The Impact of Innovation on Performance of Small and Medium Enterprises (SMEs) in Tanzania: A Review of Empirical Evidence

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Abstract This explanatory study uses a desktop methodology to investigate the world wide existing empirical studies results on the relationship between Innovation on Small and Medium Enterprises (SMEs) performance. The literature survey reveal that the studies on innovation and its effect on performance are observed to have concentrated to Western, Middle and Far East and very little empirical evidence is noticeable in Africa. The issue of innovation and how it relate to firm’s performance and specially SMEs is therefore yet to be exhaustively explored. The results from review further find that no consistent results on whether the innovations altogether influence firms performance. The conclusion is therefore not generally viable. The nature of the empirical results reported in this paper indicates a need for such studies especially in Africa where the research fissure is widely observed in this area. The paper is thus a wakeup call for empirical studies that assess the impact of innovation on SMEs performance in Africa and Tanzania in particular where the studies of this nature are rarely found in the review of literature conducted in this paper.

Keywords: process innovation, technical innovation, innovation activities, business performance


1. Introduction

Small and Medium Enterprises (SMEs) are widely recognized as the key engine of economic development. As a result of this recognition, a central issue dominating policy debates around the world and Africa in particular has been how to stimulate economic growth through the development of SMEs [14,52]. In developing countries, SMEs are important not only because they create employment but also because they employ unskilled workers, who are overly abundant in these countries [10,70]. Like many other developing countries, Tanzania has recognized the importance of SMEs for economic development and poverty alleviation. SMEs are more innovative than larger firms, due to their flexibility and their ability to quickly and efficiently integrate inventions created by the firms’ development activities [42,76,78,80,89].

Research supports the notion that SMEs that engage in innovation activities are better performers [22,24,73,81,84] and [42,80]. Studying SMEs can enhance our understanding of their needs in respect to growth and development. Such understanding would enable scientists, practitioners, and policy-makers to formulate sound support strategies for SMEs [51].

Despite their contributions to income and employment creation, SMEs in general are currently faced with many problems (Hash business Condition), [6,12,49,82,90]. In terms of determining barriers to SMEs growth to large corporate entities, surveys by the Rural Program on Enterprise Development (RPED) found two levels of constraints facing SMEs in Tanzania: those acting as barriers to general operation and those impeding growth. Subsequently, Calcopietro classify the factors hindering SMEs development in Tanzania and other developing countries in five categories, namely macro-economic and policy environment, physical and technological infrastructure, banking and finance structure, legal and regulatory framework, and market conditions [12].

SMEs are very important to any country’s economy; these SMEs face harsh conditions leading some of them failing to survive and grow to large corporate entities. One of the key means to overcome such harsh conditions is innovation. It has also been said that most of SMEs fail to innovate. After all, business performance is dependent on a wide range of factors that are not susceptible to simple conception. An empirical survey carried out by the Cambridge Small Business Research Centre provides useful insights into these SME innovative behaviour in the UK [15]. In his study, HI suggest that innovation can yield positive benefits for businesses; innovation can be equated to business performance [33]. Yet, the literature reviewed suggests that such an assertion is flawed, primarily because business performance is not an outcome solely resulting from innovation [26]. Success or failure in
innovation should, therefore, be viewed as a necessary but not sufficient cause of business performance and survival. This paper is therefore designed to make retrospective review of existing empirical literature on the impact of Innovation Activities on SMEs performance across countries. The paper adds on the stock of academic works in the area.

2. Research Methodology

The study was carried out with the purpose of revealing the existing empirical works which examine the impact of SMEs on the firm’s performance around the globe. In order to achieve this end the author conducted a rigorous review of literature and documentary information germane to the subject matter. The paper is thus purely based on desktop and library research methodology. In this regard articles selected from top Enterpris journals, research papers, diagnostic study reports have been surveyed in making this study. The review is mainly on Innovation on Performance researches conducted around the world between 2005 and now. These previous studies neither emphasized on the factors that influence innovation nor showed clearly how innovation affects business performance particularly among SMEs.

3. Empirical Studies on Innovation & Performance of SMEs

This section presents the empirical studies world-wide on innovation and firm’s performance across industries. This aims to enlighten the research on the existing results and conclusions thereon which is useful in research gap identification. In this stance this section in addition to discussing the concepts of Small and Medium Enterprises (SMEs) and innovation and the measurement of performance in this context. The section is therefore divided into three parts; the description of the concepts of innovation and SMEs the measurement of performance and existing results of empirical studies in this context.

3.1. Understanding the Concepts of ‘Innovation and its Determinants’

Innovation is described as “the introduction of new or improved processes, products or services based on new scientific or technology knowledge and/or organizational know-how” [53]. An invention is the first occurrence of an idea for a new product or process whereas innovation is the act of putting it into practice. There are different types of innovation in business [77]; however it can be related to new products or services, new production processes, new marketing techniques, and new organisational or managerial structures [56]. Innovation may also involve technology, intellectual property, business, or physical activity [74].

Most studies speak of product innovation and process innovation and all these are important towards development being at country or organizational level. Product innovation is the introduction of a good or service that is new or significantly improved regarding its characteristics or intended uses; including significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics [53]. [62] contend that product innovation generally means the organisation’s process for introducing new ideas, new products/commodities, new technology, workflows, new manufacturing methods, new services and new distribution and delivery. It is generally posited that the product innovation becomes the most important source of structural change in an economy because it alerts the mix of products, industry and jobs, which make up an economy [7].

A process innovation on the other hand refers to the new procedures, policies, organisational forms and knowledge embodied in the distribution channels, products, applications, as well as customer expectations, preferences, and needs [27] it is coupled with the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software. It can substantially lead to a decreased unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products [53]. Fagerberg stressed that while the introduction of new products is commonly assumed to have a clear, positive effect on the growth of income and employment, process innovation, due to its cost-cutting nature, can have a more hazy effect on performance.

An imperative question arises at this juncture on what are the main drivers of innovation in the business world. In literature the following can (do) affect product innovations, business process innovations or their combination. These include industry maturity [79]; customer(users) needs and expectations [34]; technological opportunities [68]; investment attractiveness, intensity of competition [4,69] and company size and origin of ownership [39,55].

3.2. The “Nature of Small and Medium Enterprises’ and ‘Indicators of Performance’

There is no universally accepted definition of SME. Different countries define SME differently depending on their level of development. However, the commonly used criteria in defining SMEs include the total number of employees, the total investment and sales turnover. The Tanzania Government, on its part, defines SMEs according to sector, employment size, and capital invested in machinery. Accordingly, in Tanzanian context, SMEs are defined as micro, small and medium size enterprises in non-farm activities which include manufacturing, mining, commerce and services [78].

In effect, the ownership structure of SMEs is different from that of larger corporations. SMEs are often owned by a small number of partners or they are family businesses, unlike the publicly owned larger firms. Innovation activities can be generated within SMEs, wherein the internal environment determines how resources are used and delegated in the organization. However, innovation activities can occur in cooperation among a group of SMEs, in a networking setting [86,87], through innovation systems [45], and even through the economy of an entire region [40] or a country. These activities can even take place on a global scale. That is why, in my opinion, it is necessary to look at both perspectives if one wishes to
tackle the issue of SME performance and relate performance to the topic of innovation.

However, in measuring firm performance, different concepts are used to include sales per employee, export per employee, growth rates of sales, total assets, total employment, operation profit ratio and return on investment [71]. In the end, all the innovative activities of the firm must result in better firm performance compared to companies that do not innovate. In this stance the performance in this context is also measured in similar ways in assessing the impact of innovation activities on SME performance.

3.3. Worldwide Studies on Innovation and SMEs Performance

Accordingly, a recent research by [29] examined the relationship between innovation and performance of wooden furniture manufacturing SMEs in Indonesia. The study reveal that innovation has a positive effect on firm’s performance. Notwithstanding, a study on innovation and SMEs performance find that innovation culture and strategy are key drivers of performance [75].

Another study reveal that distribution channels innovation is positively related to overall firm performance [41]. In their studies they find entrepreneurial orientations via innovativeness to be positively associated with SMEs performance. Consistently in Turkey context examined innovation and firm performance in automotive industry [5,41,64]. Their results demonstrated that technological innovation (product and process innovation) has significant and positive impact on firm performance, but no evidence was found for a significant and positive relationship between non technological innovation (organizational and marketing innovation) and firm performance. Results that Corroborates shows which report positive effects of innovation types on firm performance in Pakistan’s manufacturing sector [5,32].

Innovation had led to performance for SMEs in Taiwan [43]. Their research reports empirical evidence that innovation has weak link with performance (sales). The result by [43] is squabbled by results by [50] in Kenya which finds that innovation influences the growth of SMEs [43]. The study further reveal that the tendency of owners to engage in new ideas, novelty, experimentation and creative processes result in new products services or innovations rather than technological innovations appeared to be related to SMEs performance significantly. Corresponding the results by Rosli and Garcia analyzed relation between innovation and the level of small business revenue in IBERO-America [21,60]. The results show that there is a strong influence of innovation in the level of performance of Small and Medium-Size Enterprises.

Despite the weak link they found, associated innovations with increased firm sales; and they argued that organizational innovations rather than technological innovations appeared to be the most vital factor for total sales [43]. On the other hand, Johne ensured that marketing innovations increase sales by increasing product consumption and yield additional profit to firms [37]. Moreover, in a recent empirical study on British firms showed that different types of innovations were found to be related to innovative performance [54]. On the other hand Effects of innovation types on Firms Performance empirically tested identifying the relationships amid innovations and firm performance [47]. The study not only discloses how four innovation types affect diverse firm performance aspects, but it also points out that innovative performance exerts a mediator role between innovation types and performance aspects.

In general, the literature considers innovation as critical in fostering the economic efficiency of both companies and nations are one of the key drivers of firms’ long-term success, particularly in dynamic markets [31] and [8,9,17,44,66,79,88]. The rationale behind this idea is that innovation often serves to deal with the turbulence of the external environment. To survive in Schumpeterian environments, organisations must be able to cope with increasing complexity and high-velocity change [20]. In these contexts, companies with the capacity to innovate can respond to these challenges faster and exploit new products and market opportunities better than non-innovative companies [20,72]. Thus, it is commonly perceived that organisations should innovate to be effective and, in the long run, to survive [67].

4. Discussions of Results from the Review

There is no universally accepted definition of SME. Different countries define SME differently depending on their level of development. However, the commonly used criteria in defining SMEs include the total number of employees, the total investment and sales turnover. The Tanzania Government, on its part, defines SMEs according to sector, employment size, and capital invested in machinery. Accordingly, in Tanzanian context, SMEs are defined as micro, small and medium size enterprises in non-farm activities which include manufacturing, mining, commerce and services [78].
The literature review in this paper explores Innovation on SMEs performance in global wide to come up with a relevance discussion in Tanzania context. SMEs have difficulty entering new markets. They also can not affect market prices, as this is achieved through the interference of the larger firms. The only exception for this last factor is case of “hidden champions.” Hidden champions are smaller firms that are very dominant in certain niche markets [19]. However, it appears that firms that are innovative in some way (output-oriented, all round or process-oriented) achieve better results in terms of turnover growth, employment growth and profit improvement. The ‘lagging behind’ firms perform worst on the indicators in that measure growth, but it is remarkable that they perform better on profit as a percentage of turnovers. These companies may feel no need to employ innovative activities due to a satisfying performance. This is because investments in innovation are lacking, their profit margins are probably better. Another possible explanation is that these firms may already have innovated in the past, so that current innovative activities are not necessary.

In this case, innovativeness is expressed as financial resources spent on absorption and generation of new technologies. Besides the four major challenges, there are other challenges of less significance to my work. 1) The issue of innovation must be considered when constructing performance models for SMEs. 2) Young firms must be given special attention, as often these enterprises have not reached a stable status and tend to be more dynamic than more mature firms 3) Models used by managers of SMEs should be of practical value. 4) The models must account for the nature of the modern economy, as Information and Communication Technologies (ICTs) drive the organizations to adapt an open structure [25]. The way in which innovation activities are run in smaller firms differs from the way they are conducted in larger firms [28, 61, 83]. The growth potential effect related to innovation in SMEs comes from three input parameters; technology, R&D, and generation of competitive edge [59]. Vertically integrated organizational company structures facilitate innovation activities that are internally-focused, while newer forms of organizational structures are more fluid and open. As such, newer structures allow for the integration of internal and external sources of innovation [2]. However, studies of innovation in SMEs are still limited compared to similar studies focusing on larger firms [81].

Regarding empirical research, despite some conflicting evidence some studies have advocated for the positive effects of innovation on performance, while others have focused on smaller firms and concluded that innovation is not necessary [1, 3, 8, 58] and [11, 13, 16, 20, 21, 30, 36, 57, 85]. In short, both theory and empirical research especially those writers out of African continent have suggest a positive relationship between innovative activity and the performance of firms. In African there are few writers particularly Tanzania, they are countable. This has an implication for a need in empirical studies of this nature in Africa and particularly in Tanzania where SMEs are observed to provide employment to a good number of people.

The issue of innovation and how it relate to firm’s performance and specially SMEs is thus yet to be exhaustively explored. The results from reviewed literature are mixed, inconclusive and difficult to generalise. For example, while (studies) find a positive relationship between innovation and performance, others find otherwise (see for example, studies). However, these studies are substantially on manufacturing industry on other products, and few have been on furniture industry [29]. The studies are observed to have concentrated to Western, Middle and Far East and very little empirical evidence is noticeable in Africa.

5. Conclusion and Implication

Innovation’s positive impact on the efficiency and performance of firms requires clarification on two points. The first point is that investments in innovation and technology in take should be treated as positive inputs into the efficiency of the firm rather than as cost figures that exhaust the firm (as they are often treated in the classical approach of finance and accountancy). The second point is that such investment needs to be related to the production costs to reflect the true utilization of the firm’s resources. A higher ratio is an indication of the firm management’s high level of commitment to investment in innovation and absorption of new technologies, while a lower figure indicates the reverse and actually points to an old style, non-innovational approach to firm development strategies.

The purpose of this study is to investigate the worldwide extant empirical research evidence on the impact of the innovation and innovative activities on the performance (measured in different ways) of the Small and medium Enterprises and is whole based on a desktop and library review. The literature survey reveal that the studies on innovation and its effect on performance are observed to have concentrated to Western, Middle and Far East and very little empirical evidence is noticeable in Africa. The issue of innovation and how it relate to firms’ performance and specially SMEs is thus yet to be exhaustively explored. Yet the results from reviewed literature are mixed and difficult to generalise as shown in four (4) discussions. The paper is thus a wakeup call for empirical studies that assess the impact of innovation on SMEs performance in Africa and Tanzania in particular where the studies of this nature are rarely found in the review of literature conducted in this paper.

References


