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Do experience, Education and Business plan influence SMEs start-up Bank loan? The Case of Libya

[1]Khalid Hassan Abdesamed and [2]Kalsom Abd Wahab

[1]Department of Banking and finance, Faculty of Economic, University of Sabha . Libya,
[2]Faculty of Economic and Muamalat Islamic Science University of Malaysia (USIM)

Abstract: The financing of small and medium enterprises (SMEs) has been a topic of great interest among both policy-makers and researchers because of the growing importance of SMEs in the economic development around the world. There is also sizeable evidence that SMEs face large growth constraints and have less access to formal sources of external finance such as bank loans, which potentially explains the lack of SMEs' contribution to economic growth. Thus, to understand SMEs' startup financing, we rely on the human capital of owner-manager and SMEs' business strategy to investigate how human capital and business strategy influence SME startup with bank loans. Using survey data based on 76 SMEs in Tripoli and Sabha, the logit model is employed to examine the hypothesized factors. The results show that business plan and owner-manager experiences do influence SMEs' startup bank loan in Libya.

Key words: SMEs start-up bank loan, Education, Experience, Business plan, Libya

INTRODUCTION

Small and medium-sized enterprises (SMEs) are inevitably paramount in a strategic economic build-up of any country in the world. This is due to the role these enterprises play in lowering the unemployment rates and strengthening economic growth. It has been well documented and acknowledged that SMEs form a large majority in the business population in most countries, and they have become increasingly important contributors to the countries' economies. For instance, in the OECD (Organization for Economic CO-Operation and Development) countries, which are considered developed; SMEs account for over 95% of enterprises and 60-70% of employment and generate a large proportion of new jobs annually (OECD, 2006).

In the developing countries, the importance of SMEs continues to be stressed, as they account for over 90% of enterprises, and 50-60% of employment (OECD, 2006) This accounts for a huge number of enterprises, especially when looking at various sectors of the economy that contribute in the creation of jobs. Besides that, SMEs are considered to be sources of innovation, as well as being the motivator for entrepreneurial spirit and creators of competition. SMEs are also regarded as significantly contributing to equitable income distribution and in turn, ensuring social stability by alleviating redistribution pressure and reducing economic disparities between urban and rural areas.

Taking into consideration the case of Libya, where the government is striving to diversify its production base, developing small and medium-sized enterprises (SMEs) could provide better solutions to this issue. Thus, recent direction as seen in the Libyan economy, in developing its economic structure and expanding privatization, has necessitated urgent need for its government to focus and motivate more SMEs and support these companies in all aspects towards their development as a whole.

Although 96% of the enterprises in Libya are small and medium enterprises, their contribution to the GDP of the country is only 4%. (General Information Authority, 2005). One of the main aspects of this disadvantaged position is due to the financial difficulties for these enterprises to have accessed for bank loan successfully (Al-Worfaldy 2006, Falah, 2006, Futaisi, 2007).

It is generally acknowledged that small businesses can borrow money from formal financing institutions such as banks or informal financing sources like family and friends to start up their businesses or increase their capital. However, there is substantial evidence that SMEs face large growth constraints and have less access to formal sources of external finance, potentially explaining the lack of SMEs contribution to the country's economic growth. (Beck & Kunt, 2006; Deakins *et al*., 2008; Riding *et al*., 2010). It is a reality that many SMEs are launched with inadequate financial resources, and they are facing difficulties to raise capital from the formal finance sector. Therefore, to find funds for startup or expansion can be the greatest obstacle faced by many entrepreneurs, as it is the underlying theme of the inherent information asymmetry between financiers and firms (Berger at ed, 2011).

However, to reduce this issue, an entrepreneur may use his knowledge experience and business strategy to gain access to bank loan.

Corresponding Author: Khalid Hassan Abdesamed, Department of Banking and finance, Faculty of Economic, University of Sabha . Libya,

This paper seeks to investigate the SME financing start-up in Libya. This was done in the context of a model that included the bank loan, human capital variables, and business strategies. As to our knowledge, there are a very small number of studies which have been dedicated to focusing on SMEs' access to external financing at the startup level. In this regard, this study strives to answer the following question: what is the influence of the human capital and business strategy towards the Libyan SME business startup with bank loan?

After the introduction, the following sections will be examining the theory and hypotheses by discussing the relationship between the human capital, business strategy theories and firms access to finance startup sources before moving on to the study framework, methodology and results. Finally, the conclusion and recommendations shall be presented, to serve as guidance for future research.

Theory And Hypotheses:

The purpose of this paper is to measure empirically the factors that influence SMEs' business startup's financing practices in Libya. A number of factors which affect firms to have access to bank loans, including: owner-manager education level, experiences and business strategies such as business plans. Therefore, this section reviews the multifarious explanations regarding the private SMEs' startup bank loans. As shall be seen, the testable hypotheses, and a proposal of a systematic set of independent variables will serve as explanatory factors.

1. Human capital and SMEs' start- up financing:

Given that SME managers are more able to create and manage viable firms with increased human capital, it is reasonable to include human capital indicators in the following analysis.

The human capital is seen in the light of a stock of individual knowledge, capability, and skills that are economically usable and all those skills acquired through education and talents, I.Q. as well as practical experiences. Thus, a prominent definition of human capital is referred as "*the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social, and economic wellbeing*" (OECD, 2001). Human capital is an important input for organizations, especially for the owners' continuous improvement mainly concerning knowledge, skills, and abilities. Furthermore, the Owner - manager relationship is one of the most common characteristics of SMEs, and to elaborate on this, the majority of SMEs are in most cases owned and managed by the same individuals. On the other hand, large firms are normally managed by a team of professionals appointed by the shareholders of the firms. Therefore, the characteristics of owner – managers such as the level of education and experience do have impacts on the access that they have (or otherwise) to the external finance. Following this, Storey, (1994) mentions that the better the human capital, the greater the firm viability of the start-up; consequentially, access to debt capital should be greater for these firms. Besides, Coleman (2000) who has examined education, gender and years of experience and access to external finance has found some evidence of education being positively related to external loan access. In the same context, Irwin and Scott (2010) have explored into some of the barriers to the aspect of raised bank finance faced by SMEs, the barriers of which specifically include the impact of personal characteristics. They have found that the educational level has made little difference to sources of finance, except for those educated with A-level who has been found to have frequently turned to friends and family for financial assistance and remortgaged their homes as another method of financial resource.

Unlike the results of these studies, the negative relationship between the use of bank financing and years of experience is found by Cassar, (2004). Also, similarly, Ed Vos *et al*., (2007) have found that less educated SME owners tend to use the external financing more, while higher educated SME owners are less likely to resort to the external financing. Astebro and Bernhardt (2003) also find out that a significant negative correlation exists between having a bank loan and the level of education of the SME owners.

Based on the human capital theory, the education and experience of the owner- manager are likely to influence firms to access bank loan. The following hypotheses are then put forth:

H1. SMEs' owner- managers with higher education are more likely to start their businesses using bank loans than their less educated counterparts.

H2. SMEs' owner- managers with a previous experience are more likely to start their businesses using bank loans than their inexperienced counterparts.

2. Business strategy and SMEs' start- up financing:

The business plan is an important tool for elevating the financial status of a business. Business planning is significantly associated with debt, although it remains a fact that the use of business plan plays a key role in the process of raising bank loan. Zhzng (2008) has found the strong positive effect of the credit status variable in accessing formal financing. Likewise, Roman (2002) establishes that small family business' owners who do not have formal planning processes in place tend to rely on family loans as their first sources of finance .The entrepreneurs can provide their business plans to investors who may be willing to serve as partial owners or to various creditors such as commercial banks that may be willing to provide business loans to them. Therefore, the business plan should be clear and must be convincing; otherwise, the loan provider will not be willing to invest funds in the business if creditors do not believe in the plan, and do not foresee the potential in the business. In that case, the entrepreneurs will have to rely only on their own funds, or family loans as sources of finance, which may not be sufficient to support the business altogether (Madura, 2007; Romano 2001; Yilmazer & Schrank 2006).

The hypothesis that has been tested in this regard is as follows:

H3. SMEs which have business plans are more likely to start with bank loan than those SMEs without any written business plans

Research Framework:

Based on the above arguments, the conceptual framework for this study is provided in Figure 1.

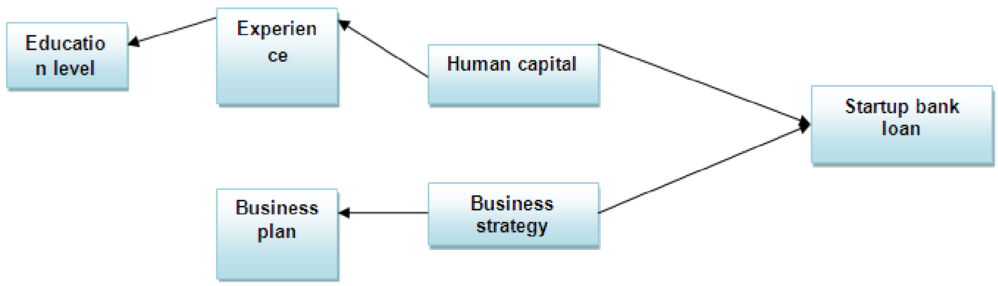

Fig. 1: Conceptual Model of Study

Research Question:

The research question of the study was; do education, experience and business plans in Libya influence the SMEs to start up businesses with bank loan?

Research Objective:

The main objective of present study was; to determine the factors affecting SMEs to startup bank loan.

Methodology:

The data used in this study were collected from SMEs in Tripoli, as the capital city in the north of Libya and Sabha city, a country located in the southern part of Libya.

The selected SMEs belong to different sectors of the economy. The study was carried out by distributing questionnaires to 100 SMEs, based on the firm size (1 to 50 employees). Subsequently, only 76 SMEs had completed and returned their questionnaires, contributing to the response rates of 76%. Study used the quantitative method to generate data. We had tested the influence of the human capital, business strategies on SMEs which access bank loan with an analysis of the Logistic regression to determine the factors affecting SMEs in Libya to get involved in the startup financing. This model considers the impact of the factors among the 76 SME-respondents in Libya. During the survey, the respondents had provided some attributes of the characteristics of SMEs' owner-manager such as their levels of education and experiences and also business strategies which include the business plan.

1. Econometric Model:

A logistic regression model has been used to determine the factors affecting SMEs to access bank loan when they started their businesses. In this model, the dependent dummy variable of bank loan is regressed by related explanatory variables. The dependent variable is designed as a dichotomous dummy because of the assumption whether or not the SME starts its business with the bank loan. The logistic regression equation derived from the startup financing is expressed below:

$$\text{Log } y_{i/(1-yi)} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + e$$

Where (y) represents the dependent variables that will be investigated

y_i = 1 if the SME's access to bank loan when it first starts up.

y_i = 0 for otherwise

β0= Constant

X = independent variables
βi= Coefficient of independent variables
e= the error/ disturbance

The independent variables represented by X_i in the equations are expressed on proxies of the conceptualized theories as the following:

BP Business Plan 1 = Use, 0 = Otherwise
EL Education Level; EL Bachelor or higher diploma and above score 1, and 0 if below
EX Experience, owner- managers have experience before this business score 1; otherwise 0.

2. Model of the Study:

Startup financing = constant + human capital i + business strategy + εi

In terms of Y, the data gathered from the survey show whether or not the owner has got bank loan to start his or her business. If the answer is "yes", the financing practice employed is regarded as a case of 'formal finance' and is coded 1. If the respondent's answer is "no", then it will be coded as 0.

We estimate coefficients (Y) using the following model:
When Y = bank loan as coded 1 and otherwise 0
Therefore,
Y for startup = β0 + β1 BP Business Plan + β2 HE Education level + β3 EX Previous Experience + εi

RESULTES AND DISCUSSIONS

The regression results for the data are presented in Table 1 which indicates that the model can reliably distinguish between entrepreneurs who have started up their businesses with bank loans and those without the bank loans and resorted to the informal financing. The nagelkerke R^2 estimated the modification of cox& snell R^2 is found to be 0.288 and satisfactory. The prediction success table (classification table) shows symmetrical good symmetry, which indicates that the model performs well at predicting both the 'yes' (startup assisted by the bank loans) and 'no' (startup without bank loans) responses. The model was able to classify correctly and give a high coefficient of predicting power at 16.6% (Cox & Snell R^2). The study also estimates on the Hosmer and Lemeshow statistics, which provides useful information about the calibration of the model. The Chi- square value is found to be of significance (0.577) (Hosmer and Lemeshow test) which indicates the rejection of the null hypothesis of the model means that there is no difference between the observed and predicted values. Therefore, the result shows that the model appears to fit the data reasonably well. The chi square value which is (13.043) of this model at the significant level of 0.01 indicates that BP, EL and EX can influence SMEs toward bank loans (16.6%) and that the logistic regression is very meaningful according to the dependent variables related to each specified independent variable.

The final logistic regression equation is estimated for determining factors affecting SMEs' startup bank loan as follows:

$$y_{i/(1-yi)} = -3.334 + 1.737 x_1 + 0.527 x_2 + 1.771 x_3$$

The results of the model show that Business plan X1 and experience X3 are significantly related with the SMEs' startup bank loan and they carry a positive effect. Otherwise, education level x2 is not found to be significant by individual.

Table 1: Results of the Logistic Regression Analysis for the Determinants of startup bank loan (Yi= 1 if startup bank loan is used, and 0 for otherwise)

Variables	Estimated Coefficient (β)	Standard Error	odd Ratio P	Exp (β)
Constant	-3.334	.874	.000	.036
BP Business Plan (X1)	1.737	.761	.022	5.680
EL Education (X2)	.527	.798	.509	1.694
EX Experience (X3)	1.771	.772	.022	5.875
Number of Observation	72			
d.f. of Regression	3			
Chi-square statistic	13.043			
Cox& Snell R^2	.166			
Nagelkerke R^2	.288			
-2 LogLikelihood	48.516			
Hosmer and Lemeshow chi-square	2.887 at 0.577 level of significance			

The variable of the business plan (X1) has a significant effect on SMEs' startup bank loan in this model and the sign of its coefficience is found to be positive. Theoretically, it is assumed that the business plan and SMEs' startup bank loan would be positively affected. This study has proven that a business plan can have positive influence on SMEs' startup bank loan. Many studies have found that SMEs which have written business plans stand higher chance of getting bank loan.

Therefore, the business plan is an important tool for raising external formal financing. Roman (2002) has found small family businesses' owners who do not have formal planning processes in place tend to rely on their families for loaning or any financial backup avenue.

The variable of education level (X2) is not made significant by the individual variable but it is found to be statistically significant in the model. Theoretically, it is assumed that the owner – manager with higher education would have the greater access to bank loan. Nonetheless, this study has proven that there is no significant positive influence of education level towards firms' startup on bank loan.

Similarly, Irwin and Scott (2010) have found that one's educational level makes little difference to sources of finance. Also, Ed Vos *et al*., (2007) highlight the fact that more educated SMEs' owners are less likely to adopt the external financing methods.

From this model it is shown that the variable of experience (X3) has a significant positive effect on firms' startup with bank loan. This is because the owners who have the experiences can reduce the asymmetrical information between the firm and the bankers. Also, Nofsing and Weiche, (2011) maintain in their study, entrepreneurial experiences are helpful in obtaining financial support from institutional investors. In this context, Anis and Mohamed, (2012) have found owner-managers with experiences are more likely to access bank loan than those who lack the experiences. Nichter, (2009); Cassar, (2004) and Zhang, (2008) have confirmed that firms with experienced owner-managers have a greater possibility of obtaining financial capital.

Conclusion:

One of the substantial steps upon starting any business is getting the financing. Thus, the aim of this paper is to study the variables' influences over the SMEs' owner-managers to get started with the bank loan. By reviewing some pertinent literature to this subject, it is found that there is the scarcity of research on this type of business especially in Libya. The logit model was specified to test empirically the hypotheses stated at the beginning. Our results through the logistic regression uphold two hypotheses except for that concerning the owner-managers' education. In short, the owner- managers of SMEs which have their own business plans, who have experiences, are more likely to start their businesses with bank loan than those without business plans and experiences. The empirical results show that all these factors have a significant impact on SMEs' startup bank loan financing. These factors are interesting not only in starting up bank loan but also for the financing expansion after the startup. Therefore, the study recommends that more studies are to be done on SMEs accessing external financing especially in the case of Libya. Finally, it is also recommended that the national programme for the development of small and medium enterprises in Libya should develop a more robust model to help SMEs' owner-managers who lack the experiences and business plans to be able to gain bank loan.

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