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SME`s Growth and Open Innovation: Tackling SME`s Family  
Business Growth Challenges with Open Innovation



## ABSTRACT

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The present economic downturn in Europe has shifted the attention of many scholars to study alternative innovation strategy which may boost innovation for SMEs and lead to growth. Many of these SMEs are family businesses and are regarded as primary driver of successful economies. Several studies on SME growth have shown the essentiality of innovation for business survival, but have not written much in the context of open innovation. The innovation process is changing from closed to open innovation processes which can enable co-innovation and collaboration in enhancement of business performance as well as job creation. However, some SMEs especially the family business still focus on the closed innovation processes that limit high-end growth.

This study argued that open innovation model can enhance Finnish economy and lead to SMEs family business's growth. Previous studies have shown that SMEs need growth and business expansion, but it based its conclusions on closed innovation systems, open innovation has not been adequately exploited in the area of growth. This study addresses the gap by focusing on SMEs and family business growth through open innovation.

This study analyzes the challenges of family businesses in the perspective of SMEs and the barriers to growth through exploratory and qualitative content analysis. It showcases how open innovation can enhance SMEs business growth as well as contribute to the economic development and employment sustainability. The findings of this study have shown that open innovation can enhance SME/family's business growth through adequate collaboration and networking with all stakeholders without internal policy biased. The major barrier of SMEs family business in adoption of open innovation concept is assumed to be protection of their intellectual property which is seen as a major asset of the firm, especially for family businesses that are generational. This study provided information to show that SMEs can benefit from Open Innovation and at the same time safeguards their intellectual properties.

Keywords: Family Business, Innovation Management, SMEs Business Growth, Open Innovation, Business Model, Finland employment and economic Growth.

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## ABBREVIATIONS

SME	SMALL AND MEDIUM ENTERPRISE
EK	CONFEDERATION OF FINNISH FIRMS
RDI	RESEARCHDEVELOPMENT AND INNOVATION
R&D	RESEARCH AND DEVELOPMENT
PWC	PRICE WATER COOPER
OECD	ORGANIZATION FOR ECONOMIC COOPERATIO AND DEVELOPMENT
MTI	MINISTRY OF TRADE AND INDUSTRY
WEF	WORLD ECONOMIC FORUM

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## 1 INTRODUCTION

Small and medium enterprises are the hub of innovation, growth and distinctiveness. Thus, they are referred to as the engine that kindles innovation, employment and helps to contribute to economic growth. The trend of economic problems in Europe has drawn the attention of several scholars to the important SME's growth and innovation prospect to salvage the economy from global crises, enhance economic stability and welfare of the society.

SMEs innovations are said to be vital to economic growth especially now that the large firms are unable to sustain the economic growth and provide job securities as they used to do before. They are also helping in increasing competitiveness and replace the large firms that are stagnant or lack of growth. Successive innovation is regarded as a necessity for all firms to boost their business growth Rahman & Ramos (2010). Nowadays, the world is seen as a global village where location is no longer an obstacle for every stakeholder to participate in the innovation process. Thanks to rapid development of information communication technology that has made the integration process easier. However, majority of these SMEs firm still traditionally focus on utilizing the closed innovation model. This model includes internal research, ideas development to commercialization of product and service. (Chesbrough, (2003) and Huston, (2006). They also have organizational policies that are less flexible to accommodate changes that are essential for growth and internationalization. Their complex innovation processes and negative attitude towards utilization of external knowledge and resources said to have hindered sustainable growth.

My interest and motivation for choosing this topic stem from the ongoing reforms in Finland, which are aim at restoring economic growth. The present economic crisis in Finland, as a result of global financial crises, has led to the inability of large firms to maintain their economic growth contribution as well as employment. (For example; Nokia, Finnair, Stockman and Tieto layoff several employees to cut cost). SMEs too are unable to achieve the targeted growth which is essential for job creation. This challenge has prompted the need to change the traditional innovation strategy to the ones that will enhance innovation-led economic growth and firm's model for reaching beyond the local geographical market. Several researchers have proved that rapid growth firms are regularly, creating job and contribute to economic development.

Moreover, SMEs now face the challenges of continuously changing technological environment and increased global competition of which they are ill-prepared for in their plan. That consequently leads to collapse of their businesses, which hitherto contributed to high rate of unemployment. Presently, there is an increasing consensus on SMEs innovation process that can combat these challenges, which require flexible and adaptive approach that is essential for fostering novel product and services, reduce cost and sustain innovation. (Eisenhardt & Tabrisi, 1995). Several researchers have also argued that SMEs face the following challenges; they usually, lack resources and appropriate innovation process that could enhance growth and development. (Chesbrough, 2003; Lee et al., 2010; van de Vrande, et al., 2009; Vanhaverkebe, 2012, Mesquita & Lazzarini, 2008). Furthermore, they argued that their present closed system business model lacked the necessary mechanism for growth; the system undermines the significance of collaboration and networking in the promotion and enhancement of growth. For

this reasons mentioned above is why I chose to explore this issue in greater details are which base on the following argument that are summarized below:

Firstly, this study responded to the surge that SME family business needs to be aware that innovation is increasingly inter-organizational. In addition, open innovation is a requirement rather than an option for SMEs firms to grow Lichtenthaler (2011). Performing today, as well as innovating effectively for tomorrow` has become a new phenomenon among firms and creating dynamic business models for both sustaining and generate growth through innovations. (Rahaman & Ramos 2010). For SMES to remain competitive and enhance growth, they need a coherent business strategy that consistently improves their efficiency. As well as reduce production cost and enhance the reputation of their product and services both locally and globally. According to Porter (1990) companies, need to attain competitive advantage through act of innovation. He also argued that they need to approach innovation in its broadest sense, which included new technologies and new ways of doing things. Moreover, they are required to perceive a new basis for competing or finding a better means for competing in preceding approach. *“Innovation can be visible in the product design, a new production process, a new marketing approach or a new way of conducting training,”* (Porter 1990). In this 21<sup>st</sup> century, innovation is regarded as an interactive process that includes every stakeholder’s joint effort to be successful.

Secondly, we are now living in the world in which the only things that matter for business survival is high-end growth. Huston (2006, p. 60) argued that most SMEs engage in “incremental changes and bondage on a broken model” that are unable to generate a high-end growth. He pointed out that relying on internal resources and experts alone cannot drive sustainable high business growth. The essentiality of economic growth has gone beyond the government of a nation; it is now the matter of every stakeholder in the business to sustain the economy and boost consumer confidence and purchasing power. Majorly, consumers and societal needs are the reason many businesses were established; their inclusion in the product and service development process could ensure their loyalty to the business. Also, it can create novel innovation for the firms through networking and adequate collaboration.

Thirdly, Rnagus and Drnovsek (2013) pointed out that scholastic and business practitioner’s highlights on the significance of opening up innovation process for sustaining competitive advantage with innovation and overall organizational performance. Innovation is essential for business prosperity and using external knowledge and resources could enable firms to achieve a high-end growth. The value of entrepreneurship is important in creating a new organization, businesses and upgrading the old ones, as well as given high priority to research and development for a new invention. Koironen (2010).In other words, value creation to generate business growth depends on ability to allow all stakeholders to contribute in the innovation process, this creates entrepreneurial culture for production of high-value product and services. Moreover, the current business environment consists of high competitiveness and fierce competitors, the ability to perform successful innovation, and commercialization are the main driver that will give greater advantage to firm in the global market. Firms must have the competency to undertake the challenges; as a result of this open innovation has become inevitable. Company must always pursuit and tends to become more innovative in business model, organization and research and development capability, in doing so, it helps firms to solve their internal problems and differentiate product or service from another counterpart.

Lastly, Open innovation trend in SMEs Finland is still at developmental stage. Especially, for the family business due to their unique structures which are mainly ownership, family focus and successive business transfer from one generation to another. In order to understand the why open innovation is essential for SMEs family business growth, this study analyzes the challenges faced by Finnish economy and suggested some way to stimulate both business and economic growth through open innovation.

My contribution to open innovation understanding in SMEs and family business perspective is growth. This study focus on SMEs and family ability to generate growth and employment through open innovation, since they constitute more than eighty percent of Finland businesses. Also, Lee *et al.*, (2010) argued that the majority of open innovation process research has focused on large enterprises. Grossmann (2010) further argues that despite SMEs contribution to economy in terms of employment and economic stability, their research in open innovation paradigm is inadequate Grossmann *et al.* (2010). This has necessitated further research in relation to growth. Open innovation model articulates a new way for organizing and managing innovation to generate a better performance.

## 1.1 Background

In the world today, the main drivers of enterprises in national economies are the private sectors which are majorly small and medium scale family businesses. Koironen (2007) says they provide resources for building up the economy through entrepreneurial activities and innovation.

It is also acknowledged that the roles and contribution of the SMEs is a necessity for economic growth. In Europe SMEs sector are distinguished as crucial in stimulating economic growth and the primary source of innovation within the economy, with natural incubators of an entrepreneurial culture and the vital to sustaining and expanding employment. Koironen (2010).

Also EC report (2013) states that over 99 percent of Europe are SMEs in which majority are family businesses. They create more than 75million jobs across Europe in which more than 66% of private sector jobs are small and medium enterprises. Similarly, they also contribute more than two third of the GDP. However, in spite of all these significant contribution Koironen (2010) argues that only 2 percent can be called fast-growing enterprise; that is assumed to be unhealthy for an economy that is craving for viable economic growth and sustainability. According to statistics Finland, (2014) in the second quarter Finland GDP growth rate stands at 0.2 percent and annual rate contracted at -0.10 percent. Moreover, the recent Yle (2014) reported that Bank of Finland forecast euro zone growth to be less than 2 percent. The issue of SMEs lack of business growth span across all sectors of the economy due their size and contribution to economic growth, when there is adequate growth; business expands and this generates employment for its people as well as reduces job losses. Economic growth also showcases a healthy society that is free from frequent restructuring as well as financial crises. While unemployment deep people into poverty and cause over-dependence on social welfare of the state, this trend sometimes leads to depression and increase crime rate.

Presently, SMEs and family business are faced with several challenges of sustaining innovation and growth due to shortening life cycle change, global competition, sophisticated technology, and concentration on internal innovation that is referred to as closed innovation model as

discussed in the previous section. According to Trott (2012), some SME's family business retains their present size so that the family can manage the business operation without requesting external help. Nowadays businesses are opening up to absorb external knowledge to develop their business to rebrand their invention that enables them to focus in creating value products and services at a reasonable price. Schumpeter (1934) emphasize on the essentiality of novel products as an incentive to economic growth. He further argued that new products competition was much more important than marginal changes in the prices of existing product. Tidd and Bessant (2009) says innovation is driven by the capability to make out connections, to identify opportunities and exploit them.

Hence, they also face a global problem like climate change, various government regulations and market uncertainty. These changes put pressure on SME companies to accelerate innovation that is viable to stand the current trend. SMEs family business needs to wrestle their way through the challenges associated with this global downturn in order keep up with the speed of change. In addition, SMEs need to adapt to the changing environment in order to ensure their continuity and growth. They are require to open up their innovation process and create a viable business model that enables similar competition and cooperation.

Although innovation has its challenges, but lack of continuous creativity may lead to the collapse of the business. Every organization firm must be concerned about their ability to innovate and grow for global competition, profitability and sustenance which is apparently their future depends on Christensen (2003). SMEs need to open up to the new possibilities which have potentials for growth and profitability. Moreover, they are necessitate to open up their innovation processes and collaborate with external partners to access beyond their geographical boundary to exploit opportunities that will enhance growth. This study suggested that with adoption of open innovation SMEs in Finland has a better chance for success to boost employment, utilize external ideas and technologies. Also, it will create an avenue to release the unused ideas and techniques to other prospective firms in form of licensing that can generate profit or capital. Chesbrough (2003) Kutvonen *et al.*, (2010) argued that open innovation model could provide the clarity and direction for a successful business exploitation and exploration.

Furthermore, findings show that family businesses tend to have a continuing assurance to employment and locality contribution which play a significant role for economic stability and development. Sandberg *et al.* (2002), describes the performance of SMEs as their capability to enhance job and wealth creation inform of business start-ups, continued existence and development (Sandberg *et al.* 2002:3). However, Winkeljoham & Andrew, (2012) says family firm's organizational strategy and customs can be a barrier in terms of high-end growth, for the reason that it keeps them away from knowing the impact they might make if they act to work with external parties. van de Vrande *et al.*(2009) in their empirical report about SMEs open innovation trend in Netherland stated, that the main challenges SME encounter relates to firms and cultural issues as a consequence of dealing with increased external contacts. Moreover, many SMEs are afraid of losing their market share to their counterpart if they open up to collaborate. An entrepreneurial family business should be characterized by explicit and open culture by a capacity for least double loop learning the permeates of the organization Koiranen (2010). Family business with these good characteristics will be better prepared for the uncertainty and speed of change in the new economy Annika *et al.* (2001).

Kutvonen (2012) also pointed out that openness in real life is however not a contradiction to company value but a continuity performance. Moreover, numerous empirical studies prove that high-end growth companies are essential for job creation and economic growth.

In a family business intellectual property and entrepreneurship experience orientation are the key values that span across generations, which are referred as family business secret or closed innovation, most family business retains or still uses their old business model without upgrading it. However, the first owner's ideas that created the traditional business model might not be able to be competitive in the future. (Koiranen, 2010) Nevertheless, the only way to maintain competitive advantage is to upgrade it. Porter (1990). In Finland, intellectual property issues constrain the SMEs to work together locally instead of engaging in open innovation. Chesbrough 2006; Grassmann et al. 2010 and Vanhaverbeke, 2012 says SMEs firms, usually, lack adequate resources and capability to protect their intellectual properties. They also depend on large companies as their principal customers or suppliers due to their lower absorptive capacity, unattractive to reputable partners and deficiencies of value creation in the whole value chain. Kutvonen *et al.*, (2010) say currently several industrial firms have begun to actively use external acquisition of knowledge as part of their business strategy. If SME family businesses would sustain profitability in the future and maintain their global competitiveness, new approach in sourcing for talent, ideas and business solutions outside known geographical and business boundaries should be considered. Open innovation enables supplying of external knowledge to boost internal knowhow of firm can enhance growth and development.

It is high time for SMEs family business to give access to their areas of needs that could be filled by external resources and experts. Traditional internal research and development must be expanded to accommodate external innovation in order to add value to internal research and development. (Huston, 2006). Small and medium family businesses can learn to tap into external knowledge, not only to explore them but promoting them as national policy. Innovation processes are becoming more and more open; the perpendicularly incorporated research and development laboratories are given way to distributed networks of innovation that connects numerous companies and organization into the ecosystem. Chesbrough, (2003) In a new era of advanced technology, several organizations no longer keep their innovation or business secret to themselves. They rather use an open platform around their innovations so that the employee's experts, customer and competitors can build upon it. Chesbrough, (2003) and Lee *et al.*, (2010). Open and joint innovations are very crucial for SMEs family businesses establishment in Finland because it will spring forth their creativity to the limelight in the arena of innovators. Thus, enabling co-creation of new ideas and resources not only for building existing businesses but for continuous growth of inventor in Finish economy

What's more is that, information plays a significant role in the process of innovation and improvement Porter (1990). In this uncertain and competitive environment, both large companies and SMEs encounter their inadequacies which require a push to acquire external resources to compensate their limitation. The current economic challenges in Finland require effort of these firms to stimulate the economy growth with essential drivers to accelerate or build suitable structure towards a better sustainable future. The drifts towards open innovation could be an efficient method that would provide firms with their required resources and assets to expand their main business and minimize the risk of business failures.

## 1.2 Research Problem Descriptions

Over the past years, Finland is known as successful innovation leader, in which other countries emulate for its innovation policy, and this has helped the economy to have high national competitiveness. With a population above 5.4 million inhabitants, the country is famous for its highly knowledgeable society with enormous investment on R& D which paved way for their modern development after economic recession in 1990. Moreover, they are traditionally known for having a giant telecommunication industry, metal and well endowed with natural resources like woods as well as other agricultural products. Finland is also well endowed with various manufacturing sector. SMEs family enterprises play a unique role in the Finnish society and in terms of employment, income generation and ownership in identifying entrepreneurial opportunities. They account for approximately two-thirds of employment in Finland and they are referred to as the major source of innovation.

These firms take a vital role in Finland economy in terms of growth and innovation. SMEs employ up to 63% of the workforce. “SMEs create up to 50% all of Finnish businesses as they are in charge of over 13% of Finland’s overseas proceeds,” (Yrittajat, 2013). It also a known fact that SMEs in Finland enjoy healthy business environment and have access to basic infrastructures that help to accelerate their inventions and innovation. Resilient innovation policies in Finland have been successful and have resulted into strong competitiveness EK (2010). However, despite the fact that Finland is classified among the leaders of novel innovation, it is still facing economic problems and sustainability of its welfare state. Only few SMEs are regarded as high-end growth company, these calls for a concern in a welfare state in spite of various government agenda in promotion of entrepreneurship growth and internationalization, few high growth firms were shown to be successful. Typical example is Moomin, which is making the headline of Finnish firm’s success story at the moment.

In 2013, WIPO reported that Finland has lost in terms of sustaining innovation in the economy; this makes them fall from fourth position to sixth position whereas the neighboring country Sweden still maintain their rank YLE,(2013). EC (2013) report says over last decades Finland major policy face challenges of “loss in competitiveness” and for the past five years it has lost 23 percent share in world export. As consequence the economy is now facing challenges of low industrial development which helps in determining the level of economic growth.

On the other hand, SMEs were severely affected by the global financial crises in 2008 that cause the losses of 3.25 million jobs in the 27 EU members state. Worse hit are family businesses with little financial resources and innovation capacity. Moreover, family businesses incurred substantial financial losses in the last decade which undoubtedly resulted in mass bankruptcy. Since then, many Finnish SMEs have been struggling to generate growth for survival. Another major problem is the lack of right innovation strategy to enhance growth and unwillingness of some SME firms to utilize external innovation and resources needed for their firms for the sake protecting invention. Honkapohja (2013) says Finnish economy facing new challenges in terms of weak export and deficit current account; he pointed out reasons for the challenges which are: weakness in the international economy, falling of the major large industries like Nokia and Paper companies and inadequate investment in the developed economy. It was also reported that

investors are beginning to pull out their share from companies due inadequate growth. Yle (2014). Honkapohja (2013) further explained that Finnish growth performance has been getting weaker since 2008 even than the euro area average. The GDP is said to be 5% lesser than 2008. In every economy, what attract investors are profitability and sustainable business growth. Moreover, without economy growth it is impossible for state to provide adequate employment and social welfare for the citizens. Moreover, Finnish economy is facing structural changes due the global financial crisis that is causing challenge to firm's finances which serve as a catalyst in industrial development The government has resulted in introducing spending cuts due to the huge deficit in order to make more savings that it aims at balancing the Finnish economy and improved economic growth. Yle (2014). According to statistics Finland, (2014) unemployment rate stands at 8.7 percent as of July this year. This trends keeps on rising both among the Finns and foreigners especially the skilled workers, for example CGI ,Ely-Centres,VTT,BROADCOM,Nokia and Finn-air, layoff many valuable workers , the recent job cuts translates to more skilled workers are now idle. However, such unemployed workers could be a vital contributor to other businesses or firms that have shortage of skilled workers which could contribute to a new wave of innovative entrepreneurship through open innovation platform OECD (2012). It can as well reduce brain drain of expertise that could have contributed to the economic growth.

According to Ministry of Labour, (2012) to thirty-one percent of start-up business in Finland collapse without maturity for profitability. Moreover, statistics Finland, (2012) and ministry of employment reported there were many small business closures over the past five years. EF (2013) reported further that in 2010 21,000 businesses closed up in Finland, which are mainly SMEs. The reason is that SMEs faces significant challenges in growth and profiting from their internal innovations which is attributed to their relatively small size, as well as fewer resources, inadequate innovation capabilities, collaboration and high-risk exposure compared to the large organization. (Bianchi *et al.*, 2010).Still, some SME firms in Finland concentrate more on the local market as they are not innovating to develop new product and technology that can dominant new market. In other words, they contended with little or no growth for continuity of the business.

What's more is that Finland is categorized among countries blessed with highly advance service innovation, infrastructure coupled with highly educated society but the recent Fitch report has downgraded the Finnish economic outlook from stable to now urgently need of high growth.

From this indication, their innovations output is still lacking behind in the global market, and its SMEs alliance gap have to addressed like other developed countries that go out of their geographical boundaries in search for opportunities and collaboration to support their business, as well as boost economic growth of their country. Freeman, 1982 says lack of continuous innovation could lead to the demise of any business that does not focus on sustainable growth and development. (Cited in Chesbrough, 2003). Nowadays changing market condition are forcing SMEs firms to seek new business opportunity that will open doors to success and happiness for their fledgling business and ultimately for themselves as well as betterment of the society at large.

Furthermore, there have been several new inventions on a yearly basis from start-ups, but there is lacks of push and drive to internationalize it, due to inadequate resources, experts and knowledge which make open innovation a necessity. There are some gigantic market boom business opportunities in Finland that would have given Finnish SME competitive edge like

Nokia, but are limited to the local market due to the myopic view of international market. Such invention has to be taken beyond the local market and for expansion and development that could enhance growth. VTT (2012) survey on internationalization says that 40 percent of SMEs co-developed innovation with external partners. On the contrary, Ministry of Employment and Economy says about 23% of Finnish enterprises engaged in export while GEM argued that 30 percent engage in exports. Nevertheless, product and services innovation should be developed with an open mindset beyond organizational boundary, in other words taking global market into consideration is essential to high end growth. Some SMEs in Finland are born global firm, but only focus on their domestic market due to the IPR control problem. More than 82 percent of the SMEs are reported not see any importance in increasing their international activities while 4 percent acknowledge the essentiality of international market. (EC, 2007) as cited in Euro found, (2013).

Finnish products and services still have a reputation of quality around the world and people are known to be hardworking and dedicated to their business ,they also believes in their innovation capability and output, but for them to generate the high-end growth they need to spread their tentacles across border. As mentioned earlier in the introduction page, the world is now a global village, Trott, (2010 p.4) emphasizes in this period of advance technology firm's administration does not have to be in the same locality, and a multifaceted management relationship must be build up in order to produce novel products and services across geographical boundaries.

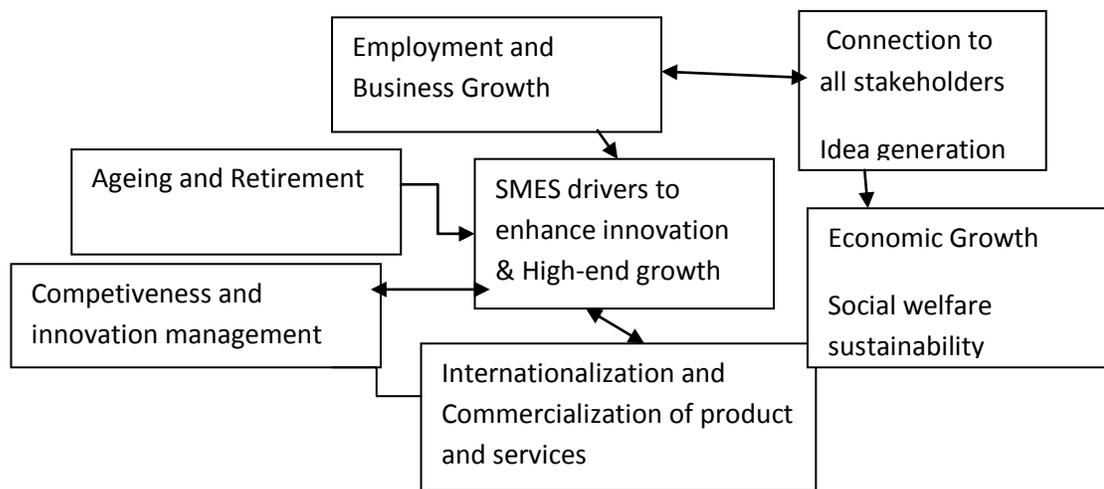
Internationalization and trade liberalization has made it crucial for most enterprises to become internationally competitive even when operating wholly in the local market because it enhances external knowledge sourcing and strategic partnership which will be beneficial to firm innovation advancement. (Porter, 1990) Presently firms search for growth prospect through market diversification and increase in trade (Trott, 2010 p. 4).Thus, cross-border knowledge sourcing by open innovation approach is essential for SMEs exposure in international business and augmenting creativity Lehtoranta *et al.*, (2012).

Besides, family businesses and SME in Finland also have challenges in the commercialization of their innovation, due to inadequate marketing skills and talent. Whereas they trained so many foreign graduates with this skills and knowledge, which yet to be tapped into due to ineffective internal policy that prevent hiring or employing foreigner into the Finnish labor market. It has been proven that human capital in any society is regarded as an asset, not a liability if they are utilized efficiently.

In addition, Finnish SMEs are said to lack innovation management capacity which also create a barrier in generation of economic growth and employment sustainability. Poor innovation management has been responsible for the collapse of many SMEs businesses in Finland.(Eurofound,2013). More to the point, rapid technology changes in the market, economic and demographic shift in the developed countries, rising up of emerging market and global middles class has been characterize as the main drivers for firms to cooperate for better innovation capabilities and management. (Eisenhardt and Martin, 2000)

Furthermore, Finnish aging population require urgently needs of experts and professional who could fill up the empty vacuum left by the baby-boomers, but due to some strict rule of the organization especially the SMEs, the external resources needed to enhance growth was not

tapped into. Cohen and Leviathan (1990) say the ability to exploit external knowledge is very crucial component of innovative capabilities. Succession that is quite common among family business is also experiencing strain as a result of aging and retirement. Aging problems in Finland is also said be responsible to for closure of some businesses when there is no right successor. SMEs in Finland need transition from traditional business model to new ones through innovation which will enable them for growth and expansion of business. Indeed for business and economic growth to be achieved and sustainable, it requires innovation process flexibility and adaptation to environmental changes. With these above mentioned challenges, SME family business in Finland require a new perspective to competitiveness that grows through open innovation processes from traditional ideology or current intellectual fashion.



**FIGURE 1:** The need for high-end growth through open innovation for SMEs and family businesses in Finland

The above information showcase the dilemma in the Finnish economy and the reasons SMEs in Finland need to improve their innovation capabilities within SMEs environment, in order to ensure business sustainability and growth that would bring positive impact on their economy. NAEC, (2004) says the continuous substantial growth of an enterprise is essential to the economic prosperity of developed countries. High-growth firm is essential for the creation of adequate jobs for the society. (MTI, 2007) Moreover, in terms of diversifying risk and ensuring successful management of business. This thesis emphasizes that open innovation environment enables SMEs firms not to rely only on their own internal resources and asset but helps in risk sharing and access to external resources.

### 1.3 Research Objectives and Targeted Audience

The purpose of this study is to analyze the Finnish SMEs family business challenges and how open innovation can be used as business tool for a family business in order to upgrade the existing business model for growth. All in all, risk taking brings profitability, innovation, and creativity help in expansion of business. In order to develop a global competitive and successful business, SMEs and family business owners should invest in larger external or open innovation. Since the findings indicate that the family firm has a long-term-investment orientation, for the purpose of keeping the business for succeeding generations, it can be crucial in giving a viable benefit and offer a way to universal participation in the innovation process.

In this era of the financial crisis whereby companies are laying employees off day by day, firms must operate bearing it in mind those competitors will ultimately overtake any firm that failed to continue improving and innovating (Porter1990). Also, this study gives suggestions that will enable family business SMEs to maximize their opportunities with merging external and internal ideas to produce or create a competitive product and services that respond to the global trend. According to STEN (2012) academic institution focus majorly on the large firms for major innovations breakthrough, but not much attention have been given to the SME family firms innovation which also necessitate for this thesis.

I intend to contribute to the SMEs embracement of open innovation in order to accelerate more cooperation among the innovative stakeholders both locally and internationally. Opening up through collaboration and networking in order to enhance growth and can revive the Finnish economy from its present economic challenges. Although some studies on open innovation in Finland already exists, they focused majorly on high-tech sectors, environmental issues and universities collaboration with Russia. At the moment, little evidence has been presented on how open innovation practice could increase both business and economic growth in Finland. This situation necessitates the study to investigate how open innovation can enhance business growth. The unique contribution of this study is that it emphasis on SMEs generation of business growth that can facilitate employment sustainability through open innovation.

This study explores how SMEs can manage internal and external innovations. In addition, it will as well enable family business to build reputable network that has good inventions. Moreover, it will aspire family business to embrace and support research and development with tertiary institutions for new discoveries. Furthermore, it will provide better diversification of opportunities by allowing firms to competitive globally with top performing companies across all sectors.

The projected audiences of the research are SMEs family businesses in Finland that desire growth, change in their firm innovation process and who are willing to expand to the global market. Also, for firms that are interested in how open innovation model could be use to generate high-end growth, stay updated with current market trend and expansion. Before exploring and discussing open innovation as a business model to enhance business growth, the conceptual framework to delineate the concept of innovation process, business model open innovation and SMEs family business growth is provided. This exploratory research study design towards

understanding the present challenge of SMEs family business in Finland and showcasing open innovation as a tool for growth.

#### **1.4 Research Questions**

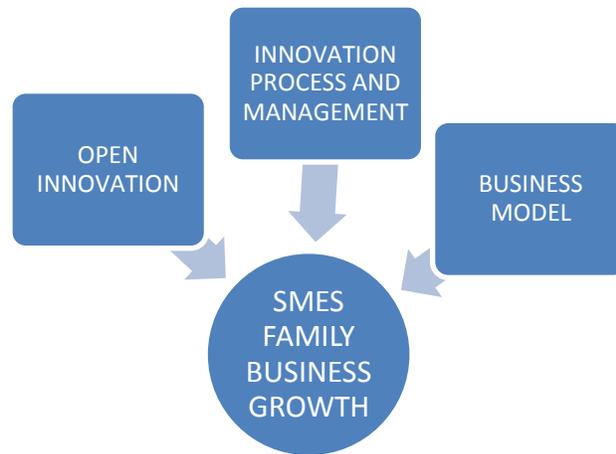
Research entails a process of creating new knowledge and making use of existing knowledge in an innovative way, in order to generate new insights, methodologies and perceptions. It is imperative to appraise all the information one needs to find out. These should be developed through the topic being addressed and the reasons for doing the research work.

The research question is how open innovation can assist family business for future global competitiveness and how SMEs family business can combine open and closed innovation to their advantage in order to enhance growth. It is crucial to have understanding on the motive that influences companies including SME to open up their boundaries to answer this question. So I conducted a literature review desktop research on innovation management, growth phenomenon in SMEs and business model.

#### **1.5 Research Scope**

The scope of the study focuses on Finnish SMEs family business firms in generating business growth through open innovation in order to curb the unemployment situation in Finland and economic problems. The use of external resource and knowledge are proposed to enhance growth and ensure sustainability of the business which is emphasized in the study. Furthermore, SMEs can benefits from unused invention by releasing it to other firms who are in need of it for the development of the economy and enhancement of business growth. (Chesbrough, 2003)

SME Family business in Finland plays a significant role in employment generation and economic development; sustainability of partnership with members of the community is crucial for their survival. This could also enable more creativity that will boost the growth of the firm and generate more wealth for the nation. The study meant to implore them to open up their firm boundaries to external opportunities and resources needed for growth and employment sustainability. This study also took into consideration present economic problems in Finland and innovation issues generally.



**FIGURE 2:** Study Framework

In this above framework above, SME business growth is regarded as essential antidotes for reviving and supporting the Finnish Economy from its present economic challenges such as unemployment and ensuring protection of the welfare state. Open innovation as business model to enhance business growth is proposed as a means to leverage SMEs challenges. In addition, it will provide necessary support in form of resources, enhancement of innovation capabilities during innovation process and more exposure to the global markets. So that SMEs firms can attain high-end growth which is needed at this point in time. It will also serve as a means to combine both internal and external innovation and resources for the benefit of the firm. The analysis focuses on essential innovation process and management which can enable adequate collaboration with all stakeholders in the business to boost the innovation capabilities in order to achieve growth.

It is also assumed that for SMEs to generate a high-end growth required for survival and innovation sustainability, it needs a broad approach to innovation management and process as well as resources. Willingness and attitude of Finnish SMEs business owners must gear towards high-end growth that is essential for the economy survival and employment generation. The essence of this study is to analysis the challenge faced by the SMEs family business, and how open innovation can be use tackle SMEs business growth challenges to facilitate national economy growth. The combination of ideas, knowledge and resources from both internal and external business environment is vital supporting SME growth and impact in contributing to the economic growth of the society. In this study ideas and theories are employed together in order to showcase SME growth through open innovation, especially the link between internal and external innovation capabilities.

Business collaboration and networking through open innovation platform is seen as a suitable platform for SMEs business to share their business challenges, discover innovation solution. Also to get professional advice for their business growth which will enable them to be innovation pacesetter. SME family business in Finland needs to rise-up to help in boosting their economic growth, sustain their good reputation of innovator and social welfare state.

## 1.6 Thesis Structure

The thesis includes 8 sections. Sections comprises chapter one which presents the introduction, background information, research problem, description, research objectives, research problem and scope of the study. Chapter 2 focuses on the concepts discussion and theoretical framework linked to this research in innovation between the SME firms and every stakeholder in the business. The concept also includes Business Model through open innovation platform, SME growth and open innovation. Chapter 3 Discusses the research methodology used in the study. Chapter 4 present analyses of the study and examined family business phenomenon which include challenges, the reason to adopt open innovation. Chapters 5 consists of the study findings and discussion while Chapter six gives the recommendation. Chapter seven give summary of the study as well as the conclusion. The last chapter showcases the references used during the study.

## 2 THEORETICAL AND CONCEPTUAL FRAMEWORK

### 2.1 Innovation

Previous chapter has described how essential innovation is to SME business survival. This section of the study elaborates on what is innovation and focus on the innovation process and models. The literature review and empirical data provided answers to the research questions formed to facilitate the fulfillment of the purpose of this thesis. Gathering the findings of the literature review and an empirical study on a comprehensive format meant the creation of a framework for growth and open innovation paradigm. This framework facilitates the understanding of open paradigm as a business model to enhance small and medium family business growth. The literature review focus on the scientific theories about innovation process and management, open innovation and SME business growth

The potential to innovate is regarded as an essential component in business sustenance and competitiveness of developed industrial nations who are unable to compete on cost. Wagner, (2007). In earlier centuries, it was easier to mobilize needed resources to develop a commercial-able product and services because the resources required are minimal. Coupled with fact that internal innovation capabilities are great asset of the firm at that time, but currently, the resources required in terms of knowledge, skills, money market experience and management mean that collaboration with external parties significant innovations are synonymous with firms. (Trott, 2012. p.6)

Recent innovation and scientific development, such as significant discoveries like mobile phones, computer software and hardware development makes external collaboration necessary. OECD (2012) reports say that innovation performance is a key determinant of competitiveness and nationwide growth and is essential in tackling the global challenge like environmental change and sustainable business expansion. The term innovation was defined by EC (1995), as a successful production, integration and exploitation of novelty product and services in the economic and social globe. The rekindling and growth of the variety of products and services as well as the related market. Liu (2013) say for a firm to innovate they must have a knowledge-capital; which is defined as a series of ideas and knowledge created and utilize in the value creation course.

Another definition by Thompson (2013) proposes it is an implementation of the new process of production, supply and distribution, as well as introduction of changes in management, work organization, the conditions and skills of the workforce. The entire drift on the above definitions can be described as a new value. Innovation needs to enclose with novelty, with the purpose of creating something new but also create value in the process. Shukla (2009)

Within the knowledge-based economy, competitiveness of ventures is gradually more based on ability to provide high value-added products and services at a competitive price with the latest trend. In this thesis, innovation is understood as the heartbeat of growth, it is now crucial for firms to innovate in order to sustain their relevance in the market. Continuous innovation could be achieved by collaborating internal and external capabilities especially now that the world is

seen as a global village. Information and knowledge span across geographical boundaries, it is now left for wise entrepreneurs to make good use of it to enhance business growth.

Innovation and entrepreneurship brings a solution in resolving the universal challenges, building substantial development, creating jobs, create economic growth and improve human welfare. WEF (2009). As described earlier, successful innovation is essential to business growth; it might not be product and service innovation alone, but can also serve as a process or management of the firm in a unique way that could add essential value to the business. Euro found report (2013), says Finnish SMEs clarify business success has a changed in terms of business structure, shorter life cycle of products and the capacity to predict the future. Tidd and Bessant (2009) also say innovation contributes to the development of new product and services of a firm that can help to capture value, retaining market shares and increase productivity of the market. As for existing product and services, competitive sales growth is not only from the ability to offer low prices but also diversity factors like design, customization and quality. (Tidd and Bessant, 2009).

SMEs in Finland are said to have confidence in technological face like equipment and ICT, the Finnish way to do business which is still interwoven Eurofound (2013). Froehle et al. (2000) also argued that more collaborative innovation process can increase the tempo of new service development. While Porter (1990) noted that in the international market, innovations that yield competitive advantage anticipate both domestic and foreign needs. Trott (2012) says innovation can provide growth irrespective of the circumstance of the bigger economy which could be view as management process. He further mentioned that many firms are now concerned on how to improve their innovation performance to enhance growth. Also, he pointed out that the early observation suggested that economic development does not occur in any usual approach, but seems to occur in burst or waves of activity. Thereby indicating the importance influence of external factor to economic development (Trott, 2012 p. 6).

Hence, the roles of other firms are a crucial factor in understanding innovation. Also, the ability offer improved products and services more rapidly, cheaper and superior quality has been identified as a source of competitive edge (Tidd and Bessant 2009). Porter, (1990) says, "Innovation may arise as a company expands, bring new resources, skills or perspectives of other firms". In this era of advanced technology, the ability to reinvent and improved product and services is very essential for business survival (Tidd and Bessant, 2009).

Zoltan *et al.*, (1987) also pointed out that small firms are inclined to have a relative advantage in industries which are highly innovative. They exploit a large constituent of skilled labor and tend to be composed of relatively high proportion of large firms. Moreover, Roper (2010) say innovation in SMEs is very essential because they act as a potential initiator which contributes to the firm competitiveness. Furthermore, it has been observed that in order to provide innovative services and product to the external market, SMEs plays a significant role in delivering innovation, increasing productivity and employment. Thus, focus on innovation for SMEs growth would create a better avenue of research on innovation that could lead to economic growth. (Hakikur & Isabel, 2010). Lee et al. (2010) says encouraging SMEs innovation is essential in stimulating economic development at the local, regional and national levels. It is globally acknowledged that knowledge is the basis of wealth generation in advanced societies, also continuous research development is one of the pillars to the creation of such knowledge. While innovation is recognized as the means to transform this knowledge into economic development.

SMEs brings hope and expectation of “*creating jobs, open up chances for upwards social mobility, foster economic flexibility, contribute to competition ,economic efficiency and stimulate industrial reorganizations etc*” (Piore and Sabel1984; Birch 1987; Rainnie 1989; Brown, Hamilton and Medoff, 1990 cited in Ziegler et al.,1992 ).However, the expectation from this firms can come to reality or justified if they survive and grow (Ziegler et al.,1992). Chesbrough, (2003) says presently the major element to organization competitiveness and survival is innovation and collaboration with external actors to source for ideas that have good commercial potentials.

As explained in the previous chapter Finnish SMEs source innovation are mainly customers, they usually try to satisfy customer’s needs. However, some SMEs consider innovation activities as costs rather than investment due to their deficiencies in knowledge management. In all for innovation to succeed, it has to target knowledge enhancement that will contribute to business growth and economic development. The advent of industrial development has transformed innovation processes into variety ways that will be discussed in the next section.

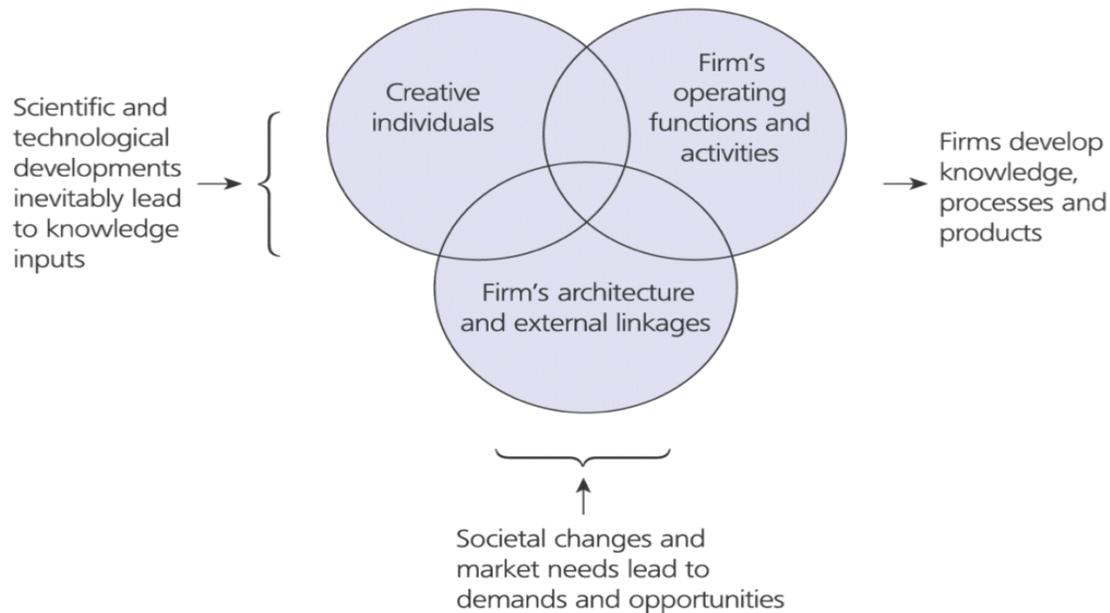
### 2.1.1 Innovation as a Process

This section of the thesis mainly discusses innovations processes and significance of collaboration with all stakeholders to produce a competitive product and services. Presently every industry is experiencing radical change in their economy and environment. Issues such as globalization, advance in information and communication technology with new emerging market, as well as rapid changes in customer demands has put pressures on most firms to reflect continuously change in the way they do business. Eisenhardt and Martin, (2000).

Nowadays the internet has open up the access to the talent market globally. Tidd *et al.* (2008) defined innovation as a total process of interrelated sub-processes which combine internal and external processes into successful production and commercialization of novel innovation. They further argued that an innovation process is merely not the conception of new ideas by an individual or the invention of a new corporate device nor development of a new market. However, it incorporates structures that can add value to the organizational development. (Tidd *et al.* 2008 p.8).This implies that innovation process involve the integration of all innovative activities in enhancing firm value with the capability to adjust to environmental changes.

Innovation as a process is also described as the theoretical conception, technical innovation and its commercial exploitation. (Trott 2012, p.6). Tidd and Bessant (2009) pointed that it was essential to view innovation as a process due to the fact it shapes the way innovation is exploited and managed. These changes have extensively altered the competitive environment for firms in all sectors and have placed a greater burden on SMEs to engage in continuous innovation (Mytelka & Farinelli, 2000). Innovation is now invariably a team game that requires active participation of both internal and external stakeholder in the process of creating value. Chesbrough (2010) says large companies like Procter and Gamble, Philips and Xerox benefit greatly by opening up their innovation process to enhance their business performance.

The figure 3 below shows the overview of innovation process which comprises of economic perspective, business management strategy perspective and organization behavior in attempt to look at the internal activities of the firm (Trott, 2012 p.8).It also identifies that firms form relationship with other for profitable benefits. In addition, it acknowledges that the activities of individuals within the firm also affect the innovation process. (Trott, 2012 p. 8).



**FIGURE 3:** Overview of the Innovation Process (Paul Trott, 2012:9)

Trott, (2012p.9) further explains each firm's unique organizational architecture that represents the way it has built itself overtime. This comprises its internal design, its function and the relationships it has built up with suppliers, competitors, customers and others. This framework recognizes that the linkages will have a considerable impact on a firm's innovative performance. (Trott, 2012, p.9)

Laperche and Liu (2013) further argued that in the situation of global competition, the development of firm's knowledge-assets usually depend on the mutual aid that a particular firm may establish with other companies and organizations like research labs and institution supporting innovation. Lee et al. (2010) says SMEs innovation processes often unfold differently in SMEs compared to the large firms. He mentioned that few SMEs have specialists that are exclusively committed to innovation process without help, whereas innovation is characteristically combination of activities that open and fundamentally linked to daily business activities.

Furthermore, SMEs own internal resources are crucial for innovation, however, openness in obtaining knowledge and resources from outside the firm also enhance innovation. SMEs innovative sources apparently rely on conventional innovation system between university, industry and government, However, any external actors who can develop and offer creative solutions to firm's progress should also be taken into consideration. Innovation process is

invariably a team game. As explained above innovation process now allows customers, employees, users and other external parties like student and other professional to contribute in adding value to the firm's innovation and this requires adequate management in order to maximize the opportunities as its present itself and this will be explained further in the next section.

## 2.1.2 Innovation Management

Planning of firm's business operation and proactiveness in the management enables firms to grow. Proper innovation management is regarded as a major element for a firm to attain high-end growth and profitability. Wagner, (2007 p.8) argued that an innovative firm that has adequate innovation management capabilities achieve higher profitability than their other counterpart which are less creative. She further argued innovation management quality has to be systematically and efficiently managed. In her report, she pointed that several enquiries demonstrates that SMEs mainly traditional sectors are not very active in systematic innovation management which comprises of 70 percent of this firms. In Finland, SMEs is importance in job creation and contribution to the GDP. These fact shows that it is crucial to augment the innovation management performance of SMEs in Finland to achieve the desired business growth.

Wagner, (2007 p. 8) says in order to achieve this strategic aim, there has to be in essential inclination for amendment and prevail over restrictions. Moreover, it crucial to have adequate principles that are adding value to firm innovation expansion in the external innovation locality. SMEs faced series of innovation management challenges due to their size and poor planning. Many SMEs lacks experience in business in which a business consultant that can help them through for the business survival.

As earlier mentioned innovation management is not the major focus of most SMEs. Tidd and Bessant, (2009 p.60) says some SMEs lacks the awareness that they should enhance their innovation management capabilities. Wagner (2007 p.9) says several SMEs abandon their main innovation due to lack of skilled personnel and finance that could have lead to their firm breakthrough. In addition, she argued that they lacked innovation strategy and readiness to link the innovation activities to accommodate another external knowledge. Wagner (2007 p.9) further argued that SMEs have access to instruments successfully used by the large companies, but they their challenges are that most of the instruments are not suitable for them. As a consequence of this, they are left without methodical and systematic support which makes their new product and services developed unplanned which sometimes hinder their targeted growth and innovation sustainability. She summarized the challenges as significant unmet needs of SMEs that is illustrated in the table below

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Knowledge of innovation management SMEs encounter	SMEs demonstrate inadequate concentration on business management. This prevents them from focusing in enhancing their innovation management capabilities
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Putting the operational arrangement in mind and at the same time eradicating operational inadequacy	SMEs usually center on operational development that suck up several resources, prior to enhancing their strategic arrangement or alliances.
Developing international networks	This era of globalization has been putting pressure on SMEs to increase their international network. But due to inadequate expertise in SMEs, building international network becomes a problem

**Table 1:** Major unmet needs of SMEs Wagner (2007 p.9)

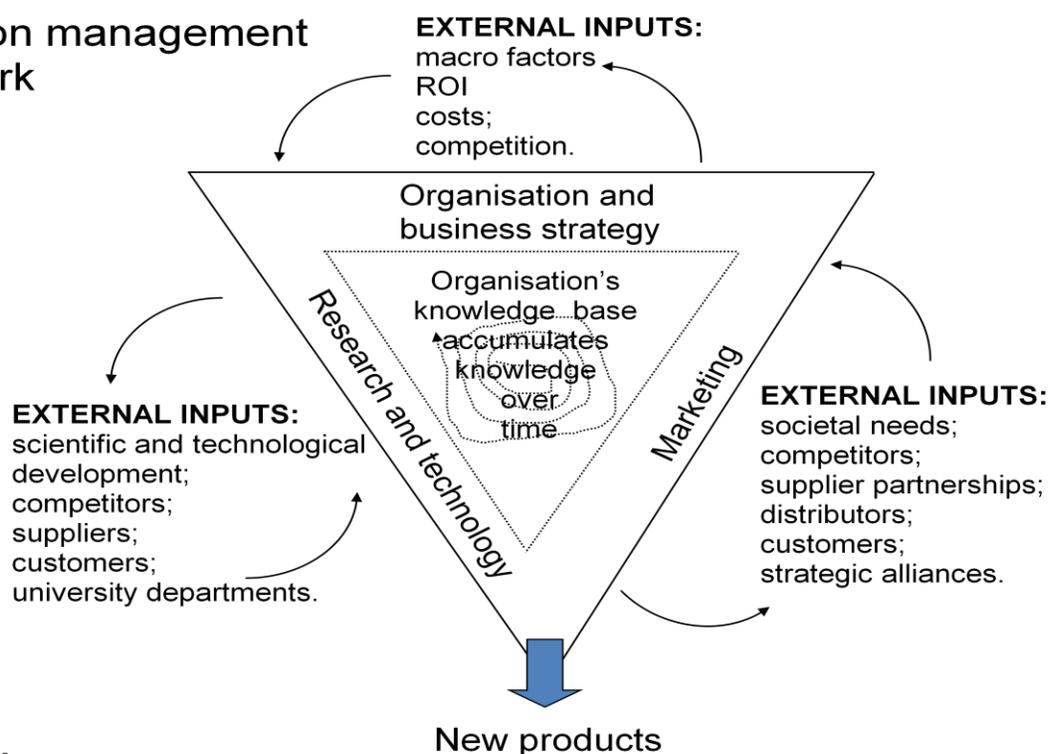
Tidd and Bessant (2009 p.61) also supported this argument by summarizing the advantage and disadvantages of SMEs innovations in the table below. Tidd and Bessant (2009) say another major influence of the particular ways in which innovation is managed is the size of the organization. He further mentioned that typically small firms possess a range of advantages, such as agility and rapid decision-making, but they also have various limitations such as resources constraints and innovation management. He says for them to develop effective innovation management will depend on their ability in creative structure and behaviors. This represents a main capacity in the maintenance of huge formality to put together communal vision and rapid resolution. Also; it will help to build network connection to compensate for resources limitation. Innovations activities determine firm capability of success and ability to manage and project effectively is essential for growth.

ADVANTAGES	DISADVANTAGES
Rapidity of decision making	Lack of adequate structures intended for management control, e.g. development period and expenses
Unofficial culture	Deficient in access to vital resources, particularly finance
Reliable communication network to everyone to stay updated	Lack of access to main proficiency and knowledge
Communal and focus vision	Lack of durable policy and trend
Flexibility, quickness	Lack of structure and succession planning
Entrepreneurial spirit and risk taking	Poor risk management
Energy enthusiasm passion for innovation	Lack of application to detail, lack of system
Good at networking internally and externally	Lack of access to resources

**TABLE 2:** Advantages and Disadvantages for Small firm's innovators adopted from ( Tidd and Bessant 2009 p. 61)

From the above tables, it clearly shows that SMEs need to involve all necessary stakeholders in their innovation management and process, in order to compensate their resources and management inadequacy. The diagram below also showcase the essentiality of innovation management with internal and external input are working together to produce a novel product and services that encompass all stakeholders. It also showcase the critical element of external information in the process of generating ideas, understanding customers and societal needs and incorporating it to internal business and organization strategy in of production new product and services. In addition, the framework accelerates their innovation process in correspondence to the environmental changes.

### Innovation management framework



Source: Trott, 2005

**FIGURE 4:** Image Source -Innovation Management Frameworks (Trott, 2008)

The above innovation management framework represents the organization capabilities and its linkages with both market and the knowledge base. Paradigm innovation changes in the underlying mental models which frame what the organization does. (Tidd *et al*, 2005, p.10). Continuous successful innovation means executing new ideas and commercialization which is achieved by innovative process and organization structure. Tidd and Bessant (2009) argued that whilst size can be viable edge, ownership of asset and other things; the model is

progressively in favors of those firms that mobilize knowledge, technological skills and experience to produce a new product and services. Thus, SMEs have to leverage their innovation capabilities deficiency in order to drive the needed growth for their business and society

Besides, the construction of the knowledge-capital takes place in innovation networks. (Laperche and Liu, 2013). This implies that a firm can use various means to strategies their relationship with external networks to generate adequate innovation and resource needed for growth. This study argued that adequate innovation management is very essential in formulating innovation capabilities through external linkages. Networking and external linkages vital in facilitating knowledge sharing. Woolock (1998) argued that in developing innovation policy “subject of networks” should be added to the program of national development. The external knowledge is seen as an asset that are either be used wholly or added to the firm own expertise in production viable product and services Lichtenthaler (2010). Kutvonen et al. (2010) say that companies need to develop their ability to manage the external exploitation of knowledge and resources to enhance growth. Also, they suggested that firms should consider the use of external knowledge for commercialization as part of their business strategy and as a proactive measure.

According to Luperche *et al.*, (2010) knowledge production and innovation are thus considered as a collective process which is build with efficient innovation networks that are in line with innovation strategy and capabilities. The above analysis shows that SMEs need to develop their innovation management system in such a way that it will be able to compete globally. This requires a creation of adaptive structures that accommodate more flexibility, adequate networking, and limit environmental impact. That can be achieved by adequate collaborations of all stakeholders in the innovation management mentioned in the above diagram as well as relevant innovation policy makers. The next section analyzes the various innovation model and drivers.

## 2.2 Innovation Model, Types and Drivers

In this era of technological development, innovation processes have been divided to various forms. (Hakikur & Isabel, 2010). PWC report (2012) says that an innovation can be apparent various ways either as an industrial change to facilitate the kind of product and services a firm offer or a business model that determine the value the firm achieve. According to Trott (2012 p. 20) over the last decades the literatures on what drives innovation has inclined to divide into two major schools of thought which are market-based view and the resource-based view.

### **Market and Resource-based view innovation**

The market-based view argued that market condition provided the framework that facilitate the level of firm’s innovation activity (Slater and Narver, 1994; Porter 1980; 1985 cited as Trott 2012 p.20). This refers to the firm’s capability to identify opportunities in the market environment. However, Cohen and Leviathan (1990) and Trott (2008) noted that only few firms can scan and search their environment efficiently.

The resource-based view innovation argued that market-driven views do not offer an adequate base for creating innovation strategies for market that are vibrant. Relatively a firm's internal resources supply is a much more constant framework in which it nurtures innovation activity and outlines its market in agreement to its own analysis (Penrose, 1959; Wernerfelt, 1984 and Hamel 1990 cited in Trott 2012 p. 20). In other words, market-based view of innovation believed in its internal resources to generate innovation activity in the market.

In contrast, the resource-based view of innovation paying attention to the firm and its resources, potential and expertise. It further argues that when firms have ideas and resources that are valuable and outstanding, it will not simply imitate. With this, it can attain a viable advantage, often in terms of innovative new products. However, major firm management challenges therefore become to identify the main innovation drivers and utility of external contribution in the specific project. (Trott, 2012 p. 20) Lee *et al.*, (2010) also says an extensive range of innovation models has been used to characterize the nature of innovation. They further categorize the model according to their innovation processes which are either linear models or interactive models.

### **Continuous, Discontinuous and Breakthrough Innovation**

Christensen (2003) differentiates between discontinuous innovations and Continuous innovations (radical or incremental innovations). Continuous innovation or incremental innovation is a type of innovation, which is modest, gradual enhancement of existing technologies. (Trott, 2008). It usually does not change the dynamics of the industry. It occurs within a recognized boundary, and it is characterized by convergent thinking as it does not require end user change behavior. (Miller & Morris 1999, p. 4-6). Continuous innovations entice to existing customers, since it focuses on the improvement of conventional products. Incremental innovations are considered more or less continuously and based on the knowledge and resources involved within an individual company as the competence-enhancing. (Trott, 2008 p. 28). It also makes small changes to the firm's existing technology and business model. (PWC, 2012).

On the other hand, discontinuous innovation or radical innovation offers something entirely new and changes the rule of the game. (Trott, 2008 p. 28). It is a model change in science; technology as well as market structure of the firm. It combines technology and business model innovation to create significant new industry. (PWC, 2012). The third type of innovation is called breakthrough innovation, this innovation makes significant changes to either technology or business model which produces significant growth.

SMEs are synonymous with incremental innovation model. However, Laursen and Salter (2004) stated that SME can also have the capability for innovation, particularly radical innovation. Edward *et al.*, (2005) further argued that as SMEs flexibility and explicitly can be valuable asset in speeding up innovation, only minority has adequate facility to manage the entire innovation process.

## **Technological innovation Model**

Technological innovation Model is essential to enhance competitiveness; wealth and growth. Technological innovations occur to create new business opportunity through the generation and use of all forms of knowledge for business development. New technologies are used to create market needs that not yet existed as well as improvement of economically and socially useful product and services. (Shane, 2000). Such knowledge thus related not only to physical artifacts but also forms of organization for their production, distribution and use. (Arnold and Thuriaux 1997). By contrast, market pull model arise from the need that comes to the markets and current existing expertise makes it possible to fill these needs. The market is the source that dictates the research and development. (Trott 2012 p. 17).

SMEs in Finland operate mainly by perceiving the customer's needs to develop a product. According to EK report (2012), the supremacy of Finnish innovation policy has habitually been connected to high technology. At the moment in addition to technology, innovation is progressively more refer to services, business models and other forms of non-technological innovation. Service innovation occupies majority of latest SMEs innovation in Finland. The conventional knowledge regarding the innovation process is that it is mostly an interactive process rather than linear and technology-push driven (Edquist, 1997) which brings this study to the next section of the analysis.

## **Interactive model**

Interactive refers to as the combination technology-push and market-pull model, it emphasizes that innovations occur as a result of the interaction of the marketplace, the science base and organization capabilities. The information flow is used to provide details on how innovations transpire which can occur from a wide variety of points, as described in the earlier innovation management framework diagram. The overall innovation process can be thought of as a complex set of communication paths in which knowledge is transferred. (Trott, 2012 p.17). These paths include internal and external linkages. Cooke & Wills, (2010) says interactive process means social; in the sense that all stakeholders and end users are likely to be involved in a specific innovation project from different organizational bases, both public and private firm as well as innovative customers.

This innovation model further highlighted the interactive character of the innovation process, signifying that innovator profoundly depend on their interaction with lead user, suppliers and variety of institution within the innovation system. (Laursen and Salter, 2006). In this regard, innovation is often considered as important drivers for economic growth and development; it also increases productivity, competitiveness and national growth. To innovate means to create, adopt or adapt knowledge and technology to develop products, services or system with the goal of increasing the productivity and competitiveness of a company.

## 2.3 Closed Innovation

In closed innovation model research and development is performed in-house, and little or none external knowledge is used. Traditionally, firms initially utilized their internal R&D to develop innovations. Their commercialization of product and services only rely on to internal resources and technologies; which is referred to as a great asset in previous centuries (Chesbrough, 2003). Self-reliant horizontal innovation of ideas development, manufacturing, marketing, distribution and eliminating competitors by aggressive intellectual property protection characterizes this model. Only large corporations with highest R&D could compete and maximize large market share (Teece, 1986). For instance; Apple Company usually, bring a new product to market that is developed in closed innovation model.

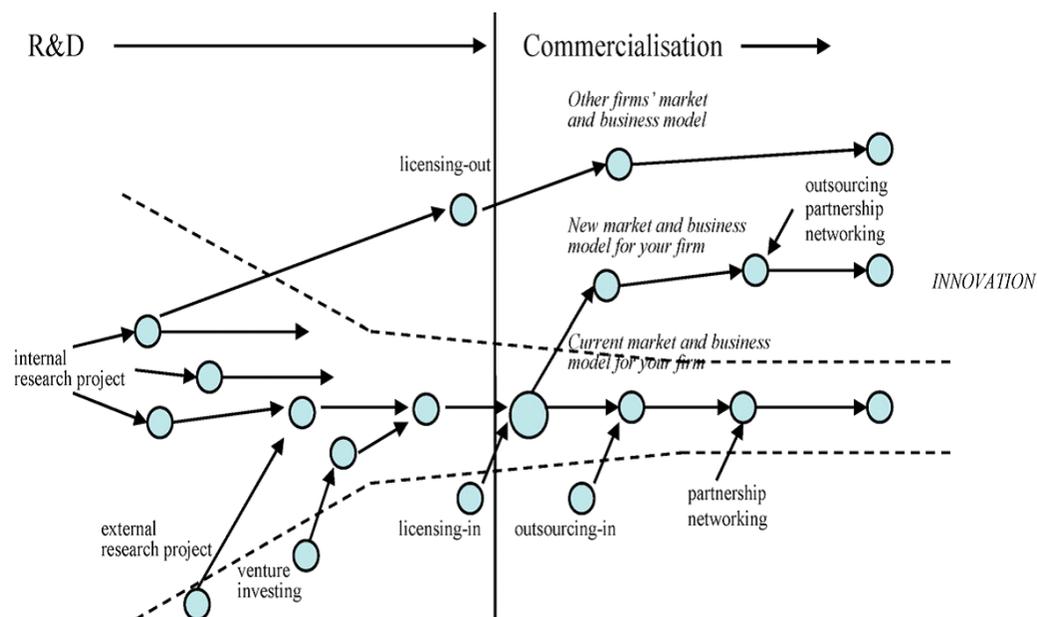
Closed innovation is still widely practiced by many SMEs firms because it is strategically and beneficially protects their internal ideas and technologies from others. Even when these ideas and technologies are not being utilized by the firm (Kutvonen et al., 2012). In family business firm, success secret is been pass from one generation to another; this sometimes enables the family members to monopolized a certain industry in the economy. (Koiranen, 2007). In addition, this model internally focused on the firm resources and ideas to generate growth. Most of the 19<sup>th</sup> and 20<sup>th</sup>- century family business and other many leading industrial corporations adopted this model. (Trott 2012 p. 6).

Furthermore, Chesbrough, (2003) described the model as company commercializes its ideas under the rigid control of all knowledge and assets needed to pursue innovation. Closed innovation concept believes to be in greater control of the intellectual property and prevents the exploitation external knowledge and feedback on their product and services which characterize the low growth or stagnant SMEs. However, Henry Chesbrough (2003) observed that more companies are now looking outside of their company boundaries for innovations and assistance with both knowledge generation and commercialization of innovation. Especially now that societal change happen rapidly which are inevitable for firm to adjust and adapt if they want to survive. He invented the term open innovation to describe this new phenomenon. As a result of this change, it paves way to open innovation model in which firms could combine both internal and external expertise to exploit innovations, acquire knowledge and resources in order to create utmost value (Chesbrough, 2003). The details of this model and their inference for SMEs in the context of this study are discussed in the next section.

## 2.4 Open Innovation

As discussed earlier, in the past innovation habitually occurred within the firm (Lee et al., 2010) but due to changes in globalization and in the environment, it paves the way to open innovation. This innovation model has been illustrated as an information-creation process that arises out of social interaction. Chesbrough (2003) says adopting this business strategy perspective, present a winning argument that the process of innovation has transferred from internally focused systems of the firm innovation, to a new approach of open system. It involving a series of actors disseminated up and down the supply chain. Open innovation includes externally focused

elements within its innovation model. Also, it assumes that firms can use internal and external paths to markets, to discover and realize innovative opportunities (Chesbrough, 2003) which will be expanded further in this study.



**FIGURE 4:** Open innovation model for SME adapted from (Lee et al., 2010,p. 292)

In open innovation the organization uses external partners to achieve research and development, firm commercialize its internal ideas as well as innovations from other organizations (Chesbrough and Crowther,2006).It brings its ideas to market (exploring different markets).Boundaries with surrounding environment are easily crossed. External knowledge from the company is used (supplier, competitors, entrepreneur's scientists, among others)

In the last decade, it has attracted organizations and responsible for increased success in innovation efficiency mainly with the large firms Chesbrough *et al.* (2003).They say a firm should embrace the initiative of openness because it cannot innovate in segregation. However, there is a gap on how SMEs can use open innovation to the reduced cost as well as spin time for innovation to be more competitive in order to enhance growth.

One of the main challenges of SMEs is related to organizational and cultural issues as a result of dealing with increased external links. Van de Vrande *et al.* (2009). Many SMEs still adhere or rely on the old model that centered on the internal infrastructure, R&D and keeping the idea of new innovation within their own firm's boundary. Nevertheless in this 21<sup>st</sup> century firms must

build on organic growth for the company survival, relying on internal R&D alone is inadequate to drive the desired growth. (Huston *et al.* 2006). That is the reason the study proposes the open innovation model in order to assist the SMEs in Finland to generate highly profitable innovation through external connections that are essential to future business and economic growth. Combination of both innovation management and open innovation will give SMEs firm the proper gear to grow and provide more jobs opportunities for the members of the society.

Recently firms are transforming their business models to that which can survive both the technological and social changes in the 21<sup>st</sup> century knowing fully that competitors will emerge. Industrial veterans, scientists, students and the public can contribute tremendous value to product development, when working outside boundaries of firms. (Huston *et al.*, 2006). Business and Academic institution were mutually inevitably converging on this rising trend. Besides, Chesbrough, (2003) argued that companies that will thrive must continue the effort in ensuring that the role of research goes beyond the firm boundaries by employing open innovation. This does not mean that limit the capability of the firm internal R&D and expertise but to better leverage them (Huston *et al.*, 2006).

Open innovation has been further described as a two-way process in which it make use of both internal and external knowledge in a suitable and creative approach for business to grow and become a leading firm Lindegaard (2010). This mean that resources and ideas for growth and expansion could be acquired from the external environment by exploiting open innovation. This model of innovation has lately received much attention in entrepreneurship and research arena, because researchers now believes that open innovation can overturn market imperfection created the by the closed innovation into sustainable opportunity that will take the world into the next level. (Chesbrough, 2003; Kirschbaum, 2005).

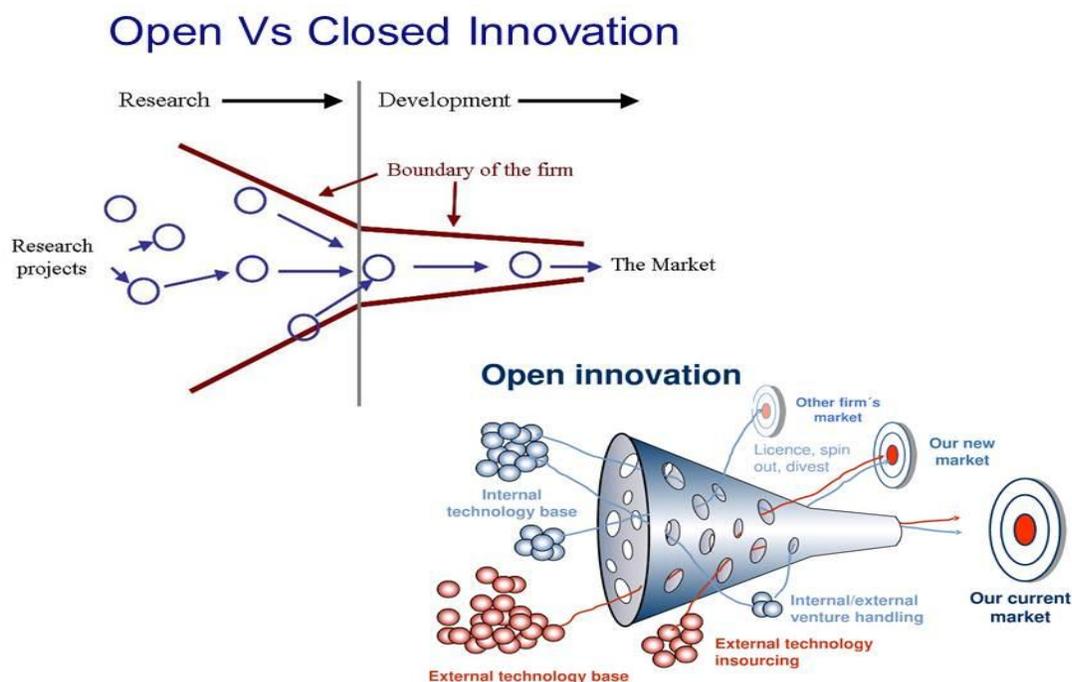
It also serves as a link that connect creative people with the organisation. In other words, it the global innovation networks of individual and institution that enables firms to resolve innovation problems, save cost and time. Nevertheless, substantial education still is required to ensure that small and medium firm understands the benefits and challenges of open innovation. Chesbrough and Crowther (2006).

Opening up a company boundary requires significant organizational structure and cultural changes. As described in the previous chapter, adopting open innovation requires changing of the old traditional innovation management approach to a new approach of “connect and develop” which needs to be accepted and adopted. Tidd and Bessant (2009, p.488-495) showed that distinctiveness of firms and technology affect firms attitude towards the acquisition of external knowledge and resources. Individuality of firm’s knowledge includes competitive significance, complexity and reliability potential.

Personality of firm’s comprises of approach, ability and existing technical experience, culture and reliability of management. (Tidd and Bessant, 2009). Moreover, the degree firm openness seems to vary according to the firm size, the level of emphasis on radical innovation (Lictentahaler, 2010); innovation needs, time and organizational culture (Montana and Minshall, 2011). Besides companies with a high degree of openness tend to have a higher level of innovative activities. Laursen and Salter, (2006)

However, while external knowledge resource seems to be extremely essential assets for firms, internal research and development is still categorized as a fundamental value within open innovation. Firm need internal research and development to follow and evaluate development outside their boundaries, to create and develop absorptive capacity. Internal R&D and external ideas and resources are therefore complement rather than substitute (Dahlander Grann, 2010).The practice may be at variance across firms due to different strategic choice as they face different motives, barriers, and risks in implementing open innovation. The next section continues to describe the comparison of open innovation and closed innovation.

### 2.4.1 Open Innovation contrasting to Closed Innovation



**FIGURE 5:** Image Source- Open innovations versus closed innovation paradigm by (Chesbrough, 2003)

These above models of innovation are categorized into two approaches which are closed and open innovation. This closed model is regarded as obsolete due to improved mobility of workers, advanced education, increased numbers of business angels, gradually more reduced product life cycle, cooperation, and numerous availability of information (Vrande *et al.*, 2009; Houston *et al.*, 2006). According to Kässi (2011), in close innovation, paradigm firms adhered following philosophy that successful innovation requires control. Companies are obligated to generate their own ideas that they would develop, manufacture, launch marketing campaign, distribute, and

provide services themselves. This approach causes substantial investment in internal R&D and aggressive protection of intellectual property as well as efficiency and effectiveness. (Chesbrough, 2003; Kässi, 2011, p.92-93). It sometimes require major capital investment on asset and infrastructure thereby causing financial drain and output of expensive product and services in which later result to unprofitable ventures and collapse of the business. For example, Finnish products and services are known quality and durability all over the world but expensive for average consumers compared to other countries. Chesbrough (2003), also presented a distinctive to what he called contrasting principle of closed and open innovation paradigm, In closed innovation business model companies employ brightest people and famous experts to work for them which are common among large firms.SMEs invest in their best employees who are devoted to working for them, but over-dependence in their skills and knowledge may be taken away if the business fail or lack sustainability thereby causing knowledge leakages to competitors. In contrast, open innovation connects intelligent people both within the firm and outside and create a platform to explore expertise of bright individuals outside the company which is significance of being rapid innovator.

In closed innovation to profit from R&D, believing in controlling all process of innovation and intellectual property. Internal R & D is needed to maintain and develop absorptive capacity (Cohen & Leviathan, 1990). Furthermore, the model believes in first mover advantage with internal innovation discovery; this thinking leads to a negligible level of spillover from the firm which is no longer valid. (Kutvonen, 2012). There is a crucial change to this theory is as results increasing economic pressures on the innovation process.

In open innovation, internal R&D can claim some portion of explored knowledge and others can profit from their internal R&D. Market sustainability is built via a business model which combines external and internal pathways. A successful example is P&G “connect and develop”. (Chesbrough 2003).In addition, close innovation believes in eliminating competitors by aggressive intellectual property protection, which sometimes generate additional cost instead of profiting from the knowledge asset (Rivette and Kline, 2000). According to Kutvonen *et al.* (2012) a firm usually uses less than 10 percent of their intellectual property and occasionally leaves the rest of 90 percent to waste without licensing it or give it to benefit other companies that are in need of it. Open innovation model enables licensing IP and attainment of competitive advantage which is a win-win situation as it gives for change in response to the environment. Tidd and Bessant (2009) also illustrate the challenges business may encounter if they take a partial view of innovation. These challenges are illustrated below::

If innovation is only seen as.....	..... the result can be
Strong R&D capabilities	Technology which fails to meet user needs and may not be accepted
The Province of specialists	Lack of involvement of others so that there is a lack of key input from different perspectives
Understanding and meeting customer needs	Lack of technical progression, leading to inability to gain competitive edge
Advance along the technology frontier	Producing product or services which the

	market does not want or designing processes which do not meet the needs of the user and whose implementation is resisted
The province only of large firms	Weak, small firms with too high a dependence on large customer Disruptive innovation as apparently in significant small players seizes new technical or market opportunities.
Only about breakthrough changes	Neglect of the potential of incremental innovation. Also inabilities to secure and rein enforce the gains from radical change because the incremental performance ratchet is not working well.
Only about strategically targeted projects	May miss out on lucky accident which open up new possibilities
Only associated with key individuals	Failure to utilize the creativity of the remainder of employees, and to secure their input and perspective to improve innovation
Only internally generated	The not-invented here effect, where good ideas from outside are resisted or rejected
Only externally generated	Innovation becomes simply a matter of filling a shopping list of needs from outside and there is little internal learning or development of technological competence
Only concerning single firms	Excludes the possibility of various forms of interorganisational networking to create new product streamlined shared process

**TABLE 3:** Problems of Partial view of innovation Adopted from (Tidd and Bessant 2009 p.69)

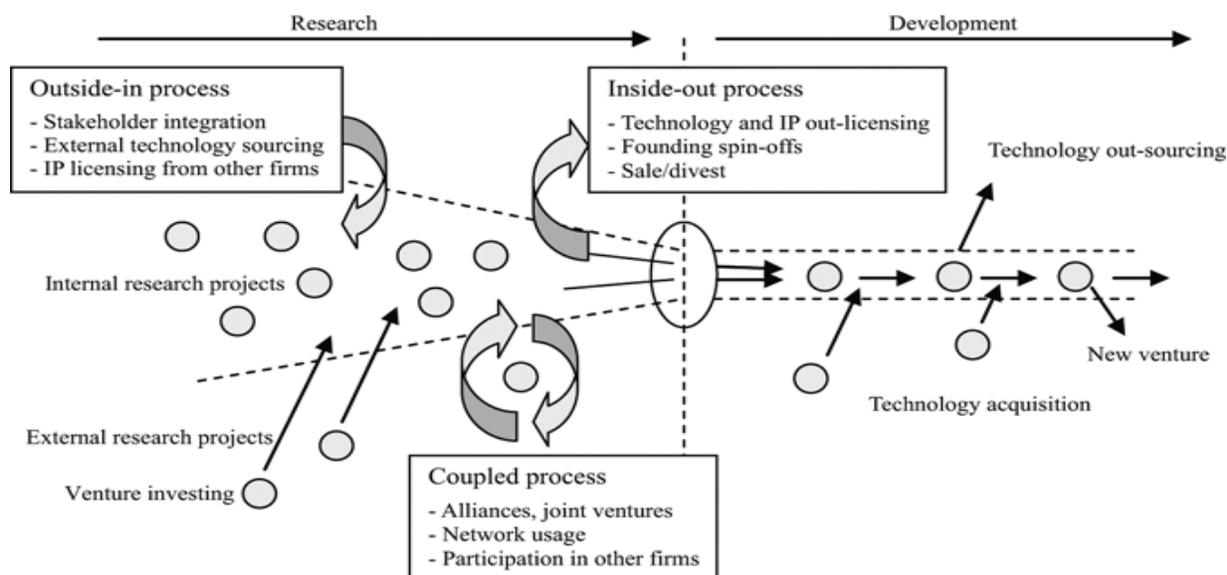
The above table shows the importance of the combination of both internal and external knowledge as well as resources to enhance innovation performance of the firm. If a firm focuses on just internal or external innovation, it may be cut-off latest market trend which may lead to the collapse of the business. The next section discusses on the three core open innovation process of open innovation.

### 2.4.2 Three Core Open Innovation Processes

It is indisputable that job creation and economic growth depend on entrepreneurship and innovation; firms must always pursue and tend more innovative in choosing one of the core

innovation processes which involve research and development capability. It helps firms to stay updated with the current trend and differentiate product or service from other counterparts. Firms must be able to adapt, forecast, evolve and position itself if they wish to survive. The major part of the innovation process in any business enterprise is the methodology that the firm employs in searching for new ideas that have commercial potentials.

Open innovation is, therefore, described as commercialization of both external as well as internal ideas, by organizing outside and in-house pathways to the market to capture value and market profitability. (Chesbrough, 2003, 2006). Through a screening process in open innovation, good and potential ideas are separated for adequate utilization. Also, it ensures that low rated ideas with potential benefits from externally sources are not discarded. West and Gallagher (2006) identified three core open innovation processes that laid down the open innovation theory which are outside-in, inside- out and coupled or joint innovation process. Companies that adopt open innovation model are said to choose one of this three core processes as their main process but also implement some elements from other ones.



**Sources:** Following Chesbrough (2003a); Gassmann and Enkel (2005)

**FIGURE 6:** Three Core Open Innovation Processes ( Emerald light .com)

**Outside-in processes:** This process intended to boost firm's innovativeness by elevating the firm's internal knowledge structure in amalgamating all crucial stakeholders in the innovation process; in order to improve the quality of the firm's innovation process. (Enkel et al., 2004). It also enables firm's that adopt it to accelerate the advance of product and services, shorten time to the market and reduce cost. Moreover, it embraces creativity such as cooperation among outer entity for innovation, crowd sourcing and mobility inside the firms. (Enkel et al. 2009; Thompson, 2013). Thus, entrepreneurs and SME family business could collaborate with other

stakeholders in the development of innovative ideas. At this present time, some technologies are so complex that it cannot be handled by one SME. The significant knowledge needed for growth and expansion are spread across various firms. The outside-in process also enhances firm's reputation as innovation in the market helping to attract future partners for external transfer. (Cosh and Zhang, 2012).

Inside-out-processes: Enkel *et al.* (2009) says this process focus on externalizing intellectual property or internal knowledge and innovations. They further argued that firms using this process can profit from their intangible asset by offering or accrediting their intellectual property to prospective firms in the market. It also enables firms to have shorter innovation cycle and reduce time to the market. (Enkel *et al.*, 2009). The ideas that are not exploited internally could be use by other firms that needs it, instead of keeping it on the shelf which sometimes lead to knowledge leakages to external parties that takes it the market faster. This process is also known as knowledge transfer through licensing of intellectual property, thereby generating a network of innovative allies and establishment of business development. (Van de Vrande *et al.*, 2009, Enkel *et al.*, 2009 and Thompson, 2013).

Within innovation department, large companies focus on the collaboration with external parties in participation in its open innovation processes, which can then benefits from the global class of research and development facilities. (Vrande *et al.*, 2009) Firms need to have both market and technological knowledge to develop innovative products and services; it can also offer financial resources for internal innovation development. Although SMEs tend to lack sufficient market knowledge due to limited resources. Still they can increase their pool market knowledge by carrying outbound activities that will assist to identify future technological knowledge needs and handle inbound activities more competently. (Cosh and Zhang, 2012)

Joint processes: This process is said to combine outside-in and inside-out process in order to have access to external knowledge. With this process together; enables firms to develop and commercialize innovation. Firm's collaboration in strategic networks, joint ventures, alliances information sharing is crucial to successive business. (Enkel *et al.*, 2009) This process also focuses on peer production through communities. Cosh and Zhang (2012) argued that for a firm to attain long-term success, they need to engage in a joint process. Also find balance between the inbound and outbound process in order to manage the trade-off activities and resources constrained. SMEs can benefits by ensuring an appropriate balance. They further argued that engaging in both inbound and outbound enhance innovation performance and promote growth sales. In conclusion irrespective of the method adopted, open innovation processes merge both internal and external knowledge which are continuous through innovation platform and structure. These prerequisites are characterized by the firm business model. (Chesbrough, 2007; Thompson, 2013). Embracing open innovation process expose firms to windows of opportunity and new discoveries that can enhance firms creativity and business growth. The next section analyzes various open innovation activities in SMEs.

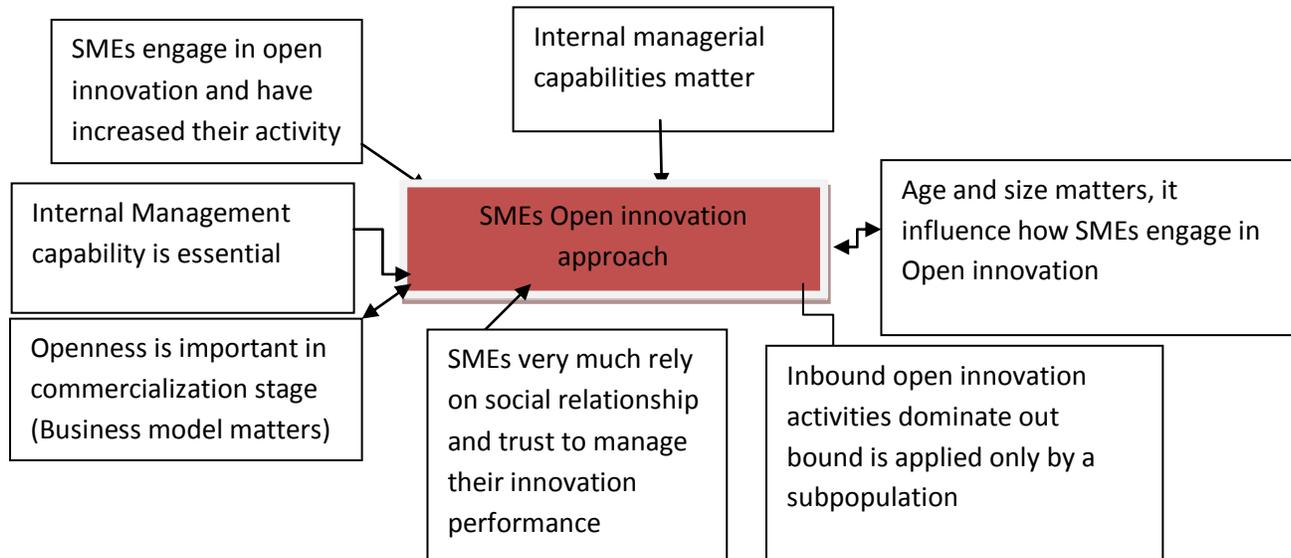
### 2.4.3 Open Innovation Activities in SMEs

Prior studies on open innovation established that SMEs firms practice more of inbound open innovation activities (Chesbrough and Crowther, 2006; Lazzarotti al., 2010 Bianchi et al., 2011; Lee et al., 2010). The reason that outbound open innovation activities are not usually practiced are; SMEs believes more in existing relationships they built, due to the fear of diffusing relevant knowledge and giving away their corporate ownership (Huizingh,2011).However confining all activities within the firm boundary may reduce innovation development.

According to Van de Vrande *et al.*, (2009) open innovation activities are distinguished into technology exploration and technology exploitation. Technology exploration or inbound open innovation activities, which implies innovation activities used to capture and benefit from external knowledge sources to enhance current product developments. (van de Vrande *et al.*, 2009) Technology exploitation or outbound open innovation activities implies that innovation activities used to leverage existing technological capabilities outside the organizational boundaries (van de Vrande *et al.*,2009).With technology exploitation, companies commercialize technology asset exclusively or in addition to their internal application. (Van de Vrande *et al.*, 2009).Observing Van de Vrande *et al.*(2009) research on open innovation, network and outsourcing, research and development are the major activities presently implemented by SME's for their product development.

Lee *et al.*, (2010) argued further that innovation in SMEs already has an external focus, and the concept is not new to them. However, their collaboration tends to be limited to strategic alliance with large firms (Rothwell and Dodgson 1994) and to outsource mainly via other SMEs. Considering the fact that firm that involved in various types of relationship are more innovative than those which only utilize one type relationship.SME regard the external sources as a means of getting access to marketing and sales channels at the later stage of innovation. They also have fewer capabilities to access external resources and few technological assets that they can share than large companies (Narula, 2004 cited in Lee *et al.*, 2010). It was also argued that innovative SME firms are keen in utilizing open innovation approach because of their ability to increase their innovation capability. Huang and Rice ( 2009)

Brunswick & Van de Vrande (2012) finally summarizes the major previous discussion on open innovation in SMEs with aid of the diagram below



**FIGURE 7:** Prior research on open innovation in SMEs-Brunswicker & Van de Vrande 2012  
(Adapted from Fraunhofer-Gesellschaft report October, 2012)

SMEs that engage in open innovation have increased their activities, but they cannot depend only on the external resource or innovative business ideas, in order to have a competitive advantage, internal managerial capabilities are paramount. As discussed earlier, firm have to develop competence within the organization to identify, develop an appropriate external collaboration in the area of need. Especially, in this era of radical innovation where new product and services that makes life easier for customer is taking over the old way of innovating. Open innovation frequently focuses more on the early stages of innovation, addressing external technology sourcing and networking with technology providers and innovative upstream companies. (Vanhaverkebe & Cloodt, 2006)

#### 2.4.4 SMEs General Challenges Towards Open Innovation

Open innovation within SMEs has its distinctive opportunities but also have particular challenges. These challenges represent higher innovation exploration and exploitation for SMEs (Lee *et al.*, 2010). This sections analysis the challenge faced by the SMEs towards open innovation.

SMEs and family businesses play a vital role in providing innovative product and services to the market. van de Vrande *et al.* (2009) says SMEs are hindered by limited opportunities to recruit expert workers, small innovation portfolio with no risk sharing, over-dependence on their networks to find innovation resources and inflexible organization policies. Moreover, Chesbrough (2010) argued further that SMEs have some fundamental challenges with open innovation. He pointed that they deficient in several capabilities necessary to lured external knowledge and expertise. The major structural challenges of SMEs are:

Lower absorptive capacity: Cohen and Levinthal (1999) “define absorptive capacity as the capacity of a company to identify the value of a novel, external knowledge, incorporate and relate it to marketable output”. They pointed out that the open innovation is not a common practice, but a prospect to grow the business operation with external firm participation or personnel. However, Chesbrough (2010) says SMEs, do not, usually, have the capacity to support committed resources needed to develop a system that can be used to spot valuable external knowledge. For example, innovation labs or garage are used by the large companies to nurture and exploit innovation, as well as tertiary liaison managers that can access latest technology from the universities but SMEs lacks the this crucial innovation facilitator.

Similarly, SMEs are also said to have inadequate capability to absorb external knowledge, whilst they are at first recognized and transfer the ideas, which means that the ideas have not efficiently created when transferred. As an alternative means, they choose to modify the order to meet the needs successfully Chesbrough (2010). Open innovation practices require a variety in terms of small entrepreneurial activities and their avenue for growth, combined with structures and activities of more established firms. The challenge is to establish a suitable arrangement, system and market that will enable the exploitation of opportunities to reduce transaction costs. (Euris, 2012).

Deficiencies in value capture: Chesbrough (2010) further argued that SMEs do not have the finances to exploit their outside source ideas, due inadequate intellectual property protection. The risk of open innovation as mentioned earlier includes loss of knowledge, control and core competencies, higher coordination costs and higher complexity (Enkel *et al.*, 2009). This mean that open innovation leads to resources availability for partners to utilize, so also can challenging for SMEs to protect their intellectual property and to reap the benefits of innovation (Dahlander and Gann,2010).Joint technology development also creates a problem about the ownership of intellectual property. As for innovation search, SMEs firms tend to strict their searches to familiar and proximate areas. The search is costly and time-consuming, as well as expensive laborious. However, strenuous search of the firm uses many external sources of knowledge can also negatively affect innovative performance (Laursen and Salter, 2006)

West and Gallagher (2006) showed that firms practicing open innovation face three inherent managerial challenges which include: maximizing returns on internal innovation that is the best way to use internal research and development capabilities of the firms to maximize advantage, incorporating external innovations, and motivating individuals and organizations to generate and contribute spillovers. Another major obstacle hindering the implementation of open innovation may involve difficulty in finding the right partners. Van de Vrande *et al.* (2009) says though, the size of the firm could also influence the adoption of open innovation; SMEs have traditionally relied on partnership with other large firms to exploit their innovations. As reported by

Chesbrough (2013) SMEs are not attractive to professionals who could have assisted them in solving the problem they might encounter in early stage of development (Enkel et al., 2009).

Organization culture also prevents the implementation of open innovation. It creates barriers and employees' resistance to knowledge both within and outside the firm, respectively (Chesbrough et al., 2010 p.17, 23). Some SMEs are said to have a rigid internal policy that base on the management or owner perspective of the market and firm. Additionally, firm faces a challenge in sustaining the commitment of open innovation over sufficient time to realize the benefits. Despite the challenges SMEs encounter, they still play a crucial role in the open innovation environment, and they have the potential to increase participation in open innovation activities. (van de Vrande et al., 2009). However, large companies are now utilizing an open innovation model; SMEs have more opportunities than ever to join the global innovation networks. (Lee et al., 2010) The next section analyze the SME advantage towards open innovation. As SMEs have challenges towards open innovation, so also they have structural edge for open innovation, the next section analysis this further.

#### 2.4.5 SMEs Structural Advantage for Open innovation compared to large firms

SMEs can benefit from their various structural advantages by expanding their innovation networks and have the willingness to grow. Open innovation create platform that enable greater growth in SMEs to reduce business risk by giving them ability to improve their innovation capacity. Chesbrough (2010) say SMEs structural advantages have enabled them to take a vital role in a developed economy's innovation system. He pointed out that these advantages also provide SMEs firm with exceptional prospect to flourish with open innovation framework. He said SMEs have five structural advantages which are stated in the table below.

Focus	Their focus allows SMEs to implement a decision successfully than bigger firms; they easily disseminate objectives into all areas of their business. Also, their focus enables them to concentrate on a particular market, satisfy targeted customer with proficiency or expertise which may give them a competitive edge in a market where customers appreciate the value and expertise SME offers.
Size:	SMEs sizes enable them to survive in a small market. Moreover, they can develop new trend faster when initiation costs is still minimal because it difficult for large firms to pursue the opportunity due to their overhead costs in niche markets
Business Specialization	SME are capable of focusing on their business

Entrepreneurial persons	more acutely in constricted fields. SMEs promote an entrepreneurial culture; this enables them to more attract more innovative potential entrepreneurs in R&D that experiment and develop new product and services for customers.
SMEs are quick decision makers	SMEs act faster to customer needs and challenges in terms of decision making compared to larger firms. They also have the capability develop their business models more speedily.

Table 4: SMEs Structural Edge for Open Innovation adapted from (Chesbrough 2010 p. 3)

From the above-mentioned characteristics, it shows that SMEs have various encouraging features that can help them overcome their internal innovation deficiency. Chesbrough (2010) says innovation capacity is enhanced by absorbing open innovation. In comparison, large companies increasingly are interested in collaborative innovation partnership, while SMEs with high focused area of expertise make good collaborative allies with large firm. Interorganisational networks create in this way open new business opportunities for specialized SMEs. For example in the past large firms with physical structures benefits more in attracting customers due to their significant appearance in major places. But nowadays globalization has placed both large and small firms on the same level playing field to explore and exploit innovation opportunities. Thus enabling the SME to increase their finances with access to common supplier and serving key customers like the large companies. In-house controlled innovation activities are limited to customers in a particular market, while open innovation activities explore and develop numerous customers support in several markets thereby diffusing costs and increase possibility of performance broadly. (Chesbrough, 2010)

As discussed in the previous chapter, innovation usually occurs at the periphery of the markets, relatively to the heart of the market, (Chesbrough, 2010). For innovation to succeed SMEs must adopt an international cross-discipline approach with openness; adopt new business model and change business and management strategies. It also indicates that SME must commit to the ideals of open innovation and allocate resources for the identification and development opportunity which is essential for growth. Family businesses have to determine to what extent, they wish to open up their research and development boundary without jeopardizing their core competencies. Modern technology, know-how and the internet has changed the traditional business model as an organization's in-house asset to broad-based asset allowing other strains of ideas flow to add value to in-house capacity. Open innovation as a business model must, therefore, be relevant, simple, and easily understandable and profitable. The next section discusses SMEs growth in relation to employment generation.

## 2.5 SMEs Growth and Employment

The focus on SME growth through innovation continued to gain more support globally. In Finnish society SMEs and family businesses serve as a pillar that supports the economy growth, welfare and employment. (Koiranen, 2010). It has also been accepted firm cannot innovate in seclusion to achieve high-end growth. Entrepreneurship and growth can be productive form of social welfare perspective because it focuses on wealth creation rather than just capital accumulation. Although self -interested entrepreneurs are more interested in their personal profit making than the interest of the society. (Venkatarama, 1979, p. 9). Stevenson (1997) says the fundamental nature of entrepreneurship is the exploration of opportunity irrespective to resources presently controlled. A perception that shows us that growth often occurs through harmonization of resources “neither owned, nor indeed managed by the firm.”

Small and medium business growth is described as the key drivers of the economy as it contributes more employment growth than the bigger firms. In the European Union region, 99.8 percent of the enterprises are Small and Medium Enterprise, which employ 67 percent of the European workforce and generate 57percent of the revenue (Eurostat, 2008). In Finland, small and medium are usually categorized as small if they are having less than 50 employees and medium when having less than 250 workers. (Yrittajat, 2013).

Majority of SMEs in Finland are family businesses, EC report (2013), also states that more than 99 percent of businesses in Finland are SMEs .The small firms are about 99.8 that employs less than ten employees, while 93.4percent of SMEs creates more than 63percent of Finnish jobs. (Yrittajat, 2013).In the EC standard definition for SMEs, they are further categorized into micro-enterprises that take up fewer than ten people with a revenue of less than 2million Euros annually, while small enterprise are said to employ less than 50 people with a turnover of less than 10million Euros annually.

Moreover, the medium size firm employs less than 250 people with a turnover of less than 50 million Euros a year. From these definitions it shows that SMEs are very essential to Finnish and Europe economy in terms of value creation, employment and economic growth, which is the reason this study focus on them. In Finland SMEs are described as the bedrock of employment and job creation with about 98% percent of its enterprise are SMEs. (Kasvuyritykastsaus, 2012) In recent years, research has broadly substantiated the importance of high-growth SMEs firms for job creation. According to the ministry of employment report in 2011 between 2007-2010, there were 668 new firms with high growth potentials which accounted 4.4 percent of the new firms that employ up 10 people in the labour market. These enterprises created up 50,000 new jobs which are nearly half of the job created during that period.

According to Storey (1994) research result for UK stated that 4 percent of high growth small firm in United Kingdom generated up 50% of employment while Birch et al. (1997) found out that SMEs create more 70% of jobs in the United State between 1992-1996 (See e.g. Birch et al., 1997; Storey, 1994). SMEs firms are essential contributor of economic growth and competitiveness which are measured by the growth of sales, turnover and employment (Barlett,

1994) and the ideal incubators of innovation (Morrison et al., 2003, Swain1985).Attaining rapid growth are crucial to SMEs firms (Churchill and Lewis 1983; Greiner, 1972).They are referred to as the main source of employment (Armington and Odle1982); technical innovation. (Kamien and Schwartz 1982)

Despite this great attribute and contribution to the society, the present economic crisis is threatening SMEs survival and growth; their internal capabilities are no longer enough to maintain the required competitiveness. The unemployment rate in Finland stands at 8.7 percent in July, 2014 while Europe in general stands at 11.5 percent. (Eurostat, 2014). Presently high rate of unemployment has made SMEs non-growth companies a major concern. Their cut costing measures has contributed to high rate of unemployment in the society.

The significant contribution of these SME's has to be sustained by using appropriate policies to prompt growth and in due course to enhance largely economic performance. Managing organizational growth is very essential for management team of SMEs firms. Therefore, they must collaborate with external partners to innovate successfully. From the above illustrations, SMEs growth has been regarded as an essential technique of reducing unemployment, encouraging them to focus on business growth and sustainability will be beneficial more for job creation (Storey 1994 and Autio, 2007).This study argued that open innovation can be an important lever for SMEs growth and sustainability.

### 2.5.1 SME Business Growth

Innovation is also portrayed as a primary source of business growth while business growth is described as a performance variable (March and Sutton, 1997). Growth is the fundamental nature of entrepreneurship (Hitt and Ireland, 1997). The means to business growth are successful innovation, and innovation process which depends on the firm ability to create, exploit and develop it knowledge-based resources. (Teece, 2000 and Salojärvi et al., 2005).The density of innovation processes could be a pilot to an incredible growth in use of external networks and resources by small and medium firms. However, attaining high-end growth is risky but serves as an essential process for SME to survival while open innovation model could help in diversifying the risk of innovation. It could be appraised in the perspective of employees, customers, revenue, liquidity, profit, geographical locations and a variety of other dimensions. Growth assists firms to ascertain the legitimacy in building new opportunity to grow.

Growth as a process occurs in various forms, which can be internal or external, national or international and at a variety of level of contribution. (Hitt and Ireland, 1997) The recent expansion of the globalized market has provided an opportunity for cooperative arrangement for firms throughout the world and provided employment opportunities in areas where few existed. It is the key to economic development and creation of wealth (Hitt &Ireland, 1997).Moreover, Growth could be a form of personal development of management and employees, technology innovation and professional recognition. (Robson and Bennett 2005; Orser et al., 1996)

Goold (1996); Sveiby,(2005) pointed out that growth is measured as one of the main performance evaluator in any industry.(Cited as Salojärvi et al.,2005). Also, Small-bore et al. (1995) illustrated that one vital distinctive feature in which distinguishes the best performing firms from non-performing firms, was their commitment to growth.

Furthermore, SMEs growth has been acknowledged in most developed countries as one of the essential element in economic strategies for new job and wealth creation Salojarvi et al.,(2005).Moreover, growth is probably one of the most reliable indicators in owner led SMEs, as profit-related indicators are infamously undependable. Sustainable growth of sale is measured as vital and dependable success criteria of SME's (Laurence, 2001; O'Gorman, 2001; Watson et al., 1998) and as well the solution to prosperity in this modern society (Charan and Tichy,2000).However, open innovation strategies suggest that firms cannot survive as isolated and self-sufficient entities rather they are firmly tied to supportive quasi-infrastructure collections; firm grows through various inter-organizational relationship and knowledge.(Chesbrough,2003)

Penrose (1959) argued that the growth path of firm disintegration is certainly associated with flexibility; cost reduction more favorable competitive position. Opening up of firms for external innovation and resources geared each firm in solving their long and short term contingency problems as well as benefit from the affluence of technological and commercial information. Proper coordination of internal and external collaborations, as well as partnerships that enables greater effectiveness and development of SMEs firms for incremental growth. He further explained that firms grow as it generate revenue and increase production capabilities. Firm grow from the inside out through merger of internal resources and external expertise. The most important inter-organizational linkages involve research and development collaboration, financial networks, supply networks, as well as joint utilization of various networks to enhance growth and sustainability. (Penrose 1959).The vital point from this is that opening up firm boundaries to absorb the needed external resources and knowledge can enhance sustainable business growth.

### **2.5.2 SME Growth Phenomenon and Innovation**

SMEs literature discusses several facets of growths, growth objectives, developing and implementing growth plans, identifying and challenges of growth. Gibbs and Davies (1990) argued there is no thorough theory that could suitably illustrate growth of SMEs. As described by Birley & West head (1990) earlier research have explored the relationship between the origin and personal characteristics (see,Khan1986; Westhead,1988; Lafuente and salas,1989) and traits of owners-managers(Hornaday and Aboud,1971;England,1975;Ketsde Vries,1977;Brockhaus,1982) and small business growth.(Perry et al.,1988)link between entrepreneurship and economic growth (Wnnekers and Thurik,1999)

O'Farrell and Hitchens (1988) also identify several other element of growth, (i) stages of growth, where small firm is believed to pass through a sequence of growth stages;(ii) the strategies view, where small firm growth develops from overcoming the impediments that have hindered previous phases of development; and strategic management perspective, which emphasizes the personal and leadership characteristics. In the latest studies, the emphasis has been on innovation ability, open culture and leadership as antecede dents to firm's growth .According to Leminen &Westerlund,(2012), in the research on Small firm's growth driver, they categories SMEs

growth drivers into three main streams namely: Tangible and intangible growth drivers , Growth stages and Schumpeterian growth models which are analyzed below:

The first research stream objective is to identify the tangible and intangible drivers of growth. The notion of intellectual property and intangible asset are described (see Salojärvi et al., 2005, Petty& Guthrie 2000, Sveiby, 1997) as it consist of three group or families which are human capital (employees' competencies and commitment), external resources (image, customer relations external relationships), and organization resources (internal processes and management of the company).Intangible assets is very crucial in success and viable in the majority of today businesses as well as research arena. (Petty& Guthrie 2000, p. 161).

In Salojärvi *et al.*, (2005) research on the relationship between knowledge management and Finnish SMEs growth in 108 firms shows that the intangible asset has a positive impact on SMEs sustainable growth. Moreover, several other authors identify internal resources as a crucial element that firms need to systematically organize for growth (Vanhaverbeke, 2009, Robson and Bennett, 2000), while others focus on strategic connection through internationalization method for growth (Liu and Beamish, 2006).

Furthermore, Leminen and Westerlund, (2012) showcase that there is a relationship between innovation management and business growth. It is logical to anticipate that the alliance of innovation and management of intangible assets are significant dimensions in explaining difference between firm's growth path and effectiveness in practicing open innovation. In other words, it will be expected that firms exhibiting high growth and high innovation knowledge will score higher on their intangible asset dimensions than other firms.

On the internationalization perspective, emphasizes on the processes that should be adapted to shift the first focus from local to global operations (Leminen &Westerlund, 2012; Coviello and McAuley, 1999). The cognitive approach describes the organizational intention and ability to ensure diverse voices by creating firms that employ managers and workers from around the world. (Cavusgil et. al., 2012; Morrison et al., 2003) leadership and talent (Gandossy, 2005), and growth ambition that develop closer relationship with foreign stakeholders to understand their needs and jointly develop solution (Cavusgil et. al., 2012; Liu and Beamish, 2006) which are necessary conditions for growth. This enable firms build the capabilities to enhance the firm's contribution to the local community and global environment. The relationship between innovation, internationalization and growth are said to visible in innovative firms that hunt for high-end growth in the large market.

Leminen &Westerlund, (2012) also described the next literature stream on firm growth as variety of phases of growth. They also explained that each stage approach emphasize on several growth changes due to design flaws in each stage. As described by Hanks *et al.* (1993) SMEs business growth as a series of stages of development through which the business may pass through in an enterprise life cycle. For instance, the increase of relationships with partners provides the required resources for the firm.

Schumpeterian growth models are categorized as the third research stream. Schumpeter (1934, 1939,1942)emphasize on the importance of new product stimuli to economic growth through product or process innovations. His growth model showcase the effect of destruction in old products and processes by innovative ones Leminen &Westerlund, (2012). This perception

clarify that economy operate in a constant state of disequilibrium due to technological, political social and other kind of change that offer continuous supply of new information and various ways to use resources to enhance growth by innovation and entrepreneurial spirit. He further recommends research and development investments as antecedents to organizational growth and performance. However in Penrose and Schumpeter theory on integration, they emphasis on growth through network strategic alliances and constellation in entrepreneurial team, which could provide the balance of expertise needed for development and profit as a result of cooperative activity within the networks.

### 2.5.3 SME Growth Strategy in relations to innovation

Traditionally SME growth has been characterized as an internal process of linear and incremental growth through increased investment on infrastructure, R&D, staffs and revenue (Penrose 1959) and a successive organization modification (Greiner 1952). In this model, the firm grows as it generates revenue and increase production capabilities. The growth is from inside through retained earnings, additional investment merger and acquisition. (Lorenzoni and Ornati, 1988). From this understanding of growth strategy in SMEs business context is quite inadequate; therefore, some authors have suggested a framework to identify growth strategies (Kirchhoff 1994). Growth strategy for SMEs refers to the formulation of policies with long-term objectives. (Leminen and Westerlund, 2012). It comprises of both strategic objective and authentic performance (Siguaw et al., 2006). SMEs utilize it to steer the efforts in the firm since it reveals strategic directions apply by a firm to create the appropriate performance of the business. (Gatignon and Xuereb, 1997).

Innovation-based growth strategy is crucial for SMEs. It is only by understanding consumer needs and serving them right that firm can identify the innovative opportunities. Then, the firms will know if there is technology that they can bring to match the opportunities that exist. Murray (2003) say being innovative is relatively easy; the hard part is ensuring the ideas become commercially viable and profitable in the market. Open innovation provide supports to a wider range of innovation activities and enables the economic force of development by firm that focused on market driven approach. The aim is to leverage competitive advantages and build core competencies for companies.

On the other hand, competitive advantages and diamond theory from Porter (1985) also indicate that innovation-led growth is what make firms improve their performances in production and business models; to cope with intensive competition both in the national and international markets. From the perceptive that the small firm wants to prolong product life cycle by providing a solution that enables them to involve more in several stages of business processes. Basic works that can be outsourced will not be taken much into consideration of generating benefits but services and improving customer experience. However, the key matter is to make customers as much independent as possible. Furthermore, this provides a long-term commitment and better customer care that can make a potential customer becomes an existing customer. Offering a solution, that enable customer to participate and contribute to the production process shows that

firms has the competences to ensure the delivery of a fruitful product and services and customer satisfaction.

Growth strategy also refers to the entrepreneur's desire to achieve growth through innovation. (Leminen & Westerlund, 2012). Most firms desire growth to prosper and survive. High growth trend means that rapid growth is the firm main objectives; low-growth orientation means safe, slow, and steady growth are the principal objectives for management (Brown et al. 2001 cited as Leminen & Westerlund, 2012). However, not all firms have the intention to grow and maximize their returns. Trott (2008) argued that some Family firm retains their existing size so that family can manage the operation without having to employ external employee or worker (Trott, 2012). The fear of losing the control of the business sometimes leads to collapse of the business. Moreover, Turok (1991, p.29) reflect on the interest within the field of SMEs policy and research identification of features that distinguish firms that grow from those that are redundant and fail. This thought is necessary if more selective small firm's policies are to be developed. The development of internal process linear growth through direct investment and subsequent organizational adjustments.

The business grows as it generate revenue and increase production capabilities; such could achieve by proper coordination of its internal resources and external resources or strategic partnership that will enable the firm position itself in the market. (Lorenzoni & Ornati, 1988). Some SMEs avoid risk and responsibility by limiting desired growth. These Firms are habitually known for little growth or control-oriented. At the moment, Euro zone which includes Finland still yawning for high growth that will bring the economy back on track of development, SMEs little growth orientation will not help in achieving these objectives as it can sometimes lead to collapse of the business. A vital challenge of the SMEs firm is sustaining flexibility and innovativeness while introducing an efficient processes like open innovation. Open innovation might consequently enhance meeting this challenge and put the firms back on the path of growth. The next chapter discusses the research methodology of this study.

### 3 RESEARCH METHODOLOGY

Research methodology is a systematic process of collecting and analyzing data to increase understanding of a fact. That is, the way to collect and analysis data in order solve a particular research problem or contribute to the general knowledge. As discussed earlier in the previous chapters, effective utilization of internal and external knowledge and resources could boost a business growth. Thus, this study aims to contribute to SMEs ways of innovating and generating resources required for growth through open innovation. Also, to understand the process requisite for a firm to change from a closed innovation to an open pacesetter. This study research design I have adopted is a conceptual approach.

Although open innovation may not be a new concept but adopting as a business model for SMEs and family businesses growth is still at a developmental stage, and connectivity with market growth is still very low. As a result, the discussions abound about the topic; academic research on the subject is still minimal. A conceptual analysis is an appropriate methodology for holistic exploration of this study. It assist researcher to get undeviating imminent and expression of innovation performance in proposing an suitable decision-making structure intended for open innovation. While open innovation concept for SMEs is on the rise, but still it remains at an early stage of development in entrepreneurship research. Vanhaverke, (2009) say open innovation in SMEs is still at an infancy stages; little evidence has been presented on SME innovation performance through open innovation. Only few studies have exclusively analysis open innovation in SMEs. Therefore, it gives the opportunity for further research because the sphere of open innovation is relatively new in SME business growth and sustainability.

To explore the link between SMEs business growth and open innovation an exploratory approach was adopted. Moreover, since open innovation in SMEs business growth is still in a phase of theoretical evolution with very little existing research, this thesis is aimed at combing and analyzing the discussion of this study through theoretical inquiry and the writer observation. The research data are collected in natural, real life situations, and the data are gathered method of the study is comprehensive in both methods. Researcher own observations and discussions as instruments are used more often than the indirect ways of measuring. The reason SMEs family businesses is chosen in the study lies in their significant contribution the Finnish Economy. Family business constitutes of about 80% of Finnish firms and employ larger percentage of the workforce (Koiranen,2010).”*Family enterprises produce 40 percent of the total turnover in all enterprises, and their total share of the GNP is nearly half the GNP Finland.*”(MTI,2006). With this immense contribution, they are referred to as the backbone of the Finnish economy, and it sustainable growth is very essential to the welfare of Finland.

The analysis of this study of SMEs family business in Finland relies on majorly secondary data from multiple document analysis and observations. From the research objective, in the design stage various literatures were gathered to review the innovation process and management, SMEs business growth, open innovation literature and overview of family business phenomenon. This include identifying and analyzing a wide range of sources; including academic publications, government reports, news, articles, using database, such as PWC, JISC, IJEM,WILEY, Science

Direct, OECD report, MTI and Statistics Finland. This provides background and theoretical framework for the study. The data analysis was carried out according to qualitative content analysis. Based on the data gathered recommendation and conclusion on innovation management and SMEs family business management practice was developed.

### 3.1 Exploratory Research

In Exploratory research, a researcher must have an original point of view and be able to recognize a problem about the research work, after which the researcher will need to gather only such experiential knowledge that is related to the work. This will ease the process of the research work. (Routio, 2007.) Entrepreneurship can be viewed as incorporating innovation and business growth. The growth and innovation theoretical framework that is generated and presented in this study can be classified as a descriptive theory, as it describes and classifies specific dimensions of innovation and SME growth. It also summarizes the commonalities found in discrete observations (Fawcett & Downs, 1986). The descriptive theory on SMEs business innovation and open innovation processes was made by empirical exploratory approach.

Exploratory helps research provides insight on causes of problems; they say it can provide rich and meaningful information or definitive information to a research problem the literature review enables the researcher to find answers to the research questions. The literature-based study provided answers to the research questions formed to facilitate the fulfillment of the purpose of this thesis. Gathering the findings of the literature review and an empirical study on a comprehensive format meant for the creation of a framework of growth and open innovation paradigm. This structure facilitates the understanding of open paradigm as a business model to enhance small and medium family business growth. The literature review focus on the scientific theories about innovation process and management, open innovation and SMEs business growth.

Furthermore, this research approach has been adopted in order for the researcher to have a broad knowledge of the importance of open innovation to SMEs and family business growth. It also gives an insight into its shortcomings if any, and establishes solutions, where required and possible, or makes suggestions, where necessary. This method gives the privilege of having necessary information about the profitable benefits of open innovation, to the world at large in the family business. Moreover, this design has been used to answer the research question with the help of literature review of academic articles, text-books and, news reports. This study is channeled towards enhancing family business to venture into unstoppable opportunities.

### 3.2 Qualitative Research

Qualitative research involves analyzing and interpreting texts to discover meaningful description of a particular phenomenon. Qualitative approach is very distinctive and incorporates greater flexibility into the research process and also provides a greater opportunity for discovery. Thus, it supports the methodology by illustrating its flexibility and many approaches that include ethnography case study, grounded theory and phenomenal. (Uwe Flick, 2009).

This method enables to know well the origin of the research problem and the fundamental description of ethnographic and grounded theory. Finally to know how to plan, perform scientific research and how find and interprets information gathered during the research in the right way. Qualitative research study is believed to be suitable in order to get deeper understanding of the concept of open innovation and SMEs growth. The relationship between innovation and business growth was established in which were captured from the existing literature. The approach and observable fact of Open innovation occur from a theoretical framework.

Qualitative research is an activity that transforms phenomena into representations such as experience, conversations, visual presentations, etc. So that the meaning of the phenomena would be interpreted in an accessible way. The structural edge for qualitative technique is that it can obtain every possible information rather than plain numerical and limited ones from quantitative research. (Saunders et al., 2009). While Concept analysis is described a way of analyzing written, oral or diagram messages. Concepts are the basic structure of scientific knowledge or theoretical framework for any discipline. (Bote, 2002). Therefore, it essential that the concepts are well analyzed during the theory development so as to ensure reliability and validity in future hypothesis-testing researches. The research design concept analysis is associated with research design of theoretical investigation. The objective of philosophical inquiry is to perform research using intellectual analysis to clarify meaning. (Bote, 2002)

According to Saunders et al., (2009) qualitative research provided the individuals own account of their attitude, motivation and behaviors. It offers richly descriptive report of individual's perception attitude, beliefs views and feeling. In addition, qualitative research methods enable the researcher to have enhanced flexibility in achieving sufficient data and present enhance researcher prospect to develop conclusion base on real world entrepreneurial knowledge. (Clark 1998; Conger 1998, Huber and Miles 1994 cited in Lowder, 2009). This study makes use of this available method of data collection within reach to arrive at study to facilitate open innovation as business model for the family business and SME which is through scientific literature review.

### 3.3 Data sources

The information are gathered from the academic journal, textbooks, articles, news, newspapers and online resources which includes internet database of JYKDOK, NELLI and LUT academic library database and some search engine like Google Scholar, Google, OCED report. From these sources, the information gathered was thoroughly scrutinized to ensure they correspond to the research findings. This study emphasis on the growth phenomenon through open innovation and analysis the challenges the SME and Family business in Finland encounter due to inadequate adoption of open innovation. The literature review starts with innovation in the contest of employment, business growth and innovation process.

### 3.4 Data Analysis

This deal with analysis of the research findings, at this part of the report, the theoretical background was used to support findings. Research data collection method of this study can be classified to qualitative content analysis methods, using interpretative and descriptive methodology that specifically are through observation literature review. This study does not conduct a primary empirical research, but rather use literature review, organization report like OCED, World Bank, Ministry of Employment, TEM and surveys conducted by family firm consulting organization like Price Water Cooper to integrate and synthesize the findings. Thus, it relies on various forms of evidence and material to study the research proposition in a systematic and pragmatic manner.

The focus was to analysis and showcase open innovation model as a tool for growth and increase the understanding of the concept. This methodology enables to focus on the research problem and gives the ability to structure the research in the area of data collection. Information search is the second move that one would do after the discovery of a need. The literature review focus on the scientific theories about innovation, open innovation model and SME business growth and Family business.

### 3.5 Limitation

This study focuses majorly on innovation management processes and adopting open innovation as a business model to enhance SME family business growth in Finland. This study is limited to encouraging SME and family business to adopted open innovation to enhance growth and generate more employments opportunities to potential employees within Finnish economy and outside Finland without many financial burdens. This study does not focus deep on Family business innovation, but discuss their importance to the Finnish society in terms of business continuity and contribution to the economic development. Also, this study does not carry primary empirical research; therefore I would recommend further empirical research on the study. Despite the above limitations, detail analyses are revealed in all chapters.

## 4 THE IMPORTANCE OF FAMILY BUSINESS IN FINNISH SOCIETY

This section aims to explain the importance of family businesses as well as analyze the challenges of a family business and showcase how open innovation model could be used to enhance growth. From this section, there will be a clear understanding to the readers the main characteristics of the family businesses, the difference between family business and non-family businesses, and challenges specific to family businesses in Finland. The study question of this section is on discussion what makes open innovation model essential for SMEs family business growth.

Family businesses are the hub that drive that economic development, because they pose a positive attitude towards growth, and their growth are, often more profitable than other firms. (MTI, 2006). Moreover, they are known for long term commitment to both businesses and employees. Family business plays a vital role in Finnish economy in terms of employment generation and economic growth. Family business Association Finland webpage pointed out that over 80 percent of businesses in Finland are family businesses which comprise of mainly small and medium enterprises. (Perheyritajat, 2013)

Family businesses are said to employ 75 percent of the Finnish SMEs workforce, particularly, they promote growth and improve employment in Finland. (Tihula, 2008) According to MTI (2006) the most crucial growth focus is to ensure the continuity of business activities and employment. Family business ensures continuity of business ownership and management from one successive generation to another through transition. The core objectives of transition period is to ensure successful transfer of ownership and management of business to the next generation, without endangering the continuity of the business activities which are essential for employment and universal wellbeing in Finland (MTI, 2006).

Also, their business ownership maintains shared family control of its habitually diversified financial and business asset. (Jaffe and Lane 2004 p. 5). Specifically, family business has been sustained and maintained with wealth and power over generations. One of the interesting features of family business is that first generation founders invested emotional capital, human capital along with financial capital into the business and they would still like have paternity control and retained as family owned business. (Koiranen, 2007) Moreover, they can develop rapidly at low cost, in a very short time to obtain a competitive advantage in the market and to get faster for the original capital accumulation. Besides, in terms of economic steadiness and performance, family businesses play a significant role in stabilizing various regional and local economies in contributing to the community development and job creation. (Koiranen, 2010)

In general, family business organization culture is used protect the family interest, culture of the business and stay in control of power. In the case of intra- generational family succession, they believe in keeping the management, ownership and control of the firm within the family. Furthermore, family businesses organization success secret is been pass from one generation to another; sometimes it enable the family member to monopolize a certain industry in the economy.

Prior knowledge of the business gives adequate information and recognition of more opportunities that contribute to the family business expansion. A family business owner regularly

owns the largest share of the business in order to retain their ownership stake. Moreover, mutual trust of a family member also helps family business to reduce managerial cost and the leader of the business would have a stable governance of leadership. In other words, the family business has a strong psychological contract; it lowers the cost than non-family business. However, Annika *et al.* (2010) pointed out that some family firms are habitually described as being introverted held back by old traditions, inflexible, and resistance to change. For a firm remain competitive in this globalization century, they are require to produce new innovative products and services and also incessantly innovate their business models to act in response to invariable changes in the environment .

The information above shows that family role and contribution in the Finnish society is very crucial to economic success. Present situation required them to do more creation of more jobs, facilitate the needed growth for the survival of the firms and ensure the welfare sustainability of the economy. The Finnish economy is craving for higher growth that will revive the country from its economical turbulence and this requires more effort from all stakeholder that make up the innovation chain. The future of Finnish economy can only be guaranteed by novel innovation that will sustain the country, as a global innovation pacesetter. SMEs and family business Finland has a crucial role to play in salvaging the economy and ensure continuous job creation. The description below analyses the difference between family business and non-family business.

#### **4.1 Differences between Family Businesses and Non-Family Businesses**

Family business has numerous features that make their governance challenging than other non-family owned firm, because it includes a family who owns and direct the affairs of the business. They also have a complex stakeholder structure that involves the family member as top management and board of directors. (Davis, 2001).Below analysis showcase the difference between Family Firm and non-family Firm.

##### **Investment longevity**

Family business seeks long-term autonomy and succession within the family. The firm has strongly-committed shareholders of whom majority could be family members. Also they usually invest their money into the family business and make long-term investments, given the fact that family firms often strive for an entrepreneurial legacy that span generations (Cruz *et al.*, 2006, in Zellweger, 2007). Unlike other non-family businesses that are keen to make a short-term investment and get quick returns.

Furthermore, family business period of investment is not necessarily limited to the lifespan of one generation but is potentially extended by the presence of succeeding generations that will take over the company. (Zellweger, 2007). As mentioned earlier, family business invests financial, human and emotional capital in the business as their total capital. Hence, in the process of buying and selling of the company shares or part of the company, family business owner and external shareholders have a different perspective towards the business. The family business owner pays more attention to the emotional capital while the shareholder thinks more of the asset and dividend because business is considered as a family legacy (Koiranen, 2010).

## **Succession**

Succession is very fundamental to every business owner; Don Schwezler, (2000) says “Succession is a process, not an event” Succession planning is very important in any business; it stands as a solid pillar for the progress and transferring business ownership the business from one generation to another either through intra-generational or to a competent external personnel. In the case of unforeseen circumstances like sudden death, illness and retirement of an active CEO or owner of the business, succession plan keeps the business going. Early succession planning are said to help in discovering perfect leadership for the business Kansikas (2010). Capable leadership who could take charge of the business may be easily identified during the process of planning for the future of the company. Transition period helps to know the right person who is interest in taking the leadership role of the business. This may entails the knowledge of the business, well motivated, innovativeness, wealth of experience, good relationship and good moral towards the progress of the business. (Kansikas, 2010)

Planning also helps ensure good financial stand for the business. In Finland, due to aging population and retirement of the baby-boomer, a vast number of family businesses expected to go through succession. Luukkonen and Hirvonen, (2007 cited in Eurofound report) say more than 70000 family businesses will likely go through succession between 2007 to 2017 which is huge change in the management and control of various organizations in Finland.

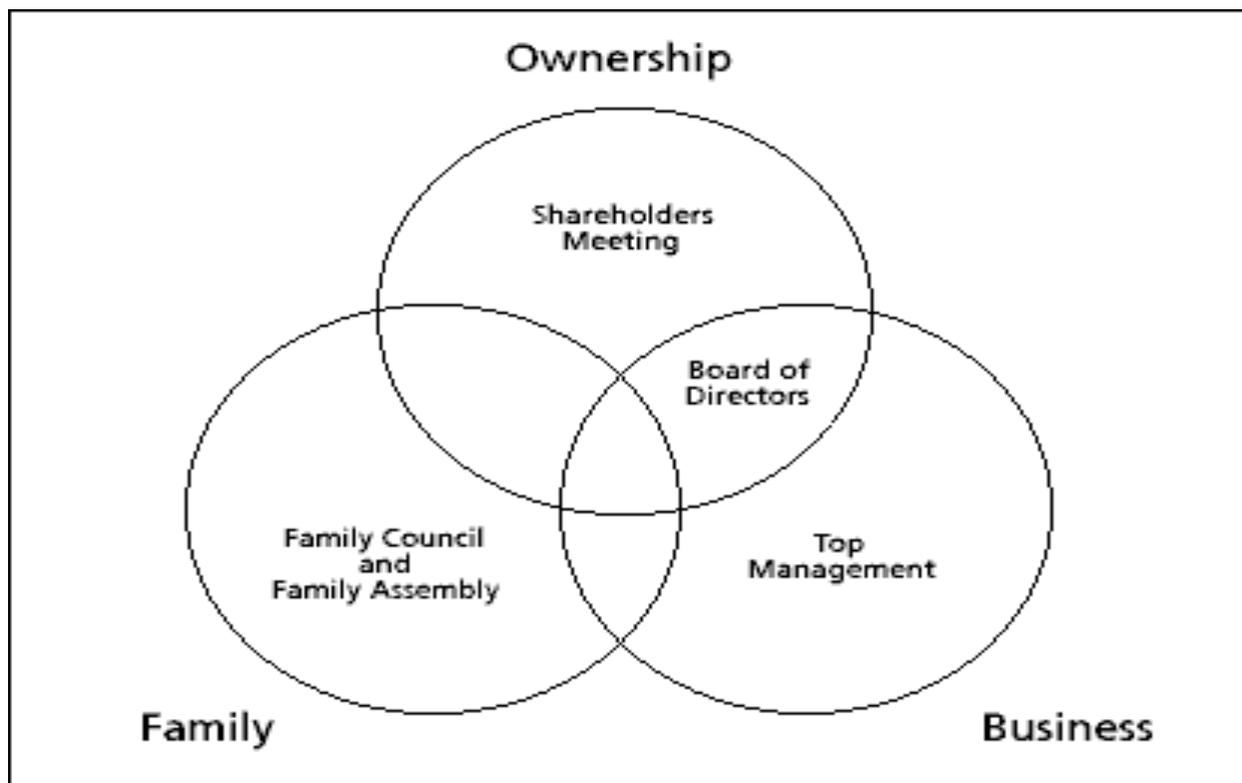
## **Value system**

Family business has a distinctive characteristics and vision for value creation. The value system portrays the ethnic background of the founder that is passing from one generation to another, as well as family culture. The transfer of management sensitivity to the existing culture of the business and local environment is important to the continuous success of the business. (Benedict 1968 as cited in William et al., 2010). Value system of a family business is very essential in the sense that is being transfer from one generation to another and this influence the relations among the family members.(Kansikas,2010) It also enhances the adaptation of personal value of the first generation (founder) to the later generations. In addition, it encourages the continuation of their ancestors’ mission in the business. (Nemilentsev,2010). In some case the founder makes some ethical wills which help to minimize the gap between family and business, as well as influence in religion. This wills also encourage the siblings or successor to put aside the differences among themselves and focus on the organization success and continuity. (Nemilentsev, 2010).This natural tendency help family businesses to maximize their value. Value creation in a family business also enhances their continuous employment generation due to their business continuity.

## **Governance structure**

Family owned business has numerous features that make their governance challenging than other non-family owned firms because it includes a family who owns and direct the affairs of the

business Kansikas (2010). The context of family firms, participation of the family members is high in its decision-making process between the family, board of directors, CEO, management and owners. They as well have a complex stakeholder structure that involves a family member as top management and board of directors. (Davis, 2001). Davis (2001) discusses the three interlocking circle model that has all the needed governance in family business that is shown in figure below.



**Figure 10:** Basic Governance Structure of the family business Davis (2010).

Source: <http://hbswk.hbs.edu/item/2469.html>

## Ownership

Family business ownership control are habitually passed from one generation to another within the family (Steier and Miller, 2010). This owner's family members usually play multiple role and responsibility in managing and governing the firm. (Tagiuri and Davis, 1996). Furthermore, family business owners may vary between active owners and passive owners. Active business owners take part in day to day activities of the business, while passive owners do not take part in the day to day activities of the business but they share in the profit and loss of the organization. (Koiranen, 2010). With this position, they are able to protect the interest of family.

## **Relationship**

Family business social and relational governance mechanism are usually stable and long lasting. The key features of the family system often have the greatest influence on the operation of the firm. These are inherent social ties among the family members. (Uzzi, 1996 as cited Mustakallio, Autio & Zahra 1999.) Family can also play an important role in given advises to the board of directors and overseeing the business through the family council. Kansikas (2010)

## **Business Operation and Decision making**

In business operation, family members with a managerial skills and experience take an active role in the management and business decision making, this sometimes serves as a way of keeping the management control within the family. Although some family owned business may depend entirely on external management but still in the control of the business. (Steier et.al. 2010)Also, multigenerational governance is common in family business because of the involvement of the predecessor in the business; there may be three-generation family active and functional in the business and daily activities (Kansikas, 2010). In major decision making, family members are often major shareholder; they owned larger part of the firm share in order to be part of important decision makers. Family business owners typically, have the largest share of the business, In Finland family amount nearly 86 percent of the businesses, they also hold a reputable position in the organization which enables them to control and manage the business effectively. Family business owners usually own the largest share of the business in order to retain their ownership stake. Boards of Director are obliged to protect the interest of the shareholder in the company. (Kansikas, 2010)

## **Board of Director**

Family business board of directors perform relevant monitoring and services task, their duties require them to act in the interest of the company and shareholders to avoid conflict of interest.(Forbes and Milliken 1999 as cited in Mustakallio et.al.1999) . Board of director selects the firm executive leadership to monitor the executive performance. In terms of resources availability, board of directors could provide an access to resources needed by the firm, that is resources depend on the functions directors engage in providing or securing resources to an organization through their linkages to the external environment. This Board holds the executive accountable, and in turn the Board is held accountable by the shareholders. Family member decreases cost of monitoring in the business because there is some level of trust among them. Monitoring focus on hiring compensating, disciplining, firing senior manager, approving top management's incentive and evaluating senior manager's performance (Johnson, Daily and Ellstrand,1996 as cited in Valentine,2009 pg.5).

## 4.2 Family Business Challenges

### Business model

In this present time, one of the prevalent challenges facing SMEs is selection of sustainable, profitable and growth business model. The World Bank economic forum (WEF, 2012) pointed out that many of these SMEs scale corporations failed due to poor business model selection and a closed loop approach. Different business model have been experimented within the past decade, ranging from the Russian Tree to the American Quality functional deployment (QFD) and the Just in time from Japan, popularly known as JIT. Other businesses models deploy to recruit entrepreneurs' internally as spin-offs and deliberate diversity as a business model. Furthermore, risk aversion and conservativeness of the strategic behavior, attributed to a family firm could explain a lower radical innovation propensity, or characterize the peculiar way of pursuing their organizational goal through collaboration. As a consequence, a lower level of collaboration could be preferred by these SMEs family firms. They may also be unenthusiastic about significant restructuring of the business activities to accommodate changes, partly because of the fear of dilution of their distinctive culture and values. PWC (2012) Finnish SMEs now faced with various restructuring due to the economic and financial crises which aim at balancing the operation with the current trend. There have been several layoffs of employees as a measure to cut cost; this put strain on the welfare system of the country, as the unemployed turn to government for support.

Statistics Finland (STAT, 2012) also reported that 90% of these business models either failed or did not capture the required value due to inappropriate choice of business models. Worse hit is family businesses with little financial resources to experiment with many business model options. More family businesses incurred substantial financial losses in the last decade which undoubtedly resulted in mass bankruptcy. Trott, (2012p.6) says the majority of this firm engage in parallel innovation in identifying and developing ideas that later became big enterprises. He further argued that a self-reliant closed business model and do it alone business model characterizes the 19<sup>th</sup>-century family businesses.

This type of business model worked and was for a long time held as the right way. However, this type of business model was short lived, in the 20<sup>th</sup> century, highly rated family companies in automobiles, electronics and other fields rapidly lost their market leadership position. Therefore, they need to identify, select and develop a more innovative business model for family businesses. Trott, (2012 p. 6). Moreover, they are required to ascertain that the business model can survive the market transformation and ensure business sustainability. Family business has an amazing culture in business because of the family commitment which is crucial in for innovation, so, it tricks now is to evolve beyond the family business. (PWC, 2013).

### **Innovation strategies and external inputs**

Furthermore, SMEs family business often faced with challenges of adopting innovation strategies and external input. Moreover, as earlier mentioned in chapter one, majority of this SMEs operates on disjointed and focuses on domestic customers as the target market in which they have to bear high market cost which affect their international competitiveness. (Winkeljoham and Andrew, 2012). Every business face challenges of finance within the stage of growth, which require external funding or assistance, but for family businesses situation is often more complex, a small family firm run only by family members usually lack the experience of doing so, they tend to finance their growth from their profit. (PWC, 2012). Likewise, Sten (2012) research finding on award winning companies between 1994-2011 stated that SMEs family firms have good environment for innovation but are less innovative than other individual SMEs

### **Succession**

Succession is seen as another main challenge for a family business. Federation of Finnish Enterprises, says within the next ten year over 40% of the Finnish based enterprises will be facing succession (i.e. 90,000 enterprises will be affected).Therefore, SME family business has to come up with a solution to tackle the succession problem. Less than 29% of the enterprise has a successor within the family ready and available.

Succession serves as a threat the Finnish economy in this 21<sup>st</sup> century due to the aging problem that touches every business sector in Finland. According to literatures, succession is the most critical phase of the small family business life cycle (Morris et al., 1997; Kets de Veris 1993). It was also reported that most business owners do not give much attention to business transfer to the next generation which is inevitable. Successful business and management transfers are vital to job sustainability in Finland and failure could lead to business failure and bankruptcy that can result to more job losses Euro found (2013), this could also hamper the economic growth.

### **Shortage of Professionals**

PWC survey (2012) showed that SMEs family businesses are concerned with the shortage of talented staff and attracting the appropriate skilled staff. Moreover, even retaining the ones they have could be a challenge for the future especially for those planning for growth and expansion due to change in the environment and market uncertainty. Limitation in their skills is also regarded as a major barrier in exploiting innovation amongst the family members. Inadequate skills erode confidence to explore and exploit novel innovation that could enhance business profitability and growth. Furthermore, innovation obstacles like incapability of companies to implement new innovations due to lack of skills and inappropriate risk management in which firms tend to abandon high risk innovatory activities also encourage firms to adopt open innovation(Grossmann and Keupp,2009).

## **Government Regulations**

Family firms are also faced with various government regulations like inheritance tax which regulate business transfer and succession (Stenholm, 2002) and this sometimes hinder successive business transfer or resulted to business closure thereby creating more job loss. Recently there has been a debate on abolishing inheritance tax in Finland in order to encourage business continuity without burden of ownership transfer (Yle, 2014).

## **Intellectual Property Right and Management**

As earlier mentioned SMEs family business symbolize a crucial engine in sustaining and reviving a nation economic growth. As a matter of fact their growth ensure entrepreneurial activity continuity and legacy to the next generation. These notion are linked to continuous innovation and intellectual property management for business growth and employment generation. However, SMEs family businesses have the deficiency in optimizing IP management to uphold and enhance growth. The IPR are said to offer SMEs the ability to exploit their innovation and control which generate an enticement for collaboration, and licensing which provide a better business platform for development of a consistent universal policy. In addition, SMEs have challenges of inadequate professionals who can manage the IP issues in terms of infringements or copyright. In some case they usually let go due to huge financial commitment which are not capable to risk. Chesbrough, (2010). Efficient IP management is essential in a firm innovation exploitation and exploration.

The above mentioned challenges is almost similar to the general challenges of SMEs in Finland and the need to engage in open up innovation process can combat this challenges, brings out new business model that will linked SMEs family business firms to the external knowledge (Chesbrough et al.2006).The essence of adopting open innovation and business model is discussed in the subsequent section. As mentioned earlier SMEs and family business firms cannot continue to rely only on internal innovations if they are to ensure adequate business growth. They need to see these challenges as a ladder of prospect to reach out to the society and global market to leverage deficiencies and expand the business.

## **4.3 Reasons SME`s Family Businesses should Adopt Open Innovation Model**

### **Exploration for Growth in Business and Management**

The purpose that drives firms to adopt open innovation is the exploration for growth in business and management, in terms of innovative product and services that could generate additional revenue for the SMEs firm and enhance their innovation management (Chesbrough and Crowther, 2006). Open innovation could help to create an environment where SMEs family business could attempt new ideas, find solutions to their various business challenges and develop profitable network. As they say change in the business environment is inevitable; due to globalization, several firms are keen to adapt to the changes in the environment. Chesbrough

(2003), but with open innovation SMEs will not have to worry about the change in the environment because they are connected to the platform of the change. Additionally, they will have access to requisite knowledge, deduction of production time and cost, sharing of risks and uncertainties, concentration on core competencies, branding, and utilization of internal creativity, realization of learning effects, autonomy to operate by establishing agreements with other firms and stakeholders. (Chesbrough 2006; Grassmann and Enkel, 2004; Keupp and Grassmann, 2009; Van de Vrande *et al.*, 2009)

### **Market Changing Condition**

Also, the reason SMEs family firms ought to be attracted towards open innovation, lies with market changing condition and the disguised rules of closed innovation; which are causing stagnating growth to the firm as explained in the previous chapter. Besides, in this current competitive market, innovations are quickly imitated leaving the innovator with little or less profit on their invention. (Tidd, Bessant & Pavit, 2009) Particularly, information on new invention travel very fast this days and imitator are eager to get it to the market first in order to reap the benefits first, leaving crumbs or nothing for the inventor. Although closed innovations has acquired many remarks with keeping the organization secret and surprised the competitor with a new product and services that are yet to be known to the market. This open innovation model believes that organization can use both and internal and external ideas to the market, as they intend to develop their expertise; it can also to reduce information leakages. To achieve this it is essential to collaborate with firms and individual globally; progressively seeking verified knowledge that can be improved and commercialize either within the firm or with partners (Chesbrough *et al.*, 2006). Open innovation strategy for family businesses would not only drive higher revenue in the future, but also consistency for the forthcoming generation thereby ensuring business continuity and family harmony.

### **Family Business Sustainability and Growth**

Family business also has a distinctive characteristic and the prospect for value creation; they are created by entrepreneurial families which combine entrepreneurial skills with family characteristics and ownership to add value and build a strong relationship that evolves across many generations. The nature to innovate ideas of family business persists beyond the founder as the next generation are more innovative with less emotional connection with the business Korainen,(2007) . Continuity of value and intergenerational wealth is based on family business sustainability and growth. The explorations for new market will be an approach based on cooperation with external partners and emotional investment of the business owner; this gives a sense of belonging to the society in terms of social and economic continuity over time. Family business sustainability should be directed towards building of the family business growth and the capacity to advance outside borders of the firm in maintaining and enhancing the living tradition of products territories and communities. Schilaci *et al.*, (2013)

### **Enhancing returns in terms of trust and reputation**

Investing in business growth through open innovation does not only mean implementing a moral and responsible model open to the society. This implies that using open innovation does not mean losing the ownership or values that relate to familiness, but it create an avenue for growth through external resources, ideas contribution, innovation and globalization. The myth of the family become the community oral tradition and gets the essential stakeholders drawn in to continuously develop the creativity of the business owner and successor. (Schilaci et al., 2013). This will also create a possibility for the family business to be supported by members of the community in the areas of need thereby ensuring business sustainability. Open innovation enhance the scope of one big happy community while creating value for the firm.

### **Communal Security and Mutual Heritage of the Family**

It also elevates from necessities of safeguarding family wealth to attaining a communal security and mutual heritage of the family; that is being with the society in construction of prospect passage and sourcing consolidating relations between business and social consensus. (Schilaci et al., 2013). SME family businesses are usually known to be community oriented firms; it needs to ensure global network close to its customers together with modern resource through open innovation and consistent systems, as well as processes. Their business model would provides leading aftermarket services with better quality cost competitiveness and well-built product knowledge.

## **4.4 Business Model and Enhancement of Growth through Open Innovation**

Business model plays a fundamental role in the approach given to innovation management as well as value creation within the firm. As discussed earlier, SMEs have challenges in value capturing due to their structural deficiencies. Business models open the hidden value that mediate between technical and economic domain Chesbrough and Rosenbloom(2002). It also determines how value can be created through innovations and which resources are to be mobilized to achieve them. (Chesbrough, 2007). In this study, open innovation business model is analyzed as a suitable platform for SMEs enhance creativity and growth

Osterwalder and Pigneur (2010) defines business model as a foundation of how firms create and deliver value. The concept can become a shared language that allows firms to easily described and manipulate business models to create new strategic alternative. This implies that business model could be changed in due course. Furthermore, they say business model innovation has been as the engine of growth in some firms that has adopted changes in their business model. However, Osterwalder and Pigneur, (2009) says without a shared language it is difficult to systematically challenge assumption about one business model and innovate successfully. They described business model as a road map for a strategy to be executed through organization structures processes and system. Morris et al., (2005) says business model can be modified to suit the external changing environment. Market leaders that fail to see radical innovations coming soon may be caught unaware and overtaken by competitors. Many of the old traditional approaches to the management of innovation need to change, and new approaches need to be accepted and adopted if SMEs firms are to survive incremental or future radical innovations.

In analyzing open innovation as a suitable business model for SME family business to enhance growth, SMEs would have to go through fundamental change in their business model. External stakeholders' participation in the innovation process of the firm enables them to become part of the business model. Chesbrough & Schwartz (2007) also pointed out that one vital method for innovating ones business model is through establishing co-development relationship. They say co-development relationship is effective means of upgrading the business model in order to improve innovation effectiveness. The essence of innovation is to develop a new businesses and opportunities for profitability and growth. Corporate and individual needs are changing; therefore firms must adapt to new market trends and make strategic adjustments which include adopting new business models, new business relationships networks and radical outside -the box thinking. (Trott, 2012)



**Figure 11:** Co-development relationships to create valuable innovations

Also to sustain co-development relationship, firms must define business objective align with the business model of the firm Chesbrough & Schwartz (2007). This entails that business model choice in the future should not just be customer oriented, but must encompass other stakeholders,

such as researchers, suppliers, universities and other external knowledge pool, so that it can flow with technological and social trends as shown above. (Morris et al., 2005, Trott, 2012). Thus, SME firms will only be profitable and enhance growth when they can develop a new viable innovative business model that could accommodate these changes. (Trott, 2012). Salkowitz R (2010 cited in Trott, 2012) says three forces that are shaping the twenty-first century are youth, entrepreneurship and information and communication technology. He said young entrepreneurs are “blending new technologies and next generation thinking, building radically new kinds of organization adapted to a flat and crowded world”. While Entrepreneurship is described as the pursuit of opportunities beyond the resources a firm currently controls. (Stevenson & Amabile, 1999). The technology plays a significant role in enabling radical options as well as improving old products and services, often using old technology in new ways. Tidd and Bessant, (2009)

Business models that will emerge as profitable must incorporate these three features. It must harness the knowledge mobility of youths, which they carry along anywhere they live, creating industrial connections with their knowledge resources via open innovation, in order to identify, enable and surface entrepreneurship skills from internal and external resources. Also, they must utilize open source of innovation technology as a business technology platform to deliver the desired business models to firms, especially family businesses. A business model should fully reflect all these, if it is to become a successful business model. (Trott, 2012). Therefore, a business model which does not have a specific product or service might be quite versatile to operate, and it will be interesting to see how the business is going to be in the future. This development towards better provision and the use of open innovation will be appealing, enabling businesses to generate new profitable models, develop advanced value of products and services that will be beneficial to the firm and society. It is essential for SMEs to know that engaging customers in the innovation process reduce the risk of business failure and enhance innovation management.

As economic problems continue to loom in the Eurozone area, both Finnish SMEs and large firms need to scale up the innovation in order to meet the global demands and changes in their environment. The innovation process literatures suggest that innovation is the result of complex and thorough connections between enterprises, users, knowledge suppliers and mediators that are inclined by a range of structural planning with external settings. (Lundvall, 1992 cited in J.P.J de Jong et al. 2010). The crucial insight is that under-investment in innovation may also be caused by system failure (O’Doherty and Arnold 2003 cited in J.P.J de Jong et al. 2010). These means that players in the innovation system do not interact sufficiently with others; conventional practices, rules are inappropriate and general external conditions for innovation do not function properly. (J.P.J de Jong et al. 2010). These arguments have developed assuming implicitly that companies organize their R&D activities under the premises of the closed innovation paradigm.

The open innovation paradigm showcases that firms organize their R&D and resources generation in a way that may influence the prevalence of market and system failures. Chesbrough *et al.*, (2006) argued that open innovation could enable SMEs firms to reduce the impact of both market and system failures. Innovation processes nowadays open up new business opportunities that enable collaboration. The table below shows the linkage between the process of innovation and open innovation

Open innovation (e.g. Chesbrough 2003; Chesbrough et al.2006)	Systems of innovation (e.g Lundvall,1992;O`Doherty and Arnold 2003)
Enterprises obtain better result of they open their innovation processes, ie involve the world outside	Innovation is the result of complex and intensive interaction between various actors
Innovation is no longer the domain of the internal R&D department; Traditional stage-gate model provide an incomplete pictures of how innovation should be organized	The linear model in which knowledge-related activities are divided in supply and demand does not hold any longer
Enterprises can benefit from purposive inflows and outflows of knowledge. Knowledge spillover offer opportunities and are not just a threat	Knowledge spillovers are essential for the functioning of the innovation system, very much desirable
Enterprises need both internal innovation competences( other than R&D) and competences to connect with external parties in order to be successful	The functioning of innovation system can be hampered by capability and network failures
As enterprises increasingly depend on external sources, infrastructural arrangements (e.g IPR) and other framework conditions becomes more important	The functioning of innovation system can be hampered by institutional and framework failures
If the innovating enterprise cannot internally benefit from its innovations, maybe other can	The social benefits of innovation exceed those of the individual innovating actors.
A mobile, educated labour force is among the trend that eroded the closed innovation model	Human and social capital provide the necessary for the lubricating the innovation system

**TABLE 5.** Similarities between the open innovation and system of innovation models adapted from. (J.P.J de Jong *et al.*, 2010 p.882)

From the table above it explains that open innovation create better opportunities to spread the risk of innovation. However, Brunswicker and Ehrenmann (2013) say for a firm to absorb “open innovation activities, the notion of inbound and outbound innovation have to be incorporated in company policy”. This implies that open innovation processes can be established by aligning ideas, policy and company goals for growth. The next section discusses the benefit of networking and collaboration through open innovation.

## 4.6 Networking through Open Innovation

Networking deals with geographical awareness of organized firms and arrangement that exceeded the local business boundaries. It focuses on universal markets or long term business network that are based on dynamic aggregations of capabilities of different SMES (Damaskopolus *et al.*, 2008).It also triggers the flow of new knowledge that becomes critical to business success and this arise only in relationships. Successful innovation nowadays depends on building efficient relationship with other firms and stakeholders in order to expand market and create value that enables sustainable development of the firm. It widely proven that SMEs; that involving in open innovation practice have a higher rate of surviving and grow due to the benefits of providing resources and ideas needed for business development.(Chesbrough,2006; Vahanverbeke,2009).Continuous increased in production cost, uncertainty in business and fierce competition has necessitated risk sharing among firms.

Business survival and economic boost now depends on networking and forming alliances that could stimulate the high-end growth. According to Vanhaverbeke *et al.*, (2012) SMEs could be very essential in the area of resources optimization, networking and technology transfer. The open innovation networking platform is designed to enable firms to identify problems and offer solution with the help of dedicated, skilled professionals. It can also enable SMEs firms to collaborate irrespective of new product concept or degree of research and development intensity that they manage. This will also enable family business SMEs in Finland to maximize their opportunities by merging external and internal ideas to produce or create a competitive product and services.

Successful implementation of open innovation process has a high- value advantage in an innovation environment and also SMEs firms can manage internal and external innovations with help of open innovation. Furthermore, it will enable family business to build reputable network that has good inventions and address their present challenges. Aspiring SMEs family businesses are to embrace and support research and development, as well as collaborate with all stakeholders for new discoveries and provide better diversification of opportunities by allowing their firms to competitive globally with top performing companies across all sectors.

Business network for SMEs through open innovation platform enables them to share their business problem and explore their innovation options. Zhao and Aram, (1995) established in their report that in a comparison between low growth and a high growth firms that, there is higher range and intensity of business network in firms that grew quickly. Asheim and Cooke

(1998) also says the ideal geographies for entrepreneurship should include structures linking people and technologies, incubators to foster new businesses, universities to add expertise, and large business that could work with and buy from the small, young firms. They further explained that this model would enable small business and entrepreneurship to thrive. Developing good relationship with people and places enhance trust that facilitate adequate network. Building strong networks including smart people, building on excellence and involving strong drivers; develop small or private partnership models with multinational enterprises.

#### 4.7 Benefit of Collaboration through Open innovation

Collaboration is a process through which actors who observes a diverse problem can beneficially explore their ideologies, and seek for solutions that further than their own limited vision. (Gray, 1989 p.5). Collaboration with allies may be the foundation of innovation and information; it may serves as a basis for firm to commercialize their internal ideas. Collaboration is the vital part of an innovation process, facilitating collaboration with partners outside Europe is very essential for expansion and growth example simplifying rules and regulations for employing personnel from outside EU for a limited period.

The reason many potential innovation fail is the crucial gap in the approach to innovation process due to inadequate collaboration. Several scholars have argued that partnership and cooperation with external stakeholders and firms are developed to create value and enhance firm innovativeness. (Chesbrough 2003, Laursen & Salter, 2006, Dahlander and Gann, 2010). Encouraging and supporting transnational innovation activities for SMEs would enable transnational collaboration, especially between firms in boundary province by synchronizing national resources. (Euris, 2013).

Open innovation networks enable firms to fill rapidly in specific knowledge needs. They may also be as a source of new business partners to commercialize internal knowledge. For example African countries are known to be categorize as one of the emerging economy in this 21<sup>st</sup> century in terms of economic development and basic infrastructures but are still lacking behind in terms of technology innovation and ICT, while Finland known to be among the world leader in innovation, partnership or collaboration with this countries to leverage their deficiencies will also generate revenue to Finnish economy and enhance business relationship. Cooke and Wills (2010) say social capital building was associated with enhancement of business, knowledge and innovation performance. Especially the opportunity in enabling firms linkages with external innovation network. This model also furthers the drive to externalize the firm capabilities to capture innovation opportunities (von Hippel, 2005). Chesbrough (2003) also described innovation as an information creation process that arises out of social interaction. Community across professional boundaries is a profoundly social interactive process and one which great care attentiveness and patience have to display (Cooke and Wills, 2010)

Trott, (2012) say Innovation model need to take account of these new technologies which allow immediate and extensive interaction with many collaborators throughout the process from conception to commercialization (Trott, 2012). Through innovation, firms can enter new

geographical market with a novel product and improve sales. In conclusion, Brunswick and Ehrenmann (2013) pointed out that for a firm to open up their innovation processes for external networking and partnership, they are obliged to develop their internal capabilities and routines for open innovation management.

## 5 DEFINING THE KEY CONCEPTS

The wealth of literatures and academic journals on open innovation and SMEs has enlightened on the open innovation phenomenon in SMEs and challenges which have been categorized into innovation management, process and Lack of essential resources, IP issues and internationalization. For a proper understanding of open innovation as model to combat SMEs family business growth challenges, the conceptual framework definition of the relevant concept are defined below:

**Innovation:** Innovation in this study can be describe as the improvement of SMEs firm's product and services that can generate employment, profitability, growth and contribute to the economic growth which is the analysis of this study. It also means ability to create a new way to resolve firm challenges. According to Kalvet (2009) *“Innovation is defined as the implementation of new or significantly improved products or services, or process, a new marketing method, or new organizational method in business practices, work place organization or external relations. Form of foundation, probably the most important one of economic development in any economy.”* Innovation is classified as one of the vital foundation of economic growth and sustainability in a vibrant society and a crucial point of business strategy. Firms innovate to adjust to their external environment and respond to perceived external and organizational changes.

**Open Innovation and Innovation Management:** Open innovation concept refers to the way firms could access external actors and resources to achieve high-end growth and sustain innovation. While innovation management is described as a way of maximizing both internal and external knowledge to add values the company for growth. This assumes that firm can overcome its local search bias and acquire precise needed resources for the business development and sustainability by applying open innovation method. Innovation management serves as a gateway for adequate planning and ensures proactiveness to exploit and explore both internal and external innovation. Presently companies facilitate growth through merger, alliance, strategic partnership, collaboration and supranational globalization. (Porter, 1990). Therefore, SMEs in Finland need to generate growth through open innovation in order to sustain their social welfare system and attract investors. According to EK report (2010) *“Finland's success in the future will be based increasingly on innovation-led economic growth”*. Thus it is crucial to ensure that innovation policy on reforms will involve open innovation strategy, whose goal is to improve productivity that will ascertain that Finland attains its economic growth and promote innovativeness of the SMEs firm. Open innovation enables firms to collaborate irrespective of new product publication or degree of research and development intensity that they manage. Similarly, it allow firm to improve their performance in transforming knowledge into economic and social wealth. It also extensively acknowledges that open innovation provide a platform for technology transfer, innovation and commercialization of new knowledge. (Chesbrough, 2003, Lee *et al*, 2010; Vanhaberke, 2009)

**Growth:** Growth in this thesis is referred to as an enhancement of business or business expansion which can create employment and contribute to the economic growth. Growth is categorized as high-end growth when it can provides adequate employment, generate profit and

business development across the geographical region as well as contribute to the economic growth. While an average growth is describe as simply profitability in business and meeting the local or domestic needs. The low growths indicate that the business is barely surviving on a daily basis. According to the OECD (2012) definition, high- end growth firm are described as firm with annually increase in employment or in turnover greater than 20 percent a year, over period of three years and with ten or more employees at the beginning of the observation period. High growth firm is said to be essential for employment generation and economic boost, in SMEs high growth gives them the possibility to become a large firm. However, According to GEM (2010) studies it was noted that Finnish high-growth SMEs is lower than other Nordic countries. About half of Finnish firms have moderate growth expectations. The continuously low growth expectations create barrier for the development of Finnish employment and business survival. (Sorama and Saarakkala, 2009 cited in Eurofound report 2013).From this indications, high-growth firm is crucial in reviving the Finnish economy especially in this period of economy reforms and structural changes

**Business Model:** Business model is described as a base of the way firms generate and convey value. The design of innovating in novelty requires a pioneering business model for creative product and services. This model has become a communal idiom that allows portraying and influencing business models to make an innovative tactical choice. When there is a lack of mutual understanding, it is complicated analytically to confront postulation regarding individual business model and innovate effectively. Osterwalder and Pigneur, (2009).

Traditionally entrepreneur produces goods and services that worth value and takes on the leadership role in showing customers the value of the new product and works with internal R&D in showing employees how to make it. Currently, entrepreneur trade and co-create with customers and employees and other stakeholders to ensure win-win result (Hick, 2009). Osterwalder and Pigneur, (2009) says business model is like a plan to be executed through organization development structure. From the above conceptual definitions the prominent link between it all is growth and innovation in which SMEs family business act as the actor that execute various decision that contribute to the economic growth. This study has explored how open innovation could help SMEs to leverage their deficiencies. It has also contributes to the argument that say relying on internal resources and knowledge is no longer sufficient to generate the high-end growth for business survival. The next section discusses the findings in relation to the research questions.

## 5.1 Finding and Discussion

Innovation is described as the heart beat of business model, which help to create value with partners and satisfy customers. While new business models to ensure sustainable growth. In this present economic crisis in Finland, the government and SMEs have applied the cut cost measure to save money (cut cost by restructuring and laying off of employees) and to reduce deficit. However this measure has been tackled by practitioners that are ineffective and only provide temporary solution to the problems. Grove (2008) argued that it not the amount of business cost cutting that enables businesses stay afloat during crises but the kind of investment that are made. He further explained that firms should not just focused on cost reduction but search to a better way to enhance their resources in order to gain better strategic benefit. This can be done by

involving every stakeholder in business to combat the challenges. A decision on growth of the business should not be taken by the management alone but should include the involvement of all stakeholders' contribution; their ideas can revive the business back on track. The Finding and SMEs family business barriers to growth are summarized in the table 6 below

SMEs Growth Barriers	Sources
<b>SMEs Lacks Variety of Resources and innovation strategies</b>	
SMEs lacks access to essential resources like expertise and professionals, Finances, knowledge base	Chesbrough,2003;van de Vrande et al.,2009; Vanhaverkebe, 2012, Mesquita & Lazzarini, 2008; Trott ,2012; Tidd and Bessant 2009; Cosh and Zhang, 2012; Laperche and Liu 2013
Lacks capacity for appropriate innovation process and Focus on closed system business model	Chesbrough,2003;van de Vrande et al.,2009; Vanhaverkebe, 2012, Mesquita & Lazzarini, 2008;Lichtenthaler ,2011; Rahaman & Ramos 2010; Huston, 2006; Hakikur & Isabel, 2010; Mytelka & Farinelli, 2000; Edward et al., 2005; Edquist, 1997; Käsi, 2011; Rivette and Kline, 2000 Enkel <i>et al.</i> , 2009
Government Regulations And Market Uncertainty And Failures	Porter 1990; Cosh and Zhang, 2012; van de Vrande et al. 2009; Rivette and Kline, 2000
<b>Innovation Management And Capabilities</b>	
SMEs lacks innovation management capabilities	Wagner, 2007; Tidd and Bessant, 2009; Trott, 2008; Laperche and Liu, 2013; Lichtenthaler,2010; Cohen and Leviathan 1990; Kirschbaum, 2005; West and Gallagher 2006
Inflexible internal Policy and organization culture	Winkeljoham & Andrew, 2012; van de Vrande <i>et al.</i> 2009; Annika <i>et al.</i> 2001; Montana and Minshall, 2011

Lack appropriate planning and proactiveness	Wagner, 2007; Tidd and Bessant, 2009
Intellectual property management and Rights	Koironen 2010; Chesbrough 2006; Grassmann et al. 2010 and Vanhaverbeke, 2012; Kutvonen et al. (2012); Dahlander and Gann,2010; Kutvonen et al. 2012; Teece, 2000; Salojärvi et al.,2005 ;Chesbrough,2010
Commercialization of their innovation	Lee et al. 2010; Bianchi et al., 2010; de Vrande et al., 2009
Ownership and Succession	Huizingh,2011, Trott 2008; Schwezler,2010;Koironen 2010;Kansikas
<b>Internationalization</b>	
Myopic view international market Local market focus and operate within their geographical boundaries	Cavusgil et. al., 2012; Morrison et al., 2003; Leminen &Westerlund, 2012; Coviello and McAuley, 1999
Limited collaboration and networking with global market	Rothwell and Dodgson 1994
Limiting desired growth by avoiding risk	Trott 2012

**TABLE 6:** SMEs Growth Barriers

### **Lack of Resources**

McKelvie and Davidson (2009) argued that resource endowments are critically important for SMEs family growth and sustainability because of lack adequate resources usually have a harmful impact on their business activities which may lead to collapse of the business. Inadequate resources is characterize the major challenges confronting SMEs Growth in Finland Finding shows that SMEs innovate mostly through customers needs, they studied how customers are responding to environmental changes, they develop their innovation internally, prototype their ideas in order to investigate its capabilities and experiment customer feedback to it. For

instance, in Finland when a newly product is about to be launch to the market the prototype is distributed to the member of the public to get the feedback, but in innovating to generate high-end growth, they need to reach out beyond the firm boundaries to tap into customers and other stakeholder knowledge. The open innovation network platform enables to engage customers in the innovation process and made known their tacit knowledge to the firm on the development of the product, this prevents any fault before the product finally get to the market. It will also prevent market failure and enhances profitability. Chesbrough,( 2003)

### **Intellectual property**

Furthermore, intellectual property as explained in the literature is seen as asset, which could be bought and sold which could in return generate profit for the firm, but most SMEs and family business still neglect or show little attention to the way of organizing right business model for innovation. As explained earlier, family business values their intellectual property which could be transferred from one generation to another because it involves social and emotional capital. Moreover, SMEs focus on protecting their best innovation and then believing on the internal R&D to provide a valuable innovation and path to the market, which is the thinking of the closed innovation system. Open innovation model recommended that innovative productivity from the firm should not be constrained to the traditional business model but gives opportunity to be shared or get access to market through various means Chesbrough et al., (2006).When there is free flow of knowledge both internally and externally will enable the innovation process move faster and eventually create a new markets for the use of the innovation. In otherwords, invention by lone firm is in adequate to generate high-end growth.

According to Lee et al.,(2010) the concept of open innovation emerged with processes that are distinguished as across firm boundaries. They say firm now want to include in their business model not only for commercialization their own ideas, but also external ideas. As the rise in the number of mobility of knowledge workers and internationalization in almost every aspect of international business, there are difficulties for companies who try to control their proprietary and expertise. (Chesbrough, 2003). In open business model intellectual property that are not utilize by the firm are encouraged to be release to another firm in form of licensing to develop, this could also form a new revenue generating ventures which open up a platform for more collaboration.

### **Internationalization**

Innovation and export businesses are among areas in which Finnish economy has excelled in the past; Finland is highly rated as a knowledge economy especially in terms of technology innovation. EK (2013) report says that Finland innovation system has performed fine but needs an “urgent reforms” in order to achieve a sustainable growth and “low degree of internationalization is regarded as weakness”. The total RDI investment amounted to 6.9 billion Euros 2008, in which 74 percent are from enterprises which are mainly large firms, University amount to 17% and public sector share 9 percent of the total. They further reported that innovation investment at lower level for Finnish economic growth. Thus, in order to generate

high-end growth in innovation and export, SMEs in Finland must be willing to identify, connect and develop global innovation network. Bye et al.(2012) says in open and small economy absorption of foreign knowledge through international trade is vital for domestic innovation and growth than investment in domestic R& D. This implies that opening up to collaborate with external partners in the global market will enhance knowledge and technology innovation in Finland. As described above ICT are among the three forces shaping this 21<sup>st</sup> century innovation, it essential in absorbing open innovation in order to hasten the SMEs internationalization. Opening up create windows of opportunity to learn and grow. Reaching out through network open innovation platform facilitate tapping into a bigger market that enables high-end growth. SMEs in Finland have a better chance of internationalization through open innovation. In the area of innovation development continuous investment in innovation shows commitment to a sustainable innovation and development .SMEs can contribute to the investment in R&D infrastructure development by collaborating with major stakeholders like the universities, research labs to boost the Finnish economy productivity that will attract investors.

### **Finances**

Finances are also regarded as a major problem that is hindering various SMEs growth in Finland, access to finance is essential for business growth. Huge investment on assets for one project sometimes prevents business diversification in SMEs due to their financial capacity. In open innovation, SMEs can foster innovations in the margins of their business; nevertheless they can make use of other means to convey their ideas to the market and gain from external collaboration Chesbrough (2006). On another hand, an increasing availability of private venture capitalist business angels and agents has helped to finance a large number of spin-offs which originated from internal R&D labs. This open innovation approach enables a firm to commercialize of innovations from other company new product and service and new markets, meanwhile seeking ways to bring its in-house ideas to market by deploying pathways outside the current streams of business Chesbrough, (2006). Items in exchange vary greatly in field of industries and business situation, in which firms use internal R&D to understand and capture external information in general alongside with venturing, companies attempt to ensure growth and survival in the face of ever-increasing competition. (Huston et al., 2006; Lee et al., 2010).

Networking may not be only essential for knowledge but also assist access finances, open innovation improve access to finance with ability to generate fund for business through crowd funding, venture capitalist, business angels, philanthropist and investors which are vital for growth. Crowd funding through open innovation platform could enable new small start-up to generate funds for their innovation. Although in Finland several programme has been set up to support firm growth for example Finnvera, ministry of employment and economy, TEKES organize some programme that helps start-up in growing their businesses which is every vital encouraging entrepreneurial spirit and innovation. However the finances given to this firms to support this SMEs are been targeted for cut due to the huge state deficit (Yle, 2014) but with open innovation platform business angels, venture capitalist, individuals, philanthropist can also help in funding this SMEs firms to expand their business while the SMEs can showcase their business opportunities for potential investors hereby creating a win-win result.

### **Innovation Management**

In the aforementioned literatures, it was pointed that innovation management is essential to maintain firm innovative system for high growth because most SMEs business failure in Finland is attributed to bad management and inadequate planning for change. In most cases first time owner's manager of potential high-growth entrepreneurial firms will likely not have sufficient skills to manage the business and may not have access to human capital and further professional advice consistently with the growth level of the enterprise. However, some SMEs business owners with growth potential face the challenge of inadequate knowledge of the market, during their initial growth stage as they usually focus more in infrastructure development for their first invention which is concentrated on sole solution for targeted customers. This usually diverts the business from its core competence, hinders growth and leads to low productivity when the infrastructure becomes outdated. Moreover, the owners may not understand how to make transition from the target customers to a larger market. Open innovation could provide essential means to access knowledge for management and ensuring growth of the business. Combinations of internal and external knowledge facilitate SMEs growth and cut across direct market. For SMEs family business open innovation will enable them to have access to family business councilors, who are willing to use their wealth of experiences in handling family business issues to save the business from collapsing, as well as ensuring family harmony while the business continue to grow.

### **Rigidity to Change and Lack of Proactiveness**

Lack of growth of some SMEs and family business in Finland is also attributed to rigidity to change and lack of proactiveness among the SMEs, nowadays change is essential to meet up with the global competitiveness and business environment and opening up enables proactiveness to unforeseen circumstances in business. Rather than relying on preventive solution, open innovation could reduce the effect of market failures and enhance business growth and employment sustainability. For illustration Cosh *et al.* (2011 p. 12 ) survey examined the relationship between business growth and open innovation in respect of business innovation among 12000 firms in the United Kingdom, from their findings they confirmed open innovation was connected to high growth performance and enhanced innovative activity. However, growth can be affected by changes in a firm's competitive circumstances and changes in the strategic aspect. As Growth is essential for business expansion, so is entrepreneur desire to grow is essential for the business, in order to achieve a high growth business; the business owners must have a growth orientation and willingness to grow. SMEs Firms need to be flexible to ensure that their policies are aligned the external conditions which motivate enterprises to practice open innovation. From another aspect, conventional closed innovation which only rely on internal R&D is no longer as important as it was before, because "invent-it-ourselves model" are argued not to able to generate and sustain high-end growth. In Finland, SMEs Firms have an equal chance of growth irrespective of their locality due to the society infrastructure and various public supportive programmes. Cooperation between firms and flexible changes in external networks can contribute to a high growth

### **Succession and Ownership**

Succession and Ownership of the business are identified as threats that prevent SMEs family business growth in Finland. Identifying the right successor for the business is still very big

challenge due aging population and inadequate succession planning which may result into business failure and increase in unemployment. The SMEs firms exhibiting both high growth and awareness of open innovation demonstrate higher command of managing their knowledge assets than others. Open innovation have positive effects on the firm's long-term growth prospects; the acceptability of open innovation practices and policies in SMEs family business enterprises will have help in sustainable growth of those enterprises.

## 5.2 Validity and Reliability of the Study

In every study validity and reliability is used to measure the authenticity of the study whether is viable from the research perspective (Creswell and Miller (2000)). The validity of this study is established by ensuring that the information gathered was thoroughly scrutinized to ensure they correspond to the research problem. The literatures were selected based on four main variables that I considered as essential in analyzing open innovation as lever to SMEs growth challenges which are innovation process, Innovation Management, Open innovation and SMEs Growth, this has facilitated the understanding and adequate explanation of the concept of open innovation in the perspective of tackling SMEs growth challenges. The study research design use the conceptual approach to answer the question, through the help of the literature review of academic articles and reviews from reputable journals such as strategic management, Technovation, Business Venturing Journals R&D management journals, Academic of management reviews, World Bank, International Business Journals, Harvard Business Reviews, international marketing review, small business management journal SMEs Growth. Wiley, OECD, GEM, PWC survey, News and several others. Research has been conducted based on Finnish SME growth issues, employment and economic problems. The validity was also ensures by adequately interpreting the data whereby the result of the findings are supported with scientific literatures .Kansikas and Kyro (cited in Fayolle et al. 2005 p.122) says in conceptual research finding the connotation associated with the concept and the interpretation is connected to the background factors.

The analysis of data was combined with report development which highlight how open innovation can be used enhance SMEs family business growth which is essential for employment and economic development with the use of open innovation model. This study argued that resources, ideas for growth and expansion can be attain from an external environment without losing the intellectual property right. Family businesses are synonymous with control and long term investment which span across generation as legacy for continuity, but this can only be ascertain if they survive and grow. This study showcase that the community at which these firms are established can contribute to the legacy through open innovation.

The SMEs in Finland are known to be the highest employment sectors in Finland but their deficiencies in resources, external knowledge absorption, and innovation management calculated risk taking has contributed to high cost of their product and services as well as various restructuring that lead to series of laid off. As mentioned earlier, Finnish people in general are known to be hardworking and very compatriot in development of their economy but they need to do more in networking and collaboration through open innovation. Many innovative ideas still

kept without utilizing it or licensing it out due to the above-mentioned challenges, while some have leaked out to external competitors due to inefficiency innovation management. This study is very valuable to SMEs especially now that they need to do in supporting Finnish economy development.

My contribution to the paradigm is generation of SMEs growth through open innovation in order generate more employment and enhancement of economic growth especially now that hardened economic climate that been responsible several business collapse and high rate of unemployment in Finland. Growth is essential for every business success, staying stagnant or inadequate growth sometimes lead to the collapse of the business leading to massive layoff and huge debt for the owner. The previous study on SMES open innovation activities, have shown that commercialization of product and services to the market through open innovation, exploitation and exploration of knowledge to the market, internationalization and IPR management which are the major problem of SMEs; especially the highly innovative ones but at the centre of it all is growth and business expansion which this study has exploited. Referring to SMEs firms as actor of innovation, the open innovation models deal with innovation management of both internal and external knowledge, to produce highly innovative product and services with all stakeholders' involvement.

## 6 RECOMMENDATION

This study argued that Finnish SMEs can benefit from open innovation in the way that they are extremely useful roadmap for the implementation of innovative projects within the company. SMEs have to thrive to be locally and internationally successful. Growth is created by entrepreneurs, workers and provides an encouraging environment for customers to boost their purchasing power when they are gainfully employed. SMEs need to tailor-make their products and services towards their target market and use open innovation to navigate it. Open innovation has been tried and proven successful for SMEs in different parts of the world. It can be considered as a remedy to the SMEs' challenges by providing resources and ideas needed for business growth, as well as a link to successful collaboration and networking among all stakeholders. It is also important in enhancing industrial innovation, private enterprise development, commercialization and business model renewal (Lee et al., 2010).

This study additionally suggests that SME family businesses may enjoy a competitive advantage as a result of rethinking the fundamental way of generating real innovation capabilities, commercialization and growth enhancement of their businesses. Furthermore, open innovation has been described as a two-way process in which it makes the best use of internal and external knowledge in a timely and creative way for business to grow and become a leading firm (Lindegaard, 2010). SMEs' resource limitations have increased the need to explore further than their firm's restrictions in order to gain access to knowledge and essential resources required for innovation. Global platforms are the activities that together constitute the collaboration and development. This indicates that networks themselves do not transmit to competitive advantage; it is how you use them that matters; meaning the capacity of the firm's willingness to work with various networks to achieve growth and business sustainability. SMEs could use the platform to explore various innovation hubs globally with an open mind of a win-win situation.

This networking could also result in identifying latest technologies and ideas that could generate numerous novel products, product ideas and promising technologies. In other words, absorbing open innovation models could open up the connectivity with their suppliers for ideas and employees for potential sources of innovation. It will allow family businesses to understand that they are a huge potential source of innovation. Firms that open up to collaborate will be more effective with partners and other stakeholders; this will drive more collective business behaviors and in particular help firms to optimize supply chains by making all elements of service or provision more open and efficient. (Deloitte, 2012). As mentioned earlier, Finland is known to have very developed manufacturing firms with good infrastructure for business; thus networking with various stakeholders will put them on the radial of efficiency in production and enhance more innovative opportunities.

In a family business, peculiar family values and resources could shape in a specific way that encourages an open form of collaboration. According to Hoffman et al., (2006) social capital refers to as ("the resources embedded in the relationship among people") this specific feature assures family firms have the capacity of establishing resourcefulness within the firm and external stakeholders. Social capital, especially that based on ties, is so much a value in family business, it

help in developing an inter-firm interaction process, accelerate knowledge flow and act as an informal governance mechanism between firms. Weak ties help firms to build the initial relationship and strong ties help firms to acquire high-quality knowledge. Social capital facilitates the creation of new intellectual assets which could be a profitable and finance venture for the firm. For example, the peculiar social capital can result in particular good relationships, characterized by even personal attachment with some stakeholders (Gomez-Mejia et al., 2007). This could lead to choosing a less diversified set of external partnership based on trust. In family business trust through good relationships reduces the cost of monitoring and encourages the family members to work towards their long-term goals and objectives; SMEs family business in Finland can spread their values to their community that will help them to keep the goals and values alive by given way to open innovation. It could also provide the opportunities for SMEs family firms and entrepreneurs to work and learn from large organizations. Strategic partnerships with universities, government, other private enterprises, competitors, and other research bodies could be a reasonable strategy set out to bring in novel ideas and release the unused ideas to firms that needed it to progress, this could create a revenue-generating avenue through licensing. The core aim of open innovation is the ability to reach outside the firm boundary to absorb external knowledge and resources to scale up internal knowledge growth, product or service development and improved profitability.

Nevertheless, customer relationships should be considered as another core value in business for SMEs. Particularly, with the open innovation model, this value is even more appreciated in the sense that it continuously engages and satisfies customers. With this process, the customers may certainly stay with the firm and become a regular partner; instead of switching from one service to another as innovative services are often unique and tailor-made offers. Thus, there is a prominent need for sophisticated and effective management tools that can help control customer relationships. This distinguishes a professional and well-managed company from a conventional one, since it will actually show how effective and efficient the amount of information flows inside the company is delivered to each segment of the business and contribute to the firm's overall performance.

Open Innovation enables strategic competition in which customers and workers are given the opportunity to participate in the product and service development. Let not forget that customers are the reason many organizations are established, given them the opportunity to express their needs and expectations about new products and services could sustain the existing customers and attract other potential customers. Combining internal and external ideas in creating new inventions which could turn things around for family business organizations and the next generation to come. Thus, SMEs and family firms across industries should select open innovation as a business model by opening up their innovation process and seeking external knowledge to boost internal know-how. Firms should increase the level of customer integration, as an innovative source without customers being felt intellectually drained. Open innovation may inspire customer engagement so it therefore suitable as a business model for family businesses.

On the other hand, Silicon Valley in the United States was developed based on the individual entrepreneurial mindset and good networks both within their community and outside. Presently, most countries are still trying to replicate their achievement because it continues to spring forth latest inventions and technologies. SMEs and family business communities in Finland could do the same if they open up their boundaries and remove bureaucracy in organizational policy that prevents

growth and development. Supporting intermediaries and platforms for open innovation could be established by setting up open innovation agencies or involving cluster management unit and support sharing facilities that provide quality checks or standards to ease access to these tools and platforms that encourage knowledge contribution from various stakeholders. Nowadays United State lured potential talents from all over the world to boost their economy, their invention are transformed into reputable business that create more jobs for the people living in the country, Finland has the same capacity to do the same by showcasing Finland as a land of opportunities where entrepreneurs or business dreams for growth can be realized.

Furthermore, internationalization has contributed immensely to growth and development of several companies, because technology and supplies of resources are becoming more global, embracing open innovation will enable easy access to raw materials for the production of the product and reduce cost as well as enhance consumer satisfaction. Deliberate partnership with universities, government, other private enterprise, competitors, and other research bodies could be a reasonable strategy set out to bring in novel ideas and release the unused ideas to firms that needed it to progress in their business.

The core value of open innovation is the capacity to reach outside the firm boundary, to absorb external knowledge and support to scale up internal knowledge for growth, product or service development and improved profitability. SMEs businesses could also use specialized competitor as a means to draw and choose best talents through new model of employment development. Business could also draw on the resources of networking source to improve it accuracy. (Deloitte, 2012)They can as well stimulate increased engagement and development with consumers while positioning for the disrupt market. The success will kindle new commercial ventures both externally knowledge and their internal information to offer qualitative services to the customer and better the community.

Besides, Public policy plays a significant role in facilitating more collaboration among firms and other external stakeholders. Their impact on the relational pattern of collaborative, innovative firms goes a long way in encouraging firms to grow. The government policy should enhance more effective collaboration between University and SME firms. This would generate and solve the institution problem of lack of human capital and inadequate innovation to enhance growth. Moreover, most SMEs attributed their lack of growth to high taxation, and inheritance tax and rigid labour that prohibit freedom of choice in the wake of these crises, the government could relief various business from high taxes and involve business owners in making policy that can enhance continuity of their businesses.

In the advent of human resources challenge for the SMEs, government should also encourage SMEs to employ fresh graduate from their various institution of learning, to fill up the necessary position that are lacking personnel in order to enable the firms move forward. Foreign-born graduates could also be accommodated in the area of expanding outside the domestic market. Example in large firms for example Procter and Gamble constitute a network made of a relationship with various actors both within and outside their domain to grow. They form cooperation with SMEs to strategize and have access with SMEs to innovate new knowledge and harmonizing proficiency more than their basic area of research that they incorporate in to their knowledge capital (Huston et al., 2006). SMEs and family business in Finland can do the same by collaborating with tertiary institutions, which gives access to students and researchers from various cultural backgrounds to work together with firms to share their knowledge and

experiences to in bring up new solutions and ideas to the firm. Thereby boosting the firm creativity and at the same time benefiting the students to have access to working environment that could prepare them for their future career.

The Finnish government's strategy on economic transformation and job creation could also contribute to the development of innovation ecosystem and frameworks by ensuring conducive business environment for internal and external linkages of SMEs. It requires commitment on harnessing and promoting high-value foreign investment as well as supporting innovative SMEs by working together with SMEs, members of the society, tertiary institution and other stakeholders in order to enhance economic growth. In other word, economic growth of a nation cannot be attained by government alone but enterprises; employees, SMEs and other stakeholders in business. I believe that SMEs in Finland are capable of averting the looming debt crisis if they allow external input, resources and knowledge to leverage area of deficiencies. Focus on SMEs business development; improving policy that promotes business integration is important as Finland seeks to safeguard the foundation of their welfare society. Therefore, Finnish SMEs and family business must rise to sustain it economic growth. Finally, open innovation activities may appear to be a mystery to many small family businesses especially in the rural area due to inadequate enlightenment that may be a major problem impediment to the development. In the view of this, there is a need to create public awareness of the opportunities in open innovation practice for their business sustainability.

## 7 CONCLUSION

In the course of this study, the impact and contribution of open innovation to the economic development and business growth of Finnish society has been examined. Moreover, open innovation activities and performance in the development of the SMEs towards change and innovation management has been analyzed.

This study also has analyzed the challenges of SMEs and family business and how open innovation can be an appropriate business model to enhance business growth as well as contributes to the economic development which is examined through exploratory research. The argument behind it is that SMEs in Finland needs to open up their innovation boundaries to obtain external resources and ideas needed for growth and that relying only internal innovation and resources is not enough to generate the high end growth needed for business sustainability and economic development particularly at this period of global economic crises.

Also as SMEs operate in a competitive and constant changing environment, firm are no longer innovating in isolation but rather collaborate, using a suitable platform like open innovation may be the key in achieving successful business growth. To enhance growth, findings show that it is vital to engage in a joint process of open innovation. The inbound process are said to promote innovation while the outbound promotes growth. It has also been proven that both inbound and outbound are required to leverage firm resources deficiencies.

Moreover, finding shows that SMEs engaging in open innovation enhance innovation performance and SME business growth. Innovation is crucial drivers in firm's ability to survive competes and prosper while entrepreneurship incorporate innovation and economic growth which generate prosperity for both businesses and society. SMEs is referred as an essential player in innovation; this thesis emphasizes on the use open innovation to generate more novel innovation needed for growth. Successful innovation is achieved by collaborating both external and internal input.

The thesis also provides information on SMEs capabilities for open innovation and the essentiality of change in their innovation process towards open innovation. It also contribute to prior research that SMEs firms stand to benefit much in selecting open innovation as a business model; these benefits include gaining access to novel innovation, latest technology, advancement of knowledge through technology transfer, external exploration as a core business model, more profitability and ability to exert control over market environment. (Kutvonen, 2011) Thus, firms build solidly on inter-organizational knowledge transactions to extend their internal knowledge bases. The study also highlights the importance of globalization to Finnish SME business growth, as SMEs are the real driver of the economy; they are required to increase further its global competitiveness in the international market. Finnish product and services are still essential demand in the global market.

Based on the analysis of this study "Open Innovation" is suggested as a suitable business model for family businesses. SMEs survival depends on ability to be innovative constantly which is an excellent deal for continuous growth and ability to defend itself against competition.

Future-oriented SME firms that will survive the 21<sup>st</sup> century challenge must position themselves to meet future customer needs and ensure their continuous involvement innovation process. As earlier mentioned technological innovation positive impact on Finnish economic growth, continuous improvement through open innovation platform could bring back the old glory of Finnish SMEs Firms as innovation pacesetter .Moreover, their future managers must be able to think and see outside the box to stay competitive, as they say been innovative is essential but ability to ensure that innovation is globally competitive and acceptable will enhance growth. SMEs would be market leader must begin to reap the fruits of indirectly creating disruptive technologies. Additionally, as reported above they need flexibility, visionary managers that believe in growth and business expansion and a technological advancement.

Furthermore, the assume theoretical model illustrated on combination various areas of research on business model, innovation process theories, SME business growth theories before focusing on Family business. In expanding this study further I examined innovation in the context of business growth model and processes. Also, there was a brief description of the research methodology and the method of collecting such data, and the way the data gathered was analyzed. The study further emphasize on growth essentiality for business survival and examined SME business growth theories in relation to innovation and growth strategy, the analysis done together with the theoretical framework. These studies finally present how open innovation can be use to enhance growth, using family business by showcasing the complexity of their structure and their importance to the Finnish society. Presently this thesis is based on the literature review and empirical data from governmental parastatals, private consulting firm, news and own observation. In the future research, I would like to recommend further research that will conduct an empirical data through survey and interview of the family business owners. This will give the researcher an opportunity of having direct contact with the family business owners for questioning, on the information needed.

Using SME family business as a base of study has unlock series of new research questions related to open innovation in a family business and structural change toward openness. Further research is required to provide a thorough analysis of family business innovation process from close to open innovation. Finally, I would like to say openness brings greater opportunities to grow than challenges it poses. There still so many opportunities in Finland that is yet to be tap into if only they open up to exploit various possibilities.

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