new ventures because of their previous experiences (Wright et al., 1997). Lastly, according to venture capitalist, serial entrepreneur past experience was found to not be enough to guarantee the success for the second time (Muzyka et al., 1996). Another specific barrier that faces serial entrepreneur over other types of entrepreneurs was lack of funding. Serial entrepreneurs were founded to carry financial losses and other obligation from previous businesses (Westhead and Wright, 1998). Finally, studies also founded that group or team start-up businesses tend to have better probability of success in business due to companied experiences and founders' business networks (Cooper et al., 1994).

In this survey, 50% of the entrepreneurs are novice entrepreneurs, and 50% are habitual entrepreneurs. The portfolio and sequential entrepreneurs account for 25% and 25% of the overall respondents' profile. From table 5.4 we can see that the distribution of entrepreneurs in Saudi Arabia was different than the UK. The environment plays a major role of how entrepreneurs involve in the process of starting a new venture in each country (Jack and Anderson, 2002; Minniti, 2010). Certainly, there are winner and losers from each type of entrepreneurs everywhere. The challenge is for policy makers and business support schemes to understand the

differences in each type of entrepreneurs and try to tailor services to fill gaps that supported entrepreneur might have. This eventually, will enable SMEs to grow and compete in market place (Bennett and Robson, 1999).

**Table 6.4 Types of Entrepreneurs**

| Type of Entrepreneur | Royal Holloway-Saudi SMEs ALAgil (2013) | Westhead and Wright (1998) |
|---|---|---|
| Novice | 50% | 62% |
| Habitual (Serial & Portfolio)* | 50% | 37.4% |
| Sample Size | 328 | 621 |

*In the Saudi Arabia survey 25% of entrepreneurs are portfolio entrepreneurs and 25% are sequential/serial entrepreneurs.

### 6.3.6 Level of Education

Formal education has had a positive effect on shaping SMEs vision and performance (Lumpkin and Dess, 1996; Covin and Slevin, 1991; Miller, 1983). It was found that the higher the education level of founders the better the performance and survival of the firm (Gomezelj Omerzel and Bos tjan Antoncic, 2008). The knowledge of an entrepreneur can build a competitive advantage of the firm in the market (Beierse, 2000), specifically in innovative entrepreneurial SMEs. On the other hand, older and less educated people could be a target segment for franchising businesses (Kropp, Lindsay, and Shoham, 2007). In Saudi Arabia, the education level was found to be very high in the population with 70% less than 30 years old (Saudi Arabian Monetary Agency (SAMA), 2008) having a degree level of education or higher. In the researcher's study he found that 84% of the entrepreneurs had a degree level of education, or higher. Stated differently, only 16% of the entrepreneurs do not have a degree level of education and the associated knowledge.

**Table 6.5 Education level of entrepreneurs in Saudi Arabia**

| University Degree | ALAgil (2013) | Kropp et al. (2007) – USA study. |
|---|---|---|
| Yes | 83.8% | 60.2% |
| No | 16.1% | 39.6% |
| Total | 100% | 100% |

6.3.7 Innovation

41% of the firms had introduced a product or service innovation, and 51% of the firms had introduced a process innovation. Innovation in SMEs' is considered a key driver of competitive advantage (Ahuja and Katila, 2001). Innovation can lead to an increase in market share, product/or service efficiency, and an increase in revenue for an SME (Shafer and Frenkel 2005). Innovation influences financial performance (Zahra et al., 2000). Keizer, Dijkstra and Halman (2002) and Tan et al. (2009) argued that innovation contributes to economic growth of the SME. An important role of innovation is to provide sustainability in the market place (Nieto and Santamaría, 2010). Innovation helps in exporting activities by opening up new markets for products services of the firm (Gillier and Piat, 2011; McDermott and Handfield, 2000; McDermott and O'Connor, 2002). The concept of innovation is heterogeneous and broad, and there is a lack of consensus on a definition of innovation (Kim et al., 2011). The European Commission (EC) (Ole Lando and Commission on European Contract Law, 2003) defines innovation as follows: "*The renewal and enlargement of the range of products/services and associated markets, the establishment of new methods or production, supply and distribution, introduction in changes in management work organization, working conditions and skills of workforce*" (p. 31).

SMEs are fundamental to the societal transformation to knowledge and an entrepreneurial economy (Audretsch et al., 2007). However, the capacity of

innovation can assist firms in the process of development of products/services to meet customers demand (Li and Mitchell, 2009; Rosenbusch et al., 2011; Verhees and Meulenberg, 2004). Firms must learn from unsuccessful activities in developing and lunching new products/services (Chaston et al., 2001; Prieto and Revilla, 2006). SMEs capability is defined as the combined and interrelated process for performing specific tasks (O'Cass and Sok, 2012). An entrepreneur considers collaboration with other external sources as a very important part of their innovation process (Massa and Testa, 2008).

These days we are witnessing a very fast moving and competitive markets, and many new products/services are more likely to fail than succeed. Although, new products/services are innovated, little is known about their commercial success (Brown and Eisenhardt, 1997; Hauser et al., 2006). Overspending on innovation expenditure, or allocation of scarce resources to unsuccessful projects will not necessarily increase performance of SME's in the market place (Adam, 2014). There are disadvantages of SMEs' investing in a multiple number of innovations at the same time, the later will lead to lack of focus and waste of scarce resources such as time and capital (Boudreau et al., 2011). Thus, the above discussion suggests that innovation may be associated with fewer barriers to growth; and that is tempered against the counter arguments that innovation is associated with more barriers to growth.

### 6.3.8 Family Business

25% of the family businesses had zero family members who in addition to the entrepreneur had an equity stake in the firm. 28% of the family firms had 1 family member who had an equity stake in the business. 23% of the family firms had 2 family members who had equity stakes in the firm. 24% of the firms had 3 or more family members who had equity stakes in the family firm.

20% of the family businesses had one family employee working in the firm, in addition to the entrepreneur. 37%, slightly more than one in three of the family firms had 2-3 family members working in the firms. 43% of the firms had 4 or more family members working the firms. The very high proportion of family businesses with 4 or more family members so the strong role of family members in Saudi businesses. employment in family businesses have their unique problems; for example, a great influence accrues when a family member who is at the same time a family business partner or manager in the SME, decides to employ another family member to fill a position at the firm (Aldrich and Cliff, 2003). One of the disadvantages of employing family members at the firm is narrowing the firms' pool of potential candidates that are qualified for the job position (Lansberg, 1983; Ward and Center, 1987). Some scholars, however, argued that hiring from family members can be a cost effective choice for SMEs. SMEs may not be able to afford to pay the best candidates to perform jobs at their small firm (Schulze et al., 2001).

Disadvantages may arise from having equity partners and/or employees who are family members in the firm. Family values such as love, kindness, security, value of being together, and culture values might not necessarily come with same direction with economic business objectives such as revenue growth, cost reduction, and creating wealth (Akhilesh, 2014). Family businesses have a longer time horizon to

achieve business goals which, indeed, reduces revenue growth (Kappes and Schmid, 2013). It's been argued, that family businesses have a negative relationship with growth of revenue and employment (Campopiano and De Massis, 2014). In many studies, family businesses were less willing to invest in R&D (Berrone et al., 2010; Chrisman and Patel, 2012; Gomez-Mejia et al., 2011; Gómez-Mejía et al., 2007).

Family businesses are concerned about their reputation and social identity more than economic performance of the firm (Ali et al., 2007; Chen et al., 2010). Different generations in one family firm might have different view of how the family business should operate. In addition, the decision process taking and evaluation of business opportunities to invest in can create conflict between family members in charge (Akhilesh, 2014). The greatest challenges for family businesses is succession planning. Who will control the family business for the next generation may affect the existing of the family business itself? The problem of succession planning will be inflated if there are many family members competing to have controlling positions in the family firm. (Akhilesh, 2014; Baek et al., 2006; Bareither and Resichl, 2005; Venter et al., 2003).

### 6.3.9 Gender

92% of the entrepreneurs in the sample are men and thus only 8% are women. Clearly the rate of participation of women in the survey is low, especially compared to studies in the USA where typically the rate of participation of women in surveys is at least double the 8% found in my study. Marshall et al (2006) in a US study had 19% women respondents. But, the 8% in this study is in line with the official number of female owners of businesses which is 12% (AlMunajjed, 2010). Clearly Saudi business activities are male dominated because of the role of culture and religion.

Most of the leading positions in government and support schemes in western nations were held by men (Welter and Smallbone, 2003). Similarly, in Saudi Arabia all the support schemes are led by men and the majority of staff are men. Saudi Arabia is still a paternalistically run society and is equivalent to the UK or the US in the 1940s, or earlier, and women are expected to take full responsibility for the domestic environment, including the taking care of children as well as ill, old and infirm members of families (Achoui, 2009; Safiri and Aram, 2011). In general, women in Saudi Arabia are employed in smaller numbers compered to males. In addition, women are extremely underrepresented at the senior level both in the public or private sector (Kemp and Madsen, 2013). Recent studies, however, shows young Saudi university women report a narrower range of entrepreneurial motivations, compared to men (Almobaireek and Manolova, 2012). Saudi women increasingly have access to a well-rounded education and the right to work, they are restricted in their participation in political life (Alturki and Braswell, 2010) and do not have the opportunity to participate appropriately in economic life (Almunajjed, 2010). Further, the relatively recent phenomenon of women's entrepreneurship has not provided enough role models of successful women-entrepreneurs in order to reinforce the pursuit of entrepreneurial initiatives as a legitimate and desirable career path. In an interview, in 2006 a member of the Saudi Management Association, Women's Branch, pointed out that "a large section of women are not concerned and some think the changes are wrong; others do not want women to change or be visible" (Montagu, 2010). In addition, women may be uncertain if they have the necessary qualifications and skills to successfully pursue entrepreneurial initiatives. Even if the level of confidence in their entrepreneurial abilities is high, they may doubt if their business endeavour will earn social support or recognition (Almobaireek and Manolova, 2012).

In the last decade, however, more leading positions were given to Saudi women as a reflection of policy makers in Saudi Arabia belatedly accepting the involvement of Saudi women in the development of the country (Al-Humadi, 2011). Challenges to Saudi women range such as a lack of involvement in the public decision making process, a lack of access to resources, and a lack of empowerment (Omiar, 2008). Taken together the previous research on the role of gender, as well as the Saudi cultural environment suggests that in Saudi Arabia women entrepreneurs will encounter more barriers to growth compared to their male counterparts. This notwithstanding there are other family business studies in Europe which have reported low levels of women participation in quantitative surveys. For example, Cruz and Nordqvist (2012) in a study of family businesses in Spain had 9% women respondents.

### 6.3.10 Sector

6% of the firms are in agriculture. 48% of the firms are in manufacturing and this sector has the highest proportion of firms in the sample. 26% of the firms are in services, covering retailing and wholesale activities. 9% of the firms are in business service activities. 11% of the firms are pursuing activities in the construction sector. The manufacturing sector was over-sampled in order to obtain a healthy number of firms for multivariate and also bivariate analysis. This approach is in accord with the precedent set by Cosh and Hughes in the Cambridge surveys of SMES in the UK which were extensively used by Bennett and Robson (1999; 2003). Agriculture was included because it is still an important employer in the Saudi economy. Likewise, whilst many other studies deliberately exclude construction sector firms it was necessary to retain them in this sample because of their important employment role.

### 6.3.11 Team businesses

89% of the firms are team based businesses. In other words, only 11% of the businesses are run by a solo entrepreneur. The comparatively high proportion of team based businesses reflects the cultural and business culture in Saudi Arabia. Team start up businesses might be a positive or negative decision on the future growth or sustainability of any given business. Group of people might form a tram of diversify knowledge and expertise, yet, this do not guarantee the initial plans of forming an enterprise. In some cases, one of cofounders of a firm could pull out and the rest of the team would like to continue hoping for better business performance. These conflicts could influence major business plans or market entries for the new established business. Entrepreneurs with little or no previous business experience may face failure simply because they under estimate needed capital to run their business, and get rejected by financial institution to raise needed extra capital (Gelderen et.al., 2005).

## 6.4 Assessment of the barriers to growth in Saudi Arabia in rank order

The purpose of this section is to provide the reader with an indication of the extent to which Saudi Arabian entrepreneurs encountered barriers and impediments to doing business in a munificent environment. Specifically, the entrepreneurs were asked "[f]rom your practical experience as an entrepreneur in Saudi Arabia, which of the following factors listed below, do you perceive as a barrier to meet your business objectives?" Respondents were asked to answer the question using a four point scale of not important, '1'; slightly important, '2'; moderately important, '3'; and crucial, '4'. In this section the results are presented first within the total of 34 factors and then

secondly breaking down the 34 factors into five types of barriers: finance, market, production input, macroeconomic, and infrastructure, respectively.

### 6.4.1 Ranking of the 34 barriers and impediments in Saudi Arabia

Table 6.6 shows the percentage of entrepreneurs who gave a 'crucial' response to the 34 barriers and impediments to their business activities in Saudi Arabia. The next chapter provides a discussion of the results and findings in greater depth. What is surprising is that whilst Saudi Arabia is a munificent business environment with a virtually zero tax regime and the existence of a plethora of well funded government backed support schemes for SMEs and entrepreneurs the most important barriers to entrepreneurs are the availability of collateral to secure bank loans which is mentioned by 55.79%, followed by difficulties to meet commercial loan criteria, and the high cost of fixed costs which are both mentioned by 54.57% of entrepreneurs. Access to new technology is the fourth most important barrier in rank order and it is mentioned by 53.35% of entrepreneurs. Difficulties to raise capital from family completes the top 5 barriers and it is mentioned by 52.74% of entrepreneurs. A shortage of skilled technology is the 6$^{th}$ most important barrier and it is reported by 52.13% of entrepreneurs. Access to debt finance from local banks is ranked 7$^{th}$ and reported by 51.83% of entrepreneurs. Corruption is ranked 8$^{th}$ with slightly more than one half of the entrepreneurs mentioning this factor. Inadequate demand for products or services, and the high rate of inflation and interest rates are the joint 9$^{th}$ most important barriers in rank order.

At the other end of the scale are the barriers which are in relative terms less important. Focusing upon the five least important barriers we see that these are: high wages for skilled labour (45.43%), inadequate marketing and management skills (44.82%), inadequate financial skills (44.51%), telecommunication networks (42.07%) and competition from local market (41.77%) where the values in

parentheses are the percentage of entrepreneurs who indicated that the factor was a crucial barrier to their business.

**Table 6.6: Limitations encountered by entrepreneurs in achieving their business objectives over the last three years, (% reporting crucial limitation).**

| | % reporting Crucial Barrier | Type of Barrier | Ranking |
|---|---|---|---|
| **Financial** | | | |
| Availability of collateral to secure bank loans. | 55.79 | Financial | 1 |
| Difficulties to meet commercial loan criteria. | 54.57 | Financial | 2= |
| Difficulties to raise capital from family | 52.74 | Financial | 5 |
| Access to debt finance from local banks. | 51.83 | Financial | 7 |
| Access to equity finance from private investors. | 49.39 | Financial | 14 |
| Interest rates charges to SMEs business sector. | 48.78 | Financial | 16= |
| Difficulties to raise capital from friends. | 47.87 | Financial | 18= |
| **Market** | | | |
| Access to new technology | 53.35 | Market | 4 |
| Shortage of skilled labor. | 52.13 | Market | 6 |
| Inadequate demand for products or services. | 50.91 | Market | 9= |
| Competition from imported products. | 49.09 | Market | 15 |
| Inadequate technical skills. | 47.87 | Market | 18= |
| High Advertising costs | 47.26 | Market | 23 |
| Managerial or technical know-how. | 47.26 | Market | 23= |
| Inadequate market research. | 46.04 | Market | 26= |
| High wages for skilled labour. | 45.43 | Market | 30 |
| Inadequate marketing and management skills. | 44.82 | Market | 31 |
| Inadequate financial skills | 44.51 | Market | 32 |
| Competition from local market. | 41.77 | Market | 34 |
| **Production Input** | | | |
| High cost of fixed cost. | 54.57 | Production Input | 2= |
| Difficulty in finding appropriate equipment. | 49.70 | Production Input | 12= |
| High cost of local raw material. | 47.87 | Production Input | 18= |
| High cost of imported raw material. | 47.87 | Production Input | 18= |
| High cost of replacing old equipment. | 46.04 | Production Input | 26= |
| Inadequate supply of raw material. | 45.73 | Production Input | 29 |
| **Macroeconomic** | | | |
| Corruption. | 51.22 | Macroeconomic | 8 |
| High rate of inflation and interest rates. | 50.91 | Macroeconomic | 9= |
| Registration/licensing/red tape | 48.48 | Macroeconomic | 16= |
| Saudi labour law criteria and regulations. | 46.04 | Macroeconomic | 26= |
| Bureaucracy in government agencies. | 46.34 | Macroeconomic | 25 |
| **Infrastructure** | | | |
| Availability of industrial sites. | 50.00 | Infrastructure | 11 |
| Cost of utility charges. | 49.70 | Infrastructure | 12= |
| Transport and storage costs. | 47.87 | Infrastructure | 18= |
| Telecommunication networks. | 42.07 | Infrastructure | 33 |

N=328

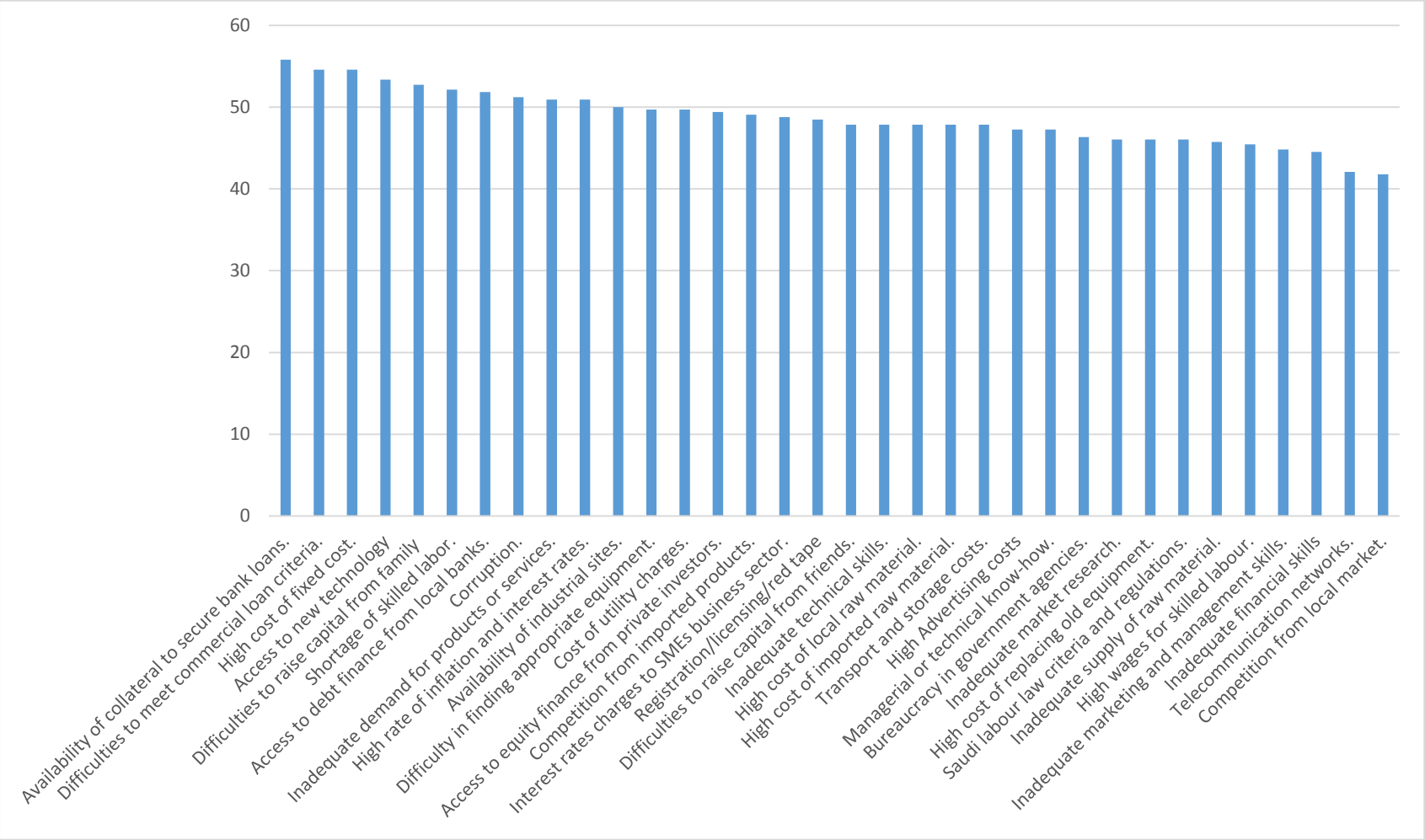



**Figure 6.1 The percentage of entrepreneurs reporting crucial barrier**

### 6.4.2 Groups of barriers and impediments to business in Saudi Arabia

For greater ease in interpreting the data the responses are also analysed according to the groups of categories of financial, market, production input, macroeconomic and infrastructure. This allows within each of the groups of barriers to see the relative pecking order of which is the most troublesome factor and which is the least inconvenient factor for Saudi entrepreneurs.

#### 6.4.2.1 Finance

From the table below, availability of collateral to secure commercial borrowing and meeting banks credit criteria were the top two financial factors that entrepreneurs in Saudi Arabia address as a barrier to growth. Financial intermediates including all financial intuitions participate in overall growth of any economy by allocating capital to projects with potential growth (Levine, 1997). Banks in Saudi Arabia are still restricting the supply of funding for new comers in the Saudi market; current level of funding for SMEs is below 2% of total credit facilities extended to the market (Saudi Arabian Monetary Agency (SAMA), 2008b). This percentage is far away from the target lending for SME business sector in Saudi Arabia of 8.9%. This situation was founded the same in all GCC countries; UAE, Kuwait, Bahrain, Oman, Qatar, and Saudi Arabia, of average lending of 2% to total corporate lending (Roberto Rocha, Subika Farazi, Rania Khouri, and Douglas Pearce, 2011).

**Table 6.7 Financial factors affecting entrepreneurs' growth in Saudi Arabia**

| **Financial Factors**: Respondent who selected "crucial" | Percentage |
|---|---|
| Availability of collateral to secure bank loans. | 55.79 |
| Difficulties to meet commercial loan criteria. | 54.57 |
| Difficulties to raise capital from family | 52.74 |
| Access to debt finance from local banks. | 51.83 |
| Access to equity finance from private investors. | 49.39 |
| Interest rates charges to SMEs business sector. | 48.78 |
| Difficulties to raise capital from friends. | 47.87 |

**Table 6.8 Comparing sources of funding in Saudi Arabia with a study by BABSON University in 2006 covering 42 different countries.**

| Sources of Finance used | ALAgil (2013) | BABSON University study of 42 countries (2006) |
|---|---|---|
| Banks & Invoice Discounting | 53.96% | 42.2% |
| Support Schemes | 24.09% | 19.7% |
| Credit from Suppliers | 18.90% | 19.6% |
| Entrepreneurs' Personal Saving | 7.62% | 33% |
| Friends & Family | 1.22% | 32.9% |

The third financial barrier for entrepreneurs in Saudi Arabia was the ability to raise funding from family. Fortunately, my questionnaire included questions which allow the identification of the different sources of finance which entrepreneurs used and the relative percentage of finance which came from each source. In this study it is found that friends and family only account for an average of 1.22% of finance used in the firms. This contrasts with the Babson College 2006 study of 42 different countries where friends and family as a source of entrepreneurs financing, accounts for 32.9% of funding (Matlay, 2005). In contrast in the researcher's study banks and invoice discounting was the most important source of finance and accounted for 53.96% of finance. Support schemes accounted for slightly less than a quarter of finance in Saudi Arabia which is more than the 19.7% corresponding value found in the Babson study.

Entrepreneurs' personal savings accounted for only 7.62% of finance used in the Saudi businesses. This compared to the Babson study which found that the entrepreneurs' personal savings accounted for one third of finance. The wealth of oil and gas and the generous provision of support schemes, and banks which also under Saudi government influence accounts in part for the low level of investment by Saudi entrepreneurs.

6.4.2.2 Market factors

**Table 6.9 Market factor affecting SMEs growth in Saudi Arabia**

| **Market Factors**: Respondent who selected "crucial" | Percentage |
|---|---|
| Access to new technology | 53.35 |
| Shortage of skilled labor. | 52.13 |
| Inadequate demand for products or services. | 50.91 |
| Competition from imported products. | 49.09 |
| Inadequate technical skills. | 47.87 |
| Advertising cost. | 47.26 |
| Managerial or technical know-how. | 47.26 |
| Inadequate market research. | 46.04 |
| High wages for skilled labour. | 45.43 |
| Inadequate marketing and management skills. | 44.82 |
| Inadequate financial skills | 44.51 |
| Competition from local market. | 41.77 |

The top four market barriers were access to new technology, a shortage of skilled labor, inadequate demand for products or services provided by SMEs, and competition from imported products and services. Low level of employee skills will imply a low level of technology development (Pius Achanga, Esam Shehab, Rajkumar Roy and Geoff Nelder, 2005). Therefore, support schemes must pay considerable attention to develop programs that guarantee the supply of skilled labor in the Saudi market. The second and third market barrier are related to each other, local market has so many alternatives of products and services that produced by SMEs in Saudi Arabia. Therefore, SMEs must be fixable to face changes in demand

and supply in local market. Also, entrepreneurs must continually evaluate their initial plans and adjust what their firm offering to customer demand. Thinking globally might help shortage of demand in local market, provided that local products or services can compete in global level. Previous literature shows that some entrepreneurial project were born globally and achieved better performance than local or exporting firms in Sweden, these entrepreneurs utilizes their networks, global mind set, and spotted a competitive advantages for their products or services globally (Svante Andersson and Felicitas Evangelista, 2006).

6.4.2.3 Production Input barriers

**Table 6.10 Production input factors barrier in Saudi Arabia**

| **Production input factors**: Respondent who selected "crucial" | Percentage |
|---|---|
| High cost of fixed cost. | 54.57 |
| Difficulty in finding appropriate equipment. | 49.70 |
| High cost of local raw material. | 47.87 |
| High cost of imported raw material. | 47.87 |
| High cost of replacing old equipment. | 46.04 |
| Inadequate supply of raw material. | 45.73 |

Fixed cost was ranked the first production factor barrier for SMEs in Saudi Arabia. Lack of capital that SMEs have forces them to change plant layout and production methods (Trmponi and Pandya, 1995). The second barrier was sourcing appropriate equipment followed by high cost of raw material. Vertical flexibility in production, marketing, and integrating with other small businesses may help overcome lack of sufficient funding to setup an integrated production firm as a startup (Abdulnour et al, 1997). Also, Robson and Bennett (1997) suggested, that the best way for SMEs entering a new market is to establish alliances with other SMEs or larger firms.

6.4.2.4 Macroeconomic barriers

**Table 6.11 Macroeconomic (Economic and regulatory) factors in Saudi Arabia**

| **Economic and Regulatory factors**: Respondent who selected "crucial" | Percentage |
|---|---|
| Corruption. | 51.22 |
| High rate of inflation and interest rates. | 50.91 |
| Registration/licensing/red tape | 48.48 |
| Saudi labour law criteria and regulations. | 46.04 |
| Bureaucracy in government agencies. | 46.34 |

Corruption in a market will always be a barrier for genuine businesses and this phenomenon is found in all countries. The Saudi Government established an authority to fight corruption practices (Nazaha, 2012). The second economic and regulatory barrier was the high interest rate charged to SMEs, which was 12% p.a. (Saudi Arabian Monetary Agency (SAMA), 2008). Loan guarantees will be a good solution that will facilitate the flow of business for SMEs; current percentage of loan guarantees extended to SMEs to total outstanding guarantees was 0.02%. Similar low rates were found in Bahrain, Kuwait, UAE, Egypt, and Morocco; 0.02%, 0.02%, 0.02%, 0.09%, and 0.41% respectively (Saadani, Arvai, and Rocha, 2010).

Registration, licensing and red tape was the third most mentioned factor within this group and was mentioned by 48.48% of entrepreneurs. Saudi labour law criteria and regulations was mentioned by 46.04% of entrepreneurs. Bureaucracy in government agencies was mentioned by 46.34% of entrepreneurs. Worldwide, entrepreneurs and small businesses will face "reality fact" that business environment is full for red tape, rules, regulation, and corruption in different level and shapes. It's very hard to understand for many novice entrepreneurs that the business environment will always put certain people, organizations, or businesses in better position to access to markets, funding, and be protected from free competition. It's in my opinion, the

entrepreneurs' own challenge to find his or her market position and find a smart and unique way to survive and grow in any environment that he or she is doing business in. On the other hand, policy makers must continually review rules and find ways to keep the business environment more transparent and fare to the majority of SMEs' and entrepreneurs.

6.4.2.5 Infrastructure barriers

**Table 6.12 Infrastructure factors:**

| **Infrastructure factors**: Respondent who selected "crucial" | Percentage |
|---|---|
| Availability of industrial sites. | 50.00 |
| Cost of utility charges. | 49.70 |
| Transport and storage costs. | 47.87 |
| Telecommunication networks. | 42.07 |

Finally, infrastructure barriers that considered obstacles to growth by entrepreneurs were availability of industrial sites and cost of utilities. Studies has shown that even when an industry is declining, SMEs were still growing and being independent source of economic growth, a study by BABSON college for 7 OECD shows that industrial districts had helped in sustainability and created competitive advantage to SMEs in all 7 OECD countries (Babson, 1996). Indeed, Saudi Arabia is developing many new industrial cities and SMEs districts and by time SME business sector will develop as pervious success in Jubail and Yanbu industrial cities (rcjy, 2011).

## 6.5 The level of awareness and use of government support schemes in Saudi Arabia

The reader is reminded that there have been no large scale studies of the levels of awareness and usage of government funded support schemes in Saudi Arabia. This section will serve to provide an accurate picture of the state of business advice in Saudi Arabia. Policies to assist SMEs and entrepreneurs are usually facilitated because of evidence of market failure. The results of the previous section on the barriers to growth when combined with the results of this section which again adopts a bivariate approach and also when integrated into the multivariate analysis will serve to show the extent to which the Saudi enterprises run smoothly or are faced with barriers which are systematically related to general and specific human capital.

### 6.5.1 Awareness

The following table 5.12 shows in percentage of all survey respondents who have heard of support schemes in Saudi Arabia, multiple responses were allowed in this question. Very interesting results were founded in this study; awareness level of small and medium enterprises support schemes was extremely high between entrepreneurs in Saudi Arabia. The highest support scheme was the Centennial fund with 93.90 % awareness level between participants. Larger funds such as Modon, Sagia, SIDF, Kafalah, and Saudi Credit Bank awareness level was also founded very high; around 92% awareness level. Two of smaller schemes: the Centennial fund and Bab Rizq Jameel the highest level of awareness of 93.9% and 93.3%. It was founded that smaller and newer support schemes were recording lower percentage than larger and older support schemes. For example, King Abdullah University of Science and Technology Entrepreneur Centre was the newest among all support schemes included

in this study and it had 49% awareness level. From the survey interviews, entrepreneurs reported that they usually receive regular invitations to attend local SMEs events by text messages, e-mails, direct mail, and phone calls in some cases.

**Table 6.13 Level of awareness of external support schemes in Saudi Arabia**

| Scheme Name | Percentage of Entrepreneurs awareness % |
|---|---|
| The Centennial Fund | 93.90 |
| Bab Rizq Jameel | 93.29 |
| MODON | 92.38 |
| Saudi Credit Bank | 92.99 |
| KAFALAH | 92.38 |
| SAGIA | 92.07 |
| SIDF | 92.07 |
| Bader | 80.18 |
| Women's Industrial city | 79.88 |
| Hadaf | 76.52 |
| Royal Comm of Jubail and Yanbu | 76.52 |
| Wa'ed | 75.91 |
| King Abdullah Economic Cities. | 75.91 |
| Reyada | 75.30 |
| Erada | 73.78 |
| Dhahran Valley | 70.73 |
| Total Responses | 328 |

### 6.5.2 Uses of Support Schemes in Saudi Arabia

After exploring awareness level, the study looked at level of uses of support schemes services from 328 entrepreneurs and small and medium enterprises business owners participated in this survey. Support schemes in Saudi Arabia were providing range of business supports and advisory services. Some schemes provide free services and others charges for their services. It was also founded that some schemes had a combination of charged and free services. In this study, participants were asked to

select one or more services that have used from each support scheme over the period between 2011 and 2013:

1- Enterprises grants.
2- Seed funding.
3- Direct lending.
4- Loan guarantees.
5- Land leasing.
6- Other financial facilities.

The following table 6.14 shows results for the level of uses in each individual support scheme. From the table, the statistics reflects that entrepreneurs and small and medium enterprises owners were using larger and older government support schemes for their enterprises. Five of major government support schemes; Modon, Sagia, SIDF, Kafalah, and Saudi Credit Bank, had the majority of uses between entrepreneurs; 58.5%, 42.6%, 48.7%, 41.5%, and 46.3% respectively. On the other hand, private support schemes in general had lower percentage of uses among entrepreneurs and small and medium enterprises owners; for example, Saudi Credit Bank, which was a government scheme, was used by 46.3% of participants, and Erada, private support scheme, had only 1.83%.

The government support schemes are able to provide free advice which places them at a huge advance compared to private sector support schemes. The resources that the five major government support schemes is substantially more than the levels of resources given to the other support schemes. Clearly, wealthy support schemes have more resources to utilise and help entrepreneurs and this means that they attract much greater levels of use compared to the majority of the government support

schemes which are comparatively small scale schemes with very limited capabilities to help entrepreneurs' businesses.

**Table 6.14 Uses of external business support in Saudi Arabia**

| Scheme Name | Percentage of uses |
|---|---|
| Modon | 58.54 |
| SIDF | 48.78 |
| Saudi Credit Bank | 46.34 |
| Sagia | 42.68 |
| Kafalah | 41.46 |
| Bab Rizq Jameel | 3.66 |
| Reyada | 2.44 |
| Royal Comm of Jubail and Yanbu | 2.13 |
| Hadaf | 1.83 |
| Erada | 1.83 |
| King Abdullah Economic Cities. | 1.83 |
| Women's Industrial city | 1.83 |
| The Centennial Fund | 1.52 |
| Bader | 1.52 |
| KAUST Entrepreneur Center | 1.52 |
| Dhahran Valle | 1.52 |
| Wa'ed | 1.22 |

N=328

Two exceptions were there, Royal Commission of Jubail and Yanbu and King Abdullah Economic Cities, which were government support schemes, had lower percentage of uses; 2.13% and 1.83%. For King Abdullah Economic Cities; which was a government support scheme, the reason of the low percentage of uses was due early program development stages that the scheme had at the time of this study. At the same time, Women's Industrial city, which was an industrial city announced in late 2012, so its little early to judge about their performance.

The study has shown that entrepreneurs and small and medium enterprises owners were using more than one scheme for the same enterprise. This finding was in line with Bennett and Robson (2000a), where they found that 95% of entrepreneurs

have used more than one source of external support for their businesses. This also confirms Freel's (2000) finding that most innovative small firms are results of verity of external knowledge and support.

### 6.5.3 Assessment of SME support schemes and evaluation of SME support schemes influences on SME growth in Saudi Arabia

To have better understanding of entrepreneurs who used multiple support schemes for their surveyed businesses, the study looked at different groups of users; entrepreneurs that use Modon as external financing schemes and entrepreneurs who were not Modon users. This comparison clarified what percentage of Modon users has used which support schemes, and what was the relationship? Also, this comparison showed what were alternatives support schemes that entrepreneurs have used once they were rejected from Modon. The table 6.15 shows the comparison results. In table 6.15 the chi square test is used to see whether there are statistically significant differences between whether or not the entrepreneurs were Modon users or non-Modon users against the levels of use of each of the support schemes.

Data has shown that Modon users in general were more likely to use more than one support scheme to their enterprises. This was in line with Robson and Bennett's (Bennett et al., 2001) survey results finding that 94% of entrepreneurs used more than one source of business advice for their firms. On the other hand, Non-Modon users tended to uses less support schemes for their enterprises, which can be explained according to Zhao and Aram (1995) who argue that entrepreneur networking activities will have a cost of losing time and possible resources. Therefore, entrepreneurs who could not get access to larger support schemes tend to stop seeking other smaller schemes in Saudi Arabia. Finally, entrepreneurs who were

successful to access external support schemes will build experience with rising funding and access to external supports.

**Table 6.15 Comparison of the percentage of Modon and non-Modon uses that used other external support for their businesses.**

| Scheme Name | All | Non-Modon Users | Modon Users | Chi_Sq |
|---|---|---|---|---|
| Modon | 58.4 | NA | 58.54 | NA |
| SIDF | 48.7 | 44.9 | 51.60 | 1.43 |
| Saudi Credit Bank | 46.34 | **52.9** | **41.20** | **4.06[c]** |
| Sagai | 42.6 | 37.5 | 46.40 | 2.55 |
| Kafalah | 41.46 | 37.5 | 44.30 | 1.50 |
| Bab Rizq Jameel | 3.66 | 5.9 | 2.10 | 3.30 |
| Reyada | 2.44 | **5.15** | **0.52** | **7.16[b]** |
| Royal Commission of Jubail and Yanbu | 2.13 | **4.41** | **1.04** | **5.77[b]** |
| Hadaf | 1.83 | 2.94 | 1.04 | 1.59 |
| Erada | 1.83 | 2.94 | 0.52 | 1.59 |
| King Abdullah Economic Cities | 1.83 | 2.94 | 1.04 | 1.59 |
| Women's Industrial city | 1.83 | 2.94 | 1.04 | 1.59 |
| The Centennial Fund | 1.52 | 1.47 | 1.56 | 0.05 |
| Bader | 1.52 | 2.21 | 1.04 | 0.72 |
| KAUST Entrepreneur Center | 1.52 | 2.21 | 1.04 | 0.72 |
| Dhahran Valley | 1.52 | 2.21 | 1.04 | 0.72 |
| Wa'ed | 1.22 | 2.21 | 1.04 | 1.87 |
| Total Number of Participants | 328 | 136 | 192 | -- |

a=significant at the 1% level; b=significant at the 5% level; and, c=significant at the 10% level

Non-MODON uses were seeking Saudi Credit bank significantly; chi-sq at 4.06, that shows that Saudi Credit Bank was the most common source of funding for small and medium enterprise in Saudi Arabia after Modon. Royal Commission of Jubail and Yanbu and Reyada, comes as a third options for non-Modon users for external funding and support; with a significant chi-sq of 5.77.

**Table 6.16 Comparison of the percentage of SCB users and none SCB uses that used other external support for their businesses.**

| Scheme Name | All | Non Saudi Credit Bank Users | Saudi Credit Bank Users | Chi_Sq |
|---|---|---|---|---|
| Modon | 58.5 | **63.6** | **52.6** | **4.07[b]** |
| SIDF | 48.9 | **43.2** | **55.3** | **4.76[b]** |
| Sagia | 42.7 | 42.6 | 42.8 | 0.00 |
| Kafalah | 41.46 | **34.66** | **49.34** | **7.24[b]** |
| Bab Rizq Jameel | 3.66 | 3.41 | 3.95 | 0.06 |
| Reyada | 2.44 | 2.27 | 2.63 | 0.04 |
| Royal Comm. of Jubail and Yanbu | 2.13 | 1.70 | 2.63 | 0.34 |
| Hadaf | 1.83 | 1.70 | 1.97 | 0.03 |
| Erada | 1.83 | 2.27 | 1.32 | 0.42 |
| King Abdullah Economic Cities. | 1.83 | 1.70 | 1.97 | 0.03 |
| Women's Industrial city | 1.83 | 1.70 | 1.97 | 0.03 |
| The Centennial Fund | 1.52 | 1.14 | 1.97 | 0.38 |
| Wa'ed | 1.22 | 1.70 | 0.66 | 0.74 |
| Bader | 1.52 | 1.70 | 1.32 | 0.08 |
| KAUST Entrepreneur Center | 1.52 | 1.70 | 1.32 | 0.08 |
| Dhahran Valle | 1.52 | 1.70 | 1.32 | 0.08 |
| Total Number of Participants | 328 | 176 | 152 | |

a=significant at the 1% level; b=significant at the 5% level; and, c=significant at the 10% level.

Since Modon and Saudi Credit Bank were the most commonly used support schemes by small and medium enterprises in Saudi Arabia, the study focused on these two support schemes. The next table, 6.16, has a comparison between Saudi Credit Bank users and Non-Saudi Credit Bank users and the level of use with other schemes for external funding. In table 6.16 the chi square test is used to see whether there are statistically significant differences between whether or not the entrepreneurs were Saudi Credit Bank or non-Saudi Credit Bank users against the levels of use of each of the support schemes. Again external funding includes the following: 1. Enterprises grants, 2. Seed funding, 3. Direct lending, 4. Loan guarantees, 5. Land leasing, and 6. Other financial facilities.

Data has shown that non-Saudi Credit Bank users were significantly using Modon, SDIF and Khafalah as sources of external funding as sources of external funding. Smaller support schemes and newer ones had limited users from both Saudi Credit Bank and Modon users. This comparison and Modons' comparison leads to the same findings; entrepreneurs were seeking supports and specially funding from larger government support schemes, and if they were having difficulties to access to Modon support they would search to the second available support scheme as an alternative. Also, these comparisons showed that smaller and newer support schemes were less used by all small and medium enterprises.

From the foregoing results which have been presented it is clear that the smaller and newer support schemes are used much less than the larger and older support schemes. These results are explained by two possible reasons which are not mutually exclusive. Firstly, the market for government support schemes may have reached saturation point. Secondly, it may be because of the lower levels of awareness for such schemes. However, this second possible explanation is a weaker explanation

as even the scheme with the lowest level of awareness, Dhahran Valley reported a 70.73% level of awareness. Thus, even the smaller and more niche government support schemes hah very high levels of awareness.

### 6.5.4 The number of support schemes used by entrepreneurs

Table 6.17 shows the levels of use of the entrepreneurs against the number of sources they used. Very few of the entrepreneurs were non-users of support schemes. In other words, the vast majority of the entrepreneurs used at least one government support scheme. Turning to the column headed one this indicates that these are entrepreneurs who used only one source of advice. They are users of a sole government support scheme. It is clear that for the entrepreneurs who only used one source, 24 entrepreneurs only used Modon (40%), 10 entrepreneurs only used Sagia (17%), 8 entrepreneurs only used SIDF (13%), 3 entrepreneurs only used Kafalah (5%), 13 entrepreneurs only used the Saudi Credit Bank (22%), 1 entrepreneur only used Bab Rizq Jameel (2%), and 1 entrepreneur only used Reyada (2%). The values in parentheses in the previous sentence are the relative percentage for sole users of a government support schemes. Thus there are 60 entrepreneurs who used one government support scheme. For example, in the case of Sagia there are 10 entrepreneurs and that is 10/60 which is 17%.

The column with 2 at the heading denotes that this group of entrepreneurs used two government support schemes. Again the number indicates the number of entrepreneurs and the percentage value indicates the relative proportion of entrepreneurs in the users of 2 government support schemes. Thus for example we see that 30 entrepreneurs in the 2 category used Sagia for one of the two sources and this accounted for 32% of the 2 category entrepreneurs. The same principle applies to the

other three columns. The significance testing is between the use of a particular source against the individual columns of the number of sources used.

**Table 6.17 Levels of use of the entrepreneurs against the number of sources they used (%)**

| Scheme Name | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **Modon** | 0 0% | 24 40% | **56[b] 59%** | **50[a] 65%** | **43[a] 81%** | 19 79% |
| **Sagia** | 0 0% | 10 17% | 30 32% | **39[b] 51%** | **43[a] 81%** | 18 75% |
| **SIDF** | 0 0% | 8 13% | 35 37% | **55[a] 72%** | **43[a] 81%** | 19 79% |
| **Kafalah** | 0 0% | 3 5% | 29 31% | **42[b] 55%** | **42[a] 79%** | 20 83% |
| **Saudi Credit Bank** | 0 0% | 13 22% | 39 41% | **42[b] 55%** | **39[b] 74%** | 19 79% |
| **Bab Rizq Jameel** | 0 0% | 1 2% | 1 1% | 2 3% | 0 0% | 8 33% |
| **The Centennial Fund** | 0 0% | 0 0% | 0 0% | 0 0% | 0 0% | 5 21% |
| **Wa'ed** | 0 0% | 0 0% | 0 0% | 0 0% | 0 0% | 4 17% |
| **Hadaf** | 0 0% | 0 0% | 0 0% | 0 0% | 0 0% | 6 25% |
| **Erada** | 0 0% | 0 0% | 0 0% | 0 0% | 0 0% | 6 25% |
| **Reyada** | 0 0% | 1 2% | 0 0% | 0 0% | 1 2% | 6 25% |
| **Royal Commission of Jubail and Yanbu** | 0 0% | 0 0% | 0 0% | 1 1% | 0 0% | 6 25% |
| **King Abdullah Economic Cities.** | 0 0% | 0 0% | 0 0% | 0 0% | 0 0% | 6 25% |
| **Women's Industrial city** | 0 0% | 0 0% | 0 0% | 0 0% | 1 2% | 5 21% |
| **Bader** | 0 0% | 0 0% | 0 0% | 0 0% | 0 0% | 5 21% |
| **KAUST Entrepreneur Centre** | 0 0% | 0 0% | 0 0% | 0 0% | 0 0% | 5 21% |
| **Dhahran Valley** | 0 0% | 0 0% | 0 0% | 0 0% | 0 0% | 5 21% |

Notes: a=significant at the 1% level; b=significant at the 5% level; and, c=significant at the 10% level

**Table 6.18 Number of schemes used by SMEs as external business support**

| Number of Support Schemes used | Percentage from total |
|---|---|
| None | 5.7% |
| One scheme only | 18.3% |
| Two schemes | 28.9% |
| Three schemes | 23.5% |
| Four schemes | 16.2% |
| Five or more schemes | 7.35% |
| Total | 100% |

Table 6.18 shows the proportion of entrepreneurs who are categorized into the four types of users of business advice. 5.79% of the entrepreneurs had not used any of the sources of advice and this represents approximately one in twenty of the entrepreneurs. This result is consistent with Bennett and Robson (1999) who surveyed 2,474 SMEs in the UK in 1994 to 1997 and found that 95% of all respondents have used at least one source of external business support (Bennett and Robson, 1999).

18.29% of the entrepreneurs were users of only one source of advice. This represents slightly less than one in five of the entrepreneurs. Many startup firms or established SMEs' will seek external business advice as long these sources provide wide range of free services or at competitive prices (Gibb and Davies, 1992). Some startup firms will stop seeking external support, they do not seem to know enough about SMEs' support schemes working in their area. However, most of the owner-managers who had used external support schemes felt the services they had received were appropriate to their needs. Therefore, the problem appears to lie more with the perceptions of certain entrepreneur than with the nature or quality of the services themselves (Audet and ST-Jean; 2007).

**Table 6.19 summaries all statistics of SMEs' uses of external business advices**

| Number of business advices used | Frequency | Percentage | Cumulative |
|---|---|---|---|
| Nonusers | 19 | 5.79 | 5.79 |
| Sole source | 60 | 18.29 | 24.09 |
| Light users | 172 | 52.44 | 76.52 |
| Heavy users | 77 | 23.48 | 100 |
| Total | 328 | 100 | ----- |

### 6.5.5 General Human Capital

*Gender*

In this study the vast majority of the entrepreneurs, 92% are men and the minority of 7.9% are women. Table 6.20 shows the number of sources of advice which are used by gender. The statistical testing is performed to see whether there is systematic evidence of a difference between the four categories of users of government support schemes against the gender of the entrepreneurs. The chi square test is statistically significant at the 0.151 level which is narrowly outside the 0.10 upper limit and thus there is no systematic statistically significance between gender and the four categories of government support. The following patterns of results are reported but it does need to be noted that they are not statistically significant at the 0.10 level or better and thus need to be treated with caution. Men are disproportionately represented amongst the light and heavy users of advice and also the non-users of business advice. Women are under-represented in the non-users, light and heavy users of business advice, but they are over-represented amongst the sole users of business advice. There may be the potential for the Saudi Government to review their support scheme programs to pay more attention to women entrepreneurs in Saudi Arabia.

Looking at the dispersion of women entrepreneurs into the four categories of use of business advice it is clear that only 1 women entrepreneur was a non-user of business advice; and that was the smallest representation; whilst at the other extreme, 12 women entrepreneurs were light users of business advice and that was the category with the greatest number of women entrepreneurs. The Saudi Arabia sample of this study was consistent with many studies in the UK (Robson and Obeng, 2008). For example: The Global Entrepreneurship Monitor (GEM) UK report (Harding, 2004) repeats a common refrain, that,

"*There are still big gaps between male and female entrepreneurship that, if narrowed, would increase overall levels of entrepreneurship within the country"*

**Table 6.20: The Number of sources of advice by Gender (n=328)**

| **Number of sources used** | **General Human Capital Factor** | | | |
|---|---|---|---|---|
| None "nonusers" | **Gender** | **Frequency** | **Percentage** | **Cumulative** |
| | Male | 18 | 94.74 | 5.96 |
| | Female | 1 | 5.26 | 3.85 |
| | Total | 19 | 100.00 | 5.79 |
| One source only "sole users" | **Gender** | **Frequency** | **Percentage** | **Cumulative** |
| | Male | 51 | 85 | 16.89 |
| | Female | 9 | 15 | 34.62 |
| | Total | 60 | 100.00 | 18.29 |
| Two sources "light users" | **Gender** | **Frequency** | **Percentage** | **Cumulative** |
| | Male | 160 | 93.02 | 16.89 |
| | Female | 12 | 6.98 | 52.98 |
| | Total | 172 | 100.00 | 52.44 |
| Four sources "heavy users" | **Gender** | **Frequency** | **Percentage** | **Cumulative** |
| | Male | 73 | 94.81 | 24.17 |
| | Female | 4 | 5.19 | 15.38 |
| | Total | 77 | 100.00 | 23.48 |
| Total | **Male** | **302** | **92.07** | **100** |
| | **Female** | **26** | **7.93** | **100** |

Pearson chi2(3) = 5.2978 Pr = 0.151

In Saudi Arabia about 275,000 or 33% of work government employees force are women; mainly working in girl schools and education sector (Ministry Of Trade, 2014). Small percentage of women are in businesses due to many rules and culture barriers

(Ramady, 2010). This force and capability of Saudi entrepreneur women could contribute to the economy and create jobs in the market if there was planned strategy to involve Saudi women in entrepreneurship. Policy makers could enhance current business-advice provision and access to informal and formal business networks, mentors, and business support for Saudi women.

*Education*

**Table 6.21 The Number of sources of advice by Education (n=328)**

| **Number of sources used** | **General Human Capital Factor** | | | |
|---|---|---|---|---|
| None "nonusers" | **Degree** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 13 | 68.42 | 4.73 |
| | No | 6 | 31.58 | 11.32 |
| | Total | 19 | 100.00 | 5.79 |
| One source only "sole users**"** | **Degree** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 48 | 80 | 17.45 |
| | No | 12 | 20 | 22.64 |
| | Total | 60 | 100.00 | 18.29 |
| Two sources "light users" | **Education** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 139 | 80.81 | 50.55 |
| | No | 33 | 19.19 | 62.26 |
| | Total | 172 | 100.00 | 52.44 |
| Four sources "heavy users" | **Education** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 75 | 97.40 | 27.27 |
| | No | 2 | 2.60 | 3.77 |
| | Total | 77 | 100.00 | 23.48 |
| Total | **Educated** | **302** | **92.07** | **100** |
| | **Not Educated** | **26** | **7.93** | **100** |

Pearson chi2(3) = 15.6047 Pr = 0.001

In this study the vast majority of the entrepreneurs, 94% have a formal education and qualifications whilst the minority of approximately 6% have not had a formal education. Table 6.21 shows the number of sources of advice by formal education. The chi square test is highly statistically significant at the 0.001 level.

In Table 6.21 it is apparent that 68% of the non-users of business advice have a formal level of education. 80% of the sole users and 81% of the light users of business advice have formal levels of education, respectively. 97% of the heavy users of business advice have a formal level of education. Thus, entrepreneurs with a formal level of education are more likely than those without a formal level of education to use a larger number of sources of advice.

*Entrepreneurial Experience*

Table 6.22 shows the Number of sources of advice by Prior Business Experience (Novice and Habitual entrepreneurs). The statistical testing is performed to see whether there is systematic evidence of a difference between the four categories of users of government support schemes against the entrepreneurial experience of the entrepreneurs. In this study 50% of the entrepreneurs are novices, 26% are serial entrepreneurs and 25% are portfolio entrepreneurs. Table 6.22 specifically, presents the number of sources of advice by the three categories of entrepreneurial experience. The chi square test is statistically significant at the 0.243 level, which is outside of the 0.10 upper limit.

53% of the light users of business advice were novice entrepreneurs which is higher than the baseline of 50%. However, for the other three categories of non-users, sole users and heavy users the novice entrepreneurs report lower scores compared to the baseline. Entrepreneurial experience is significant and has a positive effect of entrepreneurs' behavior while seeking external support schemes for their new ventures. In this study, novice entrepreneurs were heavy users of external support schemes**.** Furthermore, in each category of uses i.e. single source users, light users, and heavy users of support schemes, novice entrepreneurs were scoring higher percentage of uses compered by other types of entrepreneurs.

Looking at the serial entrepreneurs they account for 26% of the non-users, 20% of the light users of advice, and 23% of the heavy users of advice. Whilst for the portfolio entrepreneurs we see the results are: 32% for the non-users, 27% of the light users of advice, and 34% of the heavy users of advice.

**Table 6.22 The Number of sources of advice by Prior Business Experience (Novice, serial, and Portfolio entrepreneurs)**

| **Number of sources used** | **Specific Human Capital Factor (**Prior Business Experience**)** | | | |
|---|---|---|---|---|
| None-Users | **Experience** | **Frequency** | **Percentage** | **Cumulative** |
| | Novice | 8 | 42.11 | 4.91 |
| | Serial | 5 | 26.32 | 5.95 |
| | Portfolio | 6 | 31.58 | 7.41 |
| | Total | 19 | 100.00 | 5.79 |
| Two Sources "light users" | **Experience** | **Frequency** | **Percentage** | **Cumulative** |
| | Novice | 32 | 53.33 | 19.63 |
| | Serial | 12 | 20 | 14.29 |
| | Portfolio | 16 | 26.67 | 19.75 |
| | Total | 60 | 100.00 | 18.29 |
| Four Sources "heavy users" | **Experience** | **Frequency** | **Percentage** | **Cumulative** |
| | Novice | 33 | 44.86 | 20.25 |
| | Serial | 18 | 23.38 | 21.43 |
| | Portfolio | 26 | 33.77 | 19.75 |
| | Total | 77 | 100.00 | 18.29 |
| All users | **Experience** | **Frequency** | **Percentage** | **Cumulative** |
| | Novice | 163 | 49.70 | 49.70 |
| | Serial | 84 | 25.61 | 25.61 |
| | Portfolio | 81 | 24.70 | 24.70 |
| | Total | 328 | 100.00 | 100.00 |

Pearson $Chi^2(3) = 7.9300$ Pr = 0.243

From the statistics of the sample, portfolio entrepreneurs used less support schemes than novice entrepreneurs. This result shows how novice entrepreneurs are desperate to get all types of business advices and funding from any external business support source. On the other hand, habitual entrepreneurs limit their uses of external business supports to their exact business needs by seeking fewer external business support sources.

By compering habitual entrepreneurs only, statically more uses of external business advice sources were portfolio than serial entrepreneurs. Both serial and portfolio entrepreneurs have prior business ownership experiences and more probably had used or herd about different support schemes and their services. Nevertheless, portfolio entrepreneurs; due to their involvement of more than one business at the same time, were using slightly more external business supports than serial entrepreneurs.

*Team Start*

In this study 89% of the businesses are team starts and 11% are solo businesses. Table 6.23 shows the number of sources of advice by team start. The statistical testing is performed to see whether there is systematic evidence of a difference between the four categories of users of government support schemes against whether or not the entrepreneurs were in team businesses. The chi square test is highly statistically significant at the 0.01 level. Looking at the non-users of business advice it can be seen that they consist of 74% of team start businesses and 26.3% of sole businesses. For the single and light sources of advice the proportion of team start businesses has increased substantially compared to the proportion found in the non-users category. Indeed 87% and 90% of entrepreneurs in the sole source and light users of advice groups are team starts. This pattern continues for the heavy users of business advice where they are 94% team start businesses. Thus, the non-users contain a relatively higher proportion of entrepreneurs who it seems are happy with their businesses and/or are reluctant to turn to the government support schemes. These entrepreneurs could be viewed as maverics in the context of a conservative country such as Saudi Arabia. Such individuals just want to be left to get on with their businesses. Clearly, this explanation is speculative and would require qualitative analysis to confirm the explanations provided here.

**Table 6.23 The Number of sources of advice by team start (n=328)**

| No. of sources used | Specific Human Capital Factor (Team-Start) | | | |
|---|---|---|---|---|
| **None** "non-users" | **Team-Start** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 14 | 73.68 | 4.79 |
| | No | 5 | 26.32 | 13.89 |
| | Total | 19 | 100.00 | 5.79 |
| **One source** "single users" | **Team-Start** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 52 | 86.67 | 17.81 |
| | No | 8 | 13.33 | 22.22 |
| | Total | 60 | 100.00 | 18.29 |
| **One sources** "light users" | **Team-Start** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 154 | 89.53 | 50 |
| | No | 18 | 10.47 | 52.44 |
| | Total | 172 | 100.00 | 52.44 |
| **Four sources** "heavy users" | **Team-Start** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 72 | 93.51 | 24.66 |
| | No | 5 | 6.49 | 13.89 |
| | Total | 77 | 100.00 | 52.44 |
| All | **Team-Start** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 89 | 89.02 | 89.02 |
| | No | 36 | 10.98 | 10.98 |
| | Total | 328 | 100.00 | 100.00 |

Pearson $Chi^2(3) = 6.5463$ Pr = 0.0088

*Innovation*

*Product or Service Innovation*

In this study, 41% of the businesses have introduced a product or service innovation. Table 6.24 presents the numbers of sources of advice against whether the entrepreneurs' firm is a product or service innovator. The statistical testing was performed to see whether there is systematic evidence of a difference between the four categories of users of government support schemes against product or service innovation. The chi square test is statistically significant at the 0.05 level. 26% and 27% of the respondents were product or service innovators for the non-users and sole sources of advice categories, respectively. These levels of innovation are substantially lower than the corresponding values of 45% and 46% for light and heavy user groups, respectively.

**Table 6.24 The Number of sources of advice by product or service innovation (n=328)**

| Number of sources used | Specific Human Capital Factor (Innovation) | | | |
|---|---|---|---|---|
| Non-Users | **Innovation** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 5 | 26.32 | 3.70 |
| | No | 14 | 73.68 | 7.25 |
| | Total | 19 | 100.00 | 5.79 |
| One-source "sole users" | **Innovation** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 16 | 26.67 | 11.85 |
| | No | 44 | 73.33 | 22.80 |
| | Total | 60 | 100.00 | 18.29 |
| Two-sources "light users" | **Innovation** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 78 | 45.35 | 57.78 |
| | No | 94 | 54.65 | 48.70 |
| | Total | 172 | 100.00 | 52.44 |
| Four-sources "heavy users" | **Innovation** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 36 | 46.75 | 26.67 |
| | No | 41 | 53.25 | 21.24 |
| | Total | 77 | 100.00 | 23.48 |
| All | **Innovation** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 135 | 41.16 | 41.16 |
| | No | 193 | 58.84 | 58.84 |
| | Total | 328 | 100.00 | 100 |

Pearson $Chi^2(3) = 9.1736$ Pr = 0.027

Taken together Table 6.24 indicates that non-innovators represent a disproportionate number of the entrepreneurs who have either used no sources of government support or only one source of government support. However, there was little difference in innovation comparing the light and heavy users of government support schemes. This suggests that entrepreneurs who are seeking support from several sources are better placed with more resources to innovate compared to counterparts who utilise no support or support from only one government scheme. However, such a causal link does remain an explanation which would require further qualitative research to further investigate.

*Process Innovation*

Table 6.25 shows the number of sources of advice by process innovation, and can be thought of as a companion table to table 6.24. The statistical testing was performed to see whether there is systematic evidence of a difference between the four categories of users of government support schemes against whether or not they are process innovators. The chi square test is weakly statistically significant at the 0.10. Thus, there is only a weak statistically significant relationship between the four categories of the number of sources used against whether or not they are process innovators.

As can be seen from table 6.25 there is a weakly statistically significant difference between the number of sources of advice which the entrepreneurs used and whether or not the entrepreneurs' firms were process innovators. 47.37% of non-users were process innovators, which is similar to the 50% of light users who were process innovators. Both the non-users and light users reported lower levels of process innovation compared to the 57.4% of heavy users who were process innovators. Also, the non-users and light users reported higher levels of process innovation compared to the 35% of sole users who were process innovators.

**Table 6.25 The Number of sources of advice by process innovation (n=328)**

| Number of sources used | Specific Human Capital Factor (Process Innovation) | | | |
|---|---|---|---|---|
| None-Users "non-users" | **Process Innovation** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 10 | 52.63 | 5.95 |
| | No | 9 | 47.37 | 5.63 |
| | Total | 19 | 100.00 | 5.79 |
| One-source "sole users" | **Process Innovation** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 39 | 65 | 23.21 |
| | No | 21 | 35 | 13.13 |
| | Total | 60 | 100.00 | 18.29 |
| Two-sources "light users" | **Process Innovation** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 86 | 50 | 51.19 |
| | No | 86 | 50 | 53.75 |
| | Total | 172 | 100.00 | 52.44 |
| Four-sources "heavy users" | **Process Innovation** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 33 | 42.86 | 19.64 |
| | No | 44 | 57.14 | 27.50 |
| | Total | 77 | 100.00 | 23.48 |
| All | **Process Innovation** | **Frequency** | **Percentage** | **Cumulative** |
| | Yes | 135 | 41.16 | 41.16 |
| | No | 193 | 58.84 | 58.84 |
| | Total | 328 | 100.00 | 100 |

Pearson $Chi^2(3) = 6.8330$ Pr = 0.077

**Table 6.26 The percentage of finance received form each group of support scheme users (None-users, single users, light users, and heavy users) (n=328)**

| Percentage of finance received form each group of support scheme users | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Users** | **Frequency** | **Percentage of total responses** | **Cumulative** | **Mean** | **Std. Dev.** | **Max** | **Min** |
| Non-users | 19 | 5.79 | 5.79 | 0.55 | 0.34 | 1 | 0 |
| Single source | 60 | 18.29 | 24.09 | 0.61 | 0.28 | 1 | 0 |
| Two sources | 172 | 52.44 | 76.52 | 0.47 | 0.30 | 1 | 0 |
| Four sources | 77 | 23.48 | 100 | 0.45 | 0.29 | 1 | 0 |
| Total | 328 | 100.00 | 100 | -- | -- | -- | -- |

**Table 6.27 The Relationship of number of sources used and finance received form each group of support scheme users (Non-users, single users, light users, and heavy users)**

| **Users** | **Frequency** | **Percentage of total responses** | **Mean** | **Delta % From nonusers** | **Trend** |
|---|---|---|---|---|---|
| Non-users | 19 | 5.79 | 0.55 | 0 | -- |
| Single source | 60 | 18.29 | 0.61 | 11%*** | (+) |
| Two sources | 172 | 52.44 | 0.47 | (14.5)%* | (-) |
| Four sources | 77 | 23.48 | 0.45 | (18.2)%** | (-) |
| Total | 328 | 100.00 | -- | -- | -- |

**Table 6.28 The percentage of employment growth in each group of support scheme users (Non-users, single users, light users, and heavy users)**

| Percentage of finance received form each group of support scheme users | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Users** | **Frequency** | **Percentage of total responses** | **Cumulative** | **Mean** | **Std. Dev.** | **Max** | **Min** |
| Non-users | 17 | 5.79 | 5.79 | -0.009 | 0.8179 | 0.2 | -.119 |
| Single source | 60 | 18.29 | 24.09 | -0.012 | 0.2725 | -0.9 | 1.25 |
| Two sources | 172 | 52.44 | 76.52 | 0.031 | 0.2278 | -0.32 | 2 |
| Four sources | 77 | 23.48 | 100 | 0.1049 | 0.8037 | -0.93 | 5.67 |
| Total | 328 | 100.00 | 100 | -- | -- | -- | -- |

**Table 6.29 Relationship of number of sources used and employment growth from each group of support scheme users (Non-users, single users, light users, and heavy users)**

| Users | Frequency | Percentage of total responses | Mean | Delta % From none-users | Trend |
|---|---|---|---|---|---|
| Non-users | 19 | 5.79 | -0.009 | 0 | -- |
| Single source | 60 | 18.29 | -0.012 | **33%*** | (+) |
| Two sources | 172 | 52.44 | 0.031 | **244%**** | (+) |
| Four sources | 77 | 23.48 | 0.1049 | **10.65 times** | (+) |
| Total | 328 | 100.00 | --- | -- | -- |

Tables 6.26 to 6.29 shows four types of external business support users: non-users, single source users, two sources users (light users), and four or more sources users (heavy users). In table 6.26, general statistics were presented showing how many businesses in the survey belong to each category of level of uses. Only 5.7% or 19 businesses have not use any external business support. The majority of businesses in this study used one or more external business support for their businesses. The highest percentage was for firms that uses two external business support for their business; 52.4% of the sample.

To have better understanding of the uses output and to extract more useful information, table 6.27 looked at the relationship of number of sources used and finance received from each group of support scheme users (non-users, single users, light users, and heavy users). Table 6.27 shows that businesses that used one source of external business support succeeded to raise funding for their businesses by 11% more than businesses that did not approached any external business support scheme. Interestingly, businesses that uses two sources had a negative percentage of (-14.5%) from businesses that do not used any external business support for their businesses as a source of funding. The percentage declined furthermore to (-18.2%) for businesses that uses four or more external business support for

their businesses. This shows a grate finding that the more external business support schemes the SME uses will not enhance the chance of raising funds.

Table 6.28 looked at the percentage of employment growth and the number of external business support scheme used. Again, a farther analysis was studied in table 6.29 and investigated the level of uses of external business support and growth in employment in firms. In this sample, a positive relationship between level of uses and firms employment growth. From table 6.29, firms that used one external business support scheme reported a growth by 33% in employment growth than firms that have not use any source of external business support. Similarly, light users (used two to three external business support) showed an increase of employees growth by 244% form firms that have not use any external business support. Finally, heavy users (firms that used four or more external business supports) showed a massive increase of growth by 10.65 times compered to businesses that have not use any external business support.

**Table 6.30 Statistics of the percentage of revenue growth in each group of support scheme users (None-users, single users, light users, and heavy users)**

| **Percentage of revenue growth for each group of support scheme users** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Users** | **Frequency** | **Percentage of total responses** | **Cumulative** | **Mean** | **Std. Dev.** | **Max** | **Min** |
| Nonusers | 17 | 5.79 | 5.79 | 0.0336 | 0.2705 | -0.25 | 1 |
| Single source | 60 | 18.29 | 24.09 | **0.1561*** | 0.3589 | -0.25 | 1.4 |
| Two sources | 172 | 52.44 | 76.52 | 0.1149 | 0.3154 | -.33 | 1.7 |
| Four sources | 77 | 23.48 | 100 | 0.0855 | 0.2794 | -0.50 | 0.92 |
| Total | 328 | 100.00 | 100 | -- | -- | -- | -- |

From table 6.30 which looked on the influence of uses of external business support and the change in revenue. Firms that have not uses any support schemes for their business showed a very low level of revenue growth; 3.3%. In the other hand, firms that used one source of external business support showed a jumping figure of 15.6% in their business revenue after the uses of external business support. The positive percentage continue for light and heavy user firms which reported increase in their annual revenue by, 11.4% and 8.5% respectively. A very important finding in the relationship of revenue growth was that firms in light users category, were showing a positive growth percentage in revenue;11.4%, but in downward slope form single source user group;15.6%; positive trend figure for both single and light business support users but sharp declining in the slope. Finally, heavy users of external business support schemes, were experiencing a positive growth figure in their revenue; 8.5%, but in a declining trend than light users; 11.4% and single source firms of 15.6% increase in employment.

## 6.6 Conclusion

This chapter began by reminding the reader about the response rate achieved in this study and the influence of other previous studies in influencing the design of the researcher's study of Saudi Arabia. The chapter has provided the reader with descriptive statistics and an overview of the respondents, which help the reader to have a better knowledge of the characteristics of the respondents. An assessment of the headline barriers to growth was presented, followed by the results on the levels of awareness and use of government backed support schemes in Saudi Arabia. The discussion of these results is developed in chapter 8. The next chapter presents the econometric results of testing models and the hypotheses.

# Chapter 7

# Hypothesis Testing

## 7.1 Introduction

The previous chapter focused upon cross-tabulations and the overall headline figures relating to the use of business advice as well as the barriers to growth in Saudi Arabia. In particular the last two sections in the previous chapter, prior to the conclusion, provided the results on the headline figures of the thirty-four barriers to growth in Saudi Arabia as well as the usage of government support schemes. The purpose of this chapter is to present the multivariate regression analysis results and report whether the models find support, or no support, for each of the hypotheses, which were presented in chapter 4. The results are compared to the main previous studies on barriers to growth and business advice and the implications are discussed in the next chapter. The reader is reminded that the construction of the dependent, independent and control variables is presented in the methodology chapter.

This chapter is organised as follows. The next section provides the reader with information about the statistical tests and good ness of fit of the models. This is followed by section four where the results are reported and whether the results are consistent, or not consistent, with each of the hypotheses. Lastly, in section four a conclusion completes the chapter.

## 7.2 Statistical tests overview

This chapter tests the four multipart hypotheses against the thirty-four barriers to growth in Saudi Arabia using a sample of 328 entrepreneurs, which are analysed using Ordinary Least Squares (OLS) regression techniques. In all of the models the F tests are highly statistically significant at the 0.01 level, and indicate that taken together there are relationships between the variables included in the models, together, with the dependent variables. In order to

measure the goodness of fit of a model the two main statistics which are used are the $R^2$, the Coefficient of Determination and the Adjusted $R^2$ which takes into account the number of variables included in a regression model. In Table 7.2 the models deal with the financial barriers in Saudi Arabia and the Adjusted $R^2$ ranges from 0.0825 in Model 1 which only includes the control variables to 0.1817 in Model 10 which is the full model. In Table 7.3 the models deal with market related barriers. In Table 7.3 the Adjusted $R^2$ in Model 12 which only includes the control variables is 0.1307 and the Adjusted $R^2$ in Model 21 which is the full model is 0.2363. In Table 6.4 the models deal with production input barriers. In Table 7.4 the Adjusted $R^2$ is 0.1483 in Model 23 which only includes control variables. In Model 33 the Adjusted $R^2$ is substantially higher at 0.2430 which is the model which adds all of the independent variables to the control variables. Table 7.5 presents the models of macroeconomic barriers. In Model 34 the Adjusted $R^2$ is 0.0999 which is the models which only includes the control variables. In Model 43 the Adjusted $R^2$ is 0.2289 and that model includes all of the independent and control variables together.

Table 7.1 provides the summary statistics and correlation matrix of the variables included in the models of barriers to growth. The average number of employees in the firms is 71.69 and the standard deviation is 19.34. The average age of the firms is 17 years old (S.D. 9.52). 48% of the firms are in the manufacturing sector, 26% are in services, 11% are in construction, 9% are in business services, and lastly 6% of the firms are in the agricultural sector.

## 7.3 Hypothesis Testing

The following four subsections report the results of the hypothesis testing relating to: hypotheses H1a, H1b and H1c (6.3.1), Hypotheses H2a, H2b, H2c and H2d (6.3.2), Hypothesis H3 (6.3.3), Hypothesis H4a and H4b (6.3.4), and Hypothesis H5a and H5b (6.3.5).

### 7.3.1 Hypotheses H1a, H1b and H1c

Hypothesis H1a predicted that male entrepreneurs will encounter less barriers than female entrepreneurs. In models 35 and 36 (See Table 6.5) and in the full models of 43 and 44 the gender variable appears with a negative sign and the relationships are statistically significant at the 0.01, 0.05, 0.05 and 0.05 level respectively. However, there are no statistically significant relationships between gender of the entrepreneurs and financial barriers (Table 7.2), marketing barriers (Table 7.3), and production input barriers (Table 7.4). Thus, overall there is mixed evidence in support of hypothesis H1a.

Hypothesis H1b: predicts that Entrepreneurs with degrees will encounter less barriers than those without degree. The degree variable is negatively statistically significantly related to production input barriers (See Table 7.4) in models 24, 25, where general human capital is added to the control variables; and, in models 32 and 33 which are the full models at the 0.05 level in all four models. The degree variable is also negatively statistically significant at the 0.05 level in the estimates of macroeconomic barriers (See Table 7.5) in models 35, 36, 43 and 44. Thus, overall there is mixed evidence in support of hypothesis H1b.

### 7.3.2 Hypotheses H2a, H2b, H2c and H2d

Hypothesis H2a: predicts that Habitual entrepreneurs will encounter less barriers than novice entrepreneurs but the habitual variable is not statistically significant at the 0.10 level or better in any of the models in Tables 7.2 to 7.5. Thus, the evidence does not support hypothesis H2a.

H2b predicts that Portfolio entrepreneurs will encounter less barriers than novice entrepreneurs. The portfolio variable is negatively statistically significantly related to financial barriers in model 3 which includes the control variables plus the entrepreneurial experience variables, and the full models of 10 and 11 (See Table 7.2). The portfolio variable is also negatively statistically significantly related to marketing barriers in the model 14 which adds entrepreneurial experience to the control variables, and in the full models 21 and 22 (See Table 7.3). Also, the portfolio variable is negatively statistically significant in model 25, and in the full models 32 and 33 (See Table 7.4). All three relationships are statistically significant at the 0.05 level. Portfolio entrepreneurs were less likely than novice entrepreneurs to have macroeconomic barriers in model 36 and in the full models 43 and 44, and in all three instances the relationships are statistically significant at the 0.05 level (See Table 7.5). Thus, the results provide strong support for hypothesis H2b.

H2c predicts that Sequential (Serial) entrepreneurs will encounter less barriers than novice entrepreneurs. In models 3, 10 and 11 the sequential variable appear with the expected negatively signed coefficients but there is no statistically significant relationship at the 0.10 level, or better, with financial barriers (Table 7.2). In models 14, 21 and 22 the sequential variable appears with a positive signed coefficient and that is counter to the direction predicted in hypothesis H2c (Table 7.3). However, the aforementioned coefficients are not statistically significant at the 0.10 level or better. In model 25 the sequential dummy variable is statistically significantly related to production input barriers at the 0.05 level but the

relationship is positive rather the expected negative sign (See Table 7.4). This pattern of results is also found in the full models of 32 and 33 where the relationships are both statistically significant at the 0.05 level. In Table 6.5 model 36, 43 and 44 the sequential entrepreneurs are more likely than novice entrepreneurs to encounter macroeconomic barriers and these relationships are all statistically significant at the 0.05 level. Thus, the evidence is overwhelmingly against hypothesis H2c.

H2d predicts that Portfolio entrepreneurs will encounter less barriers than sequential (Serial) entrepreneurs. The aforementioned hypothesis is supported with regard to financial barriers, marketing barriers, production inputs and macroeconomic barriers. Thus, the evidence strongly supports hypothesis H2d.

### 7.3.3 Hypothesis H3

H3 predicts that Entrepreneurs who have used business advice will encounter less barriers than those who have not used business advice. In the previous chapter the number of users of the majority of the government funded sources of advice and support were used by a comparatively small number of entrepreneurs. The small number of users of schemes such as Hadaf and Erada means that in regression models the coefficient values and level of significance may be rendered unreliable. Accordingly, in the main regression models only four sources of advice are included in the main regression results reported in Tables 7.2 to 7.5 towards the end of the chapter. For completeness the result relating to models where all the sources of advice were included in the models are reported in the appendix in Tables A5.1 to A5.74. In the appendix the fourth, tenth and eleventh models in each of the tables A2.1 to A2.4 include the full set of business advice sources. In the appendix the first three models as well as the fifth to ninth models are the same as those reported in the main results. The full

set of models is reported to facilitate better comparison of the models relating to each of the different independent variables.

In Table 7.2 only one of the four business advice sources, Modon, is statistically significant at the 0.01 level. Users of Modon are less likely to encounter financial barriers compared to entrepreneurs. But, there are no relationships between Sagia, SIDF and Kafalah and financial barriers. Table 7.3 also has a similar pattern of results to those reported in Table 7.2 with regard to the relationship of business advice and encountering marketing barriers. Specifically, users of Modon were less likely to encounter marketing barriers and this is statistically significant at the 0.05 level. In Table 7.4 users of Modon, Sagia, SIDF and Kafalah are all less likely to encounter production input barriers but only SIDF users is the only business advice independent variable which is statistically significant at the 0.05 level. Thus, users of the SIDF government backed source are less likely than non-users of SIDF to encounter production input barriers. In contrast, in Table 7.5 none of the business advice dummy variables are statistically significant at the 0.10 level, or better. Thus, the results find very little evidence of support for hypothesis H3.

For completeness attention focuses upon the results reported in the appendix which relate to the full set of business advice variables. The reader is reminded that the results need to be treated with caution given the small proportion of entrepreneurs who used the schemes added to the independent variables reported earlier. Entrepreneurs who have used Modon, Hadaf, and Erada are less likely to encounter financial barriers compared to entrepreneurs who have not uses the aforementioned sources, and the relationships are statistically significant at the 0.01, 0.01 and 0.05 level, respectively in models A4, A10 and A11 (Table A4.1). Entrepreneurs who have used Bab Rizq Jameel, and the Centennial Fund are more likely than entrepreneurs who have not used those sources to encounter financial barriers. The aforementioned variables are statistically significant at the 0.01 and 0.05 level, respectively,

and that applies in the model of the control variables plus the business advice variables (model A4) and the full models A10 and A11 (Table A4.1).

Entrepreneurs who have used Modon, the Centennial Fund, Hadaf, and Erada are all less likely than entrepreneurs who have not used those sources to encounter marketing barriers. Those relationships are statistically significant at the 0.05, 0.01, 0.01 and 0.10 level, respectively, in model A15 (Table A4.2). However, in the full models there are some reductions in the levels of statistical significance between the sources of business advice and marketing barriers. The use of Modon remains statistically significant at the 0.05 level in model A21, but the use of Hadaf is reduced from the 0.01 in model 15 to the 0.05 level in model A21; and the use of Erada moves from being weakly statistically significant at the 0.10 level in model A15 to not being statistically significant in model A21 (Table A4.2).

Entrepreneurs who have used SIDF, The Centennial Fund, Wa'ed, and Hadaf are less likely than entrepreneurs who have not used these sources to encounter production input barriers and these are all statistically significant at the 0.05 level in model A26 (Table A4.3). The same patterns of results are also found in the full models A32 and A33.

Entrepreneurs who have used the Centennial Fund, Wa'ed, and Hadaf are less likely to encounter macroeconomic barriers compared to the entrepreneurs who have not used those sources. In model A37, A43 and A44 the variables consistently are highly statistically significant at the 0.01 level (Table A4.4). Thus, the results presented in the appendix provide stronger support for hypothesis 3 but that needs to be treated with caution. On balance the results only provided limited support for Mondon and SIDF; and are against Sagia and Kafalah.

### 7.3.4 Hypothesis H4a and H4b

Hypothesis H4a predicts that firms which introduced a product/service innovation will encounter more barriers than those who have not introduced a product/service innovation. Due to a high degree of collinearity between product/service innovation and process innovation each of the two innovation variables is run in separate models. In model 5 and 10 the product/service innovation variable is positively statistically related to financial barriers at the 0.01 level (Table 7.2). In line with our expectations the variable appears with the expected positive signed coefficients in the model of the control variables plus product/service innovation, as well as the full models, models 10 and 11 (Table 7.2). These relationships are highly statistically significant at the 0.01 level.

Product/service innovators encounter more marketing barriers compared to non-innovators and this applies in models 16 and 21. In both models the relationships are statistically significant at the 0.01 level (Table 7.3). The same pattern is found in regard to production input barriers (Table 7.4), and macroeconomic barriers (Table 7.5). Thus, the evidence provides strong support of hypothesis H4a. Indeed, the direction of the association is in line with our expectations and the level of statistical significance is consistently at the 0.01 level in the models of all four types of barriers to growth.

H4b: predicts that firms which have introduced a process innovation will encounter more barriers than those who have not introduced a process innovation. Process innovators are more likely than non-innovators to encounter financial barriers and this relationship is statistically significant at the 0.01 level in models 5 and 10 (Table 7.2). Process innovators are more likely than non-process innovators to encounter marketing barriers in the models which present the control variables plus innovation (Model 17), as well as the full model (Model 22), at the 0.05 and 0.10 level, respectively (Table 7.3). Thus, in the full model the process innovation variable is only weakly statistically significantly related to marketing

barriers to growth. In Model 28 process innovation is added to the control variables but process innovation is not found to be systematically significantly related to production input barriers at the 0.10 level or better (Table 7.4). In the full model (Model 33) process innovation is also not related to production input barriers at the 0.10 level or better (Table 7.4). In model 39 the process innovation variable is added to the control variables and it appears with the expected positively signed coefficient but it is not statistically significantly related to macroeconomic barriers at the 0.10 level or better. In model 44 the full model is presented but the same pattern of results which is found in model 39 is again found. Overall, there is mixed evidence in support of hypothesis H4b.

### 7.3.5 Hypothesis H5a and H5b

Hypothesis H5a: predicts that firms with a greater number of family members employed in the business will encounter more barriers than firms employing fewer family members. In models 7, 9, 10 and 11 the number of family members employed in the businesses is not statistically significantly related to financial barriers (Table 7.2). In models 18, 20, 21 and 22 firms with 2-3 family employees encountered more marketing barriers compared to businesses with only one family member working in the business. However, the aforementioned relationship is not statistically significant at the 0.10 level or better. Businesses with 4 family members encountered more marketing barriers compared to businesses with only one family member working in the businesses but this relationship is not statistically significant at the 0.10 level or better. The same patterns of results are also found in model 20, 21 and 22 (Table 7.3). Businesses with 2-3 family employees, as well as 4 family members encounter more production input barriers (Table 7.4) compared to businesses with 1 family employee. The aforementioned relationships are statistically significant at the 0.05 level in the models which adds family involvement to the control variables (model 29),

as well as the full models (models 32 and 33) (Table 7.4). In model 40 the family involvement dummy variables are added to the control variables and it is found that family businesses with 2-3 family members employed in the business are more likely than businesses with only one family member in the business to encounter macroeconomic barriers and the result is statistically significant at the 0.05 level (Table 7.5). In model 40 the 4 family employees in the business variable is also positively signed and statistically significant at the 0.05 level. Models 43 and 44 present the full models and the two variables which capture the number of family members employed in the business again appear with positive signed coefficients which are statistically significant at the 0.05 level. Thus, the results provide mixed support of hypothesis H5a.

Hypothesis H5b: predicts that Firms which have a greater number of family member with equity stakes in the business will encounter more barriers than firms where there are fewer members holding equity stakes. The results in model 8 show that businesses with 1 family partner encounter less financial barriers than businesses with 4 or more family partners but the relationship is not statistically significant at the 0.10 level, or better. In contrast the results in models 9 and 10 find that businesses with 2 family equity partners or 3 family equity partners are more likely to encounter financial barriers. This notwithstanding the results are not statistically significant at the 0.10 level or better. In the full models (models 10 and 11) the three dummy variables to capture family equity partner ownership of the business are all positively signed but are not statistically significant at the 0.10 level or better (Table 7.2).

The results in Table 7.3 show firms with 1, 2 and also 3 family members with equity stakes in the firm encounter more marketing barriers than firms with 0 family members who have equity stakes. In models 19 and 20 which augment the control variables with the three family partners equity dummy variables are all statistically significant at the 0.05 level. In the

full models (Models 21 and 22) the 3 family equity partners appears to be weakly statistically significant at the 0.10 level whilst the other two dummy variables remain to be statistically significant at the 0.05 level.

In Table 7.4 the firms with 1 family equity stake, as well as those firms with 3 family equity stakes encounter more production input barriers compared to firms with 0 equity stakes and these relationships are statistically significant at the 0.05 level in models 30, 31, 32 and 33. However, the 2 family members having equity in the business variable appears with a negatively signed coefficient but it is not statistically significant at the 0.10 level or better.

The results in Table 7.5 show that businesses with 1, 2 and 3 family partners encounter more macroeconomic barriers compared to businesses with zero family partners and the relationships are statistically significant at the 0.05, 0.10 and 0.05 level in models 41 and 42. In the full models (models 43 and 44) the signs remain positively signed for all three variables which capture the number of family equity partners. However, the 2 family equity partners variable is not statistically significant at the 0.10 level or better in both of the full models. Thus, the results provide strong support of hypothesis H5b.

### 7.3.6 Control Variables

This section of the chapter provides analysis of the control variables which are included in the models 1 to 44 in Tables 7.2 to 7.5. Five control variable are included in the OLS regression models: the size of the firms as measured by the total number of full-time employees (Size), the age of the firms in years (Age Business), the sector of the firms is captured by a series of variables: agriculture, manufacturing, services, business services and construction where the later variable is the excluded comparison variable; legal status of the business is included as a series of three variables sole proprietorship, partnership, and limited

liability where the later variable is the excluded comparison variable; and whether the firm is a team business (TEAM).

Larger sized firms encountered more barriers and this was consistently statistically significant at the 0.01 level in all 44 models across financial barriers, marketing barriers, production input barriers, and macroeconomic barriers (Tables 7.2 to 7.5). The age of the firms appeared with positively signed coefficients in models 1 to 11 which were financial barriers but these were not statistically significant and the coefficients were low values close to zero. The age of the firms was positively related to marketing barriers in models 12 to 22 (Table 7.3) but again this was not statistically significant at the 0.10 level. The coefficients were again small and around 0.10 in magnitude again suggesting that the relationship is a weak one. In contrast the age of the firms was negatively related to production input barriers. However, none of the models 23 to 33 showed any statistically significant relationships between age of the firms and production input barriers. In Table 7.5 models 34 to 44 again found a positive relationship between firm age and macroeconomic barriers. However, none of the variables are statistically significant at the 0.10 level or better.

The models included three dummy variables to represent the sectoral activities of the firms. However, only one of the sector dummy variables, services, is found to be weakly statistically significantly significant in the models of financial barriers in models 1 to 11 (Table 7.2). Service sector firms were less likely than construction sector firms to encounter financial barriers. In contrast in the models of marketing barriers found that two of the sector dummy variables were systematically important. Manufacturing firms and also service sector firms were less likely than construction sector firms to encounter marketing barriers and these relationships are statistically significant at the 0.10 level (Models 12 to 22, Table 7.3).

The manufacturing sector dummy variables and also the business service sector dummy variables in models 23 to 33 which present production input barriers are consistently

statistically significant at the 0.05 level (Table 7.4). Thus, manufacturing sector firms and also business service firms were more likely than construction sector firms to encounter production input barriers. Models 34 to 44 present the macroeconomic barriers but none of the sector dummy variables are statistically significant at the 0.10 level, or better.

The legal status of the firms has no systematic statistically significant relationship with financial models at the 0.10 level, or better (Models 1 to 11, Table 7.2). Likewise, the legal status of the firms is not related at the 0.10 level, or better, to marketing barriers (models 12 to 22, Table 7.3), production input barriers (models 23 to 33, Table 7.4), or macroeconomic barriers (models 34 to 44, Table 7.5).

The team business dummy variable is statistically significant at the 0.05 level in models 1 to 10 and at the 0.10 level in model 11. Thus, team businesses encounter more financial barriers compared to non-team businesses (models 1 to 11, Table 7.2). Team businesses encounter more marketing barriers compared to non-team businesses with regard to marketing barriers. Indeed, the team business dummy variable is statistically significant at the 0.01 level in models 12 to 20, and at the 0.05 level in models 21 and 22, where the later two models are the full models (Table 7.3). Team businesses encounter more production input barriers compared to solo entrepreneurs and this is consistently found to be statistically significant in all models in Table 7.4. The same strong set of results is found in Models 34 to 44 which present the results of the macroeconomic barriers.

## 7.4 Conclusion

This chapter has presented the regression results. A series of 44 models were reported which used OLS regression techniques relating to barriers to growth in Saudi Arabia. The hypotheses were tested against the model results and allow the researcher to see the extent to which general and specific human capital are systematically associated with barriers to growth. Multicollinearity was a problem for the two innovation related dummy variables and this necessitated the reporting of full models, twice, where both of the two product/service and process innovation dummy variables were included in separate models. Additionally, it is noted that in the main regression models the use of four support schemes were included because the other support schemes were used by a comparatively small number of entrepreneurs. The regression models with the full set of government funded sources of advice are reported in Appendix 5 in Tables A5.1 to A5.4.

The next chapter covers the discussion and conclusions of the research findings. As such the chapter discusses the implications of the results and also provides explanations of the relationships which were, and were not, found to be statistically significant. The results of the hypothesis testing are also brought together visually in a figure to assist the reader. The figure of the combined findings in relation to hypothesis testing also then leads to a discussion on the implications of the thesis for theory and also for practitioners and policy makers.

Table 7.1: Summary Statistics and Correlation Matrix (n=328)

| | **Mean** | **S.D** | **1.** | **2.** | **3.** | **4.** | **5.** | **6.** | **7.** | **8.** | **9.** | **10.** | **11.** | **12.** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Size | 71.69 | 19.34 | 1.00 | | | | | | | | | | | |
| 2. Age Business | 17.00 | 9.52 | -0.03 | 1.00 | | | | | | | | | | |
| 3. Agriculture | 0.06 | 0.23 | 0.04 | 0.09 | 1.00 | | | | | | | | | |
| 4. Manufacturing | 0.48 | 0.50 | 0.06 | -0.01 | -0.24[a] | 1.00 | | | | | | | | |
| 5. Services | 0.26 | 0.44 | -0.14[b] | 0.01 | -0.14[b] | -0.37[a] | 1.00 | | | | | | | |
| 6. Business Services | 0.09 | 0.29 | 0.03 | -0.05 | -0.08 | -0.31[a] | -0.19[a] | 1.00 | | | | | | |
| 7. Construction | 0.11 | 0.32 | 0.04 | -0.01 | -0.09 | -0.35[a] | -0.21[a] | -0.11[a] | 1.00 | | | | | |
| 8. Sole Proprietorship | 0.09 | 0.29 | -0.13[b] | -0.09 | 0.02 | -0.18[a] | 0.08 | 0.05 | 0.12[a] | 1.00 | | | | |
| 9. Partnership | 0.48 | 0.50 | -0.01 | 0.02 | -0.04 | 0.04 | 0.02 | -0.01 | -0.06 | -0.31[a] | 1.00 | | | |
| 10. LLC | 0.43 | 0.50 | 0.09 | 0.03 | 0.04 | 0.06 | -0.07 | -0.02 | -0.02 | -0.27[a] | -0.39[a] | 1.00 | | |
| 11.Team | 0.89 | 0.31 | 0.24[a] | -0.02 | -0.04 | 0.20[a] | -0.22[a] | 0.04 | 0.03 | -0.40[a] | 0.14[a] | 0.13[a] | 1.00 | |
| 12. Gender | 0.92 | 0.27 | 0.15[a] | 0.13[b] | 0.02 | 0.02 | -0.17[a] | 0.09[c] | 0.11[c] | -0.14[b] | 0.08 | 0.01[b] | 0.22 | 1.00 |
| 13. Degree | 0.84 | 0.37 | -0.08 | -0.02 | -0.15[a] | 0.39[a] | -0.22[a] | -0.18[a] | -0.05 | -0.15[a] | 0.01 | 0.08 | 0.14[b] | 0.09[b] |
| 14. Novice | 0.50 | 0.50 | -0.06 | 0.02 | 0.03 | -0.02 | 0.05 | 0.02 | -0.07 | -0.02 | 0.07 | -0.06 | 0.06 | -0.03 |
| 15. Portfolio | 0.25 | 0.43 | -0.04 | -0.02 | 0.02 | 0.08 | -0.04 | -0.08 | 0.01 | 0.09 | -0.07 | 0.02 | -0.11[b] | -0.07 |
| 16. Sequential | 0.26 | 0.44 | 0.09 | -0.07 | -0.05 | -0.05 | -0.01 | 0.06 | 0.08 | -0.07 | -0.01 | 0.04 | 0.05 | 0.09[c] |
| 17. Modon. | 0.59 | 0.49 | 0.03 | 0.00 | -0.07 | 0.41[a] | -0.41[a] | -0.29[a] | -0.27[a] | -0.20[a] | -0.01 | 0.13[b] | 0.24[a] | 0.03 |
| 18. Sagia. | 0.43 | 0.50 | 0.04 | 0.00 | -0.05 | 0.09 | -0.08 | 0.07 | -0.05 | -0.15[a] | 0.02 | 0.07 | 0.17[a] | 0.12[b] |
| 19. SIDF | 0.49 | 0.50 | 0.11[c] | 0.07 | -0.05 | 0.04 | 0.01 | -0.10[c] | 0.04 | 0.01 | -0.09 | 0.08 | 0.03 | 0.06 |
| 20. Kafalah. | 0.41 | 0.49 | 0.12[b] | 0.08 | -0.07 | 0.10[c] | -0.02 | -0.07 | -0.03 | 0.01 | -0.06 | 0.05 | 0.04 | -0.01 |
| 21. Saudi Credit Bank. | 0.46 | 0.50 | 0.01 | -0.01 | 0.04 | -0.07 | 0.03 | 0.02 | 0.02 | 0.01 | -0.10[c] | 0.10[c] | -0.06 | 0.05 |
| 22. Bab Rizq Jameel. | 0.04 | 0.19 | -0.16[a] | 0.05 | -0.05 | -0.19[a] | -0.26[a] | -0.06 | 0.03 | 0.11[c] | -0.06 | -0.01 | -0.14[b] | -0.01 |
| 23. Centennial Fund. | 0.02 | 0.12 | -0.05 | 0.00 | -0.03 | -0.12[b] | 0.16[a] | -0.04 | 0.03 | 0.13[b] | -0.02 | -0.06 | -0.12[b] | 0.04 |
| 24. Wa'ed | 0.01 | 0.11 | -0.06 | 0.03 | -0.03 | -0.11[c] | 0.13[b] | -0.05 | 0.04 | 0.16[a] | -0.05 | -0.04 | -0.05 | 0.03 |
| 25. Hadaf. | 0.02 | 0.13 | -0.17[a] | 0.05 | -0.02 | -0.12[b] | 0.16[a] | -0.03 | 0.02 | 0.19[a] | 0.01 | -0.12[b] | -0.17[b] | -0.04 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26. Erada. | 0.02 | 0.13 | -0.18[a] | 0.06 | -0.03 | -0.13[b] | 0.18[a] | -0.04 | 0.02 | 0.19[a] | -0.04 | -0.07 | -0.17[a] | -0.04 |
| 27. Reyada. | 0.02 | 0.15 | -0.23[a] | 0.01 | 0.05 | -0.15[a] | 0.18[a] | -0.05 | 0.01 | 0.16[b] | -0.03 | -0.06 | -0.13[b] | -0.03 |
| 28. RC Jubail & Yanbu. | 0.02 | 0.15 | -0.18[a] | 0.03 | -0.04 | -0.14[b] | 0.20[b] | -0.05 | 0.02 | 0.17[a] | 0.03 | -0.13[b] | -0.22[a] | -0.03 |
| 29. Rabigh. | 0.02 | 0.13 | -0.12[b] | 0.02 | 0.07 | -0.13[b] | 0.13[b] | -0.04 | 0.02 | 0.11[b] | 0.01 | -0.07 | -0.17[b] | -0.04 |
| 30. AL-Ahssa. | 0.01 | 0.13 | -0.14[b] | 0.01 | 0.07 | -0.13[b] | 0.13[b] | -0.04 | 0.02 | 0.11[b] | -0.04 | -0.02 | -0.17[b] | -0.04 |
| 31. INJAZ. | 0.01 | 0.11 | -0.06 | 0.01 | 0.09[c] | -0.11[c] | 0.06 | -0.04 | 0.04 | 0.06 | 0.01 | -0.04[b] | -0.14 | 0.03 |
| 32. Chambers | 0.01 | 0.11 | -0.07 | 0.06 | 0.10[c] | -0.11[c] | 0.06 | -0.04 | 0.05 | 0.16[a] | -0.05 | -0.04 | -0.14[b] | -0.07 |
| 33. Product/Service Innovation | 0.41 | 0.49 | 0.44[a] | 0.05 | -0.01 | 0.01 | -0.01 | -0.01 | 0.01 | -0.09[c] | 0.01 | 0.04 | 0.06 | 0.02 |
| 34. Process Innovation | 0.51 | 0.50 | 0.42[a] | -0.05 | 0.02 | 0.09[c] | -0.10[c] | 0.03 | 0.06 | -0.07 | 0.01 | 0.03 | 0.13[b] | 0.05 |
| 35. 1 Family Employee | 0.20 | 0.40 | -0.17[a] | 0.02 | -0.02 | 0.00 | 0.09 | -0.08 | -0.03 | 0.08 | 0.01 | -0.05 | -0.09[c] | -0.05 |
| 36. 2-3 Family Employees | 0.37 | 0.48 | 0.06 | -0.01 | -0.06 | -0.05 | 0.05 | 0.00 | 0.04 | -0.01 | 0.01 | 0.01 | -0.05 | -0.03 |
| 37. 4 Family Employees | 0.43 | 0.50 | 0.08 | 0.00 | -0.05 | 0.05 | -0.13[b] | -0.07 | 0.06 | -0.06 | -0.01 | 0.04 | 0.13[b] | 0.07 |
| 38. 0 Family Partners | 0.25 | 0.43 | -0.08 | 0.01 | 0.02 | 0.03 | -0.03 | 0.02 | -0.03 | 0.06 | -0.09 | 0.05 | -0.05 | 0.06 |
| 39. 1 Family Partners | 0.28 | 0.45 | -0.03 | 0.01 | 0.06 | 0.02 | 0.01 | 0.02 | -0.09 | -0.01 | -0.01 | 0.01 | -0.08 | -0.17[a] |
| 40. 2 Family Partners | 0.23 | 0.42 | -0.06 | 0.06 | -0.04 | -0.01 | 0.03 | 0.01 | -0.01 | -0.02 | 0.04 | -0.03 | 0.05[c] | 0.11 |
| 41. 3 Family Partners | 0.24 | 0.43 | 0.18[a] | -0.07 | -0.04 | -0.04 | -0.01 | -0.03 | 0.13[b] | -0.03 | 0.05 | 0.03 | -0.09 | 0.04 |

[c] $p<0.10$, [b] $p<0.05$ and [a] $p<0.01$

Table 7.1 Cont.

| | 13. | 14. | 15. | 16. | 17. | 18. | 19. | 20. | 21. | 22. | 23. | 24. | 25. | 26. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13. Degree | 1.00 | | | | | | | | | | | | | |
| 14. Novice | -0.06 | 1.00 | | | | | | | | | | | | |
| 15. Portfolio | 0.08 | -0.41[a] | 1.00 | | | | | | | | | | | |
| 16. Sequential | -0.01 | -0.38[a] | -0.33[a] | 1.00 | | | | | | | | | | |
| 17. Modon | 0.42[a] | -0.04 | 0.05 | -0.01 | 1.00 | | | | | | | | | |
| 18. Sagia | 0.11[b] | 0.10[c] | -0.05 | -0.07 | 0.09 | 1.00 | | | | | | | | |
| 19. SIDF. | -0.01 | 0.02 | 0.04 | -0.01 | 0.07 | 0.12 | 1.00 | | | | | | | |
| 20. Kafalah | 0.05 | -0.06 | 0.01 | 0.06 | 0.07 | 0.16[a] | 0.16[a] | 1.00 | | | | | | |
| 21. Saudi Credit Bank. | -0.06 | 0.07 | 0.06 | 0.02 | -0.11[b] | 0.01 | 0.12[b] | 0.15[a] | 1.00 | | | | | |
| 22. Bab Rizq Jameel. | 0.09 | 0.03 | -0.04 | -0.01 | -0.09[c] | -0.01 | 0.01 | 0.04 | 0.01 | 1.00 | | | | |
| 23. Centennial Fund. | 0.05 | 0.03 | -0.02 | -0.02 | 0.01 | 0.09[c] | 0.08 | 0.10[c] | 0.03 | 0.43[a] | 1.00 | | | |
| 24. Wa'ed | 0.05 | 0.00 | 0.01 | -0.01 | -0.08 | 0.07 | 0.06 | 0.02 | -0.05 | 0.37[a] | 0.36[a] | 1.00 | | |
| 25. Hadaf. | 0.06 | 0.05 | 0.03 | -0.08 | -0.07 | 0.02 | 0.00 | 0.02 | 0.01 | 0.40[a] | 0.42[a] | 0.40[a] | 1.00 | |
| 26. Erada. | 0.06 | 0.00 | 0.03 | -0.03 | -0.07 | 0.07 | 0.05 | 0.02 | -0.04 | 0.32[a] | 0.36[a] | 0.38[a] | 0.33[a] | 1.00 |
| 27. Reyada. | 0.07 | 0.00 | 0.04 | 0.05 | -0.15 | -0.02 | 0.01 | -0.01 | 0.01 | 0.39[a] | 0.36[a] | 0.38[a] | 0.32[a] | 0.32[a] |
| 28. RC Jubail & Yanbu. | 0.01 | -0.02 | 0.01 | 0.01 | -0.13[b] | 0.01 | 0.02 | 0.01 | 0.03 | 0.33[a] | 0.39[a] | 0.36[a] | 0.36[a] | 0..36[a] |
| 29. Rabigh. | 0.06 | 0.00 | 0.03 | -0.03 | -0.07 | -0.03 | -0.04 | 0.02 | 0.01 | 0.35[a] | 0.35[a] | 0.34[a] | 0.35[a] | 0.36[a] |
| 30. AL-Ahssa. | 0.06 | 0.00 | 0.08 | -0.08 | -0.07 | -0.02 | 0.00 | -0.02 | 0.01 | 0.32[a] | 0.28[a] | 0.31[a] | 0.38[b] | 0.37[b] |
| 31. INJAZ. | 0.05 | 0.06 | 0.01 | -0.07 | -0.02 | 0.02 | 0.01 | 0.02 | 0.01 | 0.32[a] | 0.31[a] | 0.29[a] | 0.40[b] | 0.39[b] |
| 32. Chambers | 0.05 | 0.01 | 0.07[b] | -0.07 | -0.08 | -0.04 | -0.05 | -0.04 | -0.05 | 0.31[a] | 0.22[a] | 0.18[a] | 0.40[b] | 0.39[b] |
| 33. Prod/Serv Innovation | 0.01 | -0.03 | 0.01 | 0.02 | 0.04 | 0.09[c] | 0.08 | 0.06 | 0.09[c] | 0.03 | 0.00 | 0.04 | -0.07[b] | -0.07[b] |
| 34. Process Innovation | 0.01 | 0.07 | -0.06 | -0.01 | 0.07 | -0.06 | -0.04 | -0.07 | -0.12[b] | -0.13[b] | -0.13[b] | -0.11[b] | -0.14[b] | -0.14[b] |
| 35. 1 Family Employee | 0.06 | -0.09 | -0.01 | 0.11[c] | 0.05 | -0.06 | -0.06 | -0.07 | 0.01 | -0.01 | 0.06 | 0.01 | 0.04 | 0.05 |
| 36. 2-3 Family Employees | 0.07 | -0.11 | -0.05[b] | -0.08 | -0.07 | 0.01[b] | -0.02[b] | 0.04 | 0.06 | 0.02 | -0.04 | -0.09 | -0.05 | -0.06 |
| 37. 4 Family Employees | 0.03 | -0.03 | 0.05[b] | -0.01 | 0.03 | 0.04 | 0.07 | 0.01 | -0.06 | -0.01 | -0.01 | 0.08 | -0.03 | 0.02 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 38. 0 Family Partners | 0.12[b] | 0.07 | -0.08 | 0.01 | 0.02 | 0.03 | -0.01 | 0.05 | 0.03 | -0.04 | -0.06 | -0.01 | -0.03 | -0.08 |
| 39. 1 Family Partners | -0.04 | 0.01 | 0.02 | -0.02 | 0.06 | -0.04 | -0.05[b] | -0.06 | -0.17[a] | 0.02 | 0.09 | 0.12 | 0.07 | 0.12 |
| 40. 2 Family Partners | 0.04 | -0.03 | 0.02 | 0.01 | -0.03 | 0.04 | 0.00 | 0.00 | 0.11 | 0.05 | -0.07 | -0.06 | -0.02 | -0.02 |
| 41. 3 Family Partners | -0.12[b] | -0.04 | 0.04 | 0.01 | -0.06 | -0.03 | 0.06 | 0.01 | 0.04 | -0.03 | -0.01 | 0.00 | -0.03 | -0.03 |

[c] $p<0.10$, [b] $p<0.05$ and [a] $p<0.01$

Table 7.1 Cont.

| | **27.** | **28.** | **29.** | **30.** | **31.** | **32.** | **33.** | **34.** | **35.** | **36.** | **37.** | **38.** | **39.** | **40.** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27. Reyada. | 1.00 | | | | | | | | | | | | | |
| 28. RC Jubail & Yanbu. | 0.39[a] | 1.00 | | | | | | | | | | | | |
| 29. Rabigh. | 0.34[a] | 0.38[a] | 1.00 | | | | | | | | | | | |
| 30. AL-Ahssa. | 0.36[b] | 0.38[b] | 0.35[b] | 1.00 | | | | | | | | | | |
| 31. INJAZ. | 0.38[b] | 0.36[b] | 0.38[b] | 0.39[a] | 1.00 | | | | | | | | | |
| 32. Chambers | 0.38[b] | 0.36[b] | 0.35[b] | 0.40[a] | 0.34[a] | 1.00 | | | | | | | | |
| 33. Prod/Serv Innovation | -0.11[b] | -0.04[b] | -0.02[b] | -0.02[b] | -0.04[a] | -0.04 | 1.00 | | | | | | | |
| 34. Process Innovation | -0.13[b] | -0.14[b] | -0.14[a] | -0.14[b] | -0.11[a] | -0.12[a] | -0.56[a] | 1.00 | | | | | | |
| 35. 1 Family Employ | 0.07 | 0.03 | -0.01 | -0.01 | 0.01 | -0.06 | 0.04 | 0.09 | 1.00 | | | | | |
| 36. 2-3 Family Employ | -0.02 | -0.03 | 0.06 | -0.01 | 0.09 | -0.07 | 0.09 | 0.06 | -0.39[a] | 1.00 | | | | |
| 37. 4 Family Employ | -0.04 | 0.01 | 0.07 | 0.02 | -0.07 | 0.01 | -0.05 | 0.02 | -0.38[a] | -0.36[a] | 1.00 | | | |
| 38. 0 Family Partners | -0.05 | -0.08 | -0.03 | -0.02 | 0.01 | 0.01 | 0.02 | -0.01 | 0.01 | 0.08 | 0.06 | 1.00 | | |
| 39. 1 Family Partners | 0.03 | 0.05 | 0.03 | 0.02 | 0.05 | 0.02 | 0.01 | 0.02 | 0.02 | -0.03 | -0.05[a] | -0.36[a] | 1.00 | |
| 40. 2 Family Partners | 0.01 | 0.07 | 0.02 | -0.02 | -0.06 | 0.01 | 0.12 | -0.11 | -0.09 | 0.05 | 0.03[a] | -0.31[a] | -0.35[a] | 1.00 |
| 41. 3 Family Partners | 0.01 | -0.03 | -0.03 | 0.02 | 0.01 | 0.01 | 0.14 | 0.11 | -0.01 | 0.06 | 0.08[a] | -0.33[a] | -0.36[b] | -0.31[b] |

[c] $p<0.10$, [b] $p<0.05$ and [a] $p<0.01$

**Table 7.2 OLS estimates of financial barriers**

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 | Model 9 | Model 10 | Model 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | **Control** | **General HC** | | **Bus Adv** | **Innovation** | | **Family Involvement** | | | **Full Models** | |
| ***Control variables*** | | | | | | | | | | | |
| Size | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.05**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.05**[a] | **0.04**[a] |
| Age Business | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| Agriculture | -0.24 | -0.33 | -0.27 | -0.19 | -0.18 | -0.19 | -0.21 | -0.33 | -0.30 | -0.41 | -0.41 |
| Manufacturing | -0.45 | -0.33 | -0.29 | -0.29 | -0.35 | -0.38 | -0.44 | -0.52 | -0.51 | -0.61 | -0.64 |
| Services | **-0.82**[c] | **-0.77**[c] | **-0.76**[c] | **-0.75**[c] | **-0.62**[c] | **-0.71**[c] | **-0.73**[c] | **-0.80**[c] | **-0.80**[c] | **-0.63**[c] | **-0.73**[c] |
| Business Services | -0.11 | -0.22 | -0.23 | -0.25 | -0.03 | -0.04 | -0.10 | -0.19 | -0.19 | -0.17 | -0.19 |
| Sole Proprietorship | 0.32 | 0.26 | 0.31 | **0.87**[c] | 0.57 | 0.33 | 0.31 | 0.32 | 0.32 | **0.57**[c] | **0.41**[c] |
| Partnership | 0.28 | 0.23 | 0.23 | **0.36**[c] | 0.34 | 0.29 | 0.28 | 0.30 | 0.30 | 0.32 | **0.28**[c] |
| Team | **0.92**[b] | **0.85**[b] | **0.82**[b] | **0.89**[b] | **0.65**[b] | **0.90**[b] | **0.91**[b] | **0.97**[b] | **0.95**[b] | **0.53**[b] | **0.77**[c] |
| ***General Human Capital*** | | | | | | | | | | | |
| Gender | ----- | 0.50 | 0.45 | ----- | ----- | ----- | ----- | ----- | ----- | 0.45 | 0.52 |
| Degree | ----- | -0.46 | -0.43 | ----- | ----- | ----- | ----- | ----- | ----- | -0.38 | -0.51 |
| Habitual | ----- | -0.30 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| Portfolio | ----- | ----- | **-0.56**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.63**[b] | **-0.61**[b] |
| Sequential | ----- | ----- | -0.05 | ----- | ----- | ----- | ----- | ----- | ----- | -0.22 | -0.17 |
| ***Business Advice*** | | | | | | | | | | | |
| Modon | ----- | ----- | ----- | **-0.34**[a] | ----- | ----- | ----- | ----- | ----- | **-0.44**[a] | **-0.42**[a] |
| Sagia | ----- | ----- | ----- | 0.09 | ----- | ----- | ----- | ----- | ----- | -0.20 | 0.16 |
| SIDF. | ----- | ----- | ----- | -0.04 | ----- | ----- | ----- | ----- | ----- | -0.20 | -0.10 |
| Kafalah | ----- | ----- | ----- | 0.28 | ----- | ----- | ----- | ----- | ----- | 0.17 | 0.26 |
| ***Innovation*** | | | | | | | | | | | |
| Product/Service Innovation | ----- | ----- | ----- | ----- | ----- | **0.46**[a] | ----- | ----- | ----- | **1.29**[a] | ----- |
| Process Innovation | ----- | ----- | ----- | ----- | **1.28**[a] | ----- | ----- | ----- | ----- | ----- | **1.47**[a] |
| ***Family Involvement*** | | | | | | | | | | | |
| 2-3 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | -0.10 | ----- | -0.07 | -0.08 | -0.10 |
| 4 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | 0.08 | ----- | 0.08 | 0.04 | 0.09 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | -0.02 | -0.01 | 0.02 | 0.04 |
| 2 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | 0.18 | 0.17 | 0.22 | 0.15 |
| 3 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | 0.39 | 0.36 | 0.29 | 0.35 |
| Constant | **21.82**[a] | **22.08**[a] | **21.75**[a] | **21.85**[a] | **20.09**[a] | **21.50**[a] | **21.82**[a] | **21.89**[a] | **21.88**[a] | **20.44**[a] | **21.84**[a] |
| F Test | **4.27**[a] | **3.57**[a] | **3.08**[a] | **3.29**[a] | **6.17**[a] | **4.08**[a] | **3.51**[a] | **3.32**[a] | **2.86**[a] | **3.12**[a] | **2.25**[a] |
| $R^2$ | 0.1077 | 0.1198 | 0.1129 | 0.2142 | 0.1629 | 0.1140 | 0.1090 | 0.1124 | 0.1133 | 0.2674 | 0.2302 |
| Adjusted $R^2$ | 0.0825 | 0.0863 | 0.0762 | 0.1492 | 0.1365 | 0.0860 | 0.0780 | 0.0786 | 0.0737 | 0.1817 | 0.1281 |

Note: The excluded industrial sector dummy variable is Construction; the excluded entrepreneurial experience measure is novice entrepreneurs; the excluded number of family members working in the firms is 1 family member; the excluded number of family members holding equity in the firm is 0. Standardized beta coefficients are shown; n=328; [c] $p<0.10$, [b] $p<0.05$ and [a] $p<0.01$

**Table 7.3 OLS estimates of marketing barriers**

| | Model 12 | Model 13 | Model 14 | Model 15 | Model 16 | Model 17 | Model 18 | Model 19 | Model 20 | Model 21 | Model 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | **Control** | **General HC** | | **Bus Adv** | **Innovation** | | **Family Involvement** | | | **Full Models** | |
| ***Control variables*** | | | | | | | | | | | |
| Size | **0.04**[a] | **0.04**[a] | **0.04**[a] | **0.04**[a] | **0.08**[a] | **0.06**[a] | **0.05**[a] | **0.05**[a] | **0.05**[a] | **0.09**[a] | **0.07**[a] |
| Age Business | 0.01 | 0.01 | 0.01 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Agriculture | 0.58 | 0.57 | 0.67 | 0.45 | 0.69 | 0.68 | 0.70 | 0.46 | 0.58 | 0.13 | 0.14 |
| Manufacturing | **-1.60**[b] | **-1.60**[b] | **-1.52**[b] | **-1.44**[b] | **-1.42**[b] | **-1.48**[b] | **-1.58**[b] | **-1.72**[b] | **-1.70**[b] | **-1.42**[b] | **-1.46**[b] |
| Services | **-1.25**[b] | **-1.24**[b] | **-1.23**[b] | **-1.20**[b] | **-0.99**[b] | **-1.17**[b] | **-1.19**[b] | **-1.33**[b] | **-1.27**[b] | **-0.98**[b] | **-1.17**[b] |
| Business Services | -0.32 | -0.34 | -0.37 | -0.21 | -0.17 | -0.20 | -0.29 | -0.46 | -0.42 | -0.15 | -0.21 |
| Sole Proprietorship | 0.36 | 0.36 | 0.47 | 0.52 | 0.85 | 0.38 | 0.33 | 0.32 | 0.27 | 0.41 | 0.42 |
| Partnership | 0.21 | 0.20 | 0.19 | 0.30 | 0.33 | 0.24 | 0.22 | 0.27 | 0.27 | 0.43 | 0.36 |
| Team | **1.93**[a] | **1.87**[a] | **1.80**[a] | **1.64**[a] | **1.40**[a] | **1.89**[a] | **1.86**[a] | **1.94**[a] | **1.87**[a] | **1.19**[b] | **1.55**[b] |
| ***General Human Capital*** | | | | | | | | | | | |
| Gender | ----- | 0.21 | 0.10 | ----- | ----- | ----- | ----- | ----- | ----- | 0.26 | 0.21 |
| Degree | ----- | 0.03 | 0.08 | ----- | ----- | ----- | ----- | ----- | ----- | 0.03 | 0.13 |
| Habitual | ----- | -0.23 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| Portfolio | ----- | ----- | **-0.76**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.86**[b] | **-0.82**[b] |
| Sequential | ----- | ----- | 0.28 | ----- | ----- | ----- | ----- | ----- | ----- | 0.14 | 0.06 |
| ***Business Advice*** | | | | | | | | | | | |
| Modon | ----- | ----- | ----- | **-1.22**[b] | ----- | ----- | ----- | ----- | ----- | **-1.27**[b] | **-1.29**[b] |
| Sagia | ----- | ----- | ----- | 0.04 | ----- | ----- | ----- | ----- | ----- | 0.13 | 0.05 |
| SIDF. | ----- | ----- | ----- | 0.37 | ----- | ----- | ----- | ----- | ----- | 0.11 | 0.30 |
| Kafalah | ----- | ----- | ----- | 0.22 | ----- | ----- | ----- | ----- | ----- | 0.15 | 0.11 |
| ***Innovation*** | | | | | | | | | | | |
| Product/Service Innovation | ----- | ----- | ----- | ----- | **2.44**[a] | ----- | ----- | ----- | ----- | **2.42**[a] | ----- |
| Process Innovation | ----- | ----- | ----- | ----- | ----- | **0.84**[b] | ----- | ----- | ----- | ----- | **-0.83**[c] |
| ***Family Involvement*** | | | | | | | | | | | |
| 2-3 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | -0.63 | ----- | -0.65 | -0.54 | -0.59 |
| 4 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | 0.03 | ----- | 0.07 | 0.09 | 0.19 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.78[b]** | **0.76[b]** | **0.80[b]** | **0.76[b]** |
| 2 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.38[b]** | **0.31[b]** | **0.41[b]** | **0.28[b]** |
| 3 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **1.19[b]** | **1.22[b]** | **0.94[c]** | **1.06[c]** |
| Constant | **36.91[a]** | **36.87[a]** | **36.93[a]** | **36.68[a]** | **33.63[a]** | **36.32[a]** | **37.09[a]** | **37.36[a]** | **37.56[a]** | **34.42[a]** | **37.08[a]** |
| F Test | **6.46[a]** | **4.85[a]** | **4.88[a]** | **4.09[a]** | **10.39[a]** | **6.25[a]** | **5.63[a]** | **5.45[a]** | **4.90[a]** | **5.40[a]** | **3.63[a]** |
| $R^2$ | 0.1546 | 0.1560 | 0.1681 | 0.1831 | 0.2468 | 0.1647 | 0.1637 | 0.1719 | 0.1797 | 0.2900 | 0.3017 |
| Adjusted $R^2$ | 0.1307 | 0.1239 | 0.1337 | 0.1383 | 0.2230 | 0.1383 | 0.1346 | 0.1403 | 0.1431 | 0.2363 | 0.2185 |

Note: The excluded industrial sector dummy variable is Construction; the excluded entrepreneurial experience measure is novice entrepreneurs; the excluded number of family members working in the firms is 1 family member; the excluded number of family members holding equity in the firm is 0. Standardized beta coefficients are shown; n=328; [c] $p<0.10$, [b] $p<0.05$ and [a] $p<0.01$

**Table 7.4 OLS estimates of production input barriers**

| | Model 23 | Model 24 | Model 25 | Model 26 | Model 27 | Model 28 | Model 29 | Model 30 | Model 31 | Model 32 | Model 33 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | **Control** | **General HC** | | **Bus Adv** | **Innovation** | | **Family Involvement** | | | **Full Models** | |
| ***Control variables*** | | | | | | | | | | | |
| Size | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.05**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.05**[a] | **0.04**[a] |
| Age Business | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 |
| Agriculture | 0.66 | 0.54 | 0.60 | 0.65 | 0.72 | 0.58 | 0.66 | 0.63 | 0.62 | 0.59 | 0.57 |
| Manufacturing | **0.39**[b] | **0.54**[b] | **0.59**[b] | **0.52**[b] | **0.48**[b] | **0.41**[b] | **0.38**[b] | **0.34**[b] | **0.34**[b] | **0.50**[b] | **0.45**[b] |
| Services | 0.09 | 0.04 | 0.05 | 0.05 | 0.24 | 0.11 | 0.09 | 0.06 | 0.05 | 0.12 | 0.16 |
| Business Services | **0.45**[b] | **0.33**[b] | **0.31**[b] | **0.41**[b] | **0.52**[b] | **0.38**[b] | **0.42**[b] | **0.40**[b] | **0.40**[b] | **0.43**[b] | **0.32**[b] |
| Sole Proprietorship | -0.19 | -0.28 | -0.21 | -0.25 | -0.14 | -0.19 | -0.19 | -0.22 | -0.22 | -0.22 | -0.29 |
| Partnership | 0.27 | 0.25 | 0.22 | 0.28 | 0.32 | 0.27 | 0.26 | 0.28 | 0.28 | 0.34 | 0.31 |
| Team | **1.45**[a] | **1.50**[a] | **-1.47**[a] | **-1.45**[a] | **1.15**[a] | **1.43**[a] | **1.44**[a] | **1.42**[a] | **1.42**[a] | **1.21**[a] | **1.45**[a] |
| ***General Human Capital*** | | | | | | | | | | | |
| Gender | ----- | 0.06 | 0.01 | ----- | ----- | ----- | ----- | ----- | ----- | 0.21 | 0.14 |
| Degree | ----- | **-0.80**[b] | **-0.78**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.69**[b] | **-0.85**[b] |
| Habitual | ----- | 0.11 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| Portfolio | ----- | ----- | **-0.19**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.24**[b] | **-0.19**[b] |
| Sequential | ----- | ----- | **0.40**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **0.29**[b] | **0.37**[b] |
| ***Business Advice*** | | | | | | | | | | | |
| Modon | ----- | ----- | ----- | -0.10 | ----- | ----- | ----- | ----- | ----- | -0.15 | -0.14 |
| Sagia | ----- | ----- | ----- | -0.08 | ----- | ----- | ----- | ----- | ----- | -0.18 | -0.11 |
| SIDF. | ----- | ----- | ----- | **-0.35**[b] | ----- | ----- | ----- | ----- | ----- | **-0.23**[b] | **-0.35**[b] |
| Kafalah | ----- | ----- | ----- | -0.08 | ----- | ----- | ----- | ----- | ----- | -0.06 | -0.06 |
| ***Innovation*** | | | | | | | | | | | |
| Product/Service Innovation | ----- | ----- | ----- | ----- | **1.33**[a] | ----- | ----- | ----- | ----- | **1.23**[a] | ----- |
| Process Innovation | ----- | ----- | ----- | ----- | ----- | 0.22 | ----- | ----- | ----- | ----- | 0.18 |
| ***Family Involvement*** | | | | | | | | | | | |
| 2-3 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | **0.05**[b] | ----- | **0.05**[b] | **0.05**[b] | **0.03**[b] |
| 4 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | **0.04**[b] | ----- | **0.04**[b] | **0.08**[b] | **0.06**[b] |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.30[b]** | **0.30[b]** | **0.39[b]** | **0.29[b]** |
| 2 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | -0.10 | -0.14 | -0.06 | -0.07 |
| 3 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.42[b]** | **0.42[b]** | **0.47[b]** | **0.53[b]** |
| Constant | **17.11[a]** | **17.76[a]** | **17.80[a]** | **17.726[a]** | **15.32[a]** | **16.95[a]** | **17.08[a]** | **17.23[a]** | **17.24[a]** | **16.40[a]** | **17.97[a]** |
| F Test | **7.32[a]** | **6.09[a]** | **5.97[a]** | **4.73** | **10.00[a]** | **6.65[a]** | **5.96[a]** | **5.82[a]** | **4.96[a]** | **4.97[a]** | **3.71[a]** |
| $R^2$ | 0.1717 | 0.1883 | 0.1982 | 0.2058 | 0.2398 | 0.1734 | 0.1718 | 0.1815 | 0.1816 | 0.2731 | 0.3290 |
| Adjusted $R^2$ | 0.1483 | 0.1574 | 0.1650 | 0.1623 | 0.2158 | 0.1474 | 0.1430 | 0.1503 | 0.1450 | 0.2181 | 0.2403 |

Note: The excluded industrial sector dummy variable is Construction; the excluded entrepreneurial experience measure is novice entrepreneurs; the excluded number of family members working in the firms is 1 family member; the excluded number of family members holding equity in the firm is 0. Standardized beta coefficients are shown; n=328; [c] $p<0.10$, [b] $p<0.05$ and [a] $p<0.01$

**Table 7.5 OLS estimates of macroeconomic barriers**

| | Model 34 | Model 35 | Model 36 | Model 37 | Model 38 | Model 39 | Model 40 | Model 41 | Model 42 | Model 43 | Model 44 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | **Control** | **General HC** | | **Bus Adv** | **Innovation** | | **Family Involvement** | | | **Full Models** | |
| ***Control variables*** | | | | | | | | | | | |
| Size | **0.03**[a] | **0.02**[a] | **0.02**[a] | **0.02**[a] | **0.04**[a] | **0.02**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.02**[a] |
| Age Business | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Agriculture | 0.12 | 0.08 | 0.18 | 0.19 | 0.17 | 0.09 | 0.06 | 0.06 | 0.06 | 0.08 | 0.05 |
| Manufacturing | -0.67 | -0.58 | -0.46 | -0.30 | -0.59 | -0.70 | -0.52 | -0.36 | -0.34 | -0.35 | -0.41 |
| Services | -0.59 | -0.55 | -0.56 | -0.44 | -0.47 | -0.61 | -0.48 | -0.34 | -0.35 | -0.58 | -0.57 |
| Business Services | -0.68 | -0.67 | -0.78 | -0.75 | -0.62 | -0.71 | -0.66 | -0.64 | -0.62 | -0.56 | -0.52 |
| Sole Proprietorship | -0.20 | -0.23 | -0.22 | -0.34 | -0.31 | -0.20 | -0.19 | -0.22 | -0.22 | -0.33 | -0.29 |
| Partnership | 0.22 | 0.19 | 0.18 | 0.22 | 0.30 | 0.21 | 0.27 | 0.28 | 0.28 | 0.28 | 0.25 |
| Team | **2.28**[a] | **2.24**[a] | **2.17**[a] | **2.29**[a] | **2.03**[a] | **2.21**[a] | **1.44**[a] | **1.42**[a] | **1.42**[a] | **1.16**[a] | **1.30**[a] |
| ***General Human Capital*** | | | | | | | | | | | |
| Gender | ----- | **-0.41**[a] | **-0.29**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.24**[b] | **-0.15**[b] |
| Degree | ----- | **-0.46**[b] | **-0.40**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.29**[b] | **-0.39**[b] |
| Habitual | ----- | -0.05 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| Portfolio | ----- | ----- | **-0.62**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.40**[b] | **-0.35**[b] |
| Sequential | ----- | ----- | **0.52**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **0.38**[b] | **0.25**[b] |
| ***Business Advice*** | | | | | | | | | | | |
| Modon | ----- | ----- | ----- | -0.75 | ----- | ----- | ----- | ----- | ----- | -0.35 | -0.34 |
| Sagia | ----- | ----- | ----- | -0.16 | ----- | ----- | ----- | ----- | ----- | 0.08 | 0.03 |
| SIDF. | ----- | ----- | ----- | -0.05 | ----- | ----- | ----- | ----- | ----- | -0.02 | -0.09 |
| Kafalah | ----- | ----- | ----- | 0.29 | ----- | ----- | ----- | ----- | ----- | -0.35 | -0.44 |
| ***Innovation*** | | | | | | | | | | | |
| Product/Service Innovation | ----- | ----- | ----- | ----- | **1.10**[a] | ----- | ----- | ----- | ----- | **0.67**[a] | ----- |
| Process Innovation | ----- | ----- | ----- | ----- | ----- | 0.20 | ----- | ----- | ----- | ----- | 0.15 |
| ***Family Involvement*** | | | | | | | | | | | |
| 2-3 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | **0.15**[b] | ----- | **0.16**[b] | **0.12**[b] | **0.14**[b] |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | **0.14**[b] | ----- | **0.17**[b] | **0.27**[b] | **0.24**[b] |
| 1 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.30**[b] | **0.28**[b] | **0.28**[b] | **0.33**[b] |
| 2 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.10**[c] | **0.12**[c] | 0.15 | 0.08 |
| 3 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.42**[b] | **0.41**[b] | **0.29**[b] | **0.22**[b] |
| Constant | **31.07**[a] | **31.24**[a] | **31.31**[a] | **28.14**[a] | **29.60**[a] | **31.22**[a] | **17.08**[a] | **17.23**[a] | **17.24**[a] | **18.30**[a] | **19.28**[a] |
| F Test | **5.03**[a] | **3.87**[a] | **4.18**[a] | **3.07**[a] | **5.54**[a] | **4.55**[a] | **5.96**[a] | **5.82**[a] | **4.96**[a] | **3.73**[a] | **3.33**[a] |
| $R^2$ | 0.1247 | 0.1285 | 0.1475 | 0.2019 | 0.1489 | 0.1255 | 0.1718 | 0.1815 | 0.1816 | 0.3083 | 0.2819 |
| Adjusted $R^2$ | 0.0999 | 0.0953 | 0.1122 | 0.1361 | 0.1220 | 0.0979 | 0.1430 | 0.1503 | 0.1450 | 0.2289 | 0.1971 |

Note: The excluded industrial sector dummy variable is Construction; the excluded entrepreneurial experience measure is novice entrepreneurs; the excluded number of family members working in the firms is 1 family member; the excluded number of family members holding equity in the firm is 0. Standardized beta coefficients are shown; n=328; [c] $p<0.10$, [b] $p<0.05$ and [a] $p<0.01$

# Chapter 8

# Discussions and Overall Conclusion

## 8.1 Introduction

Small and medium enterprises have been a subject of concern and interest for researchers, governments, and policy makers for a long period of time (Storey 1994). This importance came from job creation that SMEs generate in the economy. Governments and policy makers continually introduce a range of policies to support the SMEs business sector to survive and grow (Bennett, 2014).

At the start of this thesis in chapter one the reader was introduced to the research questions that are investigated in the thesis. These are: (i) to identify the levels of use as well as awareness of the government support schemes in Saudi Arabia, (ii) to identify what are the barriers to growth in Saudi Arabia, (iii) to see the extent to which the use of government support schemes helps to reduce the barriers and problems that entrepreneurs face in trying to grow their businesses, and (iv) to see the extent to which human capital theory provides a theoretical framework to allow the testing of hypotheses relating to better understanding barriers to growth in Saudi Arabia. There is an absence of any large scale study to identify the barriers to growth, level of awareness and levels of use of government funded support schemes in Saudi Arabia. Thus, whilst the aforementioned are well researched within the UK, as well in developing nations such as Ghana, the US and northern European countries such as the Netherlands, Italy and Spain, it is surprising that there are such large and important research gap in Saudi Arabia.

This chapter is organised as follows. The second section presents the key findings. The third section provides the theoretical contributions of the thesis. The fourth and fifth sections present limitations and implications for future research followed by implications for practice and policy. Lastly, conclusions complete the chapter.

## 8.2 Key Findings

The purpose of this section is to indicate the key findings related to the level of awareness and level of use of government supported schemes and the barriers to growth in Saudi Arabia.

### 8.2.1 Level of Awareness of Government funded support schemes

The Saudi government provides a large number of support schemes with generous financial support, especially to Modon and the Saudi Credit Bank. Whilst it is not the largest support fund the Centennial Fund enjoys the highest level of awareness amongst Saudi entrepreneurs with 93.9%. The major support schemes of Modon, Sagia, SIDF, Kafalah and the Saudi Credit Bank also show high levels of awareness and are recognised by more than nine out of ten Saudi entrepreneurs. Interestingly, whilst Bab Rizq Jameel is a very small support scheme it does have a level of awareness, which is on par with the larger and better endowed support schemes.

Bader and the Women's Industrial city both had levels of awareness of approximately four out of five entrepreneurs knowing about them. The remaining smaller support schemes all had levels of awareness around the 75% level with the exceptions of Erada (73.78%) and Dhahran Valley (70.73%). It is very encouraging for the Saudi government that the levels of awareness are so high.

### 8.2.2 Use of Support Schemes

Whilst the levels of awareness of government support schemes are thus very high and ranges from 70.73% with Dharan Valley to 93.9% with the Centennial Fund there are substantial variations in the levels of use of government support schemes. In other words, whilst the resources spent on promoting awareness of government support schemes has worked very well for all bar four of the support schemes the levels of use are very low. For policy makers this raises important issues about whether it is economically justifiable to continue to support such a large number of government support schemes. The five major support schemes in Saudi Arabia enjoyed the highest levels of use. Modon (58.54%), SIDF (48.78%), Saudi Credit Bank (46.34%), and SAGIA (42.68%) dominate the market for business support in Saudi Arabia. In contrast, Bab Rizq Jameel is only used by 3.66% and that is the fifth most used source of government support. Stated differently, after the top five support schemes there is a huge drop in the levels of use of the other government funded support schemes. Reyad and the Royal Comm of Jubail and Yanbu were used by 2.44% and 2.13% of Saudi entrepreneurs, respectively. Hadaf, Erada, King Abdullah Econmic Cities, Women's Industrial city, the Centennial Fund, Bader, KAUST, Dharan and Wa'ed were all used by less than 2% of Saudi entrepreneurs.

The two biggest government support schemes are Modon and the Saudi Credit Bank. Tests were carried out to see how Modon users compared to non-Modon users in the level of use of the range of government funded support schemes. 52.9% of Non-Modon users had used the Saudi Credit Bank, compared to a corresponding level of 41.2% of Modon users. 5.15% of non-Modon users used Erada compared to 0.52% of Modon users. A similar pattern was found for the level of use of the Royal Commission of Jubail and Yanbu. Specifically, 4.41% of Modon users used the Royal Commission of Jubail and Yanbu compared to 1.04% of Modon users.

Repeating this comparative exercise for non-Saudi Credit Bank users against those entrepreneurs who had used the Saudi Credit Bank produced three significant results. 63.6% of non-Saudi Credit Bank users indicated they had used Modon which was substantially higher than the 52.6% level of use of Modon for Saudi Credit Bank users. However, users of the Saudi Credit Bank reported a higher level of use of SIDF compared to the non-Saudi Credit Bank users, and specifically theses were 55.3% versus 43.2%. A similar pattern emerged for the use of Kafalah where the level of use was 49.34% if an entrepreneur had used the Saudi Credit Bank compared to 34.66% for the non-Saudi Credit Bank users.

Taken together the above comparisons of levels of use of Modon users versus non-Modon users and also for Saudi Credit Bank users against non-Saudi Credit Bank users shows to indicate a tentative indication of preferences amongst the by and large smaller support schemes.

94.3% of the entrepreneurs had used one or more source of government advice. Given that substantial resources are spent by the Saudi government on support for entrepreneurs and their ventures, and that such policies may impact upon the capacity of ventures to survive, grow and other performance measures it is not entirely surprising, therefore, that a nonetheless important finding of this study is the fact that there is a large market for government backed advice in Saudi Arabia. Indeed, Bennett and Robson (2003) found that 99.9%, virtually every SME in his survey or Scotland and Northern England had used at least one source of advice. The SBRC (1992) survey of 1991 had reported that 85.8% of SMEs had used at least one source of advice. The Bennett and Robson (2000) study reported a corresponding level of 90%. Whilst the researcher's study of Saudi Arabia has focused upon government supported schemes it is encouraging that the levels of use are higher than those for studies of UK support schemes. For example, Robson found that the use of Business Shop or the Small Business Gateway was 27.4%, Local Enterprise Agencies or Trusts were used by

33.5%, and Local LECs or Scottish Enterprise was used by 33.3% of SMEs. A Bank of England (1996) study reported that 22% of SMEs had used Business Link, and a Lloyds/SBRT (1998) report found that BL was used by 26% of SMEs. The MORI (1994) study of 755 SMEs whilst a large scale study had reported that only 1% of SMEs had used BL.

18.3% of entrepreneurs only used one source of support. The vast majority of entrepreneurs, 76%, used two or more government support schemes. Undoubtedly the absence of a need to pay for using the schemes will have contributed to their popularity and take up. Given the absence of any other large scale survey of the use of government funded support schemes in Saudi Arabia this survey has provided a key foundation and benchmark for future studies of Modon, and the Saudi Credit Bank and the smaller support schemes in Saudi Arabia.

The previous chapter looked at the number of sources of support schemes which were used against key characteristics of the entrepreneurs and their ventures. The number of sources of advice was systematically related to education, whether the venture was a team start, whether the venture was a product or service innovator, and whether the venture was a process innovator, but it was not statistically related to gender, and prior entrepreneurial experience.

### 8.2.3 Barriers to Growth

The results in the previous chapter showed that the availability of collateral to secure bank loans, the difficulties to meet commercial loan criteria, and the high cost of fixed costs were the three most serious barriers to growth in Saudi Arabia and was found to be a crucial barrier for 55.79%, 54.57% and 54.57% of entrepreneurs, respectively. Difficulties to raise capital from family, and access to debt finance from local banks was a crucial barrier for

52.74% and 51.83% of entrepreneurs in Saudi Arabia and was ranked 5th and 7th respectively. In contrast, Cosh and Hughes (2003) found that in the UK financial constraints were not a major problem for SMEs. Indeed, their study used a five point scale of '1', insignificant, '2' slightly significant, '3' moderately significant, '4' very significant, and '5' crucial and they included only 11 barriers in their study including two financial barriers. The availability and cost of finance for expansion had a mean score of 2.12 and was ranked sixth by Cosh and Hughes (2003) whilst the availability and cost of overdraft finance had a mean score of 1.95 and was ranked seventh. Equally, a recent study by BIS (2015) found that obtaining finance was only a main obstacle for 5% of respondents and cash flow was a main obstacle for 7% of respondents. Earlier studies conducted by the SBS (2012) also found low instances of financial barriers being the main obstacle facing UK SMEs – 7% indicated obtaining finance was a problem and 10% indicated cash flow was a problem. Near identical results had been found in their earlier bi-annual survey where 8% indicated obtaining finance was a barrier, and 11% indicated that cash flow was a problem (SBS, 2010). In the earlier ASBS (2007/8) survey obtaining finance was only the main problem for 3% of UK SMEs and the corresponding value for cash flows was 9%. In Obeng's (2007) study he found that the most pressing financial barrier was interest rates too high which was an important or a crucial limitation for 68.5% of entrepreneurs and it was ranked 2nd out of 38 limitations. Obeng (2007) also found that difficulty to meet loan criteria (50.3%: 9th), and do not have collateral to secure bank loan (48.8%: 11th) were a cause for concern in Ghana. However, Obeng (2007) also found that inadequate access to debt finance (41.8%: 18th) and inadequate family finance (37.2%: 20th) were mentioned by more than one third of entrepreneurs although in rank terms they were mid-level limitations to growth.

The Cosh and Hughes (2003), BIS (2015), SBS (2014), SBS (2012), SBS (2010) and ASBS (2007/8) studies did not include a direct comparison of high cost of fixed costs. Access

to new technology was mentioned by 53.35% of entrepreneurs in Saudi Arabia as a crucial barrier and was ranked fourth in order of magnitude. Cosh and Hughes (2003) found that acquisition of technology was ranked 8th out of the 11 constraints included in their study with a mean score of 1.83. Obeng (2007) found that access to new technology was an important or crucial barrier for 45.7% of entrepreneurs in Ghana, and that was ranked 13th in order of importance.

A shortage of skilled labour was mentioned by 52.13% of Saudi entrepreneurs and this was ranked 6th in order of magnitude. Cosh and Hughes (2003) also found that skilled labour was a major constraint for UK SMEs and they reported a mean score of 2.38 and it was ranked 4th. In contrast Obeng (2007) found that a shortage of skilled labour was an important or a crucial barrier for 34% of entrepreneurs in Ghana and was ranked 23rd out of 38 barriers.

Corruption was ranked 8th and it was mentioned by 51.22% of Saudi entrepreneurs. In contrast the Cosh and Hughes (2003) and other UK surveys have not included corruption as a barrier. Corruption was not a problem for entrepreneurs in Ghana where Obeng's (2007) study found that corruption was only mentioned by 20.3% of entrepreneurs and it was ranked 35th in order of importance.

Inadequate demand for products or services (50.91%), and high rate of inflation and interest rates (50.91%) were ranked equal 9th in order of magnitude. The BIS (2015) report mentions that the SBS (2014) survey found that the Economy was the most mentioned main obstacle to the success of UK businesses and was mentioned by 13%, slightly more than one in eight of the SMEs. The SBS (2012) survey also found that the Economy was the main obstacle to the success of the business but the magnitude was much higher and mentioned by 38% of SMEs. The SBS (2010) survey found that the Economy was the main obstacle to the success of the business for 33%, one third, of the SMEs in the UK. That represented a more

than doubling of the 16% which was reported in the ASBS (2007/2008) survey. Obeng's (2007) large scale study of Ghana found that the high rate of inflation was the number one barrier which was encountered by Ghanaian entrepreneurs. Indeed 71.4%, slightly more than seven out of ten entrepreneurs found that the high rate of inflation was an important or a crucial barrier in Ghana (Obeng, 2007).

Availability of industrial sites was mentioned by 50% of Saudi entrepreneurs as a crucial barrier and was ranked 11$^{th}$ of 34 barriers. Cosh and Hughes (2003) found that the availability of appropriate premises or site was ranked 10$^{th}$ out of the 11 obstacles they assessed with a mean score of 1.65. Obeng (2007) also found that a lack of industrial sites was not a problem for Ghanaian entrepreneurs. He found that 35.1% of Ghanaian entrepreneurs indicated that a lack of industrial sites was a major or a crucial barrier and this was ranked 22$^{nd}$ in order of magnitude.

Difficulty in finding appropriate equipment (49.70%) and cost of utility charges (49.70%) were jointly ranked 12$^{th}$ of the barriers in Saudi Arabia. In contrast Obeng (2007) found that 29.4% of entrepreneurs in Ghana indicated that a difficulty in finding appropriate equipment was an important or a crucial barrier, and this was ranked 27$^{th}$ out of 38 limitations.

Access to equity finance (49.39%), interest rates charges to SMEs business sector (48.78%) and difficulties to raise capital from friends (47.87%) were ranked 14$^{th}$, joint 16$^{th}$ and joint 18$^{th}$, respectively. An inadequate access to equity finance was an important or a crucial limitation for only 20%, exactly one in five, of the entrepreneurs in Obeng's (2007) study of Ghana. Furthermore, the aforementioned limitation was ranked 36$^{th}$ and it was amongst the least three important reasons.

Competition from imported products was a crucial barrier for 49.09% of Saudi entrepreneurs and was ranked 15$^{th}$. Cosh and Hughes (2003) did not have a corresponding

category. In contrast, Cosh and Hughes (2003) focused upon exporting activity and included the barrier, access to overseas markets, which was ranked 11 out of 11 with a mean score of 1.63. Obeng's (2007) study found that competition from imported goods was not one of the top barriers to growth in Ghana. Indeed, he found that completion from imported goods was only mentioned by 28.5% of entrepreneurs and was ranked 28th out of 38 barriers.

Registration, licensing and red tape was a crucial barrier for 48.48% of Saudi entrepreneurs and was ranked joint 16th in order of magnitude. The SBS (2014) survey found that red tape, and regulation was the main obstacle to the success of the business for 7% and 6%, respectively, of UK SMEs but it was ranked joint 6th out of 8 assessed obstacles. The SBS (2014) was the first of the government funded surveys to include red tape. In contrast, Obeng (2007) found that only 18.8%, slightly less than one in five entrepreneurs, indicated that registration, licensing and red tape was an important or a crucial limitation and it was the penultimate reason in rank order.

The high cost of local raw material, the high cost of imported raw material, inadequate technical skills, and transport and storage costs (and difficulties to raise capital from friends, which is discussed above) were the joint 18th barrier with 47.87%. In contrast Obeng (2007) found that high cost of local raw materials was relatively much more important in Ghana. He found that the aforementioned reason was mentioned by 51.7% entrepreneurs as an important or a crucial limitation and that was ranked 7th out of 38 limitations. The high cost of imported raw materials was an important or a crucial limitation for 42.5% of Ghanaian entrepreneurs and was ranked 17th.

High advertising costs, and managerial or technical know-how were crucial barriers for 47.26% of Saudi entrepreneurs and were ranked joint 23rd. Cosh and Hughes (2003) found that marketing and sales skills, and management skills, were the third and fifth most important constraint on the ability of UK SMEs to meet their business objectives with a mean

of 2.40 and 2.19, respectively. High advertising costs were an important or a crucial limitation for 43.1% of entrepreneurs in Ghana and it was ranked 14th out of 38 limitations (Obeng, 2007).

Bureaucracy in government agencies (46.34%) was ranked 25th, and Saudi labour law criteria and regulations (46.04%), and inadequate market research (46.04%), and the high cost of replacing old equipment (46.04% were ranked joint 26th. Obeng (2007) found that the high cost of replacing old equipment (52.3%: 6th), was much more of a barrier than inadequate market research (27.9%: 29th).

Inadequate supply of raw materials (45.73%), high wages for skilled labour (45.43%) inadequate marketing and management skills (44.82%), inadequate financial skills (44.51%), telecommunication networks (42.07%), and competition from local market (41.77%) cover the 29th through the 34th ranked barriers to growth in Saudi Arabia. Thus, it is apparent that market related barriers account for four of the least important barriers in Saudi Arabia. In contrast whilst the Cosh and Hughes (2003) study did not go into the same detail of categories they found that increasing completion, followed by overall growth of market demand in principal product markets were the top two most important constraint on the ability of UK businesses to meet their business objectives with a mean score of 2.7 and 2.47, respectively. High wages for skilled labour (48.3%: 12th), was much more of a problem for entrepreneurs in Ghana compared with Inadequate financial skills (29.5%: 26th), Inadequate management skills (26.3%: 30th), Inadequate supply of raw materials (25.6%: 31st), Poor telecommunication networks (21.3%: 34th) (Obeng, 2007).

### 8.2.4 Hypotheses testing

This thesis has followed a quantitative approach to investigating barriers to growth and the use of business advice in Saudi Arabia using one of the first large scale independent surveys of entrepreneurship. The purpose of this section is to provide a summary of the key research findings from the results presented in the second results chapter. A summary of the findings against the stated hypotheses is presented in Table 8.1 and is also shown in figures 8.1 and 8.2. Table 8.2 indicates which of the control variables are systematically related to the control variables.

**Table 8.1 Summary of hypotheses**

| **Hypotheses** | **Supported or Not Supported** |
|---|---|
| ***General Human Capital*** | |
| H1a: Male entrepreneurs will encounter less barriers than female entrepreneurs | Macroeconomic (Mc) Supported |
| H1b: Entrepreneurs with degrees will encounter less barriers than those without degrees | Production Inputs (PI) and Macroeconomic (Mc) Supported) |
| ***Entrepreneurial Experience*** | |
| H2a: Habitual entrepreneurs will encounter less barriers than novice entrepreneurs | Not Supported |
| H2b: Portfolio entrepreneurs will encounter less barriers than novice entrepreneurs | Financial (F), Market (Mk), Production Inputs (PI) and Macroeconomic (Mc) |
| H2c: Sequential (Serial) entrepreneurs will encounter less barriers than novice entrepreneurs | Not Supported |
| H2d: Portfolio entrepreneurs will encounter less barriers than sequential (serial) entrepreneurs | Financial (F), Market (Mk), Production Input (PI) and Macroeconomic (Mc) |
| ***Business Advice*** | |
| H3: Entrepreneurs who have used business advice will encounter less barriers than those who have not used business advice | Modon (F, Mk)[5] and SIDF. |
| ***Innovation*** | |
| H4a: Firms which introduced a product/service innovation will encounter more barriers than those who have not introduced a product/service innovation | Financial (F), Market (Mk), Production Input (PI), and Macroeconomic (Mc) |
| H4b: Firms which have introduced a process innovation will encounter more barriers than those who have not introduced a process innovation | Financial (F), Market (Mk), and Macroeconomic (Mc) |

[5] In the appendix the results of the full models including the support schemes with very low levels of use are reported. It was found in these models that Hadaf (F, Mk, PI), Erada (F, Mk), Centennial Fund (Mk , PI, Mc), and Wa'ed (PI, Mc). Please note that given the small number of users these significant relationships need to be treated with caution.

| | |
|---|---|
| ***Family involvement*** | |
| H5a: Firms with a greater number of family members employed in the business will encounter more barriers than firms employing fewer members | Production Input (PI), and Macroeconomic (Mc) |
| H5b: Firms which have a greater number of family members with equity stakes in the business will encounter more barriers than firms where there are fewer members holding equity stakes. | Market (Mk), Production Input (PI), and Macroeconomic (Mc) |

**Table 8.2: Summary of Control variables**

| **Control variables** | **Supported or Not Supported** |
|---|---|
| Size | Financial (+), Market (+), Production Input (+) Macroeconomic (+) |
| Age of Business | |
| Sector – Agriculture | |
| Sector – Manufacturing | Market (-), Production Input (+) |
| Sector – Services | Financial (-), Services (-) |
| Business Services | Production Inputs (+) |
| Legal Structure – Sole Proprietorship | |
| Legal Structure – Partnership | |
| Team | Financial (+), Market (+), Production Inputs (+) and Macroeconomic (+) |

**Figure 8.1 Gender, Education and prior business experience hypotheses supported with barriers to growth in Saudi Arabia**

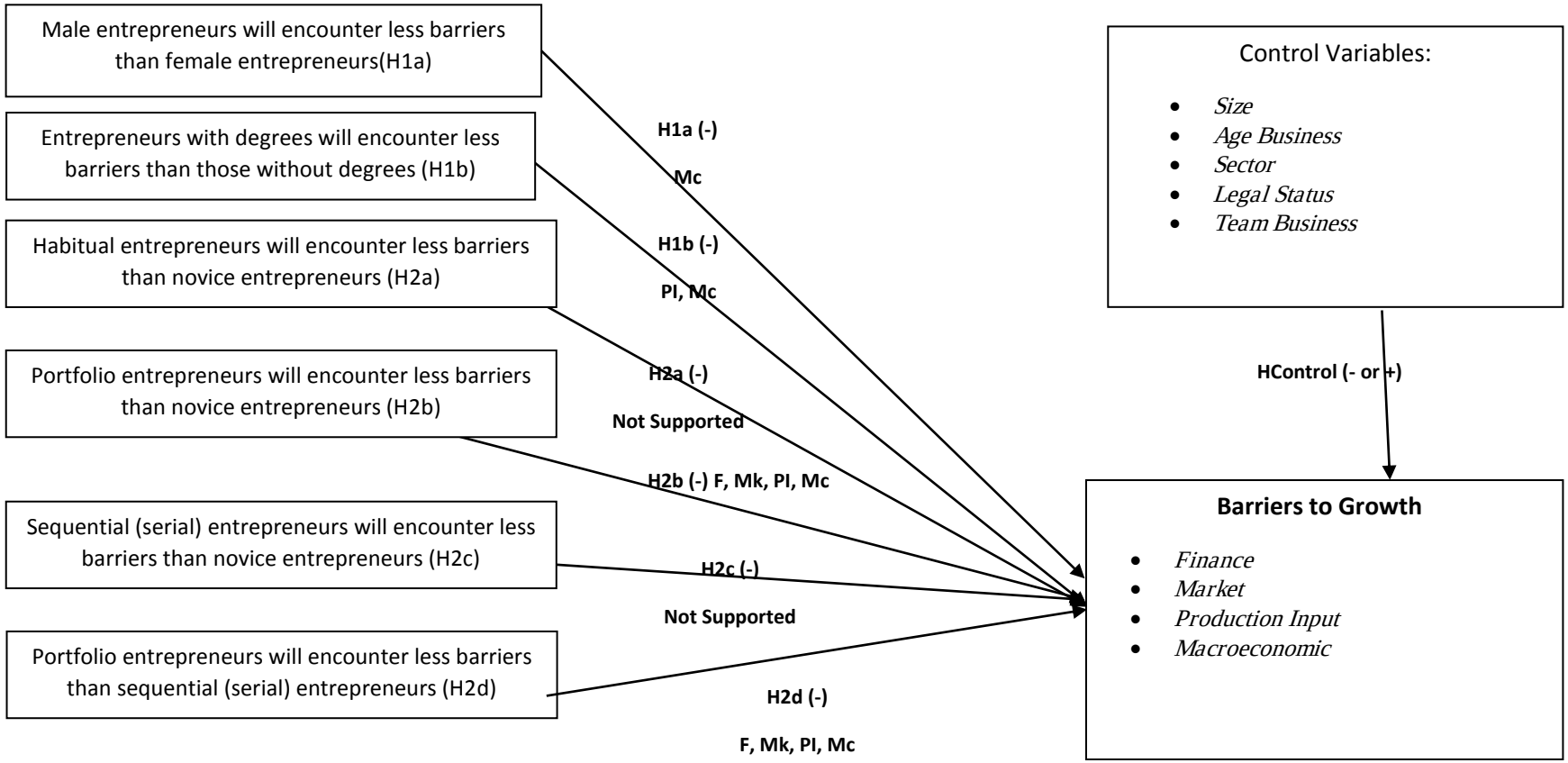
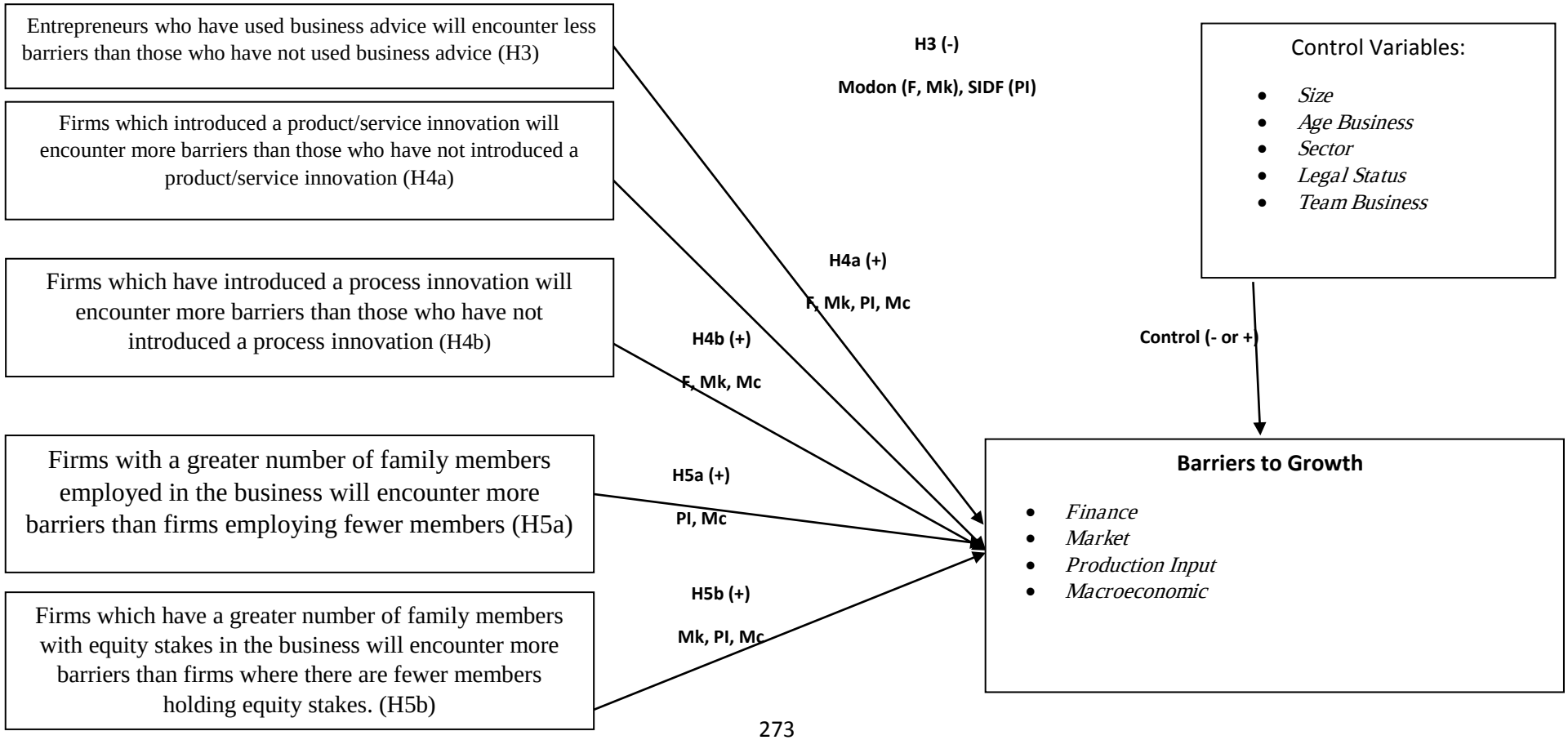


**Figure 8.2 Business advice, innovation and family hypotheses supported with barriers to growth in Saudi Arabia**



The results of the regression analysis have produced some very interesting results. Overall, the results relating to the entrepreneur's gender produced mixed results for H1a with it supported with regard to Macroeconomic barriers; and, mixed results also found for H1b with it supported with regard to education and Production Inputs and Macroeconomic barriers. For the specific human capital related hypotheses the findings were polarised with some being strongly supportive of the hypotheses, and other findings found no support for the theory related hypotheses. Hypotheses H2b and H2d was strongly supported with regard to all types of barriers examined in this study. In contrast hypotheses H2a and H2c were not supported in any of the models.

Hypothesis H3 showed that the use of only two of the support schemes was associated with fewer barriers. Specifically, the use of Modon was associated with fewer financial and market barriers; the use of SIDF was associated with fewer production input barriers. The main regression models were only able to include as dummy variables four support schemes because the other schmes were used by such a low proportion of entrepreneurs. For completeness when the models were run with all of the support schemes for which there were a very small number of users the following relationships are also found to be significant but need to be treated with caution. The use of Hadaf was associated with fewer financial, market and production input barriers; the use of Erada was associated with fewer financial and Market barriers; the use of the Centennial Fund was associated with fewer market, production input, and Macroeconomic barriers; and, the use of Wa'ed was associated with fewer production input and macroeconomic barriers. Thus, hypothesis H3 is strongly supported by the model results. However, it is interesting to see that some of the large support schemes are not found to help entrepreneurs. The implications are discussed later in the chapter.

Hypothesis H4a and H4b were both strongly supported by the model results, with the former hypothesis supported by all four types of barriers, and the later hypothesis supported

with regard to financial, market and macroeconomic barriers. Hypothesis H5a was supported with regard to Production Inputs and Macroeconomic barriers, and hypothesis H5b was supported with regard to Market, Production Input and Macroeconomic barriers. Attention now centres upon providing explanations of the results.

#### 8.2.4.1 Gender

An entrepreneurs' gender could play an important role in his or her ability to encounter barriers to growth. Early empirical studies found that women were more risk averse than men (Pettigrew, 1958; Changiti et al. 1995). Men in general had more access to external support and funding than women i.e. in 1997, 97.5% of equity funding for new ventures went to enterprises owned by men (Carter et al., 2003). In a survey of 235 US women business owners in 2000; the study showed that most of business women had difficulties getting funds from external sources such as banks, venture capitalist, or business support organisations (Carter et al., 2002). In addition, most of leading positions in government and support schemes were held by men (Welter and Smallbone, 2003). According to Chatterjee (Carlino et al., 2007) both men and women with a firm entrepreneurial intention perceive successful entrepreneurs to have feminine attributes. In his study there was a lack of a gender difference in entrepreneurial intention (Carlino et al., 2007).

In the results presented in the previous chapter it was found that women encountered more macroeconomic barriers compared to men. But, for financial, marketing, and production input barriers there were no differences by gender and whether or not the entrepreneurs were more likely to encounter barriers. The results are surprising because in Saudi Arabia all support schemes leaders and majority of employees are men. In the Kingdom of Saudi Arabia (KSA), which is a country with unwritten social mores in a male-

controlled, male dominant society (Ahmad, 2011). This is an argument in the socio-cultural status of women in Saudi Arabia, which relates family responsibility to women only (Achoui, 2009). Even for those women who work full time, with women taking responsibility for mothering, cooking and raising children (Sabbagh, 1996). Therefore, women are facing a variety of obstacles and reduces the chances of Saudi female entrepreneurs to setup their own businesses (Alshumaimri et al., 2010). In a study about Saudi women entrepreneurs by Sadi and AL-Ghazali (2010) the main barriers faced by women entrepreneurs in Saudi Arabia were: social and traditional restrictions, lack of market studies, lack of support of government, market domination by few investors, and a lack of coordination between the various government departments was the most important operating barrier facing businesswomen. In Saudi Arabia, women currently account for just 15% of the Saudi workforce, among the lowest labor participation rates in the world (Almunajjed, 2010). This is not surprising reflection of Middle East and Muslim society, strict expectations about gender roles shape young women's socialization experiences. Women are expected to be first and primary wives, mothers, and homemakers, while men are expected to provide source of income and protect their families (Almobaireek and Monolova, 2011).

However, further probing of the data suggests that some women by utilising team start businesses and having male partners is a way of better accessing support schemes. But the other side of this point is that women who are in non-team businesses do comparatively poorly in accessing support schemes and indicates that women do encounter problems. The results found that women in non-team start businesses reported the lowest level of use of Sagia (11%) which was higher than the level reported by men in non-team start businesses (22.22%) and less than women in team starts (29.41%) and non-team start businesses (46.55%). Women in non-team start businesses reported the lowest level of use of Sidf (33.33%) whilst women in team start businesses (41.18%), men in non-team start (48.15%)

and men in team start businesses (49.82%) reported higher levels of use. For Kafalah there were no significant differences in the level of use based on gender and team start combined. For Modon it was found that women in non-team start businesses (33.3%) reported a higher level of use compared to men in non-team start businesses (22.22%). Women in team start businesses (64.71%) and men in team start businesses (62.55%) both reported higher levels of use of Modon compared to their counterparts in non-team businesses.

Buttner and Rosen (1992) reported that there were no significant differences in entrepreneurs' gender during the loan application process. In Saudi Arabia, however, most of support schemes do not favour lending to men over women i.e. when reviewing loan process requirements for this study, all support schemes required that applicant must have Saudi nationality and have no other outstanding loans or credit facilities from other sources at the time of application for business support (Abdul-Muhmin and Umar, 2007). Similarly, other support schemes were using successful startup stories of Saudi women entrepreneurs as advertising tool to attract more women entrepreneurs to utilize the support scheme services (Reeves, 2013; Shiraishi and Yabe, 2014). Many scholars have found no relationship between gender and uses of external business advice; for example, a study by Robson et al (2003) analysed 650 SMEs in Scotland found that there was no influence of gender on the uses of business advice (Robson and Obeng, 2008). Finally, a study of Canadian entrepreneurs seeking loans from commercial banks by Haines at el. (1999); the study analysed 1,393 loan application and there was no impact of gender on small business borrowers loan process (Hirata and Shimizu, 2003).

Notwithstanding the fact that it was only macroeconomic factors which were the only barriers systematically related to gender it does need to be noted that women are disadvantaged in Saudi Arabia. In the Saudi culture some norms tend to restrict a woman's mobility as well as her capacity to interact with people outside the home. Women cannot

drive a car or even apply for a driving license (Doumato, 1999; Al-Magrabi, 2009). Most of the ministries do not allow women to enter the ministry building to apply for a specific license or follow up on any of her previous applications (Al-Magrabi, 2009). On the other hand, few ministries opened sections at their head office that provide services to women only (AL-Rasheed M., 2010). The common practices for Saudi business women is to hire a male employee as "reprehensive of her company to government agencies "or pay for business services office and issue a letter of attorney to represent her in one or all government ministries (Yamami, 1996).

Focusing further on gender, 65.38% of women and 91.06% of men had team start-up businesses. For some women they may be able to overcome barriers which are gender specific, by establishing and running a business with men. Furthermore, the average equity ownership of women entrepreneurs was 62% whilst the comparable value for men was 74%. Thus, it may be the case that for some women entrepreneurs trade off equity to overcome gender barriers. But relinquishing equity would imply that women are doing badly. This then raises the point that whilst women did not by in large face systematic barriers they may have had to utilise team start businesses and relinquish part of their equity to be better placed to overcome challenges.

#### 8.2.4.2 Education

From the study of Saudi Arabia, only entrepreneurs with higher education level; i.e. university degree holders, encounter less production and macroeconomic barriers. Mainly because people with higher education will be aware of changes in macroeconomic factors and might act accordingly and adapt faster than other entrepreneurs with little understanding of how macroeconomics can affect their businesses.

At the same time, entrepreneurs with higher education are possibly prepared to solve problems in production and could enquire needed information or solution from many sources. This gives people with higher education a competitive advantages over other entrepreneurs and if complimented with business support from SMEs schemes, overall performance would be much more better.

#### 8.2.4.3 Habitual Entrepreneurs

Entrepreneurial experience has been used in a variety of studies across most, if not all, branches of the entrepreneurship literature (Gao et al., 2010; Westhead and Storey 1996; Wright et al., 2004). Scholars have related entrepreneurial performance to various factors related to the entrepreneurs' experience, for example, in an early study Ronstadt (1989) recommended that many successful entrepreneurs started several businesses before they achieved success in their current businesses. The prior business ownership experiences that an entrepreneur have will affect his/her type of business to invest in, strategic business structure decisions, ways of acquiring knowledge and information, and ways of seeking external business support and funding (Fang et al., 2007; Sun et al., 2007).

According to Noel and Latham (2006) performance of start-up businesses will depend on the entrepreneur prior business experience. The identification of opportunities has also been explained using the prior knowledge approach and the potential financial reward (Shepherd and DeTienne, 2005). Prior knowledge could be gained through education, which facilitates the accumulation of new knowledge (Hisham Yahya et al., 2012).

Researchers reported that enterprises which had been established by entrepreneurs with working experiences in the same sectors over performed other enterprises which owners do not have such experiences, this evidence was a result from a study on IT business sector covering 406 managers and owner of SMEs' in south Malaysia (Carlino et al., 2007).

Prior business ownership experience can help the entrepreneur in hiring the right staff, communication with suppliers and clients in professional ways, and utilizing social capital and other resources and compete in the market (Smith et al. 2009). Other scholars, however, pointed to one of the key benefits of prior business ownership experience relates to an entrepreneur's ability to gain access to a wider pool of resources (Al Marri, 2013; Westhead and Storey 1996; Wright et al., 2004). Experienced entrepreneurs i.e. serial and portfolio, may develop the inertia of conventional wisdom, which unless challenged by others may result in `the liability of staleness' (Westhead, 2005). Some studies showed that serial entrepreneurs were found to be less likely than novice entrepreneurs to recognise the importance of external advice for growing their businesses (Wright et al., 1997; Starr and Bygrave, 1991). In addition, a number of serial entrepreneurs were, therefore, associated with the "liability of staleness". Prior business ownership experience may aid the development of networks and the accumulation of more information, knowledge, and contacts. However, experienced entrepreneurs who favour familiar circles and customary relationships over the unknown and obscure may be stuck in routine patterns of interpersonal interactions that hinder their ability to innovate. Some experienced entrepreneurs may, therefore, be associated with the `liability of sameness' (Westhead et al. 2005).

On the other hand, entrepreneurs may carry bad managerial habits or business practices inherited form his or her pervious business ownership experiences (Starr and Bygrave, 1991). Also, liabilities from past businesses may be ingrained in entrepreneurs and business failures experiences may became a barrier that stops the entrepreneur from undertaking the risk of establishing new businesses and developing their new ventures (Stokes and Blackburn, 2002).

Effective pervious business ownership, training, business network, peers or industry partners may provide entrepreneurs to identify inventions or business ideas with high

economic potential (Agrawal et al. 2006). Commercially oriented entrepreneurs with pervious business ownership experience such as habitual entrepreneurs can reflect their knowledge and networking in their business setup (Lawson, 2013a). Habitual entrepreneurs use their cumulative skills to get access to the right sources of external business support sources.

Interestingly, in the results presented in the previous chapter there was no systematic evidence to support the view that habitual entrepreneurs will encounter fewer barriers to growth compared to novice entrepreneurs. Instead, the results show that it is when the habitual entrepreneurs are looked at using a finer set of brush strokes and splitting the habitual entrepreneurs into portfolio and sequential entrepreneurs that differences in the encountering of barriers to growth emerge.

#### 8.2.4.4 Portfolio and Sequential (Serial)

Habitual entrepreneurs have two types, and they are: portfolio and sequential (serial) entrepreneurs. A portfolio entrepreneur is defined as an entrepreneur who owns or has a majority ownership or a minority equity stake in more than one businesses at the same time (Westhead, 2005). In other words, a portfolio entrepreneur owns at least two businesses. A sequential (serial) entrepreneur, however, is defined as an entrepreneur who owns one business after previously owned another; they sell or close one business and establish a new one (Beresford, 2000). The results in the previous chapter show that portfolio entrepreneurs are less likely than novice entrepreneurs to encounter all four types of barriers to growth. Portfolio entrepreneurs may outperform serial entrepreneurs due to the diversification of business experiences that they are involved in and owns' once they decided to directly invest in a new start-up business. From a creditors' point of view, portfolio entrepreneurs are less risky in general, due to the fact that portfolio entrepreneurs will have better cash flow position form their portfolio business investments.

Portfolio entrepreneurs can be more attractive to external support schemes decision makers due to availabilities of assets that they already have from previous businesses. Portfolio entrepreneurs' assets can be equipment's, extended networks, specific expertise and wisdom, and enhanced reputation (Ucbasaran, Wright, and Wright; 2010) and knowledge of how to raise funds and get more access to external support schemes than novice entrepreneurs (Dyer 1994, Katz 1994). Novice entrepreneurs, with no previous business ownership experience may find it hard to seek support from external business support or financers. Unlike experienced entrepreneurs, novice entrepreneurs tends to depend on their saving or friends and family to raise capital for their new startup ventures (Ucbasaran, Westhead, and Wright 2009). Some studies have positive effect of entrepreneurial experience on entrepreneurial intentions (Kolvereid and Isaksen, 2006). For example, serial entrepreneurs, who are capable with entrepreneurial-specific human capital has more probabilities for engaging in entrepreneurial activities (Ucbasaran et al., 2003; Westhead et al., 2005). Similarly, individuals with previous managerial experience probably have acquired skills and abilities to spot entrepreneurial opportunities (Eckhardt and Shane, 2003; Gimeno et al., 1997).

Interestingly, the results found that sequential entrepreneurs are more likely than novice entrepreneurs to encounter marketing barriers, production input barriers, and macroeconomic barriers – and where the sequential variable is statistically significant at the 0.05 level for the later two models. The finding that sequential entrepreneurs are more likely than novice entrepreneurs to encounter barriers to growth may be explained as follows. Sequential entrepreneurs build up habits and liabilities from their pervious businesses. Not all previous business ownership experiences are useful, however, and entrepreneurs might carry loans or financial obligation as well as business practices that might handicap their growth potential in their new established ventures. From the macroeconomic factors and marketing

barriers; sequential entrepreneurs might be known for practices in the market place such as dealing with suppliers and customers; might be positive or negative, that will defiantly influence future performance of the new established venture.

Overall, the results show that when habitual entrepreneurs are split into portfolio and sequential entrepreneurs the portfolio entrepreneurs encounter fewer barriers to growth than novice entrepreneurs but that the sequential entrepreneurs encounter more barriers to growth compared to both novice entrepreneurs an also portfolio entrepreneurs. Compering the three types of entrepreneurs (novice, sequential, and portfolio) finding from Saudi Arabia shows that portfolio entrepreneurs are more likely to experience less barriers than novice and sequential entrepreneurs. Novice entrepreneurs are in better position than sequential entrepreneur's; Novice entrepreneurs are neutral in their business history and in some cases starting from no history would be better than starting from bad one. Accumulated liabilities and build up history of sequential entrepreneurs played as handicaps for their abilities to access to external business support and potential business opportunities.

#### 8.2.4.5 Business Advice

As indicated in chapter 2 the Saudi Government has spent huge sums of money on supporting their endeavours to create a diversified non-oil sector of the economy to reduce its dependence upon oil. Modon, the largest of the support schemes was found to have a beneficial impact upon businesses in Saudi Arabia. Specifically, firms who had used Modon were less likely than non-Modon users to encounter financial barriers to growth, and marketing barriers to growth. Given the sums of money invested in Modon it is reassuring that there is evidence of a positive impact upon Saudi SMEs.

Firms who have used SIDF are less likely than non-SIDF users to encounter production input barriers and also macroeconomic barriers. These findings can be explained

as follows. SIDF is one of the oldest support schemes in Saudi Arabia that focus only on industrial business sector. Since establishment, early 1970's, the build-up experiences of supporting factories to build, operate, and expand their businesses; SDIF, is well known for their technical advices and providing support to SMEs to overcome challenges and changes in demand for industrial products. Again, when a scheme focus on one industry or type of support, the output can easily be measured and recognised.

#### 8.2.4.6 Innovation

Human capital is constituted by formal and non-formal education. Non-formal education is related to specific vocational and training courses that are not constituted in formal education structures (Davidsson and Honig, 2003). Usually, training courses are oriented to specific groups of people who are in a vulnerable situation (Aliaga-Isla, 2015). For example, advance training courses, post graduate degrees, and special training in science or management can give an entrepreneur a competitive niche over other firms in market place. This edge could be formed or translated as product or services innovation, or new process innovation. Innovation being viewed as a vehicle to develop better product/services to gain access to new market (Great Britain. and Department of Trade and Industry., 1988b). The level of technological development should influence firm growth (Bennett and Robson, 2000). Different ecosystems with their available resources may be required to effect different types of entrepreneurial innovation (Sapienza et al., 2006).

## 8.3 Theoretical implications

The study in this thesis contributes to better understanding human capital theory and specifically its application to barriers to growth. The models presented in the regression results chapter systematically tested six hypotheses which covered various facets of human capital theory to four groups of barriers to growth. Each of the different facets of human capital was found to have different relationships with the barriers to growth. This suggests that human capital theory is not a perfect theory when applied to barriers to growth. Taken together the results suggest that entrepreneurial experience which is a form of specific human capital is arguably the strongest facet of human capital to better understand barriers to growth.

This is consistent with the previous work of Wright et al (2007) but the results are important because there has been a general lack of large scale surveys of entrepreneurs in Saudi Arabia, and theories which have been developed in western nations have not been applied very often to Saudi Arabia. In the Saudi context, however, portfolio entrepreneurs have been found to encounter less barriers to growth than novice and also sequential entrepreneurs. And, sequential entrepreneurs were not better placed in comparison than novice entrepreneurs as far as barriers to growth are concerned, and in fact sequential entrepreneurs faired worse than novice and also portfolio entrepreneurs. These results suggest that there is a need to differentiate between sequential and portfolio entrepreneurs and suggests that in Saudi Arabia the theory of human capital is supported with regard to portfolio but not sequential entrepreneurs. Experienced entrepreneurs have built up business know-how to overcome many obstacles and avoid bureaucracy to setup their businesses (Storey 2006). Portfolio entrepreneurs, however, have an advantage of track record of repetitive successful start-up businesses (Westhead and Wright, 2011). SME performance is a reflection of founder's competence and skills that he or she learned by experiences (Chandler

and Jansen's 1992), also learning-by-doing (Gartner, 1984). That what this study confirms, that portfolio entrepreneurs but not sequential entrepreneurs were more successful to raise funding and access to external business support than other type of entrepreneurs in Saudi Arabia.

Indeed, the general confirmation of the hypotheses 2b and 2d added strength to the underlying propositions: that portfolio entrepreneurs will encounter less barriers to growth than novice entrepreneurs. Having based the hypotheses on previous research findings, and tested them in a fast developing country in the Middle east such as Saudi Arabia, some degree of confidence can be expressed in the theoretical generalizability. From this research finding, previous business ownership experiences were a major factor of overcoming barriers to growth and business sustainability to SMEs' in Saudi Arabia. However, a wider range of sample or studying more contexts might reveal different finding.

However, in 6.2.4.1 it was found that some women may be in team start businesses with men as a way of overcoming barriers to growth. Furthermore, there were differences in the levels of use of government support schemes when gender and team start businesses were linked together. This suggests that there are problems for women in being able to access support schemes and thus difficulties for women to tap into financial resources provided by the Saudi government.

Gender was only significant and related to macroeconomic barriers. Access to external finance, production factors, and market factors shows no differences between entrepreneurs' genders. However, as indicated earlier when the results were further probed in relation to use of government schemes and thus accessing finance, as well as the prevalence of women in team businesses suggest that women do encounter problems in the former and forgo equity in the later.

Limited evidence related to business advice and barriers to growth in Saudi Arabia. Despite the fact that most of SMEs' used two or more external business support for their businesses, however, small number of support schemes were liked to barriers. From this research finding, specialised schemes that focus on providing support services to fewer business sectors such as manufacturing in case of MODON or businesses that based on innovation such as Injaz, showed better results in helping SMEs' overcoming all types of barriers. However, entrepreneurs with new technology or process innovation were facing more barriers than other entrepreneurs.

Other schemes who provided support services to larger number of SMEs' in any business sector showed no effect in overcoming business barriers to SMEs'. In most support schemes entrepreneurs could not benefit from general business advices giving to all SMEs' and no competitive advantage was gained form the services.

Earlier family business research found that family was the primary economic unit of human history (Carland et al., 1984; Tardieu and Mulet-Marquis, 1984). Family involvement can foster substantial advantages or disadvantages to firms' survival and growth (Hisrich and Brush, 1984). Dyer (2006) described the inconstancies results of family involvement in the business as "Puzzling". At the same time, some family business have high-performing history of business, for example, Sumitomo of Japan established in 1630. Similarly, in Europe and USA some family firms were running for the last 200 years (Carland et al., 1984). In this research an extension to knowledge and understanding of family involvement have been achieved. This study differentiated influence of family member involvement between family members who were employed against who were equity partners. Results showed clearly that more family members involved in a firm will encounter more barrier to growth. Lastly, having family members involved in a firm; both as employees or equity partners, showed no significant effect over access to external funding from all sources.

## 8.4 Limitations and implications for future research

This research was the first research analyzing SMEs' barrier to growth in Saudi Arabia. Future research need to focus on barriers facing growth oriented firms such technology based firms in more depth. Also this research revealed many facts of how the influence of family member involvement affecting growth in SMEs' sector in Saudi Arabia. There are undoubtedly bases that habitual entrepreneurs are more feasible to be supported by support schemes, the Saudi government must channel policies and resources to entrepreneurs with pervious business ownership experiences. Larger sample and studies covering all Arabian Gulf states would reflect better understanding of barrier of growth in this part of the world.

This study along with earlier studies of barriers to growth such as the SBS (2014, 2012, 2010), Robson and Obeng (2008), Obeng (2007), and Cosh and Hughes (2003) has used cross-sectional analysis. The study has reported univariate analysis as well as multivariate analysis, where the later was used to test five multi-part hypotheses. Inferences were made about possible cause-effects between the characteristics of the entrepreneurs and their ventures against the encountering of barriers to growth across the main types of impediments. However, the study is unable to categorically indicate the nature of the possible causation between the independent and control variables to the dependent variables. The only way that direct causation can unequivocally be established is to pursue a longitudinal study over several points of time. By repeating the survey at a future time the relationships which were found to be statistically important in this study can be re-visited to see the extent to which those relationships hold, or have changed in the intervening period. Furthermore, such a longitudinal study would be able to include a suit of measures of business performance: employment growth, sales turnover growth, exporting activity and whether or not the

business ventures are still running; and, see how those ventures which had encountered barriers performed in the intervening period of time.

This study followed a key informant approach and the participants in the survey were all the entrepreneurs or the key decision maker in the ventures. A future study, supported by a government research grant ideally could obtain information from more than one key informant in the ventures. Multiple respondents, per venture, at the top decision making level, combined with those from lower level positions in the ventures may produce a study where common method bias was minimised.

The study used the responses of 328 entrepreneurs who were family businesses in Saudi Arabia. The vast majority of the barriers to growth literature has been conducted in the UK and in developing African countries such as Ghana. The UK and Ghana are very different to Saudi Arabia with regard to the cultural and social behaviours of the societies. This means that a small degree of caution needs to be noted when comparing this Saudi study with those in radically different economies. Clearly, it is imperative to repeat the study on entrepreneurs from other GCC countries. Admittedly, Saudi Arabia is the regional leader in terms of size of population, geographical land mass, total GDP, and dominance of the oil industry, but it will be interesting to see whether the same barriers which are found in this study also are found in other GCC countries which clearly have a great deal in common along social and cultural behaviour. The further research could also see whether other barriers which were not systematically important in Saudi Arabia are found to be important in GCC countries.

This study has focused upon barriers to growth. However, SME growth can be measured in many ways, for example, government and policy makers uses job creation as a measure of growth (Storey, 1994b). Secondly, financial growth or revenue growth in SMEs business sector was used by government as evaluation of SMEs contribution to the economy (Ghoshal and Bartlett, 1994). The third measure was founded to be growth in profitability;

enterprises owners used this measure to evaluate their time and capital investment in a certain business sector (Kalleberg and Leicht, 1991). Other growth measures such as return on capital invested, growth in market share, and growth in human resources development, growth in technology innovation, and growth in professional recognition (Cooper, 1984) were also used in pervious literature to measure SMEs' growth. Future studies, especially when enjoying the luxury of government research grants can incorporate more of the aforementioned measures of growth.

## 8.5 Implications for practice and policy

This study has performed a large scale study of entrepreneurship in Saudi Arabia which focussed upon business advice and barriers to growth. The levels of awareness of all of the support schemes in Saudi Arabia was very high at above 70% which suggests that the policy makers are using appropriate channels to publicise the government support schemes. Given that most of the entrepreneurs are aware of the vast majority of support schemes it suggests that the market for government support schemes is at a saturation point. In the context of the levels of use of the government support schemes the results suggest that five of the schemes which are by in large well resourced are the ones that are by far the most used schemes. 12 government support schemes reported very low levels of use ranging from 1.22% in the case of Wa'ed to 3.66% for Bab Rixq Jameel. Those schemes have limited resources and given that a lack of awareness of them is not a problem it suggests that there is a strong case to reconsider their futures. It may be beneficial for the 12 government support schemes to be merged together into one or two large scheme. Alternatively, the resources and roles of the 12 schemes could be rolled up into one or more of Modon, SIDF, Sagia, Saudi Credit Bank and Kafalah.

The study of the barriers suggests that whilst Saudi Arabia has a munificent low tax environment surprisingly the two greatest barriers were financial: the availability of collateral to secure bank loans, and difficulties to meet commercial loan criteria were the top two barriers. This suggests that there is still scope for the policy makers to revisit access to finance and the banks. Access to new technology and a shortage of skilled labor were the fourth and sixth most pressing barrier. This suggests that policy makers need to further investigate what are the problems which are hindering Saudi entrepreneurs' access to new technology. The shortage of skilled labor suggests that whilst the Saudi government has spent substantial amounts of money to educate and train the Saudi labour force there are still clearly problems. Training and retraining the Saudi the Saudi labour force is needed but not surprising given that 31.8% of the Saudi labour force have a primary level of education, or less.

The results of the econometric multivariate models of the barriers presented a complex picture of the relationship between various aspects of human capital against barriers. Portfolio entrepreneurs consistently were found to be less likely to encounter barriers compared to novice entrepreneurs. Clearly this type of entrepreneur has an important role in the future of the Saudi economy. Portfolio entrepreneurs could be used as mentors to help novice entrepreneurs make the transition from novice to habitual entrepreneurs and follow in the footsteps of the portfolio entrepreneurs.

The results showed few systematic relationships between the use of a government support scheme reducing the severity of barriers and clearly that is disappointing for policy makers. Indiscriminate support schemes that provides wide range of business advices and supports proves that it is not adding any value to the Saudi economy. In this research, the analyses showed that the majority of entrepreneurs have used at least two or more support schemes for their businesses. In Saudi Arabia, there are no problem of people trusting

external business supports, nevertheless, the problem arises from quality of services provided by external support schemes themselves. More focused support schemes providing value-added support and advices to entrepreneurs with potential growth ability will assist SMEs' overcoming barriers to growth in the market.

More family members' involvement in the business proved to be a reason to encounter more barriers to growth in a firm. Firm owners must understand that having more family members as equity owners or employees will not lead to better access to external financing or markets. The main purpose of the establishing a firm should be capital appreciation and growth. Social ties could be maintained without direct involvement in the firm. Decision makers and analysts in business support schemes can also advice entrepreneurs not to have more relatives in his or her firm, due the fact that more family members has its negative effect on the firm performance.

Whilst innovation is desirable and that may lead to sustained competitive advantages and the growth of the ventures, including taking on more workers, it is clear that product or service innovation, as well as process innovation is associated with the encountering of more barriers to growth across the different types of barriers or impediments. In these circumstances the Saudi government may be better served by also channelling more resources towards innovative ventures. Resources could be targeted towards ventures located on science parks.

## 8.6 Conclusion

This thesis has provided the first large scale study to identify the barriers to growth which are encountered by Saudi entrepreneurs, and the first to quantify the levels of awareness and use of government funded support schemes in Saudi Arabia. There is also a lack of econometric studies which have looked at establishing within a multivariate econometric framework which are the characteristics of the entrepreneurs and their ventures which are the drivers of encountering, or avoiding, barriers to growth, across a full set of possible barriers or impediments to business activity and growth.

The second significant contribution of the study was the demonstration of general and specific human capital factors of entrepreneurs and their association with barriers to growth. Stated differently, whilst human capital theory has been around for over fifty years since it was originally presented by Becker (1964) this is the first study of Saudi Arabia which has tested human capital theory. Innovation activity and family involvement were found to be two elements of human capital which are detrimental to entrepreneurial ventures in Saudi Arabia. Indeed, this study showed that more family members involvement in the business proved to be a reason to encounter more barrier to growth in a firm. Firm owners must understand that having more family members either as employees or equity partners will have more barrier to growth. Portfolio entrepreneurs in contrast are better placed than sequential/serial and novice entrepreneurs to avoid barriers to growth. Gender and education, two general measures of human capital are found to have received mixed support, and that suggests that in Saudi Arabia it is specific human capital which is relatively more important than general human capital. This is in contrast to many of the studies reviewed in Ucbasaran et al. (2007). A further important contribution is to show the differences between how the uses of different government funded support schemes are associated with less, or more barriers to growth. Users of specialized support schemes encountered less barrier to growth.

The above notwithstanding, the study has contributed to identifying the key success human capital factors affecting SMEs' overcoming barriers to growth. But, it is clear that further work is still needed to develop an overall barriers to growth model. The lack of relationships between the use of government support schemes and reducing the barriers to growth is obviously a disappointing point to policy makers in Saudi Arabia. The Saudi government needs to reconsider the provision of business advice. Specifically, there may be a need to rationalise the providers of government support schemes. Many of the smaller government support schemes could be merged together where a variety of specialist and niche levels of support are provided by a single government support scheme. Equally, the mixed level of performance of the four most used support schemes of Modon, Sagia, SIDF and Kafalah must also raise the suitability of all of those schemes operating, or certainly in their current forms. Modon and Sagia provided the most encouraging results with regard to reducing barriers to growth and it may be the case that they then are given more resources. It may be the case that further information is required before the Saudi government makes decisions which will be contentious. There is a need to create a national database of SMEs' performance before and after receiving business support for government or private sector schemes and for this to be done longitudinally. Business support schemes need to reflect upon the profiles of entrepreneurs' ventures that they support. The days of providing near blanket support for entrepreneurs' ventures is no longer economically viable. Also, given the low levels of take-up of the majority of the government support schemes this suggests that they need to be rationalised and fewer support schemes can be put forward.

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# APPENDICES

1. English version of the survey questionnaire used in the pilot survey.

2. English version of the survey questionnaire used in the main survey.

3. Arabic version of the survey questionnaire used in the main survey.

4. Tables which include regression results with the full set of government sources of business advice.

**Appendix 1** English version of the survey questionnaire used in the pilot survey

## Section One

This section will cover questions about characteristics of entrepreneurs, background information about personality, experience level in owning private business (serial, portfolio, or novice entrepreneur), ways of acquiring businesses, his or her personal satisfaction level of business achievement & goals, and assessment of SMEs growth factors in Saudi Arabia.

1.1 Please indicate your gender: _____ Male, _____ Female.

1.2 Please indicate your age:

| Age range | Age range |
|---|---|
| 18 to 25 | 51 to 55 |
| 26 to 30 | 56 to 60 |
| 31 to 35 | 61 to 65 |
| 36 to 40 | 65+ |
| 41 to 45 | |
| 46 to 50 | |

1.3 Which is the highest education level do you have?

| | | |
|---|---|---|
| High School | Yes | No |
| Technical Degree/ Diploma | Yes | No |
| Bachelors degree | Yes | No |
| Professional qualification (i.e. Accountancy/Law | Yes | No |
| Masters degree | Yes | No |
| PhD or Other higher level certificates | Yes | No |

1.4 Do you have any professional qualifications (i.e. Accountancy/Law etc.)? ___ Yes, ____No. If Yes – Please specify……

1.5 What motivated you to start a private business or continue as an entrepreneur?

(You may select more than one motive)

| | | |
|---|---|---|
| Desire to work for oneself. | Yes | No |
| Lack of employment. | Yes | No |
| Frustration in previous employment. | Yes | No |
| Wish to accumulate wealth. | Yes | No |
| An excellent opportunity presented itself (spotting a business opportunity). | Yes | No |
| Working in a family owned business or relative in business. | Yes | No |
| Previous experiences prepared me to start my own business. | Yes | No |
| Others (Please specify). | Yes | No |

Other motives: _____

1.6 Which of the following best describes your current business sector?

| Business Sector | | Business Sector | |
|---|---|---|---|
| Agriculture, forestry and fishing. | | Financial and insurance activities. | |
| Accommodation and food services activities. | | Financial and insurance activities. | |
| Transportation and storage, information and communication. | | Real estate, renting business activities, professional, scientific and technical activities | |
| Mining and quarrying. | | Public administration and Defence, compulsory, and social security. | |
| Manufacturing. | | More than S.R. 21M | |
| Electricity, gas, steam, air conditioning supply, water supply, sewerage, waste management, and remediation activities. | | Education | |
| Construction | | Human health and social work activities. | |

| | | | |
|---|---|---|---|
| Wholesale and retail trade, repair of motor vehicles and motorcycles. | | Arts, entertainment and recreation. | |
| Activities of households as employers, undifferentiated goods and services-producing and activates of households for own use. | | Activities of extraterritorial organisations and bodies. | |

1.7 Have you had any previous experience in your current business? ____ Yes, ____ No.

If "Yes", for how many years you had experience in this business? _____Years.

1.8 Have you ever owned or partially owned any business before? ____ Yes, ____ No, if Yes, how many businesses you owned? _____, and for how long? _____ years.

(*Optional*: Can you fill the following table if you previously own more than two businesses)

| No. | Business Sector or activity | For how many years did you Own this business? |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

1.9 Do you still own any of you previous business right now? ____ Yes, ____ No, if Yes, in which business sector(s)?
_____.

1.10 How did you owned you current business?

| Method of ownership | Please circle |
|---|---|
| Starting from scratch. | 1 |
| Bough existing company. | 2 |
| Partnership with existing company. | 3 |
| Franchised or licensed business. | 4 |
| Inherited or joining family business. | 5 |
| Home based business. | 6 |
| New subsidy or branch of large corporation. | 7 |
| Registered self-employed. | 8 |
| Non-registered self-employed. | 9 |
| Part time business activities, I am still have a full time job | 10 |
| Other type of business activity. | 11 |

For other types of business please specify: _____

1.11 What is your legal registration for your current business? _____

1.12 What are the odds of **this** business achieving your expectations for it in the future?

{0 = no chance of success; 10 = certain chance of success} please circle.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|

1.13 Owning and running a private business can be a very challenging experience; to what extent you consider **your** business was successful?

{0 = not successful; 10 = very of successful} please circle.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|

1.14 What are the chances of any **other** business like yours succeeding?

{0 = no chance of success; 10 = certain chance of success} please circle.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|

1.15 For how long you are running your current business? _____ Years, and which city?_____.

**End of Section One**

## Section Two

This section will cover questions about the characteristics of business; level of innovation, creative process, ways of acquiring knowledge and technology, level of investment in R&D, uses of external advices, and general performance levels such as employment and growth in turnover in the past three years.

2.1 What is your current business name? _____

2.2 Where is your business located? _____

2.3 Is your business a branch or part of any larger corporation? ____Yes, ____No.

2.4 Can you express your product or services activities according to the geographic market table below?

{**0 = Never; 10= Most of the time**}

| **Factor** | **Scale** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Our products are known for local customer in my area only. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| We have customers from large cities in Saudi Arabia such as Riyadh, Jeddah, Jubail, Yanbu, and Dammam. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Our brand(s) reached all 13 regions of Saudi Arabia. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Exporting to all GCC countries. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Exporting to Middle East countries and Africa. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Exporting to China, India, and Fare East. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Exporting to UK and European Union. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Exporting to US and Canada. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| We don’t export our products or services at all. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| We don’t export our products or services any more. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| We have offices, representatives, or agents worldwide. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

2.5 During the three years 2010 to 2012, did your enterprise introduced?

A. New or significantly improved goods or services ____Yes, ___No.

B.New or significantly improved process of goods or services ____Yes, ___No.

2.6 If you have answered any of Q-2.5 options with "Yes", can you tell us who developed these innovative products or improved process of goods or services?

{**0 = Never; 10= Most of the time**}

| **Factor** | **Scale** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Innovation was developed in-house by the enterprise R&D group, department, or personnel. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| We hired an external R&D firm to enhance our goods or services. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Acquisition or purchasing a patent or licensing from local market. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Acquisition or purchasing a patent or licensing worldwide. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Training enterprise's employees and motivate them to innovate. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Market changes and we need to adapt new technology. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| We keep changing the design and packaging of our product or service to meet customer's needs. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| We did not introduce any changes in products or services since we started the business. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| We innovate new products/services continuously. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| We innovate new products/services occasionally. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| We depend on our franchisor, or sister company in innovation activities. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

2.7 Please estimate the amount of expenditure for each of the following four innovation activities in 2012 only.

| **Innovation expenditure in 2012** | **S.R.** |
|---|---|
| In-house R&D. | |
| Purchase of external R&D. | |
| Acquisition of new technology machinery, equipment, and software. | |
| Acquisition of external knowledge. | |
| **Total** of these four innovation expenditure | S.R. |

| | |
|---|---|
| categories. | |

2.8 Please tell us what are your objectives for your products or services innovation?

{**0 = Never; 10= Most of the time**}

| **Objectives for innovation** | **Scale** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Increase range of products or services offered by my business | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Replace outdated products or services. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Enter new market. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Increase my company market share. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Improve product or service quality. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Become more flexible and increase production capacity. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Reduce labor cost per unit. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Going machine intensive rather than labor intensive. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Forced to change because of new technology and customer demand. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Reduce environmental impact. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Improve health & safety conditions in my enterprise. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

2.9 Please indicate how important each of the following objectives in your current business? {**0 = Not important; 10= Most important**}

| **Business objectives** | **Scale** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Increase market share over local competitors. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Increase market share over international competitors. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Maintain current market share. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Sustain business activities and current customer base. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Introduce products/services to new geographic market. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Introduce products/services to new customers segment. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Reduce labor cost per unit. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

2.10 What were your enterprise's total turnover, percentage of exports and number of employees?

Turnover in S.R._____2010, and S.R._____2012

Exports percentage (%)_____2010, and (%)_____2012

Number of Employees in 2010 _____, and _____ in 2012.

End of Section Two

## Section Three

In the last section of this questionnaire we would like to have your opinion and experiences with SMEs support schemes in Saudi Arabia, barrier to growth, level of access to external finance. Also, alternative financing practices by entrepreneurs in Saudi Arabia, level of uses of business advises and the way it help SME business owner to overcome critical stages of business life.

3.1 From your practical experience as an entrepreneur in Saudi Arabia, which of the following factors listed below, do you perceive as a barrier or limit your ability to meet your business objectives? {**0 = Never; 10= Most of the time**}

| **Factor** | **Scale** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Finance Factors** | | | | | | | | | | | |
| Access to debt finance from local banks. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Access to equity finance from private investors. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| High interest rates to SMEs sectors. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Do not have collateral to secure bank loan. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Difficult to meet loan criteria. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Difficulty to raise capital from family or finds. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Market Factors** | | | | | | | | | | | |
| Inadequate demand. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Too many competition from local firms. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Competition from imported goods. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| High advertising costs. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Inadequate market research. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Managerial/ Technical Know-how. | | | | | | | | | | | |
| Shortage of skilled labor. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| High wages for skilled labor. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Access to new technology. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Inadequate financial skills. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Inadequate marketing & management skills. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Inadequate technical skills. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Production inputs Factors** | | | | | | | | | | | |
| High cost of local raw materials. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| High cost of imported raw materials. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Inadequate supply of raw materials. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| High cost of fixed cost such as rent. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| High cost of replacing old equipment. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Difficulty in finding appropriate equipment. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Economic/Regulatory** | | | | | | | | | | | |
| High rate of inflation and interest rates. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Saudi labor law criteria and regulations. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Bureaucracy in government agencies. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Registration / Licensing / Red tape. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Corruption. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Infrastructure** | | | | | | | | | | | |
| High cost of utility charges. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Lack of available industrial sites. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| High transport and storage costs. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Low quality of electricity / water supply. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Poor telecommunication networks. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

3.2 Saudi Arabia has started many government initiatives to support small and medium enterprises. Which of the following support schemes have you heard of before?

| Scheme Name | Heard of Scheme? | |
|---|---|---|
| MODON –land leasing in 20 Industrial Cities. | Yes | No |
| SAGIA – Project financing and land leasing in 6 Economic Cities. | Yes | No |
| SIDF – 50% to 75% of project cost financing program for 15 years or more. | Yes | No |
| KAFALAH – 50% loan guarantee scheme for SMEs up to S.R. 2 million. | Yes | No |
| Saudi Credit Bank – up to S.R. 3MM loans to SMEs. | Yes | No |
| Bab Rizq Jameel- Start-up business support & financing. | Yes | No |
| The Centennial Fund – Start-up business support. | Yes | No |
| Wa'ed - Start-up business support & financing from Saudi Aramco Oil company. | Yes | No |
| Hadaf - paying 50% of Saudi employees salaries for 2 years, and 100% of training costs. | Yes | No |
| Erada - Start-up business support and advice. | Yes | No |
| Reyada - Start-up business support & financing | Yes | No |
| Royal commission of Jubail and Yanbu - land leasing for industrial projects. | Yes | No |
| King Abdullah Economic Cities- Rabigh | Yes | No |
| Women's Industrial city – AL-Ahssa. | Yes | No |
| Bader- Start-up business support & financing. | Yes | No |
| KAUST Entrepreneur Center- Seed funding & Start-up business support. | Yes | No |
| Dhahran Valle – Oil and Gas R&D center. | Yes | No |
| Saudi Arabian National Entrepreneurship Center (NEC) in Jeddah. | Yes | No |
| INJAZ-Saudi Arabia, to inspire and prepare Saudi youth to succeed in a global, knowledge based Economy. | Yes | No |
| SME development centers in chambers of commerce (All branches in Saudi Arabia) | Yes | No |

3.3 Which of the following as sources of information, advice support with reference to the surveyed business have been used over the last year? And what was your satisfaction level?

| Scheme Name | Used for information or advice | | Satisfaction Level 0= Very dissatisfied, 10=Very satisfied | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODON. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| SAGIA. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| SIDF. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| KAFALAH. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Saudi Credit Bank. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Bab Rizq Jameel. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| The Centennial Fund. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Wa'ed from Aramco. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Hadaf. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Erada. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Reyada. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Royal commission of Jubail and Yanbu. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| King Abdullah Economic Cities- Rabigh. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Women's Industrial city – AL-Ahssa. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Bader. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| KAUST Entrepreneur Center. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Dhahran Valle – Oil and Gas R&D center | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Saudi Arabian National Entrepreneurship Center (NEC) | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| INJAZ. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| SME development centers in chambers of commerce | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

3.4 Which of the following as sources of external funding (grants, seeds fund, direct lending, loan guarantees, land leasing or other financing facilities) support with reference to the surveyed business have been used over the last year? And what was your satisfaction level?

| **Scheme Name** | **Used for external funding** | | **Satisfaction Level 0= Very dissatisfied, 10=Very satisfied** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODON. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| SAGIA. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| SIDF. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| KAFALAH. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Saudi Credit Bank. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Bab Rizq Jameel. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| The Centennial Fund. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Wa'ed from Aramco. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Hadaf. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Erada. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Reyada. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Royal commission of Jubail and Yanbu. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| King Abdullah Economic Cities- Rabigh. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Women's Industrial city – AL-Ahssa. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Bader. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| KAUST Entrepreneur Center. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Dhahran Valle – Oil and Gas R&D center | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Saudi Arabian National Entrepreneurship Center (NEC) | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| INJAZ. | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| SME development centers in chambers of commerce | Yes | No | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

3.5 What type of support you were searching for during the last year? And if you can tell us about your experience? (0= Very dissatisfied , 5= Very Satisfied)

| **Type of Support** | **Used service** | | **Scheme(s) name** | **Satisfaction of used service** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Entrepreneurship awareness and training. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| General management advice. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Sales and marketing advice. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Business plan preparation. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Accounting or book-keeping advice. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Networking, and event. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Innovation and technology. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Production/Operations advice. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| General business information. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Loans (start-ups, or assets purchase). | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Indirect credit facility (working capital loans or other). | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Overdraft or short-term loan. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Loan guarantee. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |
| Industrial land leasing. | Yes | No | | 0 | 1 | 2 | 3 | 4 | 5 |

3.6 How much money in total was used to start your business?

| | | |
|---|---|---|
| S.R. 0 – I did not need any capital to start my business. | 1 | |
| Less than S.R. 25,000 | 2 | |
| Over S.R. 25,000 up to S.R. 100,000 | 3 | |
| Over S.R. 100,000, up to S.R. 175,000 | 4 | |
| Over S.R. 175,000, up to S.R. 250,000 | 5 | |
| Over S.R. 250,000 up to S.R. 500,000 | 6 | |
| Over S.R. 500,000, up to S.R. 1,000,000 | 7 | |
| Over S.R. 1 million, up to S.R. 2 million | 8 | |
| Over S.R. 2 million, up to S.R. 5 million | 9 | |
| Over S.R. 5 million, up to S.R. 10 million | 10 | |
| Over S.R. 10 million | 11 | |
| Don't know | 12 | |

3.7 Have you been seeking external finance for the surveyed firm over the last 3 years? _____ Yes- S.R._____

or ____ No.

3.8 How much did you finally get? S.R. _____.

3.9 What was the percentage of collateral needed to get the loan?

| | | |
|---|---|---|
| 0 % of requested amount. | 1 | |
| 0 % but they request a guarantor. | 2 | |
| 25 % of requested amount. | 3 | |
| 33 % of requested amount. | 4 | |
| 50 % of requested amount. | 5 | |
| 66 % of requested amount. | 6 | |
| 75 % of requested amount. | 7 | |
| 80 % of requested amount. | 8 | |
| 90 % of requested amount. | 9 | |

| | | |
|---|---|---|
| 100 % of requested amount. | 10 | |
| 101 to 150% of requested amount. | 11 | |
| More than 150% of requested amount. | 12 | |

3.10 Which of the following source of external financing you used to raise funds?

| **Eternal finance source** | **Used service** | | **Name of fund provider** | **Collateral %** | **Charges, fees, or interest rate** |
|---|---|---|---|---|---|
| Personal Saving. | Yes | No | | | |
| Business returned profits and capital. | Yes | No | | | |
| Friends and family financing. | Yes | No | | | |
| Banks (secured loans). | Yes | No | | | |
| Banks (unsecured loans). | Yes | No | | | |
| Personal Credit Cards, or loan. | Yes | No | | | |
| Leasing vehicles for immediate cash sell. | Yes | No | | | |
| Selling old equipment from your business. | Yes | No | | | |
| Invoice factoring. | Yes | No | | | |
| Facilities from suppliers. | Yes | No | | | |
| Sales discounts to get cash. | Yes | No | | | |
| Searching private investors capital; angle investors or other. | Yes | No | | | |
| Selling to new markets (local or international). | Yes | No | | | |
| Delaying the planed project or expansion. | Yes | No | | | |
| Closing the business. | Yes | No | | | |

3.11 How long dose the process toke from you, from the application day to finally getting the loan, loan guarantee or industrial land from the support scheme?

| **Period** | | **Name of provider** |
|---|---|---|
| Less than one month. | 1 | |
| 2 to 3 months. | 2 | |
| 4 to 6 months. | 3 | |
| 7 to 9 months. | 4 | |
| 10 to 12 months. | 5 | |
| 13 to 18 months. | 6 | |
| 19 to 24 months. | 7 | |
| More than 2 years. | 8 | |
| More than 2 years, approved but not yet obtain the loan or industrial land. | 9 | |
| Still pending with no answer. | 10 | |
| My application was rejected. | 11 | |

3.12 In which way the delay effect your business?

| | | |
|---|---|---|
| Affected our relationship with suppliers - had to pay creditors later. | 1 | |
| We missed business opportunities. | 2 | |
| Increased cashflow difficulties for example, delaying staff salaries. | 3 | |
| Delays to buying a business. | 4 | |
| Delays to starting your business. | 5 | |
| Delays to expanding your business. | 6 | |
| Delays that lead to down size my work force. | 7 | |
| Forced me to close my business. | 8 | |
| Other please specify…… | …….. | |

3.13 In which way the external funding from support scheme changed your business?

| **Business Performance Factor** | **Used service** | | **% of change** |
|---|---|---|---|
| Increase in turnover after funding. | Yes | No | |
| Increase in export activities after funding. | Yes | No | |
| Increase number of employees after funding. | Yes | No | |
| Decrease in turnover after funding. | Yes | No | |
| Decrease in export activities after funding. | Yes | No | |
| Decrease in number of employees after funding. | Yes | No | |

3.14 If your business were to cease trading tomorrow, do you think any of your competitors would take up your current sales over the next year?

| | |
|---|---|
| Yes, all of our sales | 1 |
| Yes, some of them | 2 |
| No, no-one would take up our sales | 3 |
| Don't know | 4 |

3.15 And would this mainly be competitors based?

| | | |
|---|---|---|
| Locally, and by that I mean within 20 miles of your site. | 1 | |
| Elsewhere in your region of Saudi Arabia. | 2 | |
| In the rest of Saudi Arabia, but outside your region | 3 | |
| Elsewhere in the GCC. | 4 | |
| Or, in countries outside of the Middle East. | 5 | |
| Don't know | 6 | |

3.16 In your opinion, how can government schemes enhance the quality of support to your business sector? From my own experience the current level of support is…

{Very Dissatisfied = 0; Very Satisfied = 5}

| **Type of Support** | **Used service** | | **Scheme Name** | **Satisfaction of used service** | | | | |
|---|---|---|---|---|---|---|---|---|
| Increase the amount of direct funding to SMEs. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Loan guarantee though local banks. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Sales and marketing advice. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Business plan preparation. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Book-keeping/costing. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Networking, and event. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Innovation and technology seeds. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Speed of approvals and process. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| General business information. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Loans (start-ups, or assets purchase). | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Indirect credit facility (working capital loans or other). | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Awarding more projects to SME business sectors. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| Decrease of fees and interest rates charges by support schemes. | Yes | No | | 1 | 2 | 3 | 4 | 5 |
| More industrial land leasing. | Yes | No | | 1 | 2 | 3 | 4 | 5 |

Thank you for completing the survey, kindly provide us with your contact information so we can send you a free copy of the study results.

Name:

Job Title:

Organisation:

E-mail:

Tel:

Mobile:

## Appendix 2 English version of the final questionnaire

### Section One General Business Background

This section will cover questions about characteristics of entrepreneurs, background information about personality, experience level in owning private business (serial, portfolio, or novice entrepreneur), ways of acquiring businesses, his or her personal satisfaction level of business achievement & goals, and assessment of SMEs growth factors in Saudi Arabia.

1.5 Please indicate your gender: _____ Male, _____ Female.

1.6 What is your age in years? _____ Years.

1.7 Do you have a university degree? _____ Yes, _____ No.

1.8 Do you have any professional qualifications (i.e. Accountancy/Law etc.)? ___ Yes, ____No.

If Yes – Please Specify……

1.9 Which of the following best describes the status of this firm? (Please tick one box)

Independently owned [ ] Subsiduary of another firm [ ]

1.10 Did you start, purchase or inherit this business alone or with other equity partners?

Started alone [ ]with equity partners [ ] Other [ ] ……

If with others, how many equity partners did you have at first year? [ ] partners

1.7 Currently, how many equity partners does this business have? [ ] partners.

1.7.1 Are any of the equity partners members of your family or relatives____ Yes, ____No.

1.8 What was your business size in 2012? _____Employees.

1.8.1 Number of employees in 2010? _____Employees.

1.8.2 Could you please describe your company work force structure and how many people you have in each area in the last year (2012)?

| Work force | Full time | Part time |
|---|---|---|
| Unskilled labor | | |
| Semi-skilled labor | | |
| Clerical & administrative staff | | |
| Technologist or scientists | | |
| Managerial and professional | | |
| Other | | |
| **Total** | | |

1.8.3 Are any of the workers/staff members of your family or relatives? _____ Yes, _____ No, If yes how many employees were from your family member in 2012:_____

1.8.4 Did you export any goods/services in 2012? _____ Yes, _____ No

1.8.5 If Yes, what percentage of your total revenue was exported in 2012[ ] %

1.9 How did you gain an ownership stake in this business?

Established the business [ ] Inherited the business [ ] Purchased or acquired an equity stake in the business [ ] Other [ ] please specify _____.

1.10 Is this a home based business? Yes[ ] No [ ]

1.11 What is your legal registration for your current business? _____

Sole proprietorship [ ] Partnership [ ] Private limited company [ ] Unlimited company [ ]

Other, please specify [ ] …….

1.12 Please indicate the year this business received its first order/customer ……..

1.13 What are the odds of **this** business achieving your expectations for it in the future?

{1 = no chance of success; 10 = certain chance of success} please circle.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|

1.14 What are the chances of any **other** business like yours succeeding?

{1 = no chance of success; 10 = certain chance of success} please circle.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|

**End of Section One_**

## Section Two

This section will cover questions about the characteristics of business; level of innovation, creative process, ways of acquiring knowledge and technology, level of investment in R&D, uses of external advices, and general performance levels such as employment and growth in turnover in the past three years.

2.1 Where is your business located. Please specify the name of city or town?.....

2.2 Can you express your product or services activities as a percentage of total annual sales according to the geographic market table below? *If Zero, please specify **NIL**.*

| | **% Of annual revenue** |
|---|---|
| Our products were sold for local customer in my area only | |
| We sold to customers from large cities in Saudi Arabia such as Riyadh, Jeddah, Jubail, Yanbu, and Dammam | |
| Our brand(s) reached all 13 regions of Saudi Arabia | |
| Exporting to all GCC countries | |

| | | |
|---|---|---|
| Exporting to Middle East countries and Africa | | |
| Exporting to China, India, and Fare East | | |
| Exporting to UK and European Union | | |
| Exporting to US and Canada | | |
| We don't export our products or services at all | Yes | No |
| We don't export our products or services any more | Yes | No |
| We have offices, representatives, or agents worldwide | Yes | No |

2.3. From your practical experience as an entrepreneur in Saudi Arabia, which of the following factors listed below, do you perceive as a barrier or limit your ability to meet your business objectives?

**{1 = Not Important; 2= Slightly Important; 3= Moderately Important; 4= Crucial}**

| **Factors** | **Scale** | | | |
|---|---|---|---|---|
| **Finance Factors** | | | | |
| Access to debt finance from local banks. | | | 3 | 4 |
| Access to equity finance from private investors. | | | | |
| High interest rates to SMEs sectors. | | | | |
| Do not have collateral to secure bank loan. | | | | |
| Difficult to meet loan criteria. | | | | |
| Difficulty to raise capital from family or finds. | | | | |
| **Market Factors** | | | | |
| Inadequate demand. | | | | |
| Too many competition from local firms. | | | | |
| Competition from imported goods. | | | | |
| High advertising costs. | | | | |
| Inadequate market research. | | | | |
| Managerial/ Technical Know-how. | | | | |
| Shortage of skilled labor. | | | | |
| High wages for skilled labor. | | | | |
| Access to new technology. | | | | |
| Inadequate financial skills. | | | | |
| Inadequate marketing & management skills. | | | | |
| Inadequate technical skills. | | | | |
| **Production inputs Factors** | | | | |
| High cost of local raw materials. | | | | |
| High cost of imported raw materials. | | | | |
| Inadequate supply of raw materials. | | | | |
| High cost of fixed cost such as rent. | | | | |
| High cost of replacing old equipment. | | | | |
| Difficulty in finding appropriate equipment. | | | | |
| **Economic/Regulatory** | | | | |
| High rate of inflation and interest rates. | | | | |
| Saudi labor law criteria and regulations. | | | | |
| Bureaucracy in government agencies. | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | Registration / Licensing / Red tape. | | | | |
| | Corruption. | | | | |
| **Infrastructure** | | | | | |
| | High cost of utility charges. | | | | |
| | Lack of available industrial sites. | | | | |
| | High transport and storage costs. | | | | |
| | Low quality of electricity / water supply. | | | | |
| | Poor telecommunication networks. | | | | |
| | Other | | | | |

2.4 During the last two years did your enterprise introduce new or significantly improved goods or services?

| | Innovation new to your firm but **not** to your industry? | | Innovation new to your firm **and** to your industry? | |
|---|---|---|---|---|
| **A.** Technologically new or significantly improved manufactured product | Yes | No | Yes | No |
| **B.** Technologically new or significantly improved methods of producing manufactured product | Yes | No | Yes | No |
| **C.** Technologically improved supply chain, storage, or distribution system of manufactured product | Yes | No | Yes | No |
| **D.** New or significantly improved service product | Yes | No | Yes | No |

2.5.1 If you have answered any of Q-2.4 options with "Yes", can you tell us who developed these innovative products or improved process of goods or services?

| **Factor** | | |
|---|---|---|
| Innovation* was developed in-house by the enterprise R&D group, department, or personnel | Ye | N |
| We hired an external R&D firm to enhance our goods or services. | Ye | N |
| Acquisition or purchasing a patent or licensing from local market. | Ye | N |
| Acquisition or purchasing a patent or licensing worldwide. | Ye | N |
| Training enterprise's employees and motivate them to innovate. | Ye | N |
| Market changes and we need to adapt new technology. | Ye | N |
| We keep changing the design and packaging of our product or service to meet customer's needs. | Ye | N |
| We did not introduce any changes in products/ services since we started the business. | Ye | N |
| We innovate new products/services continuously. | Ye | N |
| We innovate new products/services occasionally. | Ye | N |
| We depend on our franchisor or sister company in innovation | | |

| | | |
|---|---|---|
| activities. | | |

## * Innovation

Please count innovation as occurring when a new or significantly improved manufactured product, or service product, is introduced to the market (Product Innovation), or when a new or significantly improved production, or delivery method, is used commercially (process innovation), and when changes in knowledge or skills, routines, competence, equipment, or engineering practices are required to develop or make the new product, or to introduce the new process.

Please do not count as product innovation, changes which are purely aesthetic (such as changes in colour or decoration), or which simply involve product differentiation (that is minor design or presentation changes which differentiate the product while leaving it technically unchanged in construction or performance). The implementation of a quality standard is not innovation unless it is directly related to the introduction of technologically new, or significantly improved, products or processes.

2.5.2 Does your business have any franchises or licensing agreements? If "Yes", can you specify how many franchisees are benefiting right now and were are they located?

| Yes | | No | |
|---|---|---|---|

Number of Franchisee: _____ , Location: _____

2.6 How were your firm's total sales in the last financial year distributed across the following types of products or services?

| | |
|---|---|
| A. Products or services unchanged or only had slight changed in the last 2 years. | ……..% |
| B. Significantly improved products or services introduced within the last 2 years. | ……..% |
| C. New products or services introduced within the last 2 years. | ……..% |
| Total Sales | 100% |

2.7 Please estimate the percentage of expenditure from annual revenue for each of the following four innovation activities in 2012 only.

2.7.1

| **Innovation expenditure in 2012** | **% Of annual revenue** |
|---|---|
| In-house R&D. | |
| Purchase of external R&D. | |
| Acquisition of new technology machinery, equipment, & software. | |
| Acquisition of external knowledge. | |
| **Total** of these four innovation expenditure categories. | 100% |

2.7.2 Did your firm engage in R&D in the last financial year (2012)?

| Yes | | No | |
|---|---|---|---|

2.7.3 How many full time and part time staff were engaged in R&D in the last financial year (2012)?

| | |
|---|---|
| Full time R&D staff | |
| Part time R&D staff | |

**End of section Two**

**Section Three**

In the last section of this questionnaire I would like to have your opinion and experiences with SMEs support schemes in Saudi Arabia, and your accessing of external finance.

3.1 Saudi Arabia has started many government initiatives to support small and medium enterprises. Which of the following support schemes have you heard of before?

| Scheme Name | Heard of Scheme? | |
|---|---|---|
| MODON –land leasing in 20 Industrial Cities. | Yes | No |
| SAGIA – Project financing and land leasing in 6 Economic Cities. | Yes | No |
| SIDF – 50% to 75% of project cost financing program for 15 years or more. | Yes | No |
| KAFALAH – 50% loan guarantee scheme for SMEs up to S.R. 2 million. | Yes | No |
| Saudi Credit Bank – up to S.R. 3MM loans to SMEs. | Yes | No |
| Bab Rizq Jameel- Start-up business support & financing. | Yes | No |
| The Centennial Fund – Start-up business support & financing. | Yes | No |
| Wa'ed – Start-up business support & financing from Saudi Aramco Oil company. | Yes | No |
| Hadaf – paying 50% of Saudi employees salaries for 2 years, and 100% of training costs. | Yes | No |
| Erada – Start-up business support and advice. | Yes | No |
| Reyada – Start-up business support & financing | Yes | No |
| Royal commission of Jubail and Yanbu – land leasing for industrial proje | Yes | No |
| King Abdullah Economic Cities- in Rabigh, Jazan, or Tabouk. | Yes | No |
| Women's Industrial city – AL-Ahssa. | Yes | No |
| Bader- Start-up business support & financing. | Yes | No |
| KAUST Entrepreneur Center- Seed funding & Start-up business support. | Yes | No |
| Dhahran Valle – Oil and Gas R&D center. | Yes | No |
| Saudi Arabian National Entrepreneurship Center (NEC) in Jeddah for star business support. | Yes | No |
| INJAZ-Saudi Arabia, to inspire and prepare Saudi youth to succeed in a g knowledge based<br>Economy. | Yes | No |

| | | |
|---|---|---|
| SME development centers in chambers of commerce (All branches in Sau | Yes | No |
| Other public or private sector support scheme? Please name them: …… | | |

3.2 Which of the following as **sources of information**, advice and support with reference to the surveyed business have been used over the last two years? And what was your satisfaction level?

| **External source of advices** | **Used service** | | **Satisfaction of used service** | | | |
|---|---|---|---|---|---|---|
| Family and friends | | | | 2 | 3 | 4 |
| Informal business network | | | | | | |
| Formal business network | | | | | | |
| Chamber of commerce | | | | | | |
| Private consulting firms | | | | | | |
| Government consulting authority | | | | | | |
| Your franchisee business advice services | | | | | | |
| Universities or business research firms | | | | | | |
| Internet-based or online consulting services | | | | | | |
| Commercial banks business advices | | | | | | |
| International consulting firms | | | | | | |
| Never seeks external advices | | | | | | |
| Other …… ……. | | | | | | |

3.3 Which of the following as **sources of information**, advice support with reference to the surveyed business have been used over the last two years? And what was your satisfaction level?

| **Scheme Name** | **Used for information or advice** | | **Satisfaction Level** **1= Very dissatisfied, 2=Dissatisfied 3=Satisfied, 4=Ver satisfied** | | | |
|---|---|---|---|---|---|---|
| MODON. | Yes | No | 1 | 2 | 3 | 4 |
| SAGIA. | Yes | No | 1 | 2 | 3 | |
| SIDF. | Yes | No | 1 | 2 | 3 | |
| KAFALAH. | Yes | No | 1 | 2 | 3 | |
| Saudi Credit Bank. | Yes | No | 1 | 2 | 3 | |
| Bab Rizq Jameel. | Yes | No | 1 | 2 | 3 | |
| The Centennial Fund. | Yes | No | 1 | 2 | 3 | |
| Wa'ed from Aramco. | Yes | No | 1 | 2 | 3 | |
| Hadaf. | Yes | No | 1 | 2 | 3 | |
| Erada. | Yes | No | 1 | 2 | 3 | |
| Reyada. | Yes | No | 1 | 2 | 3 | |
| Royal commission of Jubail and Yanbu. | Yes | No | 1 | 2 | 3 | |
| King Abdullah Economic Cities-Rabigh. | Yes | No | 1 | 2 | 3 | |
| Women's Industrial city – AL-Ahssa. | Yes | No | 1 | 2 | 3 | |
| Bader. | Yes | No | 1 | 2 | 3 | |
| KAUST Entrepreneur Center. | Yes | No | 1 | 2 | 3 | |
| Dhahran Valle – Oil and Gas R&D center | Yes | No | 1 | 2 | 3 | |
| Saudi Arabian Entrepreneursl (NEC) | Yes | No | 1 | 2 | 3 | |
| INJAZ. | Yes | No | 1 | 2 | 3 | |
| SME developr in chambers o | Yes | No | 1 | 2 | 3 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Other Scheme name them: …… | Yes | No | 1 | 2 | 3 | |

3.4 Which of the following as sources of **external funding** (grants, seeds fund, direct lending, loan guarantees, land leasing or other financing facilities) support with reference to the surveyed business have been used over the last two years? And what was your satisfaction level?

| **Scheme Name** | **Used for external funding** | | **Satisfaction Level**<br>**1= Very dissatisfied, 2=Dissatisfied 3=Satisfied, 4=Very satisfied** | | | |
|---|---|---|---|---|---|---|
| MODON. | Yes | No | 1 | 2 | 3 | 4 |
| SAGIA. | Yes | No | 1 | 2 | 3 | 4 |
| SID | Yes | No | 1 | 2 | 3 | 4 |
| KAI | Yes | No | 1 | 2 | 3 | 4 |
| Sauc Ban | Yes | No | 1 | 2 | 3 | 4 |
| Bab Jam | Yes | No | 1 | 2 | 3 | 4 |
| The Fun | Yes | No | 1 | 2 | 3 | 4 |
| Wa' Ara | Yes | No | 1 | 2 | 3 | 4 |
| Had | Yes | No | 1 | 2 | 3 | 4 |
| Erac | Yes | No | 1 | 2 | 3 | 4 |
| Rey | Yes | No | 1 | 2 | 3 | 4 |
| Roy com Juba Yan | Yes | No | 1 | 2 | 3 | 4 |
| King Eco Citi | Yes | No | 1 | 2 | 3 | 4 |
| Wo Indu AL- | Yes | No | 1 | 2 | 3 | 4 |
| Bad | Yes | No | 1 | 2 | 3 | 4 |
| KAU Entr Cen | Yes | No | 1 | 2 | 3 | 4 |
| Dha Oil a R&I | Yes | No | 1 | 2 | 3 | 4 |
| Sauc Nati Entr Cen | Yes | No | 1 | 2 | 3 | 4 |
| INJA | Yes | No | 1 | 2 | 3 | 4 |
| SMI deve cent | Yes | No | 1 | 2 | 3 | 4 |

| | | | | | | |
|---|---|---|---|---|---|---|
| char com | | | | | | |
| Priv fina com bank | Yes | No | 1 | 2 | 3 | 4 |
| Othe plea then ….. | Yes | No | 1 | 2 | 3 | 4 |

3.5.1 If you used **Saudi Credit Bank** as a source of support and/or information or advice for the surveyed firm during the last two years, can you please tell us about your experience? (**Satisfaction Level 1= Very dissatisfied, 2=Dissatisfied 3=Satisfied, 4=Very satisfied**)

| **Type of Support** | **Used service** | | **Satisfaction of used service** | | | |
|---|---|---|---|---|---|---|
| Entrepreneurship awareness and training. | | | | 2 | 3 | 4 |
| General management advice. | | | | | | |
| Sales and marketing advice. | | | | | | |
| Business plan preparation. | | | | | | |
| Accounting or book-keeping advice. | | | | | | |
| Networking, and event. | | | | | | |
| Innovation and technology. | | | | | | |
| Production/Operations advice. | | | | | | |
| General business information. | | | | | | |
| Loans (start-ups, or assets purchase). | | | | | | |
| Indirect credit facility (working capital loans or other). | | | | | | |
| Overdraft or short-term loan. | | | | | | |
| Loan guarantee. | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Industrial land leasing. | | | | | | |

3.5.2 If you used **MODON** as a source of support and/or information or advice for the surveyed firm during the last two years, can you please tell us about your experience?

(**Satisfaction Level 1= Very dissatisfied, 2=Dissatisfied 3=Satisfied, 4=Very satisfied**)

| **Type of Support** | **Used service** | | **Satisfaction of used service** | | | |
|---|---|---|---|---|---|---|
| Entrepreneurship awareness and training. | | | | 2 | 3 | 4 |
| General management advice. | | | | | | |
| Sales and marketing advice. | | | | | | |
| Business plan preparation. | | | | | | |
| Accounting or book-keeping advice. | | | | | | |
| Networking, and event. | | | | | | |
| Innovation and technology. | | | | | | |
| Production/Operations advice. | | | | | | |
| General business information. | | | | | | |
| Loans (start-ups, or assets purchase). | | | | | | |
| Indirect credit facility (working capital loans or other). | | | | | | |
| Overdraft or short-term loan. | | | | | | |
| Loan guarantee. | | | | | | |
| Industrial land leasing. | | | | | | |

3.6 How much money in total was used to start your business? Please tick one box.

| | | |
|---|---|---|
| S.R. 0 – I did not need any capital to start my business. | 1 | |
| Less than S.R. 25,000 | 2 | |
| Over S.R. 25,001 up to S.R. 100,000 | 3 | |
| Over S.R. 100,001 up to S.R. 175,000 | 4 | |
| Over S.R. 175,001 up to S.R. 250,000 | 5 | |
| Over S.R. 250,001 up to S.R. 500,000 | 6 | |
| Over S.R. 500,001 up to S.R. 1,000,000 | 7 | |
| Over S.R. 1 million, up to S.R. 2 million | 8 | |
| Over S.R. 2 million, up to S.R. 5 million | 9 | |
| Over S.R. 5 million, up to S.R. 10 million | 10 | |
| Over S.R. 10 million | 11 | |
| Don't know | 12 | |

3.7 Have you been seeking external finance for the surveyed firm over the last two years?

| | | | |
|---|---|---|---|
| Yes | | No | |

3.8.1 What percentage did you finally get? _____%

3.8.2 Was the amount that you finally get enough for your firm or new venture?

| | | | |
|---|---|---|---|
| Yes | | No | |

3.9 What was the percentage of collateral was needed to get the loan facilities?

| | | |
|---|---|---|
| 0 % of requested amount. | 1 | |
| 0 % but they request a guarantor. | | |
| 25 % of requested amount. | | |
| 33 % of requested amount. | | |
| 50 % of requested amount. | | |
| 66 % of requested amount. | | |
| 75 % of requested amount. | | |
| 80 % of requested amount. | | |
| 90 % of requested amount. | | |
| 100 % of requested amount. | | |
| 101 to 150% of requested amount. | | |

| | | |
|---|---|---|
| More than 150% of requested amount. | | |

3.10 Which of the following sources you have used to raise funds in the past two years?

| External finance source | Used service | | Collateral % | %Charges, fees, or interest rate |
|---|---|---|---|---|
| Banks (secured loans). | | | | |
| Banks (unsecured loans). | | | | |
| Personal Credit Cards, or loan. | | | | |
| Leasing vehicles for immediate cash sell. | | | | |
| Selling old equipment from your business. | | | | |
| Invoice factoring. | | | | |
| Facilities from suppliers. | | | | |
| Searching private investor's capital; angle investors or other. | | | | |
| Selling to new markets (local or international). | | | | |
| Selling current business to invest in new one | | | | |
| Other ……..Please specify | | | | |

3.11.1 How long did the process take you, from the application day to finally getting the loan, loan guarantee or industrial land from the support scheme?

| Period | Saudi Credit Bank | MODON | Other, Please Specify…… |
|---|---|---|---|
| Less than one month. | 1 | 1 | 1 |
| 2 to 3 months. | 2 | 2 | 2 |
| 4 to 6 months. | 3 | 3 | 3 |
| 7 to 9 months. | 4 | 4 | 4 |
| 10 to 12 months. | 5 | 5 | 5 |

| | | | |
|---|---|---|---|
| 13 to 18 months. | 6 | 6 | 6 |
| 19 to 24 months. | 7 | 7 | 7 |
| More than 2 years. | 8 | 8 | 8 |
| More than 2 years, approved but not yet obtain the loan or industrial land. | 9 | 9 | 9 |
| More than 2 years, still pending with no answer. | 10 | 10 | 10 |
| My application was rejected. | 11 | 11 | 11 |

3.12 Have you had any previous experience in your current business? ____ Yes, ____ No.
If "Yes", for how many years you had experience in this business? _____Years.

Have you ever owned or partially owned any business before? ____ Yes, ____ No, if Yes, how many businesses you owned? _____, and for how long? _____ years.

(*Optional*: Can you fill the following table if you previously own more than two businesses)

| No. | Business Sector or activity | For how many years did you own this business? |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

3.13 Do you still own any of you previous business right now? ____ Yes, ____ No, if Yes, in which business sector(s)? _____.

3.15 What were your enterprise's total turnover, and net profit (or net loss)?

Turnover in S.R._____2012

Turnover S.R._____2010

Net Profit (Loss) in S.R._____2012

Please tell us about your firm profitability performance by ticking the right box:

| Year | Making Profit | Loss | B/E |
|---|---|---|---|
| | | | |

| | | | |
|---|---|---|---|
| 2010 | [ ] | [ ] | [ ] |
| 2012 | [ ] | [ ] | [ ] |

Thank you for completing the survey, kindly provides us with your contact information so we can send you a free copy of the study results.

Name: _____

Job Title: _____

Organisation: _____

E-mail: _____

Tel: _____

Mobile: _____

**Appendix 3:** Arabic Version of the questionnaire

# المنشآت الصغيرة والمتوسطة

السلام عليكم ورحمة الله وبركاته

واسعد الله اوقاتكم بكل خير

يسعدني ان اقدم لكم استبيان لمعرفة مدى أستخدام و رضى رواد الاعمال و أصحاب المنشأت الصغيرة و المتوسطة عن الخدمات والدعم المقدم من "صناديق دعم المشاريع الصغيرة و المتوسطة في المملكة العربية السعودية" نأمل أن تنال هذه الاستبانه اهتمامكم الكافي واستجابتكم السريعة، علما بأن البيانات ستعامل بسرية تامة ولأغراض تطوير تلك الخدمات والأنشطة بالمملكة بإذن الله. نرجو التفضل بالإجابة عن الأسئلة التالية :

Required *

**السؤال الأول (1) : أذا كنت صاحب المنشأة أو المبادر*؟ الرجاء الإجابة على الأسألة التالية**

* المبادر أو رائد الأعمال: هو الشخص الذي لديه أفكار تجارية و لكن لم يبدأ نشاط التجاري فعلي*

- ذكر
- انثى

Hr : Min AM

**هل لديك شهادة جامعية؟**

- نعم
- لا

**السؤال الأول (2)هل لديك شهادة متخصصة أو متقدمة في مجال عملك مثل: محاسب معتمد, محامي, او اي شهادة اخرى؟**

الرجاء ذكر نوع الشهادة المتخصصة في حال لديك شهادة.

**السؤال الأول (3) أي من الإختياريين التاليين ينطبق على منشأتك؟**

- مؤسسة أو شركة مستقلة بذاتها.
- فرع من مؤسسة أو شركة أخرى :امتياز تجاري - أو شركة كبرى

**السؤال الأول (4)هل بدأت نشاطك التجاري بمفردك أو مع شركاء؟**

بدء النشاط يشمل الطرق التالية: شراء مؤسسة قائمة, أو الوراثة, أو تأسيس منشأة جديدة بمفردك

- موسسة فردية خاصة بي
- شركة مع عدد من المستثمرين أو الشركاء

**السؤال الأول (5) متى أبرمت أول صفقة تجارية في هذة المنشأة أو تاريخ البيع لأول عميل؟**

الرجاء إدخال التاريخ التقريبي : السنة

**السؤال الأول (6) في الوقت الحالي ( في حال مرور زمن على تأسيس النشاط ), كم عدد شركائك في النشاط التجاري ؟**

**السؤال الأول (7) كم عدد شركائك في النشاط التجاري من الأقارب ؟**

**السؤال الأول (8) كيف تملكت إستثماراتك بالمنشأة الحالية؟**

- ◯ قمت بإنشاء أو تأسيس النشاط التجاري بنفسي
- ◯ قمت بشراء موسسة أو شركة قائمة
- ◯ ورثت النشاط التجاري من والدي أو أحد الأقارب المتوفيين
- ◯ أخرى

**السؤال الأول (9) ما هو الصفة القانونية للمنشأتك الحالية؟**

الرجاء الإجابة بحسب معلومات التسجيل في : السجل التجاري أو الترخيص الممنوح من الوزارة أو الهيئة

- ◯ موسسة فردية
- ◯ شركة تضامن
- ◯ شركة ذات رأسمال محدود
- ◯ مؤسسة غير ربحية / أو جمعية
- ◯ لدي ترخيص من أحد الهيئات أو الوزارات في المملكة
- ◯ أخرى

**السؤال الأول (10) ما هو حجم المنشأة في عام 2012م؟** *

حجم المنشأة : يقاس بعدد العاملين فيها بدوام كامل أو جزئي

**السؤال الأول (11) كم كان حجم المنشأة في عام 2010م؟** *

حجم المنشأة : يقاس بعدد العاملين فيها بدوام كامل أو جزئي

**السؤال الأول (12) هل من الممكن توضيح القوى العاملة لدى منشأتك بحسب المهارات التالية؟** *

الرجاء إستثناء صاحب العمل و المستثمرين

- ☐ عامل عادي غير مدرب
- ☐ عامل فني أو متخصص
- ☐ إداري أو أعمال مساندة مكتبية
- ☐ عالم أو باحث متخصص
- ☐ إداري تنفيذي أو مناصب عليا

**السؤال الأول (13) كم شخص من أفراد أسرتك أو من الأقارب يعمل لديك في المنشأة في عام 2012م؟**

**السؤال الأول (14) هل قمت بالتصدير للخارج (سلع أو خدمات) خلال عام 2012م؟ ***

- ◯ نعم
- ◯ لا

**السؤال الأول (15)ماهي نسبة الصادرات لخارج المملكة العربية السعودية بالنسبة للمبيعات لدى منشأتك في عام 2012م؟ ***

**السؤال الأول (16) الى أي مدى تتوقع أن تحقق الأهداف التجارية المرجوة من نشاطك الحالي؟**

| | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| فرص النجاح مؤكدة | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | لا توجد فرصة للنجاح |

**السؤال الأول (17) الى أي مدى تتوقع أن يحقق المنافسين أو المستثمرين في نفس مجالك التجاري نجاحاً في المستقبل؟**

| | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| فرص النجاح مؤكدة | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | لا توجد فرصة للنجاح |

**السؤال الأول (18) خلال العامين السابقين, هل قمت بتطوير تكنولوجي لأي من المنتجات المصنعة لديك؟**

- ◯ لا ينطبق على المنشأة , لست مصنعاً أو مُنتج للسلع
- ◯ نعم قمت بتطبيق تقنية جديدة على المنشأتي و ليس على السوق
- ◯ نعم قمت بتطبيق تقنية جديدة على المنشأة وعلى السوق أيضاً
- ◯ لم أقم بأستخدام أي طريقة مطورة خلال العامين السابقين

**السؤال الأول (19) خلال العامين السابقين: هل قمت بأي إختراع جديد يساعد بشكل جذري في تطوير المنتج أو الخدمات المقدمة لدى منشأتك؟**

- ◯ لا ينطبق على نشاط المنشأة , عملي تقليدي جداً
- ◯ نعم قمت بتطبيق جديد من إختراعي أو أحد العاملين
- ◯ لم أقم بأستخدام أي طريقة مطورة خلال العامين السابقين

**السؤال الثاني (1) من خلال تجربتك في مجال ريادة الأعمال ما هو أثر قدرة رائد الأعمال على الحصول على التمويل الكافي للمشروع من البنوك المحلية على إنجاح المشروع؟** *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

**السؤال الثاني (2) ما هو أثر قدرة رائد الأعمال على الحصول على التمويل الكافي للمشروع من " مستثمرين محليين " على إنجاح المشروع؟** *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

**السؤال الثاني (3) هل لأرتفاع أسعار الفوائد على القروض أو التسهيلات الممنوحة للمنشأة الصغيرة أثر على أدائها؟** *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

**السؤال الثاني (4) هل صعوبة توفير الضمانات الكافية للحصول على تمويل من "البنك التجاري" عامل مؤثر على أداء المنشأة؟** *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

**السؤال الثاني (5) تعتبر صعوبة " إستيفاء شروط الإقراض "المطلوبة من البنوك للحصول على تمويل عائق للنجاح بعض المشاريع الصغيرة و المتوسطة؟** *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (6) هل تعتبر صعوبة حصول رائد الأعمال على تمويل من" الأهل و الأقارب " لإقامة المشروع أو إستمرارة أحد عوامل المؤثرة على نجاح المشروع؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (7) هل تعتبر صعوبة حصول رائد الأعمال على تمويل من" الأصدقاء " لإقامة المشروع أو إستمرارة أحد عوامل المؤثرة على نجاح المشروع؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (8) هل صعوبة توقع الطلب المستقبلي للسلع و الخدمات عامل مؤثر على أداء المنشأة؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (9) هل لكثرة المنافسة "المحلية" للسلع أو الخدمات المقدمة من مشأتك عامل على أداء المنشأة؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (10) هل تعتبر كثرة المنافسة " الخارجية " للسلع أو الخدمات المقدمة من مشأتك عائق للنجاح في المستقبل؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (11) هل يشكل إرتفاع تكلفة الدعاية و الترويج لخدمات أو سلع مشأتك عامل مؤثر على الأداء؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (12) هل تعتبر ندرة المعلومات و الأبحاث عامل سلبي يؤثر على أداء منشأتك؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (13) من واقع خبرتك, عدم ملائمة الخبرة الإدارية أو معرفة تقنية في السوق تأثير على أداء المنشأة الصغيرة؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (14) عدم ملائمة العمالة المؤهلة أو المدربة في السوق هو أحد العوامل المؤثرة على أداء المنشأة ؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (15) إرتفاع أجور العمالة المؤهلة أو المدربة في السوق؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (16) عدم ملائمة التكنولوجيا المتوفرة في السوق المحلي؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (17) عدم ملائمة أساليب التمويلية المتوفرة لإدارة المنشأة؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (18) عدم ملائمة المهارات التسويقية و الإدارية لإدارة المنشأة ؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (19) عدم ملائمة المهارات التقنية ( كمبيوترات أو برامج) لإدارة المنشأة؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ○ | ○ | ○ | ○ | عامل مؤثر جداً |

السؤال الثاني (20) ما مدى تأثير إرتفاع أسعار المواد الأولية للإنتاج في السوق المحلي عاى أداء المنشأة ؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ○ | ○ | ○ | ○ | عامل مؤثر جداً |

السؤال الثاني (21) إرتفاع أسعار المواد الأولية "المستوردة" للإنتاج يؤثرعلى منشأتي؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ○ | ○ | ○ | ○ | عامل مؤثر جداً |

السؤال الثاني (22) ملائمة أو توفر المواد الأولية للإنتاج في السوق المحلي؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ○ | ○ | ○ | ○ | عامل مؤثر جداً |

السؤال الثاني (22) إرتفاع التكاليف الثابتة مثل : الإيجار المعارض أو المستودعات أو أسعار النقل *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ○ | ○ | ○ | ○ | عامل مؤثر جداً |

السؤال الثاني (23) إرتفاع التكاليف إبدال المعدات و الآلات القديمة بالجديدة؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ○ | ○ | ○ | ○ | عامل مؤثر جداً |

السؤال الثاني (23) إرتفاع التكاليف إبدال المعدات و الآلات القديمة بالجديدة؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (24) صعوبة إيجاد معدات و آلات مناسبة للإنتاج في السوق المحلي. *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (25) يعتبر التضخم في الأسعار و ضعف القيمة الشرائية لدى المستهلك عامل؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (26) ما هو تأثير إرتفاع فوائد البنوك و الإقراض بجميع أشكالة و مسمياته في السوق؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (27) يعتبر التضخم في الأسعار و ضعف القيمة الشرائية لدى المستهلك؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (28) تؤثر البروقراطية في المعاملات الحكومية على أصحاب المنشآت الصغيرة و المتوسطة بشكل؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثاني (29) يشكل الفساد المالي و الإداري في السوق بجميع أنواعة و أشكالة عامل مؤثر على المنشأت؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثالث (1) ما مدى تأثير أرتفاع أسعار الخدمات مثل: كهرباء, ماء, غاز, بخار في الحد من تحقيق أهداف المنشأت الصغيرة و المتوسطة؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثالث (2) عدم توفر أراضي صناعية أو مناطق تجارية للشركات الناشئة من قطاع المنشأت الصغيرة و المتوسطة يؤثر بشكل ؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثالث (3) إرتفاع تكاليف الشحن و التخزين على صاحب المنشأة الصغيرة و المتوسطة يؤثر بشكل؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثالث (4) يعتبر عدم توفر الماء و الكهرباء عامل موثر على أداء المنشآت الصغيرة و المتوسطة؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

السؤال الثالث (5) يؤثر ضعف خدمات الإتصالات مثل : هاتف ثابت, جوال, أو إنترنت عل المنشأت بشكل؟ *

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| عامل غير مؤثر | ◯ | ◯ | ◯ | ◯ | عامل مؤثر جداً |

**السؤال الرابع (1) لدى المملكة العربية السعودية كثير من الهيئات و الصناديق الحكومية و الخاصة الداعمة للمشاريع الصغيرة و المتوسطة** *

الرجاء إختيار الجهات التي سمعت بها من قبل

- [ ] هيئة المدن الصناعية و المناطق التقنية - مدن
- [ ] هيئة الإستثمار
- [ ] صندوق التنمية الصناعي
- [ ] برنامج كفالة المشاريع الصغيرة و المتوسطة
- [ ] البنك السعودي للتسليف و الإدخار
- [ ] باب رزق جميل
- [ ] صندوق المؤية
- [ ] " واعد " برنامج دعم المشاريع الصغيرة و المتوسطة من أرامكو السعودية
- [ ] برنامج " هدف " من صندوق تنمية الموارد البشرية
- [ ] برنامج " إرادة " لدعم المشاريع الناشئة
- [ ] برنامج " ريادة " لدعم المشاريع الصغيرة و المتوسطة
- [ ] الهيئة الملكية للجبيل و ينبع
- [ ] المدن الإقتصادية : رابغ - جازان - تبوك
- [ ] المدينة الصناعية النسائية بالأحساء
- [ ] برنامج " بادر " لدعم المشاريع الصغيرة و المتوسطة
- [ ] مركز ريادة الأعمال لدى جامعة الملك عبدالله للعلوم و التقنية
- [ ] وادي الظهران لأبحاث الغاز و البترول
- [ ] المركز الوطني لريادة الأعمال - جدة
- [ ] " إنجاز " برنامج يدعم الشباب السعودي لتطوير الإقتصاد المعرفي
- [ ] حاضنات الأعمال / و مجلس شباب الأعمال في الغرف التجارية
- [ ] لم أسمع بأي من هذة الجهات من قبل.
- [ ] لا أهتم بما تقدمة هذة الجهات

**السؤال الرابع (2) في حال إستخدام " مدن " كداعم لمشروعك**

ما مدى رضائك عن خدمات المقدمة من هيئة المدن الصناعية و المناطق التقنية - مدن؟

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| غير راضي أبداً | ○ | ○ | ○ | ○ | راضي جداً |

**السؤال الرابع (3) في حال إستخدام " هيئة الإستثمار " كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من هيئة الإستثمار؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (4) في حال إستخدام " صندوق التنمية الصناعي" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " صندوق التنمية الصناعي"؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (5) في حال إستخدام " برنامج كفالة " كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " برنامج كفالة "؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (6) في حال إستخدام " البنك السعودي للتسليف و الإدخار" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " البنك السعودي للتسليف و الإدخار"؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (7) في حال إستخدام " باب رزق جميل" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من "باب رزق جميل"؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (8) في حال إستخدام " صندوق المؤية" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " صندوق المؤية"؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (9) في حال إستخدام " برنامج واعد" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " برنامج واعد" ؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (10) في حال إستخدام " برنامج هدف" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " برنامج هدف" ؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (11) في حال إستخدام " إرادة" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " إرادة" ؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (12) في حال إستخدام " ريادة" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " ريادة" ؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (13) في حال إستخدام " الهيئة الملكية للجبيل و ينبع" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من "الهيئة الملكية للجبيل و ينبع" ؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (14) في حال إستخدام " المدن الإقتصادية" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " المدن الإقتصادية" ؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (15) في حال إستخدام " المدينة الصناعية النسائية بالأحساء" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " المدينة الصناعية النسائية بالأحساء" ؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (16) في حال إستخدام " برنامج بادر" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من" برنامج بادر" ؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (17) في حال إستخدام " مركز ريادة الأعمال بجامعة الملك عبدالله للعلوم و التكنولوجيا" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " مركز ريادة الأعمال بجامعة الملك عبدالله للعلوم و التكنولوجيا" ؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (18) في حال إستخدام " مركز إنجاز" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " مركز إنجاز "؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (19) في حال إستخدام " وادي الظهران لأبحاث الغاز و البترول" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " وادي الظهران لأبحاث الغاز و البترول" ؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (20) في حال إستخدام " المركز الوطني لريادة الأعمال" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " المركز الوطني لريادة الأعمال"؟

4 3 2 1

غير راضي أبداً ○ ○ ○ ○ راضي جداً

**السؤال الرابع (21) في حال إستخدام " الغرف التجارية" كداعم لمشروعك**
ما مدى رضائك عن خدمات المقدمة من " وحدة ريادة الأعمال لدى الغرف التجارية"؟

| | 4 | 3 | 2 | 1 | |
|---|---|---|---|---|---|
| غير راضي أبداً | ◯ | ◯ | ◯ | ◯ | راضي جداً |

**السؤال الرابع (22) معلومات عامة عن منشأتك الحالية**
كم كان رأسمال المنشأة وقت التأسيس؟

- ◯ بدأت بدون أي مبلغ مادي
- ◯ بدأت نشاطي الحالي بأقل من 25,000 ريال سعودي
- ◯ أكثر من 25,001 ريال و أقل من 100,000 ريال
- ◯ أكثر من 100,001 ريال و أقل من 175,000 ريال
- ◯ أكثر من 175,001ريال و أقل من 250,000ريال
- ◯ أكثر من 250,001 ريال و أقل من 500,000 ريال
- ◯ أكثر من 500,001 ريال و أقل من 1,000,000 ريال
- ◯ أكثر من مليون ريال و أقل من 2 مليون ريال
- ◯ أكثر من 2 مليون ريال و أقل من 5 مليون ريال
- ◯ أكثر من 5 مليون ريال و أقل من 10 مليون ريال
- ◯ أكثر من 10 مليون ريال سعودي
- ◯ لا أعلم بكم بدأت مشروعي التجاري

**السؤال الرابع (23) هل كنت تبحث عن تمويل خارجي لكي تبدء مشروعك التجاري؟**
المقصود بالتمويل الخارجي : أي شكل من أشكال القروض , أو التسهيلات الإئتمانية

- ◯ نعم
- ◯ لا

**السؤال الرابع (24) في حال حصولك على تمويل خارجي , ماهي نسبة المؤية التي حصلت عليها من أصل المبلغ المطلوب؟**
%

**السؤال الرابع (24) في حال حصولك على تمويل خارجي , ماهي نسبة المؤية التي حصلت عليها من أصل المبلغ المطلوب؟**

%

**السؤال الرابع (25) أي من المصادر التالية تم إستخدامها للحصول على تمويل خلال السنتين السابقتين؟**

بإمكانك أختيار أكثر من جهه

- ☐ البنوك التجارية على المنشأة الجديدة - قروض بدون ضمانات
- ☐ البنوك التجارية على المنشأة الجديدة- قروض تطلب علي تقديم ضمانات
- ☐ تمويل شخصي مثل : بطاقات إئتمان , قرض شخصي بإسم صاحب المنشأة
- ☐ قمت بتقسيط سيارة بغرض بيعها مباشرةً مقابل الحصول على النقد
- ☐ قمت ببيع المعدات القديمة لدي للحصول على نقد للمشروع الجديد
- ☐ تسهيلات بنكية مقابل مستخلصات و خصم فواتير
- ☐ تمويل من الموردين - شراء بالآجل
- ☐ تم الحصول على تمويل من مستثمرين رأسمال الجرئي
- ☐ تم التمويل من عملاء المنشأة و النشاط التجاري
- ☐ تم الحصول التمويل من الأهل و الأصدقاء و الأقارب
- ☐ لم أنجح في الحصول على تمويل خارجي
- ☐ تم التمويل عن طريق جهات أخرى

**السؤال الرابع (26) في حال إستخدام خدمات " هيئة المدن الصناعية و المناطق التقنية " لدعم مشروعك فضلاً أجب عن السؤال التالي**

أختر المدة الزمنية التي حصلت فيها على الدعم المطلوب

**السؤال الرابع (27) في حال إستخدام خدمات " البنك السعودي للتسليف و الإدخار " لدعم مشروعك فضلاً أجب عن السؤال التالي**

أختر المدة الزمنية التي حصلت فيها على الدعم المطلوب

**السؤال الخامس (1) هل كان لديك نشاط تجاري سابق قبل تأسيسك المنشأة الحالية؟**

- ○ نعم
- ○ لا

**السؤال الخامس (2) هل كان لديك خبرة سابقة في مجال نشاط منشأتك ؟**

- ○ نعم
- ○ لا

**السؤال الخامس (3) إذا كان جوابك للسؤال السابق بـ نعم ؟ فما هي مدة خبرتك في مجال المنشأة؟**

سنة

**السؤال الخامس (4) هل لديك حصص ملكية أو مشاركة في أي نشاط تجاري سابق قبل تأسيسك المنشأة الحالية؟**

- ◯ نعم
- ◯ لا

**السؤال الخامس (5)هل لديك حصص ملكية أو مشاركة في أي نشاط تجاري قائم في الوقت الحالي منفصل عن المنشأة الحالية؟**

- ◯ نعم
- ◯ لا

**السؤال الخامس (6) أسئلة عن أداء المنشأة في العام 2010م**

كم كان حجم المبيعات منشأتك في عام 2010م؟

**السؤال الخامس (7)أخبرنا كيف كان أداء منشاتك في عام 2010م؟**

- ◯ حققت المنشأة أرباحاً في عام 2010م
- ◯ حققت المنشأة خسائر في عام 2010م
- ◯ حققنا نقطة تعادل (الأرباح تساوي الخسائر ) في عام 2010م

**السؤال الخامس (8) كم كان حجم المبيعات منشأتك في عام 2012م؟**

**السؤال الخامس (9) أخبرنا كيف كان أداء منشاتك في عام 2012م؟**

- ◯ حققت المنشأة أرباحاً في عام2012م
- ◯ حققت المنشأة خسائر في عام 2012م
- ◯ حققنا نقطة تعادل (الأرباح تساوي الخسائر ) في عام 2012م

**السؤال الخامس (10) في أي قطاع تعمل منشأتك في الوقت الحالي؟**

Submit

## Appendix 4

**TableA4.1 OLS estimates of financial barriers**

| | Model A1 | Model A2 | Model A3 | Model A4 | Model A5 | Model A6 | Model A7 | Model A8 | Model A9 | Model A10 | Model A11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | **Control** | **General HC** | | **Bus Adv** | **Innovation** | | **Family Involvement** | | | **Full Models** | |
| ***Control variables*** | | | | | | | | | | | |
| Size | **0.03[a]** | **0.03[a]** | **0.03[a]** | **0.02[a]** | **0.05[a]** | **0.03[a]** | **0.03[a]** | **0.03[a]** | **0.03[a]** | **0.02[a]** | **0.03[a]** |
| Age Business | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 |
| Agriculture | -0.24 | -0.33 | -0.27 | -0.52 | -0.18 | -0.19 | -0.21 | -0.33 | -0.30 | -0.63 | -0.71 |
| Manufacturing | -0.45 | -0.33 | -0.29 | -0.60 | -0.35 | -0.38 | -0.44 | -0.52 | -0.51 | -0.56 | -0.60 |
| Services | **-0.82[c]** | **-0.77[c]** | **-0.76[c]** | **-0.64[c]** | **-0.62[c]** | **-0.71[c]** | **-0.73[c]** | **-0.80[c]** | **-0.80[c]** | **-0.67[c]** | **-0.66[c]** |
| Business Services | -0.11 | -0.22 | -0.23 | -0.22 | -0.03 | -0.04 | -0.10 | -0.19 | -0.19 | -0.13 | -0.17 |
| Sole Proprietorship | 0.32 | 0.26 | 0.31 | **0.89[c]** | 0.57 | 0.33 | 0.31 | 0.32 | 0.32 | **0.85[c]** | **0.91[c]** |
| Partnership | 0.28 | 0.23 | 0.23 | **0.42[c]** | 0.34 | 0.29 | 0.28 | 0.30 | 0.30 | 0.39 | **0.43[c]** |
| Team | **0.92[b]** | **0.85[b]** | **0.82[b]** | **0.92[b]** | **0.65[b]** | **0.90[b]** | **0.91[b]** | **0.97[b]** | **0.95[b]** | **0.80[b]** | **0.80[c]** |
| ***General Human Capital*** | | | | | | | | | | | |
| Gender | ----- | 0.50 | 0.45 | ----- | ----- | ----- | ----- | ----- | ----- | 0.34 | 0.43 |
| Degree | ----- | -0.46 | -0.43 | ----- | ----- | ----- | ----- | ----- | ----- | -0.49 | -0.49 |
| Habitual | ----- | -0.30 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| Portfolio | ----- | ----- | **-0.56[b]** | ----- | ----- | ----- | ----- | ----- | ----- | **-0.50[b]** | **-0.56[b]** |
| Sequential | ----- | ----- | -0.05 | ----- | ----- | ----- | ----- | ----- | ----- | -0.10 | -0.17 |
| ***Business Advice*** | | | | | | | | | | | |
| MODON. | ----- | ----- | ----- | **-0.27[a]** | ----- | ----- | ----- | ----- | ----- | **-0.49[a]** | **-0.43[a]** |
| SAGIA. | ----- | ----- | ----- | 0.04 | ----- | ----- | ----- | ----- | ----- | -0.05 | 0.02 |
| SIDF. | ----- | ----- | ----- | 0.00 | ----- | ----- | ----- | ----- | ----- | -0.14 | -0.04 |
| KAFALAH. | ----- | ----- | ----- | 0.26 | ----- | ----- | ----- | ----- | ----- | 0.18 | 0.25 |
| Saudi Credit Bank. | ----- | ----- | ----- | -0.22 | ----- | ----- | ----- | ----- | ----- | -0.25 | -0.16 |
| Bab Rizq Jameel. | ----- | ----- | ----- | **2.49[a]** | ----- | ----- | ----- | ----- | ----- | **2.61[a]** | **2.61[a]** |
| Centennial Fund. | ----- | ----- | ----- | **4.84[b]** | ----- | ----- | ----- | ----- | ----- | **3.11[b]** | **4.60[b]** |
| Wa'ed | ----- | ----- | ----- | -2.07 | ----- | ----- | ----- | ----- | ----- | -3.57 | -3.05 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hadaf. | ----- | ----- | ----- | **-7.22[a]** | ----- | ----- | ----- | ----- | ----- | **-6.42[a]** | **-7.34[a]** |
| Erada. | ----- | ----- | ----- | **-6.02[b]** | ----- | ----- | ----- | ----- | ----- | **-5.38[b]** | **-5.45[b]** |
| Reyada. | ----- | ----- | ----- | 1.82 | ----- | ----- | ----- | ----- | ----- | 3.50 | 2.69 |
| RC Jubail & Yanbu. | ----- | ----- | ----- | 0.73 | ----- | ----- | ----- | ----- | ----- | 0.29 | 0.39 |
| Rabigh. | ----- | ----- | ----- | -1.68 | ----- | ----- | ----- | ----- | ----- | -1.34 | -1.38 |
| AL-Ahssa. | ----- | ----- | ----- | 0.12 | ----- | ----- | ----- | ----- | ----- | 0.11 | 0.10 |
| Bader. | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| KAUST . | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| Dhahran Valle | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| (NEC) | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| INJAZ. | ----- | ----- | ----- | 2.35 | ----- | ----- | ----- | ----- | ----- | 3.58 | 1.85 |
| Chambers | ----- | ----- | ----- | 2.98 | ----- | ----- | ----- | ----- | ----- | 3.20 | 4.05 |
| ***Innovation*** | | | | | | | | | | | |
| Product/Service Innovation | ----- | ----- | ----- | ----- | ----- | **0.46[a]** | ----- | ----- | ----- | **0.43[a]** | ----- |
| Process Innovation | ----- | ----- | ----- | ----- | **1.28[a]** | ----- | ----- | ----- | ----- | ----- | **1.10[a]** |
| ***Family Involvement*** | | | | | | | | | | | |
| 2-3 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | -0.10 | ----- | -0.07 | -0.10 | -0.15 |
| 4 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | 0.08 | ----- | 0.08 | 0.06 | 0.08 |
| 1 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | -0.02 | -0.01 | 0.02 | 0.03 |
| 2 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | 0.18 | 0.17 | 0.15 | 0.22 |
| 3 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | 0.39 | 0.36 | 0.19 | 0.43 |
| Constant | **21.82[a]** | **22.08[a]** | **22.11[a]** | **21.85[a]** | **20.09[a]** | **21.50[a]** | **21.82[a]** | **21.89[a]** | **21.88[a]** | **22.24[a]** | **21.76[a]** |
| F Test | **4.27[a]** | **3.57[a]** | **3.49[a]** | **3.29[a]** | **6.17[a]** | **4.08[a]** | **3.51[a]** | **3.32[a]** | **2.86[a]** | **3.05[a]** | **2.69[a]** |
| $R^2$ | 0.1077 | 0.1198 | 0.1262 | 0.2142 | 0.1629 | 0.1140 | 0.1090 | 0.1124 | 0.1133 | 0.2701 | 0.2439 |
| Adjusted $R^2$ | 0.0825 | 0.0863 | 0.0900 | 0.1492 | 0.1365 | 0.0860 | 0.0780 | 0.0786 | 0.0737 | 0.1826 | 0.1532 |

Note: The excluded industrial sector dummy variable is Construction; the excluded entrepreneurial experience measure is novice entrepreneurs; the excluded number of family members working in the firms is 1 family member; the excluded number of family members holding equity in the firm is 0. Standardized beta coefficients are shown; n=328; [c] $p<0.10$, [b] $p<0.05$ and [a] $p<0.01$

**TableA4.2 OLS estimates of marketing barriers**

| | Model A12 | Model A13 | Model A14 | Model A15 | Model A16 | Model A17 | Model A18 | Model A19 | Model A20 | Model A21 | Model A22 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | **Control** | **General HC** | | **Bus Adv** | **Innovation** | | **Family Involvement** | | | **Full Models** | |
| ***Control variables*** | | | | | | | | | | | |
| Size | **0.04**[a] | **0.04**[a] | **0.04**[a] | **0.03**[a] | **0.08**[a] | **0.06**[a] | **0.05**[a] | **0.05**[a] | **0.05**[a] | **0.08**[a] | **0.06**[a] |
| Age Business | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 |
| Agriculture | 0.58 | 0.57 | 0.67 | 0.10 | 0.69 | 0.68 | 0.70 | 0.46 | 0.58 | 0.14 | 0.17 |
| Manufacturing | **-1.60**[b] | **-1.60**[b] | **-1.52**[b] | **-1.49**[b] | **-1.42**[b] | **-1.48**[b] | **-1.58**[b] | **-1.72**[b] | **-1.70**[b] | **-1.50**[b] | **-1.49**[b] |
| Services | **-1.25**[b] | **-1.24**[b] | **-1.23**[b] | **-1.07**[b] | **-0.99**[b] | **-1.17**[b] | **-1.19**[b] | **-1.33**[b] | **-1.27**[b] | **-0.93**[b] | **-1.07**[b] |
| Business Services | -0.32 | -0.34 | -0.37 | -0.17 | -0.17 | -0.20 | -0.29 | -0.46 | -0.42 | -0.23 | -0.29 |
| Sole Proprietorship | 0.36 | 0.36 | 0.47 | 1.06 | 0.85 | 0.38 | 0.33 | 0.32 | 0.27 | 0.39 | 0.89 |
| Partnership | 0.21 | 0.20 | 0.19 | 0.48 | 0.33 | 0.24 | 0.22 | 0.27 | 0.27 | 0.48 | 0.53 |
| Team | **1.93**[a] | **1.87**[a] | **1.80**[a] | **1.77**[a] | **1.40**[a] | **1.89**[a] | **1.86**[a] | **1.94**[a] | **1.87**[a] | **1.08**[b] | **1.53**[b] |
| ***General Human Capital*** | | | | | | | | | | | |
| Gender | ----- | 0.21 | 0.10 | ----- | ----- | ----- | ----- | ----- | ----- | 0.32 | 0.19 |
| Degree | ----- | 0.03 | 0.08 | ----- | ----- | ----- | ----- | ----- | ----- | 0.09 | 0.06 |
| Habitual | ----- | -0.23 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| Portfolio | ----- | ----- | **-0.76**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.87**[b] | **-0.88**[b] |
| Sequential | ----- | ----- | 0.28 | ----- | ----- | ----- | ----- | ----- | ----- | 0.22 | 0.05 |
| ***Business Advice*** | | | | | | | | | | | |
| MODON. | ----- | ----- | ----- | **-1.14**[b] | ----- | ----- | ----- | ----- | ----- | **-1.30**[b] | **-1.22**[b] |
| SAGIA. | ----- | ----- | ----- | 0.18 | ----- | ----- | ----- | ----- | ----- | 0.08 | 0.09 |
| SIDF. | ----- | ----- | ----- | 0.32 | ----- | ----- | ----- | ----- | ----- | 0.18 | 0.27 |
| KAFALAH. | ----- | ----- | ----- | 0.21 | ----- | ----- | ----- | ----- | ----- | 0.12 | 0.14 |
| Saudi Credit Bank. | ----- | ----- | ----- | -0.18 | ----- | ----- | ----- | ----- | ----- | -0.20 | -0.17 |
| Bab Rizq Jameel. | ----- | ----- | ----- | 1.17 | ----- | ----- | ----- | ----- | ----- | 1.31 | 1.06 |
| Centennial Fund. | ----- | ----- | ----- | **-10.80**[a] | ----- | ----- | ----- | ----- | ----- | **-7.05**[b] | **-9.63**[a] |
| Wa'ed | ----- | ----- | ----- | -4.62 | ----- | ----- | ----- | ----- | ----- | -7.12 | -5.22 |
| Hadaf. | ----- | ----- | ----- | **-9.59**[a] | ----- | ----- | ----- | ----- | ----- | **-7.48**[b] | **-8.74**[b] |
| Erada. | ----- | ----- | ----- | **-7.21**[c] | ----- | ----- | ----- | ----- | ----- | -2.33 | -6.06 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Reyada. | ----- | ----- | ----- | 2.66 | ----- | ----- | ----- | ----- | ----- | 2.85 | 3.48 |
| RC Jubail & Yanbu. | ----- | ----- | ----- | 1.44 | ----- | ----- | ----- | ----- | ----- | 1.08 | 0.96 |
| Rabigh. | ----- | ----- | ----- | -4.66 | ----- | ----- | ----- | ----- | ----- | -7.78 | -6.12 |
| AL-Ahssa. | ----- | ----- | ----- | 2.81 | ----- | ----- | ----- | ----- | ----- | 1.30 | 2.71 |
| Bader. | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| KAUST . | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| Dhahran Valle | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| (NEC) | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| INJAZ. | ----- | ----- | ----- | -1.23 | ----- | ----- | ----- | ----- | ----- | -1.27 | -1.61 |
| Chambers | ----- | ----- | ----- | 3.56 | ----- | ----- | ----- | ----- | ----- | 2.67 | 3.12 |
| ***Innovation*** | | | | | | | | | | | |
| Product/Service Innovation | ----- | ----- | ----- | ----- | **2.44**[a] | ----- | ----- | ----- | ----- | **2.20**[a] | ----- |
| Process Innovation | ----- | ----- | ----- | ----- | ----- | **0.84**[b] | ----- | ----- | ----- | ----- | **-0.80**[c] |
| ***Family Involvement*** | | | | | | | | | | | |
| 2-3 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | -0.63 | ----- | -0.65 | -0.51 | -0.62 |
| 4 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | 0.03 | ----- | 0.07 | 0.10 | 0.18 |
| 1 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.78**[b] | **0.76**[b] | **0.59**[b] | **0.38**[b] |
| 2 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.38**[b] | **0.31**[b] | **0.24**[b] | **0.11**[b] |
| 3 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **1.19**[b] | **1.22**[b] | **0.84**[c] | **0.89**[c] |
| Constant | **36.91**[a] | **36.87**[a] | **36.93**[a] | **36.77**[a] | **33.63**[a] | **36.32**[a] | **37.09**[a] | **37.36**[a] | **37.56**[a] | **34.48**[a] | **37.00**[a] |
| F Test | **6.46**[a] | **4.85**[a] | **4.88**[a] | **4.32**[a] | **10.39**[a] | **6.25**[a] | **5.63**[a] | **5.45**[a] | **4.90**[a] | **4.62**[a] | **3.69**[a] |
| $R^2$ | 0.1546 | 0.1560 | 0.1681 | 0.2636 | 0.2468 | 0.1647 | 0.1637 | 0.1719 | 0.1797 | 0.3566 | 0.3065 |
| Adjusted $R^2$ | 0.1307 | 0.1239 | 0.1337 | 0.2026 | 0.2230 | 0.1383 | 0.1346 | 0.1403 | 0.1431 | 0.2795 | 0.2233 |

Note: The excluded industrial sector dummy variable is Construction; the excluded entrepreneurial experience measure is novice entrepreneurs; the excluded number of family members working in the firms is 1 family member; the excluded number of family members holding equity in the firm is 0. Standardized beta coefficients are shown; n=328; [c] $p<0.10$, [b] $p<0.05$ and [a] $p<0.01$

**Table A4.3 OLS estimates of production input barriers**

| | Model A23 | Model A24 | Model A25 | Model A26 | Model A27 | Model A28 | Model A29 | Model A30 | Model A31 | Model A32 | Model A33 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | **Control** | **General HC** | | **Bus Adv** | **Innovation** | | **Family Involvement** | | | **Full Models** | |
| ***Control variables*** | | | | | | | | | | | |
| Size | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.02**[a] | **0.05**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] |
| Age Business | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.01 | -0.02 | -0.02 |
| Agriculture | 0.66 | 0.54 | 0.60 | 0.66 | 0.72 | 0.58 | 0.66 | 0.63 | 0.62 | 0.58 | 0.54 |
| Manufacturing | **0.39**[b] | **0.54**[b] | **0.59**[b] | **0.32**[b] | **0.48**[b] | **0.41**[b] | **0.38**[b] | **0.34**[b] | **0.34**[b] | **0.38**[b] | **0.39**[b] |
| Services | 0.09 | 0.04 | 0.05 | 0.21 | 0.24 | 0.11 | 0.09 | 0.06 | 0.05 | 0.27 | 0.17 |
| Business Services | **0.45**[b] | **0.33**[b] | **0.31**[b] | **0.34**[b] | **0.52**[b] | **0.38**[b] | **0.42**[b] | **0.40**[b] | **0.40**[b] | **0.30**[b] | **0.24**[b] |
| Sole Proprietorship | -0.19 | -0.28 | -0.21 | -0.27 | -0.14 | -0.19 | -0.19 | -0.22 | -0.22 | -0.23 | -0.24 |
| Partnership | 0.27 | 0.25 | 0.22 | 0.30 | 0.32 | 0.27 | 0.26 | 0.28 | 0.28 | 0.35 | 0.32 |
| Team | **1.45**[a] | **1.50**[a] | **-1.47**[a] | **-1.49**[a] | **1.15**[a] | **1.43**[a] | **1.44**[a] | **1.42**[a] | **1.42**[a] | **1.17**[a] | **1.41**[a] |
| ***General Human Capital*** | | | | | | | | | | | |
| Gender | ----- | 0.06 | 0.01 | ----- | ----- | ----- | ----- | ----- | ----- | 0.09 | 0.02 |
| Degree | ----- | **-0.80**[b] | **-0.78**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.55**[b] | **-0.59**[b] |
| Habitual | ----- | 0.11 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| Portfolio | ----- | ----- | **-0.19**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.22**[b] | **-0.20**[b] |
| Sequential | ----- | ----- | **0.40**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **0.32**[b] | **0.36**[b] |
| ***Business Advice*** | | | | | | | | | | | |
| MODON. | ----- | ----- | ----- | -0.09 | ----- | ----- | ----- | ----- | ----- | -0.09 | 0.02 |
| SAGIA. | ----- | ----- | ----- | -0.05 | ----- | ----- | ----- | ----- | ----- | -0.06 | -0.02 |
| SIDF. | ----- | ----- | ----- | **-0.44**[b] | ----- | ----- | ----- | ----- | ----- | **-0.28**[b] | **-0.39**[b] |
| KAFALAH. | ----- | ----- | ----- | -0.09 | ----- | ----- | ----- | ----- | ----- | -0.03 | -0.05 |
| Saudi Credit Bank. | ----- | ----- | ----- | -0.19 | ----- | ----- | ----- | ----- | ----- | -0.25 | -0.21 |
| Bab Rizq Jameel. | ----- | ----- | ----- | -0.24 | ----- | ----- | ----- | ----- | ----- | -0.33 | -0.31 |
| Centennial Fund. | ----- | ----- | ----- | **-2.23**[b] | ----- | ----- | ----- | ----- | ----- | **-1.33**[b] | **-1.92**[b] |
| Wa'ed | ----- | ----- | ----- | **-3.60**[b] | ----- | ----- | ----- | ----- | ----- | **-4.92**[b] | **-3.62**[b] |
| Hadaf. | ----- | ----- | ----- | **-2.89**[b] | ----- | ----- | ----- | ----- | ----- | **-1.65**[b] | **-2.33**[b] |
| Erada. | ----- | ----- | ----- | -0.58 | ----- | ----- | ----- | ----- | ----- | -0.57 | -0.43 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Reyada. | ----- | ----- | ----- | -0.40 | ----- | ----- | ----- | ----- | ----- | -0.34 | -0.30 |
| RC Jubail & Yanbu. | ----- | ----- | ----- | -0.67 | ----- | ----- | ----- | ----- | ----- | -0.41 | -0.46 |
| Rabigh. | ----- | ----- | ----- | -1.65 | ----- | ----- | ----- | ----- | ----- | -1.42 | -1.59 |
| AL-Ahssa. | ----- | ----- | ----- | 2.40 | ----- | ----- | ----- | ----- | ----- | 1.78 | 1.82 |
| Bader. | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| KAUST . | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| Dhahran Valle | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| (NEC) | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| INJAZ. | ----- | ----- | ----- | -1.10 | ----- | ----- | ----- | ----- | ----- | -0.94 | -0.80 |
| Chambers | ----- | ----- | ----- | 1.60 | ----- | ----- | ----- | ----- | ----- | -1.89 | -1.67 |
| ***Innovation*** | | | | | | | | | | | |
| Product/Service Innovation | ----- | ----- | ----- | ----- | **1.33**[a] | ----- | ----- | ----- | ----- | **1.42**[a] | ----- |
| Process Innovation | ----- | ----- | ----- | ----- | ----- | 0.22 | ----- | ----- | ----- | ----- | 0.19 |
| ***Family Involvement*** | | | | | | | | | | | |
| 2-3 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | **0.05**[b] | ----- | **0.05**[b] | **0.06**[b] | **0.04**[b] |
| 4 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | **0.04**[b] | ----- | **0.04**[b] | **0.07**[b] | **0.08**[b] |
| 1 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.30**[b] | **0.30**[b] | **0.22**[b] | **0.31**[b] |
| 2 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | -0.10 | -0.14 | -0.08 | -0.17 |
| 3 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.42**[b] | **0.42**[b] | **0.33**[b] | **0.36**[b] |
| Constant | **17.11**[a] | **17.76**[a] | **17.80**[a] | **17.46**[a] | **15.32**[a] | **16.95**[a] | **17.08**[a] | **17.23**[a] | **17.24**[a] | **16.36**[a] | **17.83**[a] |
| F Test | **7.32**[a] | **6.09**[a] | **5.97**[a] | **5.43**[a] | **10.00**[a] | **6.65**[a] | **5.96**[a] | **5.82**[a] | **4.96**[a] | **4.96**[a] | **4.21**[a] |
| $R^2$ | 0.1717 | 0.1883 | 0.1982 | 0.3103 | 0.2398 | 0.1734 | 0.1718 | 0.1815 | 0.1816 | 0.3728 | 0.3355 |
| Adjusted $R^2$ | 0.1483 | 0.1574 | 0.1650 | 0.2532 | 0.2158 | 0.1474 | 0.1430 | 0.1503 | 0.1450 | 0.2976 | 0.2559 |

Note: The excluded industrial sector dummy variable is Construction; the excluded entrepreneurial experience measure is novice entrepreneurs; the excluded number of family members working in the firms is 1 family member; the excluded number of family members holding equity in the firm is 0. Standardized beta coefficients are shown; n=328; [c] $p<0.10$, [b] $p<0.05$ and [a] $p<0.01$

**Table A4.4 OLS estimates of macroeconomic barriers**

| | Model A34 | Model A35 | Model A36 | Model A37 | Model A38 | Model A39 | Model A40 | Model A41 | Model A42 | Model A43 | Model A44 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Variables | **Control** | **General HC** | | **Bus Adv** | **Innovation** | | **Family Involvement** | | | **Full Models** | |
| ***Control variables*** | | | | | | | | | | | |
| Size | **0.03**[a] | **0.02**[a] | **0.02**[a] | **0.03**[a] | **0.04**[a] | **0.02**[a] | **0.03**[a] | **0.03**[a] | **0.03**[a] | **0.04**[a] | **0.03**[a] |
| Age Business | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Agriculture | 0.12 | 0.08 | 0.18 | 0.18 | 0.17 | 0.09 | 0.06 | 0.06 | 0.06 | 0.07 | 0.06 |
| Manufacturing | -0.67 | -0.58 | -0.46 | -0.44 | -0.59 | -0.70 | -0.52 | -0.36 | -0.34 | -0.41 | -0.40 |
| Services | -0.59 | -0.55 | -0.56 | -0.56 | -0.47 | -0.61 | -0.48 | -0.34 | -0.35 | -0.57 | -0.58 |
| Business Services | -0.68 | -0.67 | -0.78 | -0.76 | -0.62 | -0.71 | -0.66 | -0.64 | -0.62 | -0.59 | -0.54 |
| Sole Proprietorship | -0.20 | -0.23 | -0.22 | -0.35 | -0.31 | -0.20 | -0.19 | -0.22 | -0.22 | -0.34 | -0.28 |
| Partnership | 0.22 | 0.19 | 0.18 | 0.33 | 0.30 | 0.21 | 0.27 | 0.28 | 0.28 | 0.32 | 0.35 |
| Team | **2.28**[a] | **2.24**[a] | **2.17**[a] | **2.34**[a] | **2.03**[a] | **2.21**[a] | **1.44**[a] | **1.42**[a] | **1.42**[a] | **2.00**[a] | **2.05**[a] |
| ***General Human Capital*** | | | | | | | | | | | |
| Gender | ----- | **-0.41**[a] | **-0.29**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.28**[b] | **-0.18**[b] |
| Degree | ----- | **-0.46**[b] | **-0.40**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.32**[b] | **-0.58**[b] |
| Habitual | ----- | -0.05 | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| Portfolio | ----- | ----- | **-0.62**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **-0.65**[b] | **-0.61**[b] |
| Sequential | ----- | ----- | **0.52**[b] | ----- | ----- | ----- | ----- | ----- | ----- | **0.48**[b] | **0.39**[b] |
| ***Business Advice*** | | | | | | | | | | | |
| MODON. | ----- | ----- | ----- | -0.79 | ----- | ----- | ----- | ----- | ----- | -0.82 | -0.71 |
| SAGIA. | ----- | ----- | ----- | -0.17 | ----- | ----- | ----- | ----- | ----- | 0.07 | 0.10 |
| SIDF. | ----- | ----- | ----- | -0.06 | ----- | ----- | ----- | ----- | ----- | -0.01 | -0.02 |
| KAFALAH. | ----- | ----- | ----- | 0.21 | ----- | ----- | ----- | ----- | ----- | -0.16 | -0.25 |
| Saudi Credit Bank. | ----- | ----- | ----- | -0.17 | ----- | ----- | ----- | ----- | ----- | -0.21 | -0.18 |
| Bab Rizq Jameel. | ----- | ----- | ----- | 0.70 | ----- | ----- | ----- | ----- | ----- | 0.72 | 0.58 |
| Centennial Fund. | ----- | ----- | ----- | **-6.12**[a] | ----- | ----- | ----- | ----- | ----- | **-4.01**[a] | **-5.66**[a] |
| Wa'ed | ----- | ----- | ----- | **-10.71**[a] | ----- | ----- | ----- | ----- | ----- | **-10.18**[a] | **-8.67**[a] |
| Hadaf. | ----- | ----- | ----- | **-9.78**[a] | ----- | ----- | ----- | ----- | ----- | **-8.34**[a] | **-8.99**[a] |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Erada. | ----- | ----- | ----- | 3.42 | ----- | ----- | ----- | ----- | ----- | 5.10 | 4.64 |
| Reyada. | ----- | ----- | ----- | 3.76 | ----- | ----- | ----- | ----- | ----- | 3.23 | 2.98 |
| RC Jubail & Yanbu. | ----- | ----- | ----- | -2.76 | ----- | ----- | ----- | ----- | ----- | -3.57 | -4.08 |
| Rabigh. | ----- | ----- | ----- | -4.38 | ----- | ----- | ----- | ----- | ----- | -5.38 | -4.18 |
| AL-Ahssa. | ----- | ----- | ----- | -0.42 | ----- | ----- | ----- | ----- | ----- | -0.38 | -0.33 |
| Bader. | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| KAUST . | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| Dhahran Valle | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| (NEC) | ----- | ----- | ----- | **NA** | ----- | ----- | ----- | ----- | ----- | **NA** | **NA** |
| INJAZ. | ----- | ----- | ----- | -1.27 | ----- | ----- | ----- | ----- | ----- | -1.05 | -0.94 |
| Chambers | ----- | ----- | ----- | -1.60 | ----- | ----- | ----- | ----- | ----- | -1.46 | -1.65 |
| ***Innovation*** | | | | | | | | | | | |
| Product/Service Innovation | ----- | ----- | ----- | ----- | **1.10**[a] | ----- | ----- | ----- | ----- | **0.95**[a] | ----- |
| Process Innovation | ----- | ----- | ----- | ----- | ----- | 0.20 | ----- | ----- | ----- | ----- | 0.14 |
| ***Family Involvement*** | | | | | | | | | | | |
| 2-3 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | **0.15**[b] | ----- | **0.16**[b] | **0.14**[b] | **0.12**[b] |
| 4 Family Employees | ----- | ----- | ----- | ----- | ----- | ----- | **0.14**[b] | ----- | **0.17**[b] | **0.22**[b] | **0.20**[b] |
| 1 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.30**[b] | **0.28**[b] | **0.31**[b] | **0.36**[b] |
| 2 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.10**[c] | **0.12**[c] | 0.14 | 0.18 |
| 3 Family Partners | ----- | ----- | ----- | ----- | ----- | ----- | ----- | **0.42**[b] | **0.41**[b] | **0.35**[b] | **0.36**[b] |
| Constant | **31.07**[a] | **31.24**[a] | **31.31**[a] | **30.79**[a] | **29.60**[a] | **31.22**[a] | **17.08**[a] | **17.23**[a] | **17.24**[a] | **30.98**[a] | **32.42**[a] |
| F Test | **5.03**[a] | **3.87**[a] | **4.18**[a] | **3.76**[a] | **5.54**[a] | **4.55**[a] | **5.96**[a] | **5.82**[a] | **4.96**[a] | **3.78**[a] | **3.55**[a] |
| $R^2$ | 0.1247 | 0.1285 | 0.1475 | 0.2372 | 0.1489 | 0.1255 | 0.1718 | 0.1815 | 0.1816 | 0.3120 | 0.2985 |
| Adjusted $R^2$ | 0.0999 | 0.0953 | 0.1122 | 0.1740 | 0.1220 | 0.0979 | 0.1430 | 0.1503 | 0.1450 | 0.2296 | 0.2144 |

Note: The excluded industrial sector dummy variable is Construction; the excluded entrepreneurial experience measure is novice entrepreneurs; the excluded number of family members working in the firms is 1 family member; the excluded number of family members holding equity in the firm is 0. Standardized beta coefficients are shown; n=328; [c] p<0.10, [b] p<0.05 and [a] p<0.01