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## **Overview**

Technology and innovation is very important in small businesses as it ensures collaboration, communication, improve business efficiency, and reduce cost and economic efficiencies. The modern society has experienced fast changes in political, social, cultural and economic development than before following the adoption, application and use of technology and innovative means in all aspects of life. Economically, businesses are finding new ways in which they can thrive and the world competitive markets. The technological society require small businesses to use technology and innovative ideas for greater economic growth. In essence, many small businesses have made vital contribution in developing technological innovation nation-wide. The adoption of technology is essential in marketing small businesses since it supports for a clear recognition of opportunities that helps in creating market orientation. For example internet is on the modern technology that is useful in small businesses when it comes to marketing. Many of the small businesses benefit through marketing customer relations, accessing new markets, creating products with customers and enhancing internal efficiency of the businesses. Innovation also makes small businesses to experience fast and rapid growth. The implementation of innovation in small businesses is essential in enhancing business process that helps in increasing efficiency and productivity and makes the business to expand and improve on the quality of products. Innovation is the best when it comes to adding value firm's existing product and improving or developing new products. Innovation is a creative process that comes from either within or outside the businesses. Innovation inside the business comes from parties such as managers, employees while from outside comes from customers, suppliers, media report or even from other different firms. The combination of technology and innovation in a business helps small businesses experience improved turn over, improve profitability, build business's brand, be competitive, reduce operational costs and general improvement in terms of productivity.

### **The research purpose**

The issue of technology and innovation has many potential benefits to the business that are currently existing. Technology on its own comes with the modernization of infrastructure of the information technology that usually generative major innovative solutions allowing small firms to grow effectively. The technology solution is an avenue that facilitate for the growth of the small businesses by making them maintain agility for quick response to changes in the markets. The integration of technology and innovation has increased team's collaboration for better development of products. Many firms are able to launch product fast, innovate on quality and improve the features of products for the growth of their businesses. The coordination and collaboration of staff has also improved through technology and innovation due to the existing communication technologies that supports for the small businesses in organizing their team. Automation and productivity allows the small businesses to run more efficiently compared to big firms due to high speed and automated software that handles important tasks like supporting engagement with their potential customers. Small enterprises have played a very essential role in economic development. The innovation have made these business to undergo transformation as they encounter globalization. Small firms are achieving long terms viability due to innovation.

### **Literature review**

#### **Innovation of internet technology and marketing in small firms**

The adoption of marketing technology supports the idea for the technology and innovation is helping for the growth of a small businesses as it reveals how these businesses are surviving essentially due to the adoption of technology. The more focus is put on the issue of internet. Internet potentially supports the transformation of both small and medium sized organizations in terms of marketing. Many firms uses unique value of websites and application of management, innovative skills to meet sustainable advantage. The success of the adoption of technology depends on leadership of owner-managers for these organization. The owner of these firms pays a very influential role since adoption of technology

has succeeded for owner-managers with a high level of entrepreneurial orientation (Alford & Page, 2015, P. 657). The successful adoption of the technology need to be viewed as key booster of business performance. The technology improves business performance based on the owner's competency in aspects like value and vision of the business, control and technical ability owners and the extent on which competitors, customers and collaborators uses internet. The successful adoption of technology in a situation where business owners view themselves as enablers of their enterprises it bores long-term benefits. Websites are being used by owners of the small businesses as best tools for marketing because they use them to access customers. In other words, businesses uses the websites as marketing tools to build a firm link with customers. Besides, this is helping businesses to have access market niche and support a change for perception of customers in regard to their goods and services (Alford & Page, 2015, p. 657). The technology is easily adopted if it fits a model of a given business. The adoption of technology is creating a good link between the business and market orientation and thus business find it easy to understand the value and needs of customers, share customer information, create time to respond to feedbacks from customers and analyse strength and weaknesses of their competitors. The technology has brought an online marketing mix that many business have adopted which is an effective transition that comes with different technologies like analytics and mobile applications. To determine if technology and innovation really helps in business grow. Alford & Page, (2015) carried out a study online market orientation with a sample of twenty four owner-managers of tourism firms. This study showed a positive adoption of technology in marketing of the firms. The study revealed that small business owners adopted technology mainly for marketing and this gave them an opportunity <sup>4</sup> to engage with customers. Based on this study, it is clear that, small businesses benefit from adoption technology in that they can read content crated on the websites, concerning their firms and get some knowledge of how their business is perceived.

#### **Innovative technology in commercialization and market diffusion**

A lot of studies suggest that small businesses reap huge benefits through innovative technology. According to Hossain (2015) open innovation gives small business an opportunity to thrive through the application of innovative practices supporting that the use of internet together with website increases the firm's capabilities to grow. With open innovation firms collaborates with both customers and suppliers as a low cost. Many small firms usually pursue an open innovation when undertraining commercial activities and this helps them keep up with competing firms and meet demands of the customers. The technology and innovation supports the commercialization of small firms. Whenever, these firms have innovative sources, they can easily be recognized and more importantly, commercialization of their goods and services. The appropriate innovative capabilities impacts small firms positively and thus with adequate resources the technology and innovation improves their performance. Innovation, benefits small firms through patenting. Basically, it is very easy for the small firms to license their knowledge through patenting its activities to external parties. Many of these can find partners by use of patent information through innovation. The acquisition of technology, has a positive relationship with patenting practices and thus small firms always uses patenting strategy as the most effective innovative activities that benefit their firms. The small firms still finds innovation and technology using through networking. Innovation itself seems to be facilitated by networking in small firms. The network approaches helps the firms to foresee any opportunities using innovative practices. Many innovative small firms depends on networking for proper collaboration of team. The use consistence use of networking strategies make firms to realize great innovation performance. The use of technology helps small business collaborate with external agencies and this helps them launch their products. There are two types of collaborations that small firms use such as vertical or horizontal. The existence of technology and use of vertical collaboration brings radical innovation while horizontal one leads into an improvement in innovation that also support commercialization activities of a firm.

#### **Technology and invention in innovative business incubators**

Innovation has taken pace in small firms especially in Japan where they have come with a program of for innovation in small businesses. It is evident that, since 1991 Japanese has been undergoing a long-term recession and thus the government has been seeking several ways to curb this problem. One of the approaches is subsidizing high technology enterprises. This is an innovation that has played a very important role as it helps small firms to stimulate the entire economy where those small firms are growing fast as they create new markets and employment opportunities. The small firm innovation research is also a program the united states launched in 1982 and it has been doing well in subsidizing small businesses earning many small business at least 2 Billion dollars per year (Inoue & Yamaguchi,2017. P1). In USA, this program is mandated give subsidies and support small business that have been performing successfully in commercialization activities in private sectors. The innovation has also helped small businesses to expand in terms of technological advancement while distributing support for more innovative activities. The SBIR, as innovative policy/program works on transferring knowledge from tertiary institutions to private sector. The benefit here is that small firms with any relationship with these institutions get supports and become successful in controlling their ventures and they usually grow very fast. Inoue & Yamaguchi (2017. P2) believes that SBIR focuses more on commercialisations as evident in both Japan and United States of America.

In the most developed countries, social and economic development is influenced by small businesses that strives towards the improvement of well-being of people, <sup>2</sup> contribute to the growth of gross domestic product and job creation. Innovation support investments for the small firms. For example innovative businesses spends 2% of their funds in technological activities that helps them boost their investment. The innovation helps the firms to introduce new and improved products, and new methods of sales. Besides, the firms find innovation useful in that, it implementing, projects, creating infrastructure, and maintaining activities within the businesses. The innovation of things like infrastructure helps small businesses in forming other new businesses. Innovation and business incubators plays an important role teaching small business owners on staff management in a small

business. They also offers insight on understanding standards of the business, preparing promotion and best approaches of carrying out advertisement. In most cases, the owners of small firms are guided by innovation and business incubators on the best strategies and approaches of negotiating with customers and partners. The incubators offers important basis of information related to class of more civilized entrepreneurs. With innovative and business incubators the small firms are adopt technique of striving and surviving in business professional standards. The existence of small innovative firms helps small offers training to make them highly qualified business professionals. Business incubators helps small businesses by leasing those premises and offers office services. They also offer advice on how small firms are built based on legal, technological and economic issues and more importantly helping them acquire education to support their small firms. In most cases, small firms will benefit following conditions created that allows to expand their inter-regional corporation. Business Incubators potentially facilitate realization of ideas to entrepreneurs and innovators hence helping in generation of more small businesses as evident in Russia (Romanovich, et al, 2015).

#### **Innovation leading and managing businesses**

The ability of small firms to achieve long terms goas innovation forms a plays a very fundamental role based on the management and leadership of a specific firm. Good leadership helps firm in fostering a conducive environment for innovation. The firms that have the ability to innovate have succeeds effectively. The issue of innovation and creativity are the major gaols commonly found in many organization because it helps them to grow and survive. The existence of effective leaders in small firms have an influence on how innovation is useful in enhancing the firms. With effective leaders the small firms finds innovation useful in product development. Basically, good leaders effectively apply knowledge and skills in a way that produces a product. Jobs characteristics influences creativity in firms.

#### **Technology and communication in business**

The innovation influence positive or great performance of small forms. These firms survives well with whenever they apply their innovative activities in workplace. It is worth to mention that, the firms that have succeeded due to innovation, they must have had leaders who turned all the attention towards production of good and services at the expense of innovation. Small firms that have effective leaders find innovative helpful in communication and marketing. Once organizational awareness is increased the firms benefits from innovative practices that also helps in transforming the entire firm. Effective innovative practices support the success of a business. The ability of the business to innovate also make it achieve growth and remain competitive. The implementation of innovation in small firms is essential even if they are constrained by resources. The importance of innovation helps small firms search to discover creativity and is more dependent of the behaviour of the leaders and the role they play to foster innovation at individual levels. Innovation is helpful in fostering organization efficacy. The efficacy here is centred on the either group or employees who need to be very innovative. With innovation the self-efficacy of the individuals influences firms to take initiative and dedicate their efforts in implementing changes in the business. Leaders communication is a benefit derived from innovation in small businesses. It believes that, leaders need to be innovative and creative when communicating ideas in organization as this helps in enhancing effectiveness of employee's performance. At times, innovation is the best practice in translating leader's knowledge into creativity (Duune, 2016, p. 4877),

#### <sup>1</sup>**The knowledge-based bio-economy (KBBE) innovation**

The small firms are benefiting from <sup>1</sup>the knowledge based bio-economy that allows them in application and exchange of knowledge in support for sustainable development (Golembiewski, Sick, & Bröring, p. 2015). This is closely related to management activities that supports for utilization of innovation and technology. Introduced in 2004 by European Union, KBBE is very effective innovation involved funding within Europe and this means that small businesses are able to be economically financed and invest in different ventures. Notably, the base of global resource focuses

on moving from fossils and transit to bio-based raw materials and thus technology helps the firms in increasing interconnectedness. The development of technology and innovation is links KBBS to technology together with management research. Innovation and technology have industrial relevance for small firms. They increase the industrial coverage fir value chains for agricultural-based foods following a shift in bio-based raw materials. This in turn results to joint dependence triggering the new flow of technologies of food processing (Golembiewski, Sick, & Bröring, 2015, p 308).

### **Innovation and survival for people and organization**

For the longest time, innovation has served small business by making lives of entrepreneurs comfortable. Mostly innovation helps in supporting the survival of individuals and firms. It is believed that innovation is a very important aspect in modern small firms since it serves the purpose of giving competitive strength for small businesses. The entrepreneurs motivates innovation practices to meet a newly market demands. Several studies support the idea that innovation is one of the best approach that small firms use to add value to their existing product. When value is added to the products, new products are generated. In this way, innovation becomes helpful to firms in reflecting competencies which determines the longevity of the enterprises.

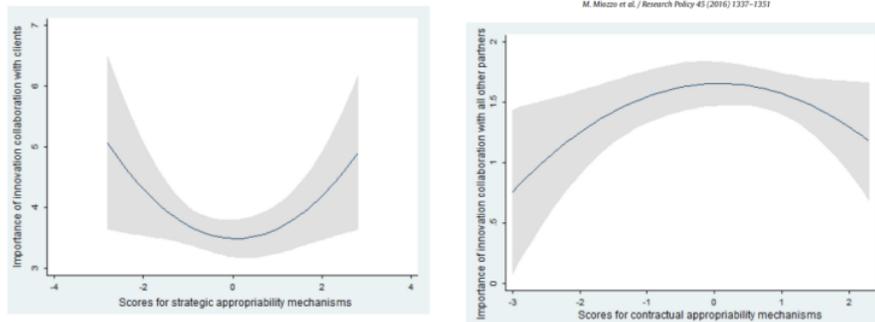
Small business finds innovation useful in instilling learning for growth and high financial returns. Innovation earns small businesses huge profitability. Innovative activities in a business focuses their efforts towards increased revenue, cost reduction and a reasonable market share (Limada Silva, 2017, p295). The bio-economy is accompanied with technological change viewed as a long process. While bio-economy implementation is requires more viable technology, the transfers of this technology promote their evolution. As these firms implements bio-economy technologies the business also undergoes some changes or experienced some evolution.

Small enterprises usually participate in economic development as evident in Taiwan. With the growth of firm's important services, these firms undergo a series of transformation through service innovation. In the context of globalization small firms uses this innovative services in developing

market adaptability, engage in application of innovative knowledge and apply effective technology. This is very important in enhancing overall innovation of services hence helping the business in establishing new service value while at the same time creating and increasing market competitiveness. In countries like Taiwan, service innovation has created 78% of job opportunities and thus they are enhancing economic environment for the small firms. The small firms focuses on manufacturing and production and thus, they make put more efforts to enhance ensure the production process is efficient. This is made possible due to the application of innovative services. The small businesses use service innovation to transform their enterprise which also helps them improve on the profitability and gain competitiveness. Innovation service is critical in improving service performance and addition of customer value. The business usually tries as much as possible to optimize general effectiveness of these services. As suggested by the studies, service innovation usually seek to put new technology in place which helps the firms gain what we call a competitive advantage (Hsieh & Chou, 2018, p. 87).

<sup>3</sup> The integration of Innovation collaboration and knowledge intensive business services (KIBS) firms is helpful in ensuring that the firms avoids conflicts. For a long time, collaboration of the innovation has been service firm's norms particularly KIBS. These firms depends on professional and technical knowledge in solving client's problems. Most of the time, firms will always collaborate with clients and customers and this cooperation is the most important innovative process. Basically at least 87% of firms cooperate with their partners such as suppliers to get materials, partners of software and equipment. Miozzo et al (2016, P.1346) explored and investigated how forecasting the importance of innovation collaboration relates with customers/clients with more focus put on mechanism of formal appropriability. These study depicted a good understanding on how appropriability strategies for knowledge intensive firm and collaboration for innovation are related. This study used the KIBS mechanism. It was revealed that firms showed KIBS never regarded mechanism of formal appropriability as the best effective approach in protecting innovation related to imitating their competitors. But the study showed a positive relationship between formal appropriability mechanism

and KIBS Firm's innovation collaboration. It is clear that, the study established how innovation collaboration relates manufacturing firm's strategies. Therefore both formal mechanism appropriability and innovation collaboration for clients goes hand with hand with each other and thus are equally importance for the firms. See the figures below



### **The practical application of literature**

There are several ways in which the finds from the literature of this paper can be applied in small business. First, the small firms can integrate innovation collaboration to solve and prevent issues of conflict arising from their organization. To do this there is a need of technical knowledge that could handle issues affecting customers. The innovation collaboration can also inform these firms on the best strategies of manufacturing and producing goods and services and then apply it to their real life business situation. Second, use of technology and innovation in the adoption application of online marketing as well websites. The adoption and use of marketing mix will help firms engage with the customers. The firms can actually read be informed through website by reading content created by customers or client in form of feedback and understand how customers are perceiving the business. The firms can use websites supported by internet to increase their growth through digital commercialization of activities. Innovation and business incubators is very important finding in study. The firms can adopt and utilize business incubators when they need to lease premises an also help them gain knowledge on how they should handle their staff. They can also use the incubators to inform them on realizing best ideas as innovators and entrepreneur. Incubator will allow small business

expand regional cooperation hence promoting growth of the firms. Whenever firms need to negotiate with customers, it would be wise for them to professionally use business incubators that provide information in the best civilized manner. I would advise the small firms to consider investing on technology and innovation because many businesses have adopted such approach to deal with the world combative market. The opening of a new market for developed products and gaining knowledge and experience important for the business and the knowledge about them is gained through technology. The firms should note that innovative process involves coming up with an idea, develop and commercialize that idea and with resources business boost their performance through invention process.

To sum literature review, have proved that technology and innovation are essential in helping small businesses to thrive. The involvement of small businesses in innovative activities is commendable. The technology and innovation helps firms realize the need and ways of staying in market, build interpersonal relationship and meet the needs of a customer by showing the well-being of their clients. Also it is through innovation where firms implement new ideas show collaboration. Importantly, technology is the best tool used by firms to market their products through websites and then get feedback from customers for better improvement. Product development relies heavily on how firm apply modern technology. Finally, to serve new clients, and access knowledge on about market changes depends on how small firms have adopted , implemented and applied technology and innovation in their businesses.

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