

**The role of financial institutions in promoting innovation of SMEs in
Rwanda: An empirical review**

Abstract

The government of Rwanda has set up an empowering environment to support SMEs and has attracted players with good local, regional, and international experience in using innovation and technology to expand business activities and increase economic growth. The majority of SMEs struggle to increase productivity, organizational effectiveness, sustained competitive advantage and satisfactory rate of return on investment. It is not an easy task to achieve such kind of objective in an economy where traditional and informal practices of business management are still applied. It is evident from research that innovative technology strategies are key resource for gaining competitive advantage, but it is challenging because some enterprises lack entrepreneurship and innovative skills. Consequently, many small businesses fail and close few days after their start up. One way in which SMEs should operate to remain economically viable and contribute to a sustainable economic growth is through innovation. The financial institutions play a role of intermediating people, business companies or enterprises in need of funds (borrowers) with lenders. This paper reviews empirical evidence on the contribution of SMEs to innovation, examining the role financial institutions and SMEs in promoting innovation, the role of SMEs in economic growth and challenges facing SMEs.

Key words: SMEs, innovation, financial institutions

1. Introduction

In Rwanda, after the Genocide of 1994, the government has tried to boost the business sector's performance by establishing different organizations enabling small and medium business operations. It is clear that the government alone cannot succeed in its efforts to make this sector productive and successful. Institutions and other concerned bodies for small businesses underline the importance of public and private partnership to initiate various tasks including research and development (which is rare in this sector) to support entrepreneurs and owner-managers in better business operations management. As Rwanda moves towards becoming a middle income country, small and medium enterprises are engine to its economic development. The importance of Small and Medium Enterprises (SMEs) for economic competitiveness and growth, employment and poverty reduction is widely recognized [1].

The Small and medium enterprises (SMEs) support in strengthening entrepreneurship and innovation [2, 3]. They contribute to economy by employing a large number of people and play a big role by increasing economic development. However, the inability of SMEs to access financing remains one of the key constraints to growth. With industrial change and recent government policy shifts, increased integration of global markets and business, many enterprises are experiencing increasing pressure to

remain sustainable as their markets grow, and they begin competing with a larger number of firms. In this regard, SMEs in particular, are exposed to this pressure, as they tend to be disadvantaged comparing to bigger firms that generally have better access to funding and other resources. There are demand side barriers such as verifiable borrower information or practical business plans, lack of collateral, absent or inconsistent record keeping and a poor repayment culture among business owners [1]. [101] emphasized that SMEs are more innovative compared to larger enterprises due to their diverse character but are limited in innovative capacity due to their financial and human resources. This study is an empirical review on the role of SMEs and financial institutions in promoting innovation.

2. Brief description of SMEs

2.1. Characteristics of SMEs

Small and Medium Enterprises are defined on the basis of their characteristics, namely, size of the , investment, capital, total number of employees, income, the organization behavior, their location and their market share; but the most commonly used characteristic is the number of employees in the enterprise [4]. Small and medium-sized enterprises (SMEs) are non-subsidary, independent enterprises which hire and employ less than a given number of employees. According to [5, 6], the number of employees differs across countries. In the European Union, the upper set limit in SME is 250 employees; however, some countries fixed the limit number at two hundred employees, while the United State of America considers SMEs to include firms with fewer than five hundred employees [7]. According to [8], the SMEs account for sixty to seventy percent of job creation and for almost sixty percent of the total gross added value in Europe. They are considered as the true strength of the European economy because they are mostly responsible for wealth creation and economic growth, next to their key role in innovation, resource and development. According to the World Bank definition, the Small enterprises are generally those with fewer than 50 employees, while micro-enterprises have at most ten, or in some cases five, workers [9]. Different banks use financial assets to define SMEs [10]. [4] stated that SMEs are characterized by individual initiatives & skills, greater operational flexibility, low cost of production, high propensity to adapt technology, high capacity to innovate & export, high employment orientation, utilization of locally available human and material resources, and reduction of regional imbalances.

The concept of SME in Rwanda is used to refer to micro as well as small and medium enterprises. The Rwandan SMEs consist of 98% of the total businesses and account for 41% of all private sector employment [11]. SMEs in Rwanda face many macro-level challenges faced by large companies, including limited transport and energy, lack of entrepreneurship skills, low levels of societal trust, limited access to financial institutions, challenges with contrast enforcement and a weak education system. Unlike large firms that may have the time and resources to invest in resources and human

capacity building, SMEs often have limited abilities to develop the skills of their staff or take advantage of local economies of scale in terms of energy, transport or raw material. The Rwandan strategy plan is to construct a dynamic and viable SMEs with the purpose of increasing the economic growth through enhanced business support service provision, capacity building and enabling access to finance, markets, innovation and technologies [12]. The government of Rwanda is continuously engaged in formulating and implementing policies to assist SMEs sector so that they can play its role in the economic development of this country. Through an immense attention given to the SMEs and entrepreneurship by Rwandan government particularly Ministries of commerce (MINICOM), Labor and Youth sector and with the coordination by Rwandan Development Board (RDB) there is no concern that policy and good will is lacking [13]. In 2008, Private Sector Federation in Rwanda conducted a study and put SMEs at 72000 SMEs and 25,000 SMEs are formal or registered. The study carried in 2011 by Rwandese Private Sector indicated that the number SMEs operating in the private sector was 119,158 or 96.5% of work force. The SMEs employ 281,946 persons. Micro enterprises constitute 92.6 % of all enterprises and employ 51.3 per cent of the workforce. Small enterprises make up 6.9 % and employ 2.4 % of the workforce. Medium enterprises are 0.4 % and employ 8.7 per cent of the workforce. Large establishments are 0.1 % and employ 16 % of the workforce [13]. Additionally, 99.9 % of whole sale and retail trade are from micro or small enterprises.

2.2. Role of SMEs in economic development

Rwanda's economy has gone through a process of changes and transformations for last twenty years after genocide of 1994 that has destroy almost all the sectors of the economy. After this period, the country started to develop different institutions by establishing progressive inclusive rules and regulations. However, the economy still faces some challenges, for example the level of exports is low, while the level of imports keeps on growing due to a higher demand for imported products than for domestic ones. At the same time, Rwanda doesn't have big firms to compete with regional and international, counterparts, Rwandan small firms have limited regional presence and they are utmost all, at the moment concentrated in the agriculture sectors [11]. In that sense, there is no main receipt to improve competitiveness of a national and regional economy. Despite its lower natural resources and a rather small domestic market, it would be a mistake for Rwandese policy makers to consider that they can avoid participating actively in the current process of globalization and competition; where for example the country now belongs to different organizations like the Commonwealth, the Eastern African Community, etc. Of course, this participation is, to some extent, unavoidable and it is indeed already taking place. To do this, there are some recognized factors that been confirmed to play a significant and strategic role to support a sustainable economic development process.

Different studies by international institutions confirmed the key input of innovation and the role of small and medium firms (SMEs) in boosting economic development [14, 15,16, 17, 18, 19, 20, 21, 22, 23]. Some of the conclusions of these international financial institutions are that SMEs account for more than 90% of all enterprises in activity in the vast majority of countries and provide the majority of jobs. Additionally, because of their dynamism and flexibility, they are crucial for the creation of jobs and, in a lot of countries, they are practically the only source of new jobs and reduce the flow of people from rural area to urban area. [7, 24, 25]. The SMEs contribute greatly to economic development by creating more employment opportunities, generating higher production volumes, increasing export and introducing innovation and entrepreneurship skills [25].

[3] stated that SMEs provide income, savings and employment generation at low investment cost and also the development of entrepreneurial capabilities and technology. This has been confirmed by [26] that SMEs are engines for the development of entrepreneurial capabilities and innovative technology which generate employment in the country. SMEs constitute the foundation for industry and natural economy development and they contribute substantially to the GDP, export earning, and the growth prospects of the countries [27]. According to [6], in advanced economies, Small and Medium enterprises in formal sector contribute up to forty five percent of employment and up to 33 percent of GDP. In high income countries, they contribute almost 50% of GDP. In low income countries the percentage is sixteen (16%). In the countries of Africa it is below ten percent (10%). In the countries of Asia-Pacific 32-48% of total employment is in SMEs, and 60-80% of the GDP is provided by this sector. SMEs contribute to employment growth at a higher rate than larger firms do, and in the long term, they offer an important share of overall employment. They offer economies greater flexibility and innovative service delivery. They increase competitiveness and help to limit the large firms' monopoly and offer complementary services and engage in the fluctuation of modern economy [4]. They encourage entrepreneurial skills and innovation and play important part in the provision of services in communities [28]. The primordial role of SMEs is to produce products and services mainly for domestic markets. They form an effective supply chains for enterprises and increasing service industry that contribute to increase the economy of gross development product. Preceding research shows that the operations function in SMEs generally has a poor relationship with other functions in the business. Furthermore, the individuals involved in operations management are poorly trained, they lack specific skills and are by large technologically illiterate [29]. Indeed the survival and progress of SMEs are threatened by problems that may exist in the operations functional area. One of these barriers is that entrepreneurs with technical backgrounds would probably be weak in managing functional areas such as general management and processes [30].

Business failure is often attributed to the lack of entrepreneurial information and business management skills [21, 22, and 23]. Low levels of education and training, as well as poor business skills are contributing factors to the lack of capacity and poor business efficiencies among SMEs.

Most entrepreneurs often start a new enterprise while ignorant of many key dimensions of running their enterprises, and must obtain the necessary skills if they are to survive [30]. It is imperative that the entrepreneur be knowledgeable about all the functional areas in business. The importance of entrepreneurial skills, such as innovation and risk taking should not be overlooked as essential ingredients to SME success. Skills development and education in general form part of human capital and according to human capital theorists, these assets can improve SME productivity significantly [31]. Entrepreneurs who have built successful companies have solid entrepreneurial and management skills. Competency in a variety of skills will contribute to the profitability and sustainability of a business, and a focus on skills development in the operations function is key to competitiveness and growth for SMEs [32].

2.3. Acquisition of innovation in the growth of SMEs

2.3.1 The concept of innovation

The concept of innovation, generally refers to changing or creating more effective processes, products and ideas, and can increase the likelihood of a business succeeding. The innovation is a process of translating an idea or a discovery into a good or service that makes value and is applied to meet and satisfy the needs and expectations of the customers [33]. It includes different processes by which an innovator generates and converts new ideas into useful products [34]. [35, 36, 37] stated that innovations are grouped into two types: evolutionary innovations (dynamic and continuous evolutionary innovation) brought by many incremental advances in process or technology; and revolutionary innovations (discontinuous innovations) which are often new and disruptive. The innovations help to create new methods of joint venturing, increasing purchasing parity power, flexible work hours and alliance creation. Organizations that are technology based take greatest risk because they create new products, opportunities and markets [23]. According to Wood [34], innovation is mainly concerned with the acceptance of a new product, service and methods by enterprises and approved by them. This has been confirmed by [38] that innovation is creation or acceptance, adaptation and utilization of a value added novelty in business and manufacturing domains, renewal and expansion of a product, services and markets, making of new ways of product development and establishing new management system. Additionally, [36, 37, 39] highlighted that innovation is the process of development of new output by implementing new methods of working and product development. Moreover, this new method of working is concerned with the improvement and better outcome of an enterprise that result in production of a new product, service and process. Innovation is reproductive renewal and competence of an enterprise to perform in correspondence to environment [37, 40]. Innovative entrepreneurship is the intersection between innovative businesses, young and high-growth businesses, and SMEs [23].

According to [41] entrepreneurs are the principal actors in innovation. They bring change in an economy by providing new combinations: new or improved goods and services, methods of production, markets, sources of supply of inputs, organization of an industry, or management processes within a firm. They disrupt markets, leading to long-run evolutionary growth in the economy. [42, 43] emphasized the role of entrepreneurs as discoverers and early exploiters of previously unnoticed profit opportunities. [44] highlighted that entrepreneurs take risks by offering new solutions in the market in the face of uncertainty because they are not sure 100% whether their solutions will be profitable. They facilitate economic adjustment by forecasting where new profit opportunities will open up and providing products, processes and business models [23]. Diverse studies have classified the innovation into different process. [45 and 46] stated that innovation is the process to develop and improve services, products, processes and markets, with the purpose to increase value of the firms. [47] stated that this process of innovation comprises four steps: invention, diffusion (communication), through social system, time and consequences. As for, [48], they identified four types of innovation: incremental, radical, modular and architectural innovation. [49] summarized these types of innovation as radical or incremental. On one side, the radical innovation involves systematic and scientific scholars and entrepreneurs to develop and assess new skills founded on technology methods [28]. A study done by [50] referred to this process as techno-globalization which includes multinational development of new technologies created by different firms across the world. Moreover, Small and Medium Enterprises with high technology participate also in this radical form of innovation process [28]. [51, 52] affirmed that SMEs are involved in radical innovation when there is a huge gap in technology. On another side, incremental innovation requires that current knowledge is combined, adjusted and used in specific context and confined perspective [28]. According to [53], innovation process is linked to three concepts that explain the role played by innovation in social-economic change, innovation process in the firms and interactive process which includes innovation systems. The following figure illustrates the relationship between absorptive capacity to local innovation systems and global value chains in explaining the level of innovation.



Figure1: Innovation process

Source: [28]

According to [54], local innovation system is a regional innovation system where SMEs interact with enterprises and non-enterprises players in the local area. The studies by [55, 56 and 57] confirmed that in local innovation system, enterprises network within their sector and with other enterprises in regions need identical skills and technology. This system helps SMEs to interact reciprocally and

exchange knowledge. The global value chain offers an innovation system and refers to activities required to get a product or service from beginning, through different stages of production and delivery to end users, [58, 59]. The presence of a global value chain provides access to explicit and appropriate knowledge, which empowers SMEs to innovate. The capacity of SMEs to innovate, however depend on a strategic plan to approach global buyers and the mode of governance of value chains [60]. In absorptive capacity, SMEs are the focus part of an innovation system and absorptive capacity enhances enterprises' abilities to gain and sustain competitive advantage [53]. The absorptive capacity comprises four steps: acquisition, assimilation, transformation and exploitation. According to [61], the acquisition is the firm's ability and capacity to identify and acquire externally created knowledge that is critical to its operations. SMEs should obtain adequate knowledge to benefit from innovation systems [62]. Assimilation includes the procedures of an enterprise that allow it to examine and analyze, develop and process, interpret and understand knowledge obtained from outside and within an enterprise through training and communication [61, 63, 64]. The transformation stage helps enterprises to transform their routines by combining old and new knowledge, it involves entrepreneurship ability to analyze information and to solve problems [46, 61]. This process requires a willingness to invest, access to finance, management capability and business plans [65]. SMEs should have ability and capacity to exploit the acquired knowledge [66].

2.3.2. Role of innovation in SMEs development

The rising of international competition around the world and markets globalization force small and medium enterprises to search for new, innovative, flexible and imaginative ways to survive [67]. Innovation is key to technology adoption and creation through knowledge management in order to explain the vast differences in productivity across and within countries. In order to survive in the globalized market, small and medium enterprises need to innovate. Consequently, knowledge management and innovation are important factors of success of economic growth. The factors that influence the innovation are opportunities, new business proposition, high cost of existing product, aim to have more market share or to be the market leader or to provide affordable medicine to everybody [68]. Innovations play an important role in the development of small and medium enterprises through new venture creation process [69]. [30] reported that innovation is key in ensuring enterprises and long term loyalty competitive advantage. [70] in his theory of economic development confirmed also the importance of innovation as a key factor of economic growth and development [71]. Empirical studies on innovation elaborate the relationship between innovation and enterprise growth [72]. An important challenge facing SMEs worldwide is continuous improvement. In today's markets, the inputs of customers and their fast changing needs makes it imperative that enterprises continuously improve the way business is conducted [73]. Entrepreneurship and innovation are recognized as key drivers of economic growth, productivity and employment and as a basic aspect of economic progress [15]. Innovation is a significant mechanism that brings opportunities to new inventions and building of new markets [33]. In addition, there is a significant increasing interest trade

and industry growth based on innovation and creation of competitive advantage [74, 75, 76, 77, 78]. To remain competitive in today's modern business world, SMEs should pursue innovation tool [79]. However, a question remains on how and what to innovate. In recent studies, [80] concentrated on this question and used previous theory to identify four modes of innovation (open exploration, closed exploration, open exploitation, and close exploitation). [72] confirmed that SMEs benefit more from innovation than the advanced enterprises generally due to their flexibility to accept change in their environment or business. The Small firms are playing a continually increasing role in innovation, driven by changes in technologies and markets. SMEs and innovative entrepreneurship play a key role in economic development and they are involved in the development and commercialization innovations. SMEs adopt also innovations developed by other business firms, and they also provide ideas and inputs to ideas generation that are exploited by large firms, scientific research centres and higher learning institutions. The majority of SMEs innovate incrementally when they copy existing technologies and apply them to their environment. These innovations help SMEs to compete at relatively low cost and increase economic development [51, 55, 58, 81]. SMEs inform themselves with up-to-date technologies and market demands in interaction with researchers, buyers, business associations, business development services, finance institutes, firms, friends and family [28].

According to [34], the creativity of SMEs is to establish valuable and useful new products, services or ideas and the methods by which individuals work together in a complicated social system. Studies done by [36, 37, 82, 83] reveal that innovation is used by SMEs to define their problems, respond to unforeseen events, create solutions and develop new ways and procedures to organize their work, through the use of experience, skills, motivation and the knowledge accumulated is converted into the production of an innovative product or service. Empirical research indicates that there is significant relationship between innovation and growth of the enterprises if there is a constant supply of finances [84]. In the presence of innovation, the overall enterprise outcome would enhance [67, 85, 86, 87, 88, 89]. This shows that innovation is critical for the growth of the firms in terms of its sales, market penetration, profitability and sustainability of organizations especially for small and medium enterprises.

3. The effect of financial institutions in promoting SMEs

SMEs play a significant role in economic development, both in developed and emerging markets. Now the question arise: how small and medium enterprises (SMEs) finance their operations? What is the role of financial institutions in the growth of SMEs? Financial institutions are intermediaries between surplus and deficits. They play a role of intermediating people, business companies or enterprises in need of funds (borrowers) with lenders. Financial institutions offer a large range of financial services that SMEs deem key to facilitate trade and cover financial risks [8]. Financial

institutions play a significant role in funding SMEs. They not only provide loans but also provide other facilities like management advice, training to employees, managing administration [4]. However, various studies have affirmed that SMEs are financially more constrained than large firms and are less likely to have access to formal finance [90]. Many SMEs in emerging markets often rely on informal sources of capital, such as borrowing from relatives, to meet their finance needs. Moreover, since most large firms usually start as small enterprises, the practicality of SMEs becomes crucial to any economy that needs to grow. The concerns are composited by evidence showing that SMEs tend to be more financially constrained than large firms and that lack of access to finance is an important obstacle to their growth [91]. In particular, SMEs find it difficult to obtain outside financing from banks and capital markets given their size and characteristic opaqueness [6]. SMEs tend to suffer from a financial shortage impeding their expansion into foreign markets. Therefore gaining insight into the financial barrier that SMEs may encounter enables to target SMEs' specific financial needs and what role can banks play in this process. Banks offer a large range of financial services that SMEs deem key to facilitate trade and cover financial risks. Trade Finance and solutions such as exports and imports documents, bank guarantees, or standby letters of credit aim at meeting SMEs' expectations in terms of reactivity or products expertise. Half of internationalized SMEs consider Trade Finance essential to enter new international markets. Risk coverage, such as currency risk (forward exchange, currency options, etc.). Consequently, police makers and governments have established various programs to raise SME lending and improving the institutional environment, such that the financial institutions are more willing to lend to SMEs [92]. They have involved subsidized loans, guarantees, and special lines of credit by certain banks, typically for particular economic sectors like agriculture firms and innovative activities [7, 9, 93]. Banks have begun to turn their attention toward this untapped market and their service to SMEs is a major factor in increasing SME access to finance.

Banks have traditionally viewed SMEs as a challenge because of information asymmetry, lack of collateral, and the higher cost of serving smaller transactions. However, as corporate banking margins continue to shrink and increasing fiscal restraint lowers yields on government borrowings, banks have begun to explore the SMEs space. SMEs are longer-term debt instruments. However, although banks have previously focused on high-value, low-risk corporate clients, there is an increasing consensus that the SME market can be a profitable. Banks supported this perception by employing a range of measures, such as risk-adjusted pricing, credit scoring models, and SME-tailored non lending products, they are developing ways to mitigate risks, lower costs, and increase the overall benefit accrued from SME banking. SMEs are particularly in need of bank services because they lack the cash flow to make large investments, they cannot access capital markets as large firms can, and they often lack qualified staff to perform financial functions.

In addition when banks provides long-term debt such as term loans with longer maturities and fewer restrictions on usage (for example, through research and development, or property and equipment

purchases) provide SMEs with investment capital for strategic business expansion without losing their ownership; while short-term and working capital loans help SMEs grow incrementally. The bank deposit and transaction products improve operational efficiency and enable SMEs to outsource financial functions.

Bank products can also enable SMEs to take on more and larger contracts. SMEs may have a potential order from a customer, but need cash to complete the order. Banks can provide short-term working capital to such SMEs to purchase supplies, pay employees, and meet obligations to clients. SMEs may have difficulty obtaining these types of loans because of inadequate financial records or assets to use as collateral. Financial institutions, through their intermediation role are meant to provide financial support to SMEs. To perform this and play their role in the economy, SMEs need adequate funds in terms of short and long-term loans [94]. SMEs need adequate finance to their survival, as it has been recorded in literature that financial constraint is one of the main reasons SMEs fail [1, 95, 96]. According to [97], financing strength is the main determinant of SMEs growth in developing countries.

For SMEs to grow, it important to facilitate access to information by improving the infrastructure that provides information which involves the supply of financing (banks), the demand side (SMEs), and the government, which regulates and shapes the institutional environment. According to UNCTAD [2], sustainable economic growth is strongly related to the rate of enterprise creation and technical innovation, and dynamic enterprise creation depends on a country's entrepreneurial culture and the ease with which businesses can be started and financed.

4. Challenges facing SMEs

The SMEs are playing an increasing role as drivers of growth and job creation in the economy, but they face major challenges in responding to globalization and to new forms of innovation. Creating jobs for young entrepreneurs and fostering female-entrepreneurship remains a key challenge [31]. They often face stronger barriers to capital and labor markets than larger established businesses. It is for that reason that multiple policy measures have been adopted to target those firms and their opportunities to engage in innovation [98]. Some of the common problems which one generally, faces while running a business are [90]: Lack of cash flow: cash is the life line of any business. It is necessary to have adequate cash to run a business successfully. Lack of cash flow can lead to insolvency in the long run. This problem arises when you give long credit periods. It is always better to give 1% or 2% cash discounts to encourage people to release payments well on time.

Changing government or economic policies: every single change in government or economic policies, the business policies and strategies suffer a great deal. Every increase or decrease in the price of products or rates of taxes the business suffers either positively or negatively. For example change in

export or import policies affect the business house which depend on either of them. Every single penny increase in price of fuel can also lead to significant changes in the business. Macroeconomic instability and inappropriate regulatory and tax policies constrain entrepreneurship and the development of innovative SMEs. *Varying labor and raw material cost*: in the present scenario, there is a shortage of labor and raw material, owing to the economic recession. It has become really difficult to procure labor and raw material at economical prices. *Lack of track records*: it is very important to keep up-to-minute track records of inventories, sales and purchases. This will help you keep a track of all the money and you can see where to cut down cost to make maximum profits. *Tough competitors*: it is almost impossible these days to have monopoly in any products or services. One has to face large competitions in all walks of business. From procurement of space, procurement of labor, raw material and necessary services, one has to compete with various other who are seeking the same services. Keep buyers and suppliers intact: it is very important to maintain your buyer and supplier list. Try and keep them happy and satisfied for as long as possible. Offer them cash discounts and if possible offer longer credit periods. Entertain them timely and listen to their grievances patiently and reply politely. This will help you in strengthening your long term relations. *Accounting and taxes*: it is the most problematic area of running a business. Maintaining up-to-date accounting books is quite problematic at times. It is better to appoint professionals to keep accounting and tax related documents ready. Accounts help you to know the real position of the business, as to what is the status of it, where is it actually heading. Is it profitable or needs certain amendments in the procedure to manage the things. *Natural Disaster*: natural disaster is the most unforeseen danger. It is almost difficulty to prepare yourself against the unforeseen calamity, consequently, it needs to adopt forecasting strategies. According to [2], various financial institutions in emerged and emerging countries find it challenging to SMEs because of high perceived risk and high transaction costs and lack of experienced personnel and appropriate corporate structures, which bias them against SMEs, including those created by women entrepreneurs.

In developing countries like Rwanda, improved technology is often the key to economic growth and efficiency in the economic sectors contributes to break the vicious cycle of poverty. However, in Rwanda, the SMEs fail after operating a short time, the reasons why business fail are: lack of entrepreneurship skills, overexpansion, poor capital structure, overspending, lack of reserve funds, bad business location, poor execution and internal controls, an inadequate business plan, failure to change with the times and lack innovative strategies, ineffective marketing and self-promotion, high taxes, lack of market knowledge, uncompetitive prices, access to appropriate technology and underestimating the competition [13]. SME sector is a less formally organized sector in Rwanda, and the economic environment also creates structural problems which hinder enterprise competitiveness [11].

The majority of the SMEs struggle to increase productivity, organizational effectiveness, sustained competitive advantage and satisfactory rate of return on investment. It is not an easy task to achieve such kind of objectives in an economy where traditional and informal practices of business management are still applied. It is evident from research that technology and innovation strategies are key resource for gaining competitive advantage, but it challenging because Rwandan SMEs lack innovation skills. Running a successful business is not children's play. With inconsistent economic policies, changing governments, inflation, cash flow problems, variation in labor and raw material cost, it is really tough to manage business. According to [99], SMEs in Rwanda face many macro-level challenges faced by large companies, including limited transport and energy, lack of a strong insurance industry, limited financial outreach, difficulties with contract enforcement and a weak education system. They also, according to the 2008 GTZ/PSF study, 'Cutting Red Tape', face huge burdens in regulatory compliance costs that can be better absorbed by larger firms. This survey identified the challenges faced by SMEs. The top challenge was high taxes, caused by the current tax regime. Next was the lack of customer/market knowledge, lack of capital, uncompetitive prices, access to finance and transport. They also often lack the ability to gather and process market information outside of what is immediately relevant to their current business, due to the lack of technical knowledge and training on how to make use of this information. SMEs face difficulties in accessing and utilizing information regarding local, regional and international pricing, a major constraint to business planning as well as about the regulatory environment in Rwanda and regionally [100]. SMEs do not have any participation in the policymaking process, meaning that they have little knowledge of interventions designed to assist them. SMEs have inadequate access to market information that could benefit their businesses as well as inadequate knowledge about marketing their products both nationally and internationally. Every company demands its management to put more emphasis on IT and innovation aspect. This is because they are very crucial for successful businesses.

Low access to finance is also widened by supply limitations. Supply-side barriers include a small number of banks with the interest or capability of serving SMEs and a low level of innovation leading to very limited offer in the range of appropriate products for financing SMEs. For instance commercial banks offer mainly deposit services and short term credit facilities. Facilities of three years and longer maturities are quite rare for SMEs. Based on PSF reports, there is almost no availability of supply chain finance products such as purchase order financing, invoice discounting, factoring or distribution finance [99]. Also, other macro-level factors such as property and land ownership, regulatory requirements and the practices of securing loans affect bank behaviour and impose high transaction costs on SMEs. Other general challenges in SMEs finance in Rwanda relate to information gaps which fall into three categories: knowledge of SME demand and market segmentation by financial institutions; SMEs knowledge of financial products in the market and financial literacy among SMEs. According to [101], there is a weak linkage between big banks and

SMEs in rural areas. In an effort to bridge the financial services access gap and encourage local people to use formal financial institutions to save money and take out loans, the Government of Rwanda began providing assistance by establish a small Savings and Credits Cooperatives (SACCOs) in every Umurenge (administrative sector) in the country. The Rwandan banking industry introduced also new financial services and products (financial innovative services), as one of the strategies to increase service delivery and customer satisfaction. This resulted in increase in the number of people who could access banking services. With this challenge, an opportunity arises for both public policy makers and the private sector to intervene at various levels to encourage better banking services, higher deposit rates, and greater accessibility of capital for SMEs.

5. Conclusion and recommendations

This study was aimed to find out the role of financial institutions and SMEs in promoting innovation in Rwanda. The empirical review shows that the Rwandan SMEs sector recognize the importance of SMEs in economic development of the country. Various studies indicated that innovative technology strategies are key resources for gaining competitive advantage. Enterprises focusing on innovation achieve not only competitiveness but also are able to sustain themselves for a longer period of time. However, it is not an easy task to achieve such kind of objectives in a country like Rwanda where traditional and informal practices of business are still applied, and where many businesses lack entrepreneurship and innovative skills. To sustain economic growth and increase competitiveness among SMEs, innovation and technology strategies should be applied. The survival of Rwandan SMEs will depend on their ability to innovate as they will face enormous challenge from other Eastern African member countries SMEs. They should be engaged in developing activities that help to acquire new and advanced technologies and innovations by developing also the required capacities and skills of their employees. To achieve this, financial institutions have to participate by allowing subsidized loans, guarantees, and special lines of credit to SMEs, typically for particular economic sectors like agriculture firms and innovative activities. Financial institutional supports alleviate SMEs' challenges and constraints. The strategy of securing SMEs access to funds to increase the capacity of financial institutions to grow and make more efficient the delivery of financial services and products, both offline and online, for different segments of SMEs. It is important for financial institutions to know their markets and customer needs and offer updated products, as well as automatic and standardized ones. Financial institutions have significant impact on SMEs, since they still remain an important source of finance through which SMEs can grow. SMEs should cultivate the culture of innovation and entrepreneurship skills. They should keep adequate financial accounts of their business operations as this is one of the pre-requisite in securing loans from banks. To fulfil their potential for job creation and long-run growth, governments must ensure a business environment that stimulates entrepreneurship and does not impose undue burdens on innovative SMEs. There should

also be an appropriate set of structural policies addressing market, system and government failures in areas including financing, access to markets and knowledge networks, the management of intellectual assets and entrepreneurial human capital. Recommendations are addressed to SMEs to improve their abilities in order to manage innovation, to constantly engage in capacity building, research and development and governments should reduce financial barriers to SME innovation and facilitate SMEs' access national and global innovation networks.

The Government of Rwanda should encourage financial institutions to lend to SMEs by providing incentives and persuade the banks to give preference to SMEs. The Government also should maintain regular supervision of the financial sector, taking into account the specific requirements for medium and long-term investment finance for SMEs, and ensuring that lending to SMEs is on a sustainable basis. The government should continue to deliver cheaper more accessible energy, improve infrastructures and other transport infrastructures to reduce innovators transport costs, investing in higher quality, more widely accessible education modelled to increase marketable skills. Promote business run by the youth and female entrepreneurs. The government should establish a solid financial infrastructure like auditing and accounting standards, credit registries/bureaus, and collateral and insolvency regimes by building reliable data sources for SME finance. We recommend to government to reinvent the future of SMEs by transforming educational system in order to impart entrepreneurship skills to young people. Further studies should review the latest trends in financial innovation for SME customers in order to increase their access to finance services; and they should raise awareness among policy makers about the role of these innovations activities for Small and Medium Enterprises and consider how they could be applied in Rwanda.

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