

THE IMPACT OF FINANCIAL MANAGEMENT ON INNOVATION

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Abstract: In the current competitive market, innovation has become a crucial element for organizations, willing to grow. Financial management in this regard is playing a significant role in improving firms' innovation capacity. This research paper evaluates the impact of financial management components on innovativeness of Austrian SMEs. Using data of 118 employees from 41 SMEs operating in Austria, the research finds a significant impact of the financial management model on firms' innovation. The three components: liquidity, controlling, and financial literacy are statistically significant in explaining innovativeness at 1% level. The study suggests focus on the three financial management constructs in order to improve their innovation capability and capacity.

Keywords: Financial management, innovation, crucial element, employees.

1. INTRODUCTION

Organisations are anticipated to act promptly and appropriately towards the high market pressures to meet the customers' changing demands due to the increasing competition in the dynamically growing market. In this regard, the basic but the most critical aspect is of adequate financial controlling, in terms of planning the finances and managing the liquidity aspects as well (Kozubikova, Homolka, & Kristalas, 2017; Belas & Sopková, 2016; Ključnikov, Kozubiková, & Sopková, 2017). Meanwhile, it has also been contended that the organisations these days are more concerned towards turnover and profit margins, rather than keeping the financial aims and liquidity as the prime objectives (Upadhaya, Munir, & Blount, 2014; Frame, & White, 2014). Besides, there is another notable aspect of the increasingly competitive market that demands the organisations to be considerate enough, in order to gain the maximum level of competitive advantage within the respective industry (Hristov, & Reynolds, 2015). Innovation management is the most crucial element that has acquired potential magnitude in an integrated manner with the management of finances if the firm intends to be a leading entity even in the incessantly increasing competitive marketplace (Hausman, & Johnston, 2014; Schrage, 2013; Laužikas et al., 2017).

In order to sustain competitiveness in the market, the firms must be continuous in innovating their business processes, which requires the firms to manage sustained investment in both the tangible and intangible aspects of business innovations (Fang, Tian, & Tice, 2014). Lee, Sameen and Cowling (2015) have documented that mainly Small and Medium-sized Enterprises (SMEs) or Entrepreneurial start-ups having potential innovation opportunities face financial constraints that eventually limits the adoption of technological innovations. Sufficient financial resources are essential for the successful exploitation of innovatively diverging growth patterns, particularly in terms of advancing the Research & Development (henceforth; R & D) areas. In this regard, it has been established that the option of external capital (preferably stock market) is significantly favourable for such firms since it tends to reduce the asymmetry in the information regarding the innovation activities (Agénor, Canuto, & Jelenic, 2014; Agénor, & Canuto, 2017). However, multiple other perspectives regarding managing the financials and liquidity of the organization in relation to the deployment of innovations have also been presented in the literature; yet, the studies are observed to be deficient in facilitating credible outcomes.

Problems have been there due to the inefficient identification of valued patterns in the data, along with the use of inappropriate controls, and sampling inadequacies as the main reasons. Consequently, this particular study intends to fill the typical gap in the literature, by means of being vigilant in adopting the research method and all other associated elements of the research design. Besides, it has been recognized at first that all the competitive outcomes of innovation element are second to the assurance of the most proficient financial controls within the organizational activities. It leads to the assertion that innovation is dependent on the finances; thus, financial controlling and management turns out to be significantly critical for the competitiveness of the organisations.

2. LITERATURE REVIEW

In the current competitive market, innovation has become a crucial element for organizations, willing to grow. In fact, in some industries like technology, an entity cannot survive without innovation. This is the reason why global giants like Volkswagen, Samsung, Intel, and Microsoft spent a material ratio of their earnings (5.2%, 6.4%, 20.1% & 13.4% respectively) in research and development. Hence the need to bring up new ideas for supporting industry growth through fulfilling the expectation of the consumer is always a concerned factor. It is important to know that no matter how important the innovation element is, it always comes after the primary objectives of business, which are profitability and survival. Therefore, it is crucial to lead the research only if appropriate financial controls are present. Thus, the innovation is in a sense dependent on finance.

2.1 Relationship between Finance and Innovation

The nature of finance is often dependent on the purpose of funding and nature of the project. Research and development is a risky business and does not always come with a favourable outcome, there is no certainty of the outcome, the collective nature requires finance from a different source, and the cumulateness indicates that innovation may lead to a merger of different research results (Lazonick and Mazzucato, 2013). All these characters direct us to the facts that Innovation demands finance from various sources, of patient nature and with acceptability of high-risk. Thus, the nature of investment is dependent on the type of finance. From the perspective of investors (specifically private investors) funding research and development is not the best investment (Turner, 2015), due to its' long-term nature. Instead, they believe that investing in short-term projects, for example, share trading is considered more profitable. This is caused by the modern corporate governance structure that prefers earning short-term returns (Kay, 2012) and reinvesting in companies existing activities or support expansion, plus the uncertainty of achievement is a scary concept for investors. On the contrary, many technological revolutions are resulted through high-risk investment, even though those experiments are more taskbased in nature. These sorts of investments are made with the aim of the betterment of some target industrial landscape, for achieving some heights that have never been met before (Mowery, 2010; Foray et al., 2012). Such investments are put in motion to accommodate two kinds of purposes, for meeting the expectations and demand in the market or for developing a new product that will be desired by the market (Climate Policy Initiative, 2013; Mazzucato & Semieniuk, 2017). As mentioned above, most of the research projects are cumulative and require multiple investments throughout the process. Even in the mission-oriented innovation projects, where the objective and the deadline is set, the risk of financing, and so the innovation is high. This is because the investor has to rely on the hope that the funding will keep flowing in as long as the project requires it, but if for any reason, funding is not available at any time, the whole previous investment will probably turn to a waste, with no return. Thus the financing risk in innovative projects exists, therefore the estimated Net Present Value of any such project may be lower than its actual worth, due to the high-risk element of financing. This risk can be eliminated if the investor commits, to provide more investment until the end of the project, however, in any case, the risk of uncertainty will remain to impact the financial risk in equilibrium. As a result, the investor keeps a close track on his investments, and require regular updates about the potential of the project, possibility of the achievement and time required for completion, in order to preserve his investments and exclude the option of terminating the research (see Bergemann & Hege, 2005). Thus, low financing risk leads to more interest of investors into funding experiments (Nanda & RhodesKropf, 2016). As much important an innovation is for the growth of any business for the purpose of competitive advantage and strategic gain, finding and maintaining finance stream is still a difficult and considerable part. One of the useful external sources of funding is the stock market. Sometimes a firm does not have the ability to conduct a quality research, and other times the capable firm holds itself back due to the unavailability of funds required for experiments. Listed firms can easily access Stock market, to raise funds for investing

in their research activities, unlike private entities which do not have any access to the stock exchange, unless under the capacity of a trader. Public listed companies that are externally financed dependent (EFD) are known for being more efficient in their research programs than other private or non-listed companies. However, the internal finance dependent (IFD) types of both public and private companies have no material difference while supporting their research and development divisions. The extent that listed companies can reach to for the development of their operations or their brand name. It is considered as the best option for public companies to go for EFD, and due to unavailability of this option to private investors, the suggestion is to go for other sources, like private investors or more likely for internal development of fund, so the innovation, experiment or research programs continue for the sake of company's future. There are many ways to evaluate the results, but the most common one is the comparison between cost and benefit of the research that is in the case of achievement of required results. In the case of absence of a proper cost-benefit analysis, a private company may not be able to survive the aftermath of research.

2.2 The Role of Financial Management in Innovation

A relevant example of the effect of financial management on innovation industry could be China, which has successfully turned the living style of its locals, increased GDP and has maintained a reputable and leading rank in world's top most business countries and all this was done within a span of few decades. There is more than one reason behind the sudden growth of China, and the incline in financial literacy of local investors is one of the major reasons. China realized that one does not need a 4-year degree to read the profit figures, and in order to operate successfully the person must at least have sufficient knowledge or literacy of the finance, to understand the ups and downs of business and the causes of the volatility. And so the Chinese government provided the tool to its inhabitants leading to the growth in business sectors in various industries. Coming to our main topic, the innovation industry in China before the growth in the financial sector was too low, but with the increasing trend in financing sector and availability of more investors, the innovation industry also followed the rise-up. A detailed analysis, including figure based assessments, are presented in a recent article "Financial Literacy in China as an Innovation Opportunity" (Brejcha, Wang & Zhang, 2016 July). Another example of the rapid growth of innovation industry is of Germany in 1930s and 40s when German government gave its scientist a free hand and unlimited access to finance for conducting researches and innovation products. Thus, it has been proved by many scholars, theorists and researchers that for firms engaged in innovation activities and dependent on external finance to maintain the flow of their operations, effective financial management policies and potential willing financiers are vital element.

3. METHODOLOGY

The successful execution of a research process demands the collected data to be credible and authentic. It brings in the undeniable importance of selecting the most appropriate method of collecting and analysing the data (Feilzer 2010; Flick 2011). Accordingly, Bryman (2015) has affirmed that needs of being selective towards the research method, as the accomplishment of the study objectives are greatly dependent on the adopted method. In this regard, research approach is identified at first due to its feasibilities of categorising the data collection and analysis methods to be easily selected (Fowler Jr, 2013). Taylor Bogdan & DeVault (2015) have documented three types of research approaches as being Quantitative, Qualitative, and the combination of both as a Mixed research approach. Reviewing both the qualitative and quantitative approaches within the study context, the researcher has selected Quantitative approach as the most preferred one. It has been preferred over the Qualitative approach based on the fact that the study objectives of assessing the relation in between the management of financial aspects of the organisation and the investments in the innovation deployment for being competitive. Recognising the notable gap in the literature, qualitative and thus, mixed research approach has been disregarded. The significance of Quantitative research approach is validated from the study of Creswell (2013), which asserts that this particular approach facilitates the researcher by means of its unique aspect of "cause and effect thinking". Rovai, Baker, & Ponton, (2014) have affirmed this unique thinking pattern leads to the accurate and logical interpretation of the problem focus. Consequently, the selected approach has been remarkable in helping the attainment of cohesive results pertaining to the relationship in between the identified variables. Subsequently, there comes the selection of research purpose that depicts the strict abidance of the devised aim of the study. The study context could be either a new idea or analysis of the already identified variables within the extensive research scope. Therefore, the purpose of the study needs to be clearly articulated prior to the initiation of the study. Davies & Hughes (2014) have

presented three main purposes of the research, as Exploratory, Descriptive, and Explanatory, depending on the study context. This particular study is explanatory in nature since the objectives are related to the assessment of relationship in between the identified variables of financial controlling aspects and the innovation management at the organisational level. In addition to this, another important element is the consideration of research design, for its potential contribution to addressing the research problem (Bryman & Bell 2015). Research design has its multiple forms, including review-based design, meta-analytic design, experimental and semi-experimental design, descriptive design, correlational design and others (Davies & Hughes, 2014; Lampard & Pole, 2015). Depending on the nature of the study objectives, the researcher adopts the most appropriate design of these all on the basis of their unique aspects. The descriptive design has facilitated the analysis of the identified variables in terms of percentages, frequencies, and others. On the other side, the correlational design has assisted in recognising the relationship in between the identified variables under consideration. Even though, the researcher is expected to be considerate towards the selection of the most appropriate approach, purpose and the design of the study, the importance of data sources remains undeniable. It has been asserted based on the fact that the overall authenticity and reliability of the study is reliant over the feasibility of accessing the required data (Matthews & Ross, 2014).

4. RESEARCH OBJECTIVES AND HYPOTHESES

4.1 Research Objectives

The current research paper aims to determine the relationship between financial management and firm innovation. For this purpose, it focuses on small and medium enterprises (SMEs) operating in various business sectors in Austria. Financial management, in this study, is represented by financial liquidity, financial controlling, and financial literacy. Following are the objectives of the study:

1. To examine the relationship between financial management components and innovativeness of Austrian SMEs
2. To develop a financial management-innovation model based on the data from Austrian SMEs

4.2 Research Questions

The research question of the current research paper is: What is the impact of financial management components on innovativeness of Austrian SMEs? Based on the above question, following sub-questions are proposed:

1. What is impact of financial liquidity on innovativeness?
2. What is impact of financial literacy on innovativeness?
3. What is impact of financial controlling on innovativeness?

4.3 Research Hypotheses

The statistical relationships between financial management constructs and innovativeness of the Austrian SMEs is based on the following hypotheses:

- H1: The impact of financial liquidity is significant on innovativeness of the Austrian SMEs.
- H2: The impact of financial controlling is significant on innovativeness of the Austrian SMEs.
- H3: The impact of financial literacy is significant on innovativeness of the Austrian SMEs.

5. CONCLUSIONS

Financial management and controlling plays a significant role in the overall performance of businesses. In this paper, the significance financial management is assessed with respect to innovation. Based on the primary data of 118 respondents from 41 SMEs operating in Austria, the research finds a significant impact of financial management components on firms' innovation. Individually, financial liquidity, literacy, and controlling are statistically significant in explaining firms' innovation capacity. It suggests that Austrian firms are required to focus on these financial constructs for enhancing innovative capabilities and capacities.

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