Capital Budgeting techniques: The case of Lebanese SMEs

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ABSTRACT: *Lebanon is a developing country in the Middle East. Over the last few years, the country has faced an exceptional level of inflation brought along by an economic crisis and the depreciation of Lebanese currency. As a result, most people have opted for self-employment as salaries have continually become unsustainable. This self-employment has seen most people opting for SMEs as their side hustles and according to a report released in 2019, over 90% of the economy is made up of SMEs. However, managers of these SMEs face a lot of challenges especially when making budgeting as well as investment decisions. In this regard, this paper seeks to identify the challenges of financial managers of SMEs when implementing advanced capital budgeting techniques like NPV, IRR, MIRR, DPB, and DCB. The research used an open-ended questionnaire to collect information from SME sector in Beirut Lebanon. It emerged that some of the challenges are government related, financial related also based upon levels of education. Generally, this paper will outline the SME sector and its link to the usage of capital budgeting techniques in Lebanon.*
KEY WORD: *SMEs, Capital Budgeting Techniques, Lebanon,*

I.   INTRODUCTION AND LITERATURE REVIEW

Companies and corporations are established with a goal of maximizing firm and shareholder value, a feat that requires both short and long-term profitable investments. The firm growth is not only measured from the firm size (Large or Small), but also from other factors including internal financing, future business plan and factor productivity. The definitions of SME are usually based on the role of SME in the economy, policies and programs designed by particular agencies or institutions empowered to develop such organizations. Micro finance enterprises investment decisions are majorly based on capital budgeting.

A capital budgeting decision rule studies the project cash flows and the time value of money which leads at the end to the right decisions. Since creation and retention of maximum profits should be based on long-term objectives and plans, the different projects chosen for long term investment should be evaluated in relation to their viability due to associated risks, expected returns as well as the company's objectives and available resources. This process, defined by the appraisal of investments, is referred to as capital budgeting where long-term investments involving plants and machinery, expansion, research and development projects among other forms of long-term investments are appraised. This process culminates into a decision on the best alternative where techniques such as net present value (NPV) and the internal rate of return (IRR) among others are utilized in the investment appraisal process. Moreover, companies and corporations should make a risk analysis to study all factors of risk; which helps in decreasing the levels of risk and give the chance to have alternative strategies. Many types of risk may face any business, but this study will be more concentrated on the financial risk.

The definition of the term SMEs usually differs from one country to another, and most countries define the term depending on three criteria. These criteria are based on the size of the firm including micro, small or medium enterprise. In addition, SMEs usually have three main characteristics. To begin with, SMEs are mostly characterized with an independent management where the owner of the business is also the manager. Another important property of SMEs is that, money or funds or capital in the enterprise is usually and mostly in the hands of the one or a small group of individuals. Lastly, SMEs conduct their operations in the local region or area while workers of the business and owners usually come from the same locality or society (Khaja, 2013).

The size of SMEs usually depends on the number of employees and the worth or value of assets owned by the SMEs, hence, there are both minimum and maximum sizes of SMEs. Moreover, different countries have different sizes of SMEs depending on the country's development level and availability of resources. It is also usually clear that SMEs' operations mostly involve sectors such as manufacturing, trade, agribusiness, transport, and even communication among many other sectors. Even though some SMEs are innovative, growth-oriented, and flexible, others are usually less dynamic and are usually owned by families. Lastly, SMEs operate in formal sector and in most cases, majority of employees and workers usually earn wages (Rody and Stearns, 2013).

Various macroeconomic variables play an important role in an economy in relation to SMEs, including unemployment, inflation, and economic output. These macroeconomic variables mostly and usually have a key

role in the economic development of many countries. For example, the financial markets of many developed countries such as Sri Lanka and India indicate that more economic tools and financial markets results into challenges to SMEs.

There are a number of critical macroeconomic roles of SMEs in different countries. These vital roles of SMEs usually result into the economic development of the countries they are based in. To begin with, SMEs usually contribute to the creation and generation of employment to a larger population of citizens worldwide. According to various researches, it is clear that about 40% of the total population of various countries globally is mainly employed in local SMEs although the performance and employment creation differs from one country to another. For example, in the year 2016, around 95% of the population in Lebanon was employed through SMEs (IFC, 2016).

Again, data from other countries like UAE usually indicate that majority of people in these countries are employed by the micro, small and medium enterprises. Therefore, from these data sources, it is clear that SMEs play a very important and key role in the macroeconomic development of various countries. Furthermore, SMEs provides employment in almost all sectors of economy such as trade, hotels, industries, transport and communication, construction, agriculture, fishing, tourism and other services that lead to economic development of various countries (Khaja, 2013).

Secondly, SMEs promote macroeconomic development by generating economic wealth in various countries. Here, money generated from SMEs in various countries is usually used in the development of various sectors of economy of a country. In addition, the money obtained from SMEs is also used in uplifting and raising people's living standards. Besides, SMEs sector is seen to easily generate capital that contributes to economic wealth. Wholesale and retail stores are among the leading sections of SMEs contributing to economic development by generating huge capital and enhancing other economic aspects in a country (Oncioiu&Oncioiu, 2012).

Thirdly, SMEs contribute to creativity and innovation in the use of local resources of various countries worldwide. Again, the creativity in use of resources and innovation of ideas usually result to the economic development, as the resources that would have been otherwise wasted are innovatively modified to produce useful products. These products are then exported to other areas and countries, thus earning the country valuable foreign exchange. Furthermore, SMEs provide proper and advantageous competition in various countries that brings and makes individuals to work hard, leading to economic development (Khaja, 2013).

SMEs are also very important in that, they contribute largely in eradication of poverty level in various countries worldwide by promoting economic growth. Generally, one of the main benefits from the existence of SMEs is wealth and employment creation, thereby providing a source of income to individuals of the country. As a result of these wealth and employment creation, SMEs reduce poverty level of various countries. It is also important that owners of SMEs know their resources as well as how to use them appropriately in order to create competitive advantage. This will make SMEs use appropriate knowledge and skills in improving their operations, hence achieving competitive advantage that will not only aid the growth of specific SMEs, but also increase aggregate demand, leading to economic development of the country.

Other important macroeconomic development impacts SMEs include, the promotion of technological innovation, as most technological advancement in the world is attributed to the SMEs. Again, SMEs aid in increasing export growth and productivity in various countries, leading to growth in GDP. Therefore, as a result of SMEs, there has been more knowledge-based economy due to information, communication, and technological advancements witnessed recently from SMEs. Due to this, there is continuous innovation of various technologies taking place worldwide every day. Therefore, it is important that various countries' governments provide conducive environments for SMEs to apply and use technological growth strategies in their businesses (Shaikh, Shafiq, and Shah, 2011).

According to Magableh, (2015), small and medium enterprises (SMEs) not only facilitate job creation but also play a critical role in promoting social and economic development. In regard to country development, small and medium enterprises constitute of 33% of gross domestic product, 45% of workforce employed and 95%of the whole business (IFC, 2014). SMEs are considered among the major pillars of the economy of Lebanon consisting of more than 97% of total private businesses and more than 51% of total labor force. However, the growth of this sector face challenges of strategy level and policy. Additionally, external matters such as the ongoing conflict in Syria and the huge refugee influx have escalated the strain on the economy of Lebanon. Therefore, it is imperative to support the small and medium enterprises to reduce barriers that are currently hindering the social and economic growth of the country.

The SMEs risk is primarily due to the fact that there is a great difficulty in evaluating risks incurred by SMEs. Risks are directly related to the lack of transparency in terms of financial declaration and absence of studies and researches about managerial problems and solutions that may face SMEs' (Ministry of economy in Lebanon 2014-2015). Most of Lebanese SMEs are owned by a person or a family, whose decisions are not basedon areal and scientific strategy. Hence, they will face problems to get funds from banks or creditors. The

main strategy is how to change the culture by using entrepreneurship and leadership to achieve success and development (SMEs' in Lebanon, Ministry of Economics, 2015).

The study carried out by Sarwary (2019) sought to determine the capital budgeting techniques (CBT) used in small and medium-sized organizations. Sarwary (2019) explains that cash outflows usually occur in expenses and investments. For this reason, the cash outflows consist of the direct costs, the assets purchases, the operating expenses, and the existing debts within the organization. Thus, the documentation based on the organizational cash outflow many focuses on both the in and out timings owing to that most of them take longer. According to the study, CBT is categorized into sophisticated capital budgeting techniques (SCBT) and non-sophisticated capitalbudgeting techniques (NSCBT). SCBT involves the following methods: net present value, internal rate of return, profitability index, and real options. NSCBT includes payback method, accounting rate of return, return on assets, return on equity, return on investment, and discounted payback. The study noted that 92% of SMEs adopted the payback method while the other 8 % used the accounting rate of return method, indicating that NSCBT ruled in SMEs. The research depicted that risk assessment, the decision-maker, institutional strength, and the structural composition determine CBT's choice. The study concluded that SMEs preferably use NSCBT due to the inadequacy of credible information to adopt SCBT.

The literature review has pointed out a dominating gap in the study of the acceptance level of the capital budgeting process (Verma, Gupta &Batra 2009). It seems that most of the businesses not only in Lebanon but also in other parts of the world as well, even in some advanced countries are using payback period as the most accepted means of the evaluation process. The justification of the managers in adopting payback period over the NPV and IRR has been its simplicity in the calculation. So, there seems to be an imminent gapby the businesses choosing non-discounted means over and above the discounted measures to assess the business profitability(Verma, Gupta &Batra 2009).With this, the primary objective of the paper is to examine the challenges of financial managers of SMEs when implementing advanced capital budgeting techniques like NPV, IRR, MIRR, DPB, and DCB. The paper has been segmented into various sections with research objective following, followed by research methodology and data analysis, then results and discussions and finally a conclusion. A list of references has also been provided.

II.   Research Objectives

- This paper's main objective isto examine the challenges of financial managers of SMEs when implementing advanced capital budgeting techniques like NPV, IRR, MIRR, DPB, and DCB.
- The paper also seeks to is to assess the use of capital budgeting techniques by Lebanese SMEs. So, the study will contribute to putting forth the means of the discounted measures in showcasing the suitability of the investments especially for the SMEs operating in Lebanon.

III.   Research Methodology and Data Analysis

This study was performed in Lebanon among small and medium sized enterprise owners. SMEs were randomly selected from Beirut which serves as the capital city of the country. The choice of Beirut was triggered by the fact that it represents the country's metropolitan culture and comprises of people from all social classes with different motives. This made it easy to get actual SMEs owners who also represented the entire country. An open-ended questionnaire was used to collect the data on the performance of SMEs in Lebanon and use of capital budgeting techniques. Notably, some of the questions had multiple choices for easy analysis of responses while others were generally open-ended. The responses were recorded in the questionnaire and analyzed using excel and a bit of Statistical Package for Social Sciences (SPSS) software. Qualitative knowledge was also used to enhance reaching the research objective

The study seeks to examine the various capital budgeting techniques used in Lebanese SMEs and the various factors influencing financial investment practices within the country. The focus is to find out how capital budgeting is used by Lebanon.The use of an appropriate type of research design ensured appropriate resolution of the research problem and at the same time help in improving effective level of marketing research. The designs applicable in financial researches always focus on three types of research design which include exploratory research, descriptive research and casual research.

Exploratory research is applicable where general nature of the problem needs to be established. The alternative decisions need to be verified in consideration of relevant variables.The research methods are characterized by high flexibility and unstructured means granting application of clues concerning the problem situation. Descriptive research involves the use of speculative hypothesis making the relationships not to appear casual and then finally casual research, which seeks to reveal the relationship existing between variables used within the study.

The study involved the use of both descriptive and explanatory, whereby descriptive helped in identifying the value of capital budgeting Lebanon. And on the other hand, an explanatory approach used to explain the contributions of capital budgeting towards development of SMEs within the country

IV.   Findings and Interpretation

Most of the SMEs owner based their investment decisions on demand and supply of products. People had the tendency to invest in the production of products with high demands and the investment decision was solely dependent on the business owner. The forces of demand and supply and the factors influencing the demand and supply such as consumer preferences, changes in tastes, weather conditions. Finally, although most of the respondents did not have proper knowledge regarding the investment rules. However, according to their way of responding, most SMEs owners shown a great use of Net Present Values to evaluate their projects. Capital budgeting of Lebanese chamber presents one of the most important means of making decisions. Capital budgeting is necessary for the purposes of maximizing the value of the business. The empirical results are presented, and the analysis is given based on the data obtained.

The study provided participants from the chamber with relevant techniques allowing them to tick various importance of capital budgeting techniques from the questionnaire given. The SMEs that were sampled added up to 248; however, responses were used from only 174representing 70% response rate. Good percentage of the questionnaires was answered by intended respondents from the region.

Table 1: showing response rate

	Number	Percentage (%)
Spoilt Questionnaires	20	8
Unfilled Questionnaires	54	22
Responses Used	174	70
	248	100

Respondents were found to be learned since they had considerable academic qualifications. This indicated that they had valuable information concerning the area of study. The size of the capital budget was also identified from each respondent and tabulated as below. The SMEs differ in terms of size hence vary in annual or periodic capital budget.

Size of Capital budget	Number	Percentage
< 5 million Lebanese pounds	46	26%
Between 5 – 10 Lebanese pounds	57	33
Between 10- 50 million Lebanese pounds	33	19%
Between 50-100 million Lebanese pounds	36	21%
Above 100 million Lebanese pounds	2	1%
	174	100%

There were also responses on the frequency of the use of the various budgeting methods. These include; net present value (NPV), profitability index (PI), Internal rate of return (IRR), modified internal rate of return (MIRR) as well as payback. The results were as follows

Capital budgeting technique	% Usage
NPV	65%
IRR	60%
Payback	94%
MIRR	50%
PI	35%
Other techniques	13%

The results indicate that the techniques mostly used in evaluation of projects within SMEs in Lebanon are profitability index, net present value and internal rate of return. This is clearly shown by 94% preferring the use of Payback period, 65% of the companies use NPV in most occasions while 60% of the participants use IRR method. This reveals that NPV, payback period, IRR are the most preferred techniques with payback periodforming the most popular method.

In determining the factors which influence the use of investment rules, All the respondents claimed that their decisions were based on financial motives. Additionally, they identified their main source of financing as small loans from money lending institutions. Additionally, the SMEs revealed minimal sustainability issues and engaged minimally in corporate social responsibility. However, some respondents also claimed that they were not aware of the best capital structure although they recognized debts as the main source of capital.

In identifying challenges of financial managers of SMEs when implementing advanced capital budgeting techniques like NPV, IRR, MIRR, DPB, and DCB, it turned out that there are various factors affecting the development of SMEs such as macroeconomic factors, growth opportunities, and the business environment. Macroeconomic factors it largely depends on government expenditures and government procurement procedures in the registration of SMEs in various countries. Therefore, legal requirements of the government regulations need to be considered in the process of registering SMEs in order to allow them provide sound taxation and proper contract terms. In addition, low-inflation economic environment has been found to be one of the ways through which growth of SMEs can be encouraged, given that high inflation rates usually lead to slow growth rate of SMEs. Moreover, there is need for creation of a stable exchange rate regime to encourage SMEs engage in effective and efficient operations; this allows them to engage in stable exchange currencies, leading to economic development.

The level of education in a country also plays a very crucial role in the development of SMEs, as high education level contributes to high level of development and growth of SMEs. Besides, there is need for the promotion of SMEs to acquire and access credit services from banks and other financial institutions, as it has been found that this promotes the growth of small firms, leading to more economic development. Therefore, banks should be encouraged to provide loans at low rates in order to attract more small firms to apply for loans and in the process increase the rate of investment in the country.

Other factors such as the black-market premiums, including land rates and rents, also affect the development of SMEs; hence, the government should properly regulate the black-market policies. Again, startup costs in the registration of SMEs usually differ from country to country. In addition, in all countries, SMEs are usually required to have license in order to operate freely without interferences. Again, studies show that corruption and other labor market operations affect the operations of SMEs. It is also found out that the political stability of various countries contributes largely to the development of SMEs. Moreover, it is clear that SMEs also contribute to infrastructural development of various countries both locally and nationally (Steinerowska-Streb, 2012).

SMEs face some challenges and problems in their operations such lack of credit and other financial support. Again, lack of access to modern technology is also another common problem facing various SMEs worldwide. Training of individuals in order to improve human resource development is also a problem that faces SMEs. Other problems that are common to SMEs globally include lacks of funds to improve research and development on matters dealing with SMEs, limited information, skills, and knowledge on the possible market changes, and poor government policies and regulations.

V. Conclusion

In conclusion, to solve these problems, the government must put in place policies and systems that will give SMEs a conducive environment to promote and develop their entrepreneurial businesses. To begin with, the paper suggests that the governments should provide support to SMEs development by providing conducive environment for them to operate (Pisoni, Fratocchi, and Onetti, 2013). Again, the government should provide policies and regulations, including regular opportunities to share market information with the SMEs firms and to involve the firms in developing various policies and regulations affecting them. In addition, there is need for more links between the private sectors and the governments in order to provide mutual understanding between them.

Due to the problem of finances and limited funds facing SMEs, the government can provide loans to various small firms and encourage banks to start giving loans to these small firms, as that will result into more economic development. Furthermore, the government should also ensure that the level of education is elevated and improved in their countries in order to provide more knowledge and skills to SMEs. Besides, the problem of infrastructure can be solved through promoting local infrastructural development and other technological advancement in order to promote the development of SMEs.

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