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**REVENUE LEAKAGES IN SMALL AND MEDIUM SIZED ENTER-  
PRISES**

**Comparison between Ghana and Finland**

**Master's Thesis**

**CENTRIA UNIVERSITY OF APPLIED SCIENCES**

**International Business Management**

**August 2018**

**ABSTRACT**

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<b>Degree Programme</b> Master in Business Administration – International Business Management		
<b>Name of thesis</b> REVENUE LEAKAGES IN SMALL AND MEDIUM SIZED ENTERPRISES Comparison between Ghana and Finland		
<b>Instructor</b> Katarina Broman		<b>Pages</b> 59 + 4
<b>Supervisor</b> Katarina Broman		
<p>The purpose of this study was to review the leakages in small and medium sized enterprises and by comparing organizations in Ghana and Finland, and as such come up with a practical solution, hence the development of a Point of Sale application. Various literatures and theories were reviewed to gather secondary data to complement the study.</p> <p>A practicable form of research was adopted as the researcher believe organizations must be able to monitor their sales and revenue in comprehensively. The respondents were made up entrepreneurs in Finland and Ghana, who own businesses in various sectors of the business field. 50 entrepreneurs responded to the questionnaires that were administered through Webropol and their answers were represented in graphs to depict their answers.</p> <p>The researcher found that technology could be used to monitor activities within the organisation especially sales. The study revealed that, organizations used proper bookkeeping methodology to monitor their revenue. On the other hand, there is a tendency for these organizations to use software application in monitoring processes, but they might have to be educated more on how it functionalities work. The revelation brought to bear that, organizations which fall within a specific revenue range rely on their memories in their revenue monitoring, which could be jeopardize their revenue mobilization. Nonetheless, respondents also believe integrating software application in their processes could have a positive impact on the revenue, but none availability of these application is a major problem due to a couple of factors such as lack of knowledge, cost of the application and many more.</p> <p>Recommendations were made at the end of the study, which could help organizations realize their full sales value.</p>		

<b>Key words</b> Revenue Monitoring, Software Application
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## **CONCEPT DEFINITIONS**

**SME** - Small and Medium Enterprises

**OECD** - Organization for Economic Co-operation and Development

**CRM** – Customer Relationship Management

**IT** – Information Technology

**ICT** - Information Communication Technology

**GSS** - Ghana Statistical Service

**NBSSI** - National Board of Small Scale Industries

**IPO** - Initial Public Offerings

**GDP** – Gross Domestic Product

**IFC** – International Financial Corporation

**MSE** - Micro and Small Enterprises

**GSMA** – Global System for Mobile Communication

**ABSTRACT**  
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## 1 INTRODUCTION

The problem with expected revenue and actual revenue has been a major headache for entrepreneurs of Small and Medium sized Enterprises. One will expect the sales value of goods sold, but many at times, this is not the case as the actual revenue realized from sales is below expectation. What accounts for this shortage actually affect SMEs life span and their inability to identify and resolve this issue accounts to their eventual collapse.

The primary objective of SME establishment within a setting it to make money as well meeting the basic needs of an entrepreneur. But due to their inability to put in place measures and control often lead to the creation of leakages in their revenue generation. Most SMEs use conventional means of accounting which are often outdated and lack proper monitoring features, thereby exposing the organisation to potential run down by criminally minded employees. These employees perform dubious transactions that are in lure to organizational interest. These include theft, understated sales, unapproved discounts, inflated prices, unauthorized giveaways and others.

SMEs the world over have similar objectives but their operations might differ depending on their location. The environment in which they are established contributes to their development and growth. SMEs in developed countries tend to enjoy favourable conditions while their counterparts in developing economies tend to face challenges created by the government or other factors. Ghana which is a developing country, have majority of their citizens being entrepreneurs who own SMEs across the country. It is estimated that 70% of the population are entrepreneurs, who are into selling, manufacturing and distribution (Chu H. M, Benzing C, McGee C, 2006. 4).

Finland on the other hand can be categorised as a developed country with over two hundred thousand SMEs ranging from agriculture to manufacturing. According to Statistics Finland, as at 2016 the total number of enterprises was close to 357,000, with a decrease in retail trade. Micro enterprises in that same year saw a reduction in their number, but small and large enterprises grew a bit in comparison to to the previous year. (Nurmela, P. 2017)

Business operations differ from country to country. Most SMEs in developing economies lack advanced ways of operation such as the usage software applications. Ghanaian SMEs are stuck with primitive ways of monitoring and recording of data. Most use books and files to record information whiles SMEs

in Finland mostly use advance technology in their processes. Therefore, it is of prime importance to these Ghanaian SMEs to employ information technology in their processes.

Information Technology (IT) has for the past five decades evolved to the extent that one cannot plan a project or start an initiative without the involvement of technology. Information Technology does not only involve personal computers or smart devices, but also modern machinery in factories, automotive industry, aviation industry as well as various household appliances. This has not only facilitated our daily activities but also generally improved our lives in reducing cost and time.

The main objectives of this thesis are to come out with practicable solutions for entrepreneurs who own SME's in Ghana and Finland to realize their full sales value. Owners of these companies invest so much into starting a business, which are mostly on small scale basis, but may never earn return on their investment and eventually die off within the first year of commencement of business. Those that are fortunate to live over a year face difficulty in their operations and eventually die off a few years' time.

Therefore, it is of prime importance of this research to come up with a state-of-the-art application which has its functions built around the local attitude and culture of Ghanaians and to aid revenue mobilization. Most applications on the market have universal functions which might not necessarily have a positive impact on the local companies. They are mostly developed around default concepts which are applicable mostly in developed countries but not locally in Ghana. Hence the need to have a localized application which inculcate the Ghanaian culture in its functions.

Another objective is to establish the benefits of using the practical solutions, which is to reveal the competitive advantage it would have on other competitors on the market. It is always important to be ahead of your competitors within the environment you operate to achieve success. As the world evolves, competitors engage in new technologies to outwit their opponents. Which has made it important to adopt efficient technologies to always stay ahead.

To reveal the advantages of using software application in revenue monitoring within the organisation. Also, it is the objective of the thesis to establish operational excellence of the application to the organisation, which is improving efficiency and profitability in the organisation. Since profitability is the main reason for the establishment of any business, it will be of great importance to the organization to know how profitable the application has been to them since its deployment.

Information Technology usage has increased the rate at which people work from home. While a considerable number of people work from home, others are work mobile. This reflects the great opportunities that Information Technology and the Internet provide as an important tool for implementation in organizations and public institutions. When well anchored, within an organization's strategy, internet can contribute to information sharing, information exchange, relationship-building actions and other market orientation supporting activities (Brock and Zhou, 2005; Chang et al, 2002)

The recent boom in ICT usage in the world has necessitated organizations to adopt them in their processes. The failure to include ICT in the processes of an organisation can result in a catastrophic end, especially for SMEs. Most entrepreneurs had the excuse of not using technologies as being expensive. However today, with the continual improvements in Information Technology, as well as breakthroughs in cloud computing and mobile connectivity, entrepreneurs can afford technologies to a higher extent. But the decision to fully integrate technology in their processes is often delayed or totally abandoned because they are stuck in growing their businesses rather than invest in IT. They hardly allocate time to access how technology could improve their activities and as such maintain the old system of operations. Even so, some SMEs are able to commit to new technology trends and innovations. They invest in newer technologies as and when they are available to stay relevant in the ever-changing business environment.

Nevertheless, the relationship between small and medium sized enterprises and their use of information and communication technologies (ICT) is problematic. Globally, almost all the sectors in SMEs have access to ICT in their processes. It is no longer a barrier to e-business, as simple applications such as email and web access are virtually unavoidable. However, the usage of high complexity applications such as supply chain management system, customer relationship management (CRM) application, integrated financial ledgers, by SMEs are much lower.

As a result of not using simple technologies to man their activities, employees take advantage of the loopholes in the system and use them to their benefit. This situation is prevalent in the financial sector of the organisation. Revenue accrued from the business operations is the backbone of the organisation, hence the collapse of majority of these companies. But for reasons best known to the entrepreneurs, they are unable to enjoy these profits to the fullest.

Majority of the SMEs in Ghana are stuck in the old system of management, where entrepreneurs do not have the right tools to run companies especially SMEs in Ghana face a daunting task in mobilizing and securing their finances during their operations. These companies are still using conventional methods in



book keeping, exposing themselves to massive leakages in their finances. This is a whole new topic in this area of SMEs and after the research, it will afford SMEs the opportunity to learn new and technological ways to solving the financial leakages.

There have been several researches done by different authors on SMEs and their operations in the world, but more specifically in Africa. Various topics have been covered in all aspects of SMEs, which include SME financing, employee motivation in SMEs, and others. But the concept of revenue leakages in SMEs has been abandoned by many authors, hence the need to fill that gap in SME operations. The thesis will seek to find the numerous loopholes in the operations of SMEs which people take advantage too milk the companies.

While conducting the research, there will be a need to answer some pertaining questions deemed relevant to the success of the research. The research is aimed at finding out whether there are any developed applications currently being used by SMEs in revenue mobilization. Then whether there has been an improvement in business efficiency and profitability using the application. If yes, what has been the trend so far? Also, it is aimed at finding out whether there has been an improvement in decision making by managers of SMEs in Ghana when the application was incorporated in their processes. And last but not the least, whether comparatively, there has been any reduction of operational cost since the introduction of the application in the company's operation

The thesis is structured into six chapters, beginning with the introduction, which discusses the background of the thesis, emphasis on the importance of researching on that topic. It further goes on to describe objectives of the thesis, then the research questions that the writer is seeking answers and its hypothesis. After the introduction is the theoretical framework is presented. It basically evaluates previous researches written by different authors on the topic. Articles, journals, reports and other scientific materials were reviewed as part of the secondary data. Chapter three discusses the methodology that was used in the thesis as well as the sample and population of the respondents. The analysis and the presentation of data follows the methodology which is the chapter four. It discusses the data and findings of questionnaires that we completed by the various respondents. These respondents are various SMEs spread throughout Ghana.

The fifth chapter presents the discussion on the findings and recommendation about the study. The findings is based on the information gathered in this study. The researcher makes clear recommendations that could be used in the future, either by an entrepreneur or any individual willing to undertake further studies in the topic.

The sixth chapter concludes the thesis with the summary of whole dissertation, giving out criticisms as well as the final presentation on the study.

## **2 INFORMATION TECHNOLOGY IN SME REVENUE MOBILIZATION**

This chapter provides an overview of previous research on SMEs and their operations in the world. It introduces the framework for the case study that comprises the focus of the research described in this thesis. For a deeper understanding of this chapter with respect to the thesis, it is important to set the literature review work by initially providing the specific purpose it has on this case study. Also comments on previous treatment of the broad topic of SMEs and how they operate in their area of jurisdiction.

The main purpose of the theoretical framework is to survey previous studies on Small Medium Enterprises' activities and how information technology has been used in achieving their objectives in Ghana as well as Africa and the world. It will further discuss how other SMEs in developed countries use software applications to manage their companies, which prevent loopholes from being created by members of the companies to milk them.

The examination of previous literature will afford a better understanding of how important information technology is to the successful operations of an SME. How it prevents recalcitrant workers from engaging in frivolous activities which could bring the financial status of the company down and in worse cases total shut down.

### **2.1 Overview of Small Medium Enterprises – SMEs**

According to Gentrif B and Pula J, in their article; *Defining Small and Medium Enterprises: a critical review* (2015), there is no unique, universally accepted definition for small and medium enterprises. Most authors who have tried defining SMEs use quantitative indicators, the size of number of employees and economic criterion of annual turnover and the summation of economic results in financial statements.

However, SME as defined by OECD, 2000, it is non-subsiary, independent firms which employ fewer than a given number of employees. Employee numbers vary from continent to continent, with European Union giving an upper limit of 250, North America setting it to 200 employees, while some countries set the limit to 200 employees.

For developing economies which includes African countries, having more than 100 employees is large while a small business could have one to five employees. But despite the numerous definitions, several researches agreed to define SMEs as those having less than 250 employees although very small businesses may have less than 50 employees while micro-enterprises have between 5 to 10 workers. (Muriithi, 2017, 37)

According to OECD in their article “Enhancing the contributions of SMEs in Global and Digitalized Economy, 2017”, SMEs are the predominant form of enterprise, which accounts for almost 100% of all firms. They suggest that averagely it provides employment to about 70% of the population under their organization and a major contributor to value creation, which generates averagely between 50% and 60% of value added. SMEs in emerging economies contribute up to 45% of total employment and 33% of GDP. With reference to informal businesses, SMEs contribute more than half of employment and GDP in most countries, irrespective of income levels (OECD, 2017)

Africa has seen some growth in its economies, and the backbone of this growth has been the emergence of several SMEs. Narrowing it down to the sub-Saharan region of Africa, SMEs constitute over 90% of all firms (Hatega, 2007; Kaufmann, 2005; IFC 2006). Between 2000- 2008, the GDP of most of these countries grew by 5%, even though it differs from country to country, there was a persistent jump in growth rates. (Fjose, Grunfeld, Green; 2010). The role SMEs play in the lives of the people in sub-Saharan African countries is significant due to the reduction of poverty among families in these countries. It also serves as the backbone of their GDP and provides employment for majority of the population. (Benzing & Chu, 2012)

SMEs range from mining to manufacturing, service industry to agriculture, fishing to climate change as well as wholesaling and retailing. They are also the link between simple industries to complex and highly developed large industries and provide a platform for Africa take-off to development. SMEs play a pivotal role in facilitating development through the provision of inputs and services for industries while at the same time providing direct goods and services to consumers. This makes SMEs continue to propel the engine for sustainable growth and economic development of African countries (Fjose et al, 2010)

### 2.1.1 SMEs in Ghana

As discussed earlier, there are no globally uniformed definitions for SMEs, however in Ghana, the commonly used definition is the number of employees of the enterprise. But, in applying this definition, there is some controversies in respect of the arbitrariness and cut off points used by the various official records (Dalitso and Quarey, 2000). According to the Ghana Statistical Service (GSS), small businesses are enterprises that employ less than 10 people, while those that employ more than 10 people are classified as medium and large-sized enterprises.

On other hand, National Board of Small Scale Industries (NBSSI), which is an apex governmental body for the promotion and development of the Micro and Small Enterprises (MSE) sector in Ghana, utilizes both the fixed asset and number of employee's criteria to define SMEs. According to them, enterprises employing twenty-nine or fewer workers can be described as micro and small enterprises. Where micro enterprises are those that employ 1 -5 people with fixed assets not exceeding USD 10,000 excluding land and building. The further classified SMEs as follows: Micro enterprise: less than 5 employees; Small enterprise (6 -29) employees; Medium enterprises (30 -99) employees; Large enterprise (100 and more) employees. (Oppong, M. Owiredu, A. Churchill, R, Q. 2014, 87)

Although SME has been around for a while, but in Ghana it can be traced to the 1970s, even though they did not assume much success in their operations. To streamline their activities as well as bolster their operations, certain institutions were set up to give a helping hand in their operations, such as Ghana Enterprise Development Commission. (Hinson, R. Boateng & R. Sorensen, J.O. 2015, 116 - 138). The idea to develop the SME sector in Ghana was because of the failure of large organizations to serve as the engine for the growth of the economy and serve as an employer to the growing population in the 1970s. Although large organizations received massive support through general trade, finance, tax policy and direct subsidies, they were not able to provide the necessary assistance for the growth of the economy. (Adjei, D, S. 2012, 30)

Entrepreneurs who own SMEs in Ghana can marshal idle funds in the economy and turn them into profitable ventures by reinvesting and expanding production. The number of jobs that are created by entrepreneurs are enormous, as compared to large companies, through indigenous entrepreneurship. Less privileged individuals in the society are catered for through these SMEs because they operate locally, therefore are not bothered by any foreign exchange requirements. They also produce tailored made products, which meet the specifications of the locals in the country.

It must be noted that, countries all over the world have ways of dealing with SMEs, which Ghana is of no exception. It is a well-known fact that they are the engine and the bedrock of entrepreneurial activities in most economies in the world (Hinson, R. Boateng, R. Sorensen, J.O. 2015, 116 -138). SMEs in Ghana are evenly distributed across the country, although most can be found in the regional capitals. They are likely to succeed in smaller urban and rural areas due to their labour intensive nature and helping the local economy as well as reducing the number of rural-urban migration.

The contribution to the national economy by SMEs is mainly through manufacturing of goods, providing services to consumers and other firms. SMEs are again not only suppliers of goods and services to consumers but also a source of demand for industrial and consumer goods. Thus, they demand goods and services and stimulate the activities of their suppliers.

Most SMEs in Ghana are characterized by higher intermediation costs of smaller projects and as such do not have access to local and international capital market. During their operations, they are likely to incur almost the same fixed cost as their counterparts in large companies, but most often they are denied access to the international market due to the lack of support by government.

### **Classification of SMEs in Ghana**

Ghana is made up of both rural and urban dwellers, with majority of the population in the urban areas. According to the United Nations Population Division's world Urbanization Prospects, as at 2016 the population in the urban area was 54.7% of the total population. Among these population is where SMEs are established, categorizing it into organized and unorganized enterprises. Those enterprises that are organized have registered offices and employees who receive monthly or weekly salary, while the unorganized enterprises are basically made up of artisans, who work in open spaces, temporary wooden structures, kiosks, from home and employ little or no salaried worker. These workers are always on task-based employment, which means, they are laid off immediately their task is over.

With the rural enterprises, they are mostly made up of fabric designers, ceramics, timber, mining, bricks, clothing and tailoring, textile and leather, soap making, among others. Those involved in these enterprises include individual artisans, family members and women who are into food production from local crops. (Liedholm & Mead, 1987; Osei et al, 1993, World bank, 1992; Gray Cooley & Lutabingwa, 1997)

The operations of SMEs are mostly done by women in Ghana, which often are home based. But those enterprises owned by their male counterparts are usually outside the home and are mostly registered. These enterprises owned by women are often not in the position to take up credit facilities to bolster their operations because they are not captured in official documents to attract these credits with these credit schemes designed with the mindset of registered enterprises. In a recent report published by the Mastercard Index of Women Entrepreneurs 2017, women own 46% of businesses in Ghana, making it one of the top performing African countries.

### **Sources of financing for SMEs**

Issues of financing SMEs in developing countries, especially Ghana is of great concern to entrepreneurs. It has also dominated several write ups across the world by different authors because is the number one factor that affects the development of SMEs. Entrepreneurs must have a sound financial base to start an SME, that has the potential to survive into the future. There are several sources of capital existing, but many of them may not be accessible to entrepreneurs of SMEs.

Relatives and friends is a common form of raising capital to finance SMEs in most developing countries. This is always the best option because most financial institutions are reluctant to offer entrepreneurs the needed finance, especially when they are new, simply because of the risk involve. This source of funds, however, bears a potentially dangerous price.

Many friends and relatives find it very difficult to stay as passive creditors or investors. They usually try to interfere with policy and operational issues. (Kuriloff et al. 1993; Longenecker et al. 1994). As a remedy to this problem, the authors suggested that this means of financing must be treated as a bank loan, where an undertaken will be signed by both parties, stating clearly the refund period and interest associated with it.

Various literature believe that banks are the main external capital provider for SMEs sector in both developed and developing countries. In the development and growth of a startup or SMEs, the financial systems play a fundamental role by serving as an alternative source of funds. An assertion made by Hisrich and Peters (1995) was that commercial banks constitute the most widely used source of debt financing for small companies, which was backed by Longenecker et al (1994), claiming that what commercial banks loan to small companies, are mostly short – term loans, though some do offer long – term

loans to small and medium sized companies. It is assumed that bank loans are available for SMEs on competitive and fair basis. (De Bettignies & Brander, 2007)

There is a suggestion by Moro, Lucas, Grimm and Grassi (2010), that, for SMEs to optimize their capital structure, they should focus more on bank financing, which was supported by Keasey and McGuinness (1990) in their article that, despite the bank financing being more expensive in comparison to other alternative financing, it generates a higher rate of return for SMEs. They further conclude that bank finance can aid SMEs to accomplish better performance levels than other financing sources can do. This is because SMEs tend to use the funds judiciously when they are monitored and answerable to the banks.

Also, when banks are resourcing SMEs financially, they demand evidence of the company's ability to pay the interest as well as the principal on the agreed period. The banks can know the company's capabilities through their cash flow statements throughout the years. However, the banks usually demand security, which collaterals are usually used.

Business suppliers can serve as a source of financing to SMEs in the form of credits. This is also a very important means of generating capital for the businesses. This form of financing can vary from a few days to several years and are usually in the form of trade credit or equipment loans and leases.

Trade credit basically involves the purchase of goods and services for a supplier on credit. The purchasing firm is usually given 30 to 120 days to settle the debt. According to Garcia-Teruel & Martinez-Solano (2010), trade credit is a delay in the payment for goods or services after they have been delivered or provided because of an agreement between the supplier and the firm. It provides access to capital for firms that are unable to raise it through more traditional channels.

Entrepreneurs tend to use this form of financing when alternative source of finance is unavailable or expensive. More so, trade credit financing is preferred by new young SMEs when the risk of default is high during the early years of operations.

Comparing trade credit to bank loans, SMEs tend to prefer trade credits because suppliers are more flexible in their dealings with them. They may only check whether the SME is in good standing in terms of credits whereas banks demand financial statement and cash flow budgets before extending a credit facility. Generally, suppliers are very eager to add to their customers (irrespective of the size of firm) and thereby increase their sales hence they are more willing to assume greater risk.



With the issue of adherence, banks are more rigid than suppliers. They require strict adherence to loans terms and monitor borrowers more closely than suppliers do.

Also, negotiations are easily done especially when the entrepreneur wants the amount of trade credits to be increased when the company's purchases increase. Banks are less willing to substantially increase the amount of credit they grant to customers, especially small medium scale companies.

However, trade credit comes with its associated risk. They are mostly not cost free, meaning, it is not explicitly stated as compared to bank loans, which has bank interest known to the customer. When suppliers incur cost by supplying goods on credit and they must recover cost, they usually pass those cost to the customer as part of the purchase price of the merchandise.

Again, it can be costly to the SME when the buyer delays the payment beyond the specified date in the agreement.

Notwithstanding the challenges, Berger and Udell (2006) believe that despite some drawbacks, trade credit remains an important source of financing for most SMEs, especially the startups. Trade credits can serve as a cushion to SMEs in times of financial challenges such as credit crunches, contractions of monetary policy or other shocks that may make other funding suppliers unwilling to provide financing to SMEs, they further stated.

Raising of funds for outright purchase of certain machines and equipment is of great challenge to most SMEs, resorting to installment packages for these purchases. But they are made to pay an initial deposit before the rest is spread across a period, either weekly or monthly, running into years, usually three to five years period.

But an alternative to this is equipment leasing. This allows firms to have a greater investment flexibility; and smaller amounts of capital are required by the firm at any given time. However, the involved cost is always higher than the cost of outright purchase. But in situations whereby continuous specialized maintenance and protection against obsolescence is required, leasing may be more suitable.

Due to moral hazard and problems with information opacity typically being more severe during initial stages of SME development, internal equity financing, as best represented by owner-manager personal savings is a critical source of funding for SMEs in these early stages, that is seed financing and start-up. (Abdulsaleh & Worthington, 2013, 40). During their operations, and as they are growing, they tend to

decrease the dependence on this source of finance and venture into alternative ones. Venture Capital and internal generated profits are just two examples of equity options SMEs seek to expand as they grow.

Generally, equity capital is the money invested in the firm without a specific repayment date, where the supplier of the equity capital is effectively investing in the business. (Ou & Haynes 2006, 156). It can be generated internally or externally depending on the size of the money. Internal equity is mostly from the owners of the company, friends, family members or it could be the retained profit from the firm. External equity is capital mostly acquired from external channels besides the existing partners and their relatives.

Venture capital is a form of financing in which funds are raised from investors and redeployed by investing in high risk informationally opaque firms which for the most part is young or start-up firms. (Abdulsaleh & Worthington, 2013, 41). Stevenson et al., (1999), also describe venture capital as a pool of equity capital contributed by wealthy individuals, as limited partners, and professionally managed by general partners for a fee and a percentage of the gain on investments. Thus, venture capital firms are investment firms. Another author also opined that, venture capitalist virtually participates in strategic planning and decision making in the firm. The market for venture capital consists of public entities as well as small business investment corporations and private limited partnerships.

One of the characteristics of venture capital is, it involves high levels of asymmetry information and uncertainty as well as higher intangible assets. Venture capital organizations target companies that have prospects of rapid growth and above average profitability. These targeted companies must also make it a point to go public within five to seven years. They usually aim to cash in on their investments if prices are substantially above their initial investments in the respective companies in addition to capitalizing on Initial Public Offerings (IPOs)

Venture capitalist helps SMEs to resolve many informational problems hampering them in addition to providing an alternative source of funding for them. With the help of increasing their financial flexibility, venture capitalist offers SMEs the chance of sourcing funds from other financial channels, such as banks and insurance companies. However, the supply of venture capital appears to be relatively inflexible, at least in the short-term, as it requires years of experience to develop the necessary skills (Kortum & Lerner, 2000)

Joint Venture is another form in which SMEs can use to raise capital for their operations. It is a form of strategic alliance that is very common in today's businesses. It usually involves two or more companies coming together to form a new entity. Gaining competitive advantage within the environment in which they operate is the main reason for joint venturing as well as becoming more profitable.

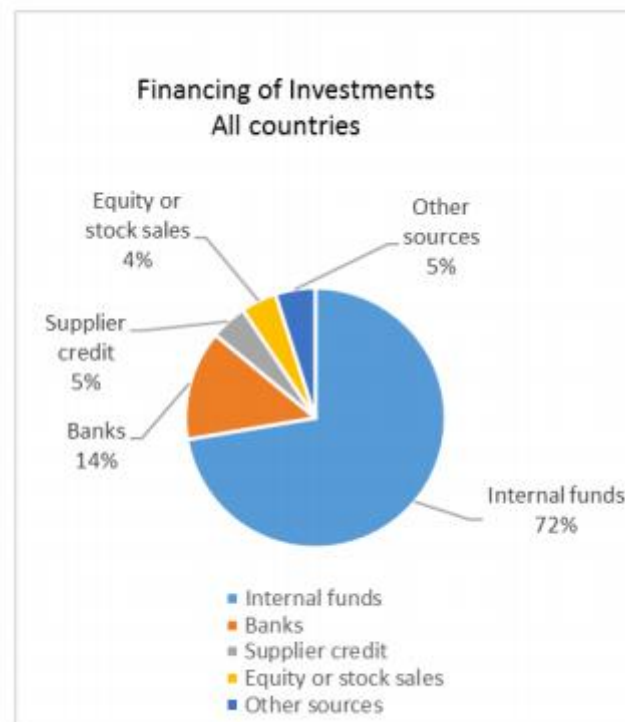
When resources of two entities are combined, they wield an enormous power to influence decision in the competitive market as well as attaining synergy. The new company may be able to perform a service more efficiently, produce at a less cost or utilize a facility or funds more effectively. This creates utmost results in greater profits for the firms involved than they would have achieved as separate entities.

Smaller firms tend to benefit massively when there is a joint venture and usually placed in a better financial position than they were before. In addition, joint venture stands a better chance of obtaining credit or raising more equity as creditors and investors' confidence in the new firm is often greater. As a joint entity, they provide better guarantee for creditors fund as their assets base widened.

There are no intermediaries in business angels as compared to other external sources of financing. According to Madill, Haines & Riding, 2005, angels are highly-selective wealthy individuals with long business experience who invest directly in high growth SMEs with which they have had no previous relationship. Most of these individuals tend to have some experience in business and/or are affluent professionals who may have a lot of money to invest. They mostly categorized in the informal sector because there is no specific market where their investment is carried out, associated to them. They are usually contacted through deal makers such as business associates, accountants and lawyers.

There are some characteristics that can be seen in business angels, which makes it the ideal option for SMEs. Initially business angels are more active at the early stages of the business, closing the co-called 'equity gap' by forming a 'bridge' between internal financing sources and outside investors. Secondly there is a low rate of rejection and very patient form of capital with longer exit horizons, angel financiers tend to be more obliging to the needs of SME owner. Lastly, angel investors prefer to invest in local economies where majority of SMEs operate.

The chart below shows the share of funding types available to entrepreneurs to fund their SMEs globally. Clearly, over reliant on internal or "own" fund is significantly higher in developing countries, which not checked could lead to the stagnation of growth, especially with the absence of alternative funding modalities



GRAPH 1. Global Funding Sources for SMEs (African Center for Economic Transformation 2015, 4)

### Challenges SMEs face in Ghana

Small and medium sized enterprises are big business in Ghana, with a contribution of more than 70% to the GDP, even though it is difficult to quantify due to the nature of Ghana's economy (Fuseini G, 2015, 16). Despite their importance, there are significant barriers to the growth and development of this sector, which includes, lack of affordable financing, restrictive legislation, lack of international exposure, competition, non-availability of suitable technology and others.

With the perceived mindset of financial institutions about SMEs as being high risk ventures, getting access to conventional source of funding is very difficult. Due to this, high interest rate requirements and collateral is required before loans are granted to entrepreneurs. Other institutions have complicated processes which frustrate applicants, and as result discouraging them to continue the loan process. These financial institutions attach conditions to the credit including high minimum deposits and administrative charges. The situation is worse for SMEs that are unorganized, that is businesses that operate from temporary structures or at home, employing few or no salaried workers. 'Unorganized' SMEs are often microenterprises owned or run by females, who can experience increased impediment to capital.

Businesses operate in an environment; therefore, they must conform to the rules and regulations within the environment they operate from. This could be a challenge to the operations of SMEs because of strict legal and regulatory environment. According to WBES,2013 cumbersome formalities in registering and commencing business is a huge factor. To the financial standards of SMEs, it is relatively high for the owners. The World Bank Doing Business Report (2016) indicates that, for organizations to register and start operating, it will take them fourteen days and through a total of eight processes. This is an improved figure from 2006 which was twelve processes within eighty-one days. Nevertheless, the associated cost of registering a business in 2016 remains relatively high, at 19.4% of the income per capita.

International exposure helps organizations to create business links which could enable them to increase their revenue. This is necessary for the development of SMEs as they face stiff competition from the environment they operate within. But for SMEs in Ghana, there is limited access to external customers because of the lack of international marketing experience to attract these customers. The few businesses that can gain access to the international market are often faced with the issue of standardization as well as an overall lack of knowledge of international markets.

Every organization needs an experienced workforce to help it grow and achieve its objectives. This dedicated workforce controls the business with their skills acquired in school and on other jobs. But, one major challenge SMEs in Ghana face is the lack of these qualified and experienced workforce, who can understand the dynamics of business operations and to take the right decisions for its growth and sustenance. Small enterprises lack the financial muscle to attract these qualified workforces and do not provide the right atmosphere for the development of these workforce, thereby forcing them to opt for well-established Organisations.

In Sub-Saharan Africa, political instability is a major factor that causes SMEs to go out of business. Most countries are plagued with wars to the extent of crippling the country, causing its people to flee. Because of this phenomenon, businesses are unable to grow to the level it wishes to, and in the long run, dying off. This challenge also does not encourage owners to seek for people to invest in the business, due to the uncertainty in the environment organisation finds itself in. It does not allow the expansion of the business to other markets, but rather survive for some few years and going out of business completely. According to IFC's Development impact report 2015, "Advancing Innovation in Africa", political instability and conflict in many sub-Saharan African countries deter investors.

There are other challenges that SMEs face in Africa, which have been listed in the table below.

TABLE 1. Challenges SMEs face in Africa

No.	Challenges	Source
1	Competency and Capabilities	Muriithi, 2015; Aylin, Garango, Cocca & Bitiche , 2013
2	Electricity Supply	World Bank Enterprise Survey, 2010
3	Poor Management	Brink, Cant & Lightelm, 2003
4	Access to reliable information	Kamunge et al., 2014 ; Oshikoya & Hussein. 2007, Benzing & Chu, 2012
5.	Lack of Governmental support	Kamunge et al., 2014
6.	Corruption	Benzing & Chu, 2012
7.	Negative Perception	Amyx, 2015

### 2.1.2 SMEs in Finland

According the Federation of Finnish Enterprises, the 2016 figures which excluded Agriculture, there were 283,563 enterprises in Finland. Of this total figure, SMEs with less than 50 employees constitutes about 98.8%. But to break it down further, SMEs with less than 10 employees constituted about 93.3 %. SMEs play a significant role in the Finnish economy that, it cannot be overlooked. Over half of the private-sector employees in Finland currently are in various companies that employ less than 250 people, contributing about 50% turnover of all businesses in Finland. (The small and medium-sized enterprises, 2017)

The average size of SMEs in Finland is six, but on the EU level, there is an average of 15 employees. Most companies established by an individual in Finland, mostly die off after few years of it existence, as compared to other European countries. Few companies grow to become medium sized or bigger organisation. There is a lack of medium sized organizations which have the propensity to grow into a bigger corporation. (Brunila & Vihriala, 2004, 100 – 101)

## **Challenges SMEs in Finland face**

Small and Medium Sized Organisations in Finland face challenges as their counterparts in other countries. Most businesses are constraint with resources, that will aid in their operation, rules and regulations instituted by regulatory bodies, competitive disadvantages, as well as employee attitude. These are some of the challenges that could hinder the development of SMEs in Finland. SMEs are often constraint with adequate skills in potential employees that could be of advantage to the development of the company.

Rules and regulations as well as legislations instituted by government agencies also serve a great challenge to the growth and development of SMEs in Finland. They incur additional cost in paying huge taxes as well as high wage bills and surcharges. SMEs are often made to pay high taxes for their operations which might affect the companies negatively. They are made to take a greater amount of revenue to pay taxes, which the government uses to finance its numerous social interventions.

Competition in every business environment is good for consumers as well as the companies. Consumers benefit immensely from competition as they are offered durable products at affordable prices. But, one of the challenges SMEs face in Finland is stiffer competition among organisations in the same line of production. Due to the over concentration on competition, SMEs are unable to device long terms strategies, as they are focused on outwitting their competitors, which are always built on short term policies.

The most common challenge that SMEs face in Finland is the easy accessibility to funds to finance their operations. This is a major challenge for SMEs throughout the world as financial institutions are reluctant in granting loan facilities to them because of their size and nature. Funding is always problematic for SMEs which creates

## **2.2 Information Technology in Small and Medium Scale Enterprises**

Globally, Information Technology have had a massive impact on the lives of people and businesses. It has gone on to improve the economic conditions in countries that have been able to embrace it. Also, it is viewed as being capable of providing considerable strategic and operational value for organizations. In today's world, businesses are not possible without the help of information technology, with Small and Medium Sized Enterprises being in the fore-front of this phenomenon. Businesses must always strive to provide the best their customers, and in doing so involve a lot of technology, which aids them to achieve

this goal. SMEs that fail to involve technology in their operations often stumble along the way and as a result die off.

IT can be seen as a wide range of software, hardware, telecommunication and information management techniques and applications that are used to create, produce, analyze, process, package, distribute, receive, retrieve, store and interpret information (Barba-Sanchez et al., 2007, 105)

Competition among businesses have improved due to the fusion of Information Technology in their processes. They are often compelled to innovate technologically to gain competitive advantage over their peers. What IT does is to process data, gather information, store collected materials, accumulate knowledge and boost communication. Managers of these SMEs must have an in-depth knowledge about their organizational corporate resources which are vital to gaining competitive advantage through the usage of Information Technology. A technological diffusion or infusion may be attributable to the fact that IT's introduction onto an organisation creates a further technological need and encourages product and policy innovation to meet such needs. (Canadian Center of Science and Education, 2010, 237).

SMEs can utilize the IT to boost their competitive position in their processes as well as larger companies because of the global environment the organizations operate from. Therefore, it is important for the entrepreneur to identify the strategic value of IT to the company and device ways to exploit it. It will be of great advantage to the organisation to invest heavily in IT infrastructure and employees.

Most SMEs especially in developed countries are involved in various supply chain processes where suppliers, distributors, producers and customers are involved. They mostly engage in buying and selling of products, which means the transfer of goods from the warehouse of a manufacturer to their storage site. There are retailing SMEs who serve as middlemen between the manufacturer and the end user or customer. The emergence of Information Technology in recent years has enabled entrepreneurs to control and coordinate their processes involving their suppliers and customers. With advances in, and increasing availability of ICT, manufacturers, their suppliers, and their distributors can be linked together into a seamlessly integrated organization. (Stavrulaki and Davis, 2010; Ajayi and Olayungbo, 2014).

Business owners can reduce their cost of operation by adopting IT solutions, especially in their supply chain management processes. Due to efficiency of IT, it is less likely for the company to run into losses because there are checks and balances that IT can perform effectively, rather than humans. This prevents errors from occurring especially with the usage of papers and other manual processes.



### **2.2.1 Benefits of Information Technology to SMEs**

When ICT is adopted into the operations of businesses, it affords them enormous benefits which spans across intra and inter-firm business processes and transactions. Businesses can have competitive advantage when IT is used even though the same technology can be replicated by competitors, making them lose the advantage. Nevertheless, IT helps to reduce cost, improve an organization's marketing strategies, more efficient and effective communication. In some instances, businesses can have superior procurement and methods of distribution.

SMEs vary in characteristics such by size, sector, age, structure etc. and because of these, the adoption of IT can be influenced. (Nath and Standing, 2010, 70 - 84) highlight the influence of company size on the adoption of IT and note that it is also directly related to the type of industry to which the organisation belongs. Larger companies are in the position to adopt IT easy, taking into consideration the available resources at their disposal. But, the decision to implement might delay as approval must be sort from higher authorities. On the other hand, SMEs, though have scarce resources at their disposal, decisions are quickly taken as there are few hierarchies to navigate. In some SMEs, the owner or entrepreneur is the sole decision-making person, thereby making it easy to implement IT.

SMEs can reduce cost by creating, processing, distributing, storing and retrieving information with the usage of paperless document. Procurement can be undertaken by introducing a system where administrative cost can be prevented. It is a tool that is strategically designed to help users be efficient and effective at their work place. The reduction cost also leads to the flexibility of work processes, which allows individuals to multitask.

High level of efficiency is obtained by SMEs when transactions are being executed because of fast and accurate processing of information. With the help of web-based applications, the relationship between businesses and customers are improved resulting in the company being competitive. This is because, interactions are seamless and on point making networking easy for organisation and maintaining solid relationships.

The use of IT in SMEs facilitates cooperation within the company and between the company and other firms. There are various business model tools and internet technologies that SMEs can use to facilitate their activities as well as service development, discussion groups and training tools. IT goes a long way in merging businesses processes such as order processing, payments and after sales services, that are

somewhat separated into one model and could be controlled by fewer people in real time. This reduces cost in moving, creating, processing and managing documents.

The figure below shows how Porter summarizes the benefits of ICT in SMEs

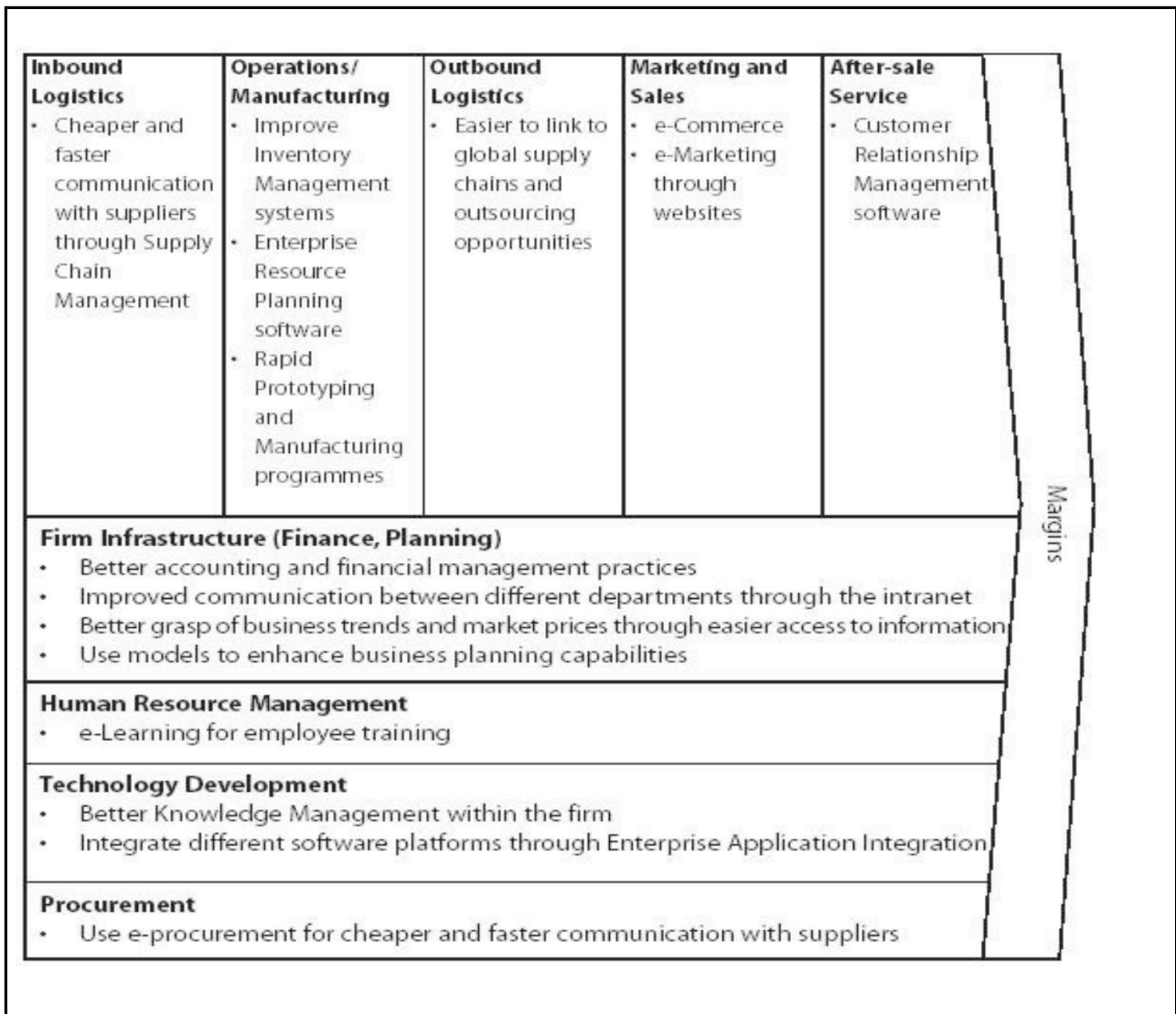


FIGURE 1. Benefits of ICT in SMEs (Kotelnikov, 2007)

### 2.2.2 Barriers of Information Technology to SMEs

Small and Medium Enterprises face a lot of factors when trying to actively implement ICT in their operations. These barriers vary from one continent to the other and one sector of the environment to the other. These barriers can be internal or external. Internal barriers are those that are pertinent within the organisation and can be resolved easily. These include the culture existing within that organisation, the entrepreneur's attitude towards the usage of ICT, non-availability of resources or the level of training the employees have in ICT. The external barriers can be referred to as the those that fall outside the

organisation and not in the control of business owners. The lack of funds from banks and other governmental authorities, play a significant role in the implementation of IT in businesses, as well as lack of infrastructural facilities.

It can also be noted that, the lack of IT knowledge by employees could be a critical barrier to the implementation of IT in the operations of SMEs. This can also be said about business owners, as they lack the knowledge to determine which technology can aid them in their business process, they find it difficult to come out with a technological solution that will be suit their operations, hence the need to undergo training to come into terms with the evolving nature of the business world. But, for fear of loosing their employees to rival companies, business owners are adamant in organizing training for their employees.

For SMEs that have young business owners, there could be a swift implementation of IT within the organisation, as compared businesses with older owners. Young entrepreneurs will be willing to take risk by implementing a solution that could be of greater help to the organisation, as compared to their older counterparts, because young people understand the importance of IT, not only to businesses but life in general. That is why they will be willing to go extra mile in seeking technological solutions that will enhance their operations.

Another factor that could serve as a barrier to the implementation of IT in businesses is security. There are fears of data loss, viruses attacking computers, theft etc. occurring in technological transactions. Hackers could gain access to customer data and use it to their advantage at the blind side of the owners. Therefore, there is this notion that, information is not safe with business, which then informs owners to abandon any plan of implementing IT, because individuals will be skeptical in performing transactions online. Business owners are forced to spend so much on data protection applications, which could cost millions of euros. The recent incident involving Facebook, where a total number of 87million users have had their data accessed by Cambridge Analytica without their knowledge has increased this notion (Romano, A. 2018). And, it has sparked companies to revise their privacy policy on their website.

Infrastructural constraints could serve as a source of barrier for SMEs for the implementation of ICT in most parts of the world especially undeveloped countries. Basic infrastructure such as electricity is very difficult to come by in most parts of the countries to the extent that, expansion becomes difficult for the businesses there. Electricity supply is unstable, forcing businesses to invest in other alternatives such as generator sets and solar panels, which comes as heavy cost to the companies. They might be forced to secure loans which sometimes are very difficult to come by, since banks are adamant in granting them.

They spend almost their entire profit in getting these infrastructures in place, which later leads to frustration on their part and as a result abandoning the idea of IT implementation in their company.

Most SMEs do not see IT as suitable in their organisation, thus paying less attention to its implementation and usage. Businesses in the transportation sector of SMEs may prefer to use customer contacts as a tool for marketing, rather than the internet. Likewise, SMEs in the construction sector, who will prefer to use internet for internal communication rather than e-commerce. Therefore, the view that IT is not suitable for the business holds strong implications for small firms aiming to adopt IT because they will not take advantage of IT unless these benefits justify the need for establishing and maintaining a more advanced IT based system.

There are legal uncertainties that could serve as a barrier to the implementation of IT in SMEs. Most e-commerce transactions are mostly performed internationally, therefore firms must be careful when dealing with various customers in various jurisdictions. As there are no standard rules regarding e-commerce, firms risk being sued in these jurisdictions if there are inconsistencies in their transaction. Bigger organisations may have the means to meet up the cost that may arise, but same cannot be said of SMEs. Therefore, entrepreneurs will feel reluctant to implement technology in their processes.

### **2.2.3 Information Technology usage in Ghanaian SMEs**

Information Technology has been in existence for a while, but Ghana was able to catch up with the rest of the world some two decades ago. Companies were using other means of communication, like faxes, telegraphs even though they were not efficient in delivering prompt services. Offices were filled with hard copies such as papers which contained customer details, making it extremely difficult to access information for optimal decision making.

2003 saw the introduction of a government policy which was aimed at accelerating the development of Ghana's economy through the deployment and exploitation of ICTS within the economy and society. This policy was Information and Communication Technology for Accelerated Development (ICT4AD policy). But, the overall aim of ICT4AD was to engineer and ICT-led socio-economic development process with the potential to transform Ghana into a middle income, information-rich, knowledge based and technology-driven economy and society. (Boateng M.S, 2012, 4)

Since then, there has been improvement in the information technology sector in the country with mobile telephony usage accelerating to considerable figures. Data from The National Communication Authority as at June 2017 suggested that, the total number of mobile subscriptions in Ghana has increased (1.75%) to over 36 million with a penetration rate of 128%. While the volume traffic also increased by 6.45% to over 14 billion minutes. Also, mobile data subscriptions increased (1.96%) to over 21 million, while data traffic saw an increase by 24.63% to over 33 billion megabytes (National Communication Authority, 2017)

Below is a figure that shows the growth of mobile phone subscriptions in Ghana from the second quarter of 2016 to the second quarter of 2017.

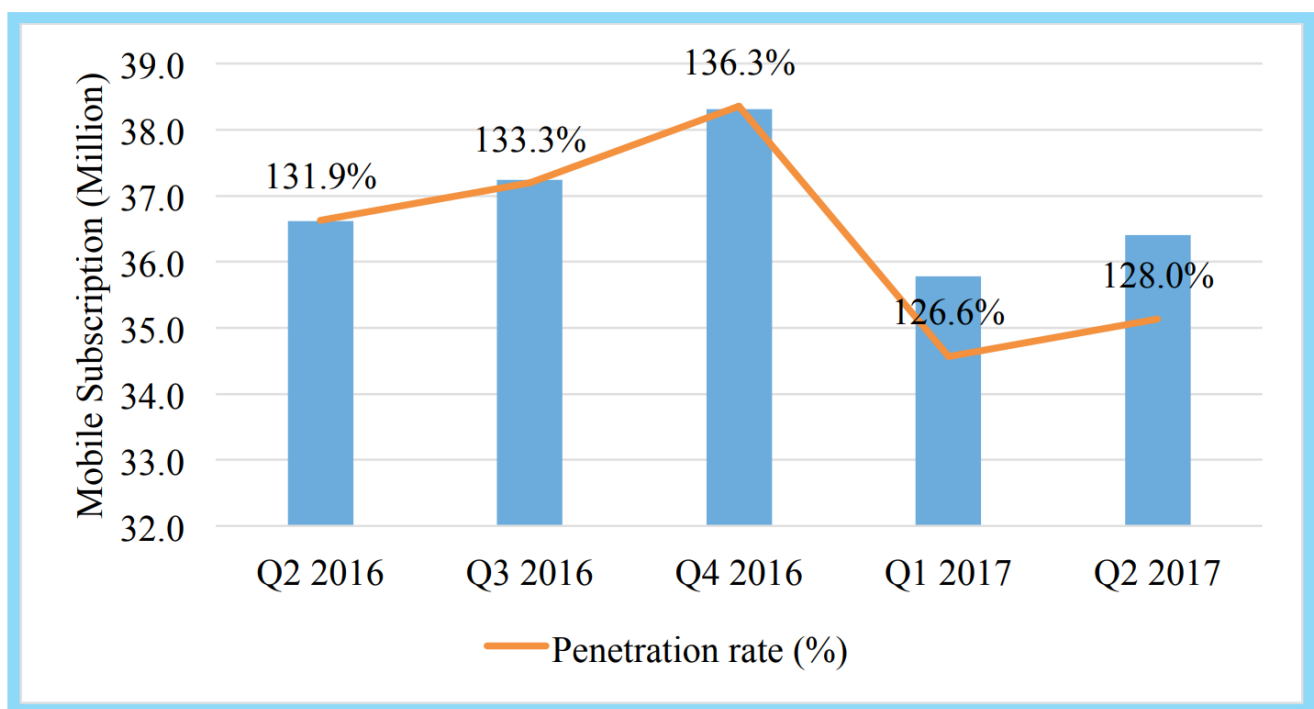


FIGURE 2. National Communication Authority, Mobile phone subscription in Ghana, 2017

There is no doubt how the increased usage of mobile phone has helped SMEs in Ghana to grow. A report by GSMA in 2015 suggested that there was a direct link between mobile connectivity and productivity in businesses. It further opined that mobile penetration leads to economic growth, while growth in mobile data consumption has the potential of transforming the way in which businesses and consumers operate and communicate, and as such, increase economic growth through increased productivity.

One improvement that can be associated with the increase in mobile telephony is the payment of money between individuals as well as companies. Ghana has seen tremendous increase in mobile money payment since its inception some years ago. It has become the method of payment for many unbanked people in Ghana, since a significant number of the population live in the rural areas as well as SMEs. This has been made possible by the advances in handset functionality, chip and mobile network technologies and upgrade in Point-Of-Sale (POS) infrastructure. According GSMA (2013) Mobile Money is a transformational service that uses ICT and non-bank retail channels to extend the delivery of financial services to clients who cannot easily be reached profitably with traditional branch-based financial services. Users of Mobile money have a digital wallet that holds funds electronically and can be accessed by a unique PIN given to the user after registration (Bank of Ghana, 2017)

Entrepreneurs use this feature to make payments as well receive funds rather than use the conventional method of opening a bank account which could be costly. For example, farmers in remote areas can buy seedlings without necessarily being there, saving them time to concentrate on other pressing issues. Fortunately for SMEs in Ghana, the government recently launched an interoperability platform which could link mobile money accounts to bank accounts, enhancing the smooth transfer of funds from mobile money wallet and vice versa. Also, it is now possible to transfer funds across mobile networks without necessarily purchasing the sim card of the other. All these go to the extent of helping SMEs reach out to their customers and making transactions easier and efficient.

Notwithstanding the numerous benefits SMEs may enjoy with the introduction of technology, there are still concerns of how vulnerable the Ghanaian environment is in relation to technology advancements. One major problem SMEs face in the usage of mobile money is the increase in robbery cases. Recent times have seen a surge in robbery cases relating to mobile money. Since the start of the year, there has been over 30 cases relating to armed robbery that involves mobile money vendors in Ghana. Some of these robberies have turned out to be fatal while others have left victims traumatized (Arthur, J.K, 2018). Nevertheless, the importance of mobile money to SMEs is enormous to ignore, as it is efficient and effective for their operation.

Many SMEs in Ghana are aware of the importance of technology to the success of their business. In a 2012 study by Akomea-Bonsu and Sampong of some SMEs in Ghana's second city, Kumasi, indicated that there was a positive impact on their businesses and would consider putting in much effort to harness its potential. Some are investing in web applications to manage their processes, but unfortunately, these are few companies, leaving the rest to the conventional way of managing processes in an organisation.

This is the reason why employees take advantage of the system within the organisation and milk them dry causing them to die off within a short time frame.

### **2.3 Software Application in SMEs**

Software Applications are defined by Wikipedia as a computer software designed to perform a group of coordinated functions, tasks, or activities for the benefits of the user. As described by Wiley 2014, it is a set of computer instructions that provide more specific functionality to a user. These advancements help get things done in no time and in the process reduce cost, increase innovation as well as enhancing implementation speed.

SMEs can use software applications to eliminate barriers that hinder their smooth operation especially in the global market. Clients cannot wait for months before an invoice is received or progress of a consignment. There is a possibility to monitor all these in real time by the usage of computer software applications. The ability to implement these innovations will go a long way to increase the competitive advantage over their competitors.

Software applications have evolved throughout the years to be flexible and efficient as well as adopting the ever-changing business environment. Developers of these software used to build these applications on platforms which were not dynamic. Therefore, most applications built became obsolete as the days went by, creating losses for SMEs that adopted them for their business processes. But with the evolution of business software applications, businesses can now have access to data by a single click of a button, which can enhance their operations effectively. Due to the efficiency of software applications, business decisions are easily taken because data that can be based on are readily available to the business owners. These business applications are now built on technologies that have the tendencies of longevity as well as efficacy. Cloud computing has become the most technologically advanced platforms that applications are being built on because of its numerous advantages

### **2.4 Cloud Computing**

Cloud computing is a computing paradigm, where a large pool of systems is connected in private or public networks, to provide dynamically scalable infrastructure for application, data and file storage. (Harris T, 2014, 2). This technology has reduced drastically the cost of application hosting, content

storage, cost of computation and delivery. Other authors simply defined cloud computing as a subscription-based service where you can obtain networked storage space and computer resources (Huth, A, & Cebula, J. 2011, 1) The likened it to having email service from Yahoo, Gmail or other messaging platforms, where emails can be accessed anywhere in the world, no matter the location.

Developers of software applications build them on the cloud platform which can enable businesses to access business data from anywhere at any time from any mobile device, at a reasonable price. SMEs are in the position to benefit because of cloud computing, economically. Their data and applications are remotely hosted in the cloud service, which overcome the cost of hardware and software acquisition as well as maintenance. Essentially, cloud computing offers four key advantages for SMEs: flexibility, scalability, easy accessibility and pay-per-use models.

Technologies that used to be available to deep pocket Organisations have been made accessible by SMEs through cloud computing. Huge price tags on applications such as Customer Relationship Management (CRM) software and Sales Force Automation (SFA) are now non-existent during their development and installation because many cloud computing services are available at a cheaper price with monthly subscriptions.

Applications developed based on the cloud platform are flexible, as it enables a lot of software to be web-based and creating one environment for different services such as provision of storage services, collaboration, IT infrastructure. The existence of cloud computing makes it possible for small Organisations to rent IT services, rather than use their scarce resources to build infrastructure. To enhance their business capabilities, literature on cloud computing has shown that, SMEs are motivated to use internet as a tool for cloud computing (Alshamaila et al. 2013. 250-275)

SMEs tend to enjoy numerous advantages when cloud computing is adopted and implemented effectively. One of such advantages is cost saving. IT services can be rented at a lower cost rather than the organisation building infrastructure, which could be costly. Operating and capital expenditure is reduced to the barest minimum. Further, it is also helpful in saving substantial cost along with application requirements ad zero- in-house ser storage. (Gupta et al 2013, 861 - 874). In addition, energy cost and administration cost is reduced drastically due to the rented cloud services, which is operated elsewhere by a different organisation.



Organisations using applications that support cloud computing stand the chance of gaining access to their resources in a centralized location. These data management centers are being used due to high scalable cloud computing nature and its efficiency. To be able to control these data centers, cloud experts are trained to maintain hybrid, private, and shared clouds. Data loss and overloading are avoided completely because systems are managed professionally and properly in the data centers. It can also be emphasized that, cloud computing is overly reliable as compared to the in-house information technology infrastructure built by the company. This is because the data centers are managed exclusively from the company, which are mostly companies on its own, making data or available 24 hours. Whereas in-house infrastructures are often shut down when the company closes for the day's business.

As maintenance is critical for every computer infrastructure, so it for cloud computing. But it must be noted that maintenance in cloud computing is easier since there is no requirement for its installation on every single computer within the organisation, rather it is set up on a platform in a remote location. The features within the cloud computing makes it easy to service, host, develop and test applications in the cloud. As a result, modification and launching of different programs by developers are enhanced to provide an efficient application.

Cloud computing is so innovative to the operations of the Organisations that, it is possible to interact with customers, employees and partners in different ways. Alshamaila and others revealed that, companies can get highly incredible business opportunities which can help them build real-time interaction and innovation to flourish their enterprise (Alshamaila et al., 2013, 250-275). These innovations can help tailor solutions to Organisations especially when the application being used is web-based. In that case files and emails can be accessed without the usage of software and this the usage of licensed software is reduced, helping the organisation to reduce cost.

Multiple users can access shared information using cloud computing without any interferences. It makes employees discharge their duties effectively and efficiently

### **3. RESEARCH AND REPORTING METHOD**

This chapter mainly discusses the research methodology used in this thesis to achieve its objectives. The focus is primarily on the research strategy, the research method used, the research approach, data collection analysis, ethical consideration as well as the limitations of the thesis.

#### **3.1 Research Strategy**

A research strategy details a step-by-step approach used in directing the thoughts of the researcher and efforts, which enables a systematic and timely production of results and detailed reporting. The strategy helps the researcher to have a clear understanding of the objectives that is seeking to achieve. The objectives the researcher seeks to achieve are,

- To come up with practical solutions for entrepreneurs who own SMEs in Ghana and Finland to realize their full sales value
- To establish the benefits of using practical solutions, which is to reveal the competitive advantage organisations will have their competitors.
- To establish operational excellence of the application to the organisation, which is improving efficiency and profitability in the organisation.

#### **3.2 Research design and Method**

It is important to understand the design of the study and the methodology being used, which could reveal the plans set out by the researcher and the strategy to be used to fulfill those plans.

##### **3.2.1 Research design**

Research design can be considered as the structure of research, which is the "Glue" that holds all of the elements in a research project together, in short it is the plan of the proposed research work ( Islamia, 2016). Other authors such as J Ahoda, Deutch & Cook also defined research design as "the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy and procedure"

In other breath, it can be seen as a master plan which specifies the methods and procedure for collecting and analysing the needed information. It portrays the blueprint for the collection of data, measurement as well as analysis of data.

Generally, research design can be categorized into four main group, that is, exploratory or formative research, descriptive research or statistical research, explanatory research and experimental research or analytical research.

Exploratory is the basis in which a research is started, which serves as the primary stage of the research. The main idea behind this research is to achieve insights into a phenomenon that exist. It aids in the formulation of the hypothesis which is as a result of a formed problem which needs an in-depth investigation. Exploratory research is more appropriate in situations where there are few or unavailable knowledge about a topic. The goals of this research are to scope out the extent of a particular phenomenon, problem or behavior, as well as to generate some initial ideas about that phenomenon and to test the feasibility of undertaking a more extensive study regarding that phenomenon. (Bhattacharjee A, 2012, 5)

Descriptive Research is always concrete or abstract in nature. It is used to identify and obtain information on characteristics of a particular issue like community, group or people. Governments for example usually use this type of research to conduct population census, as well as collection of social indicators that can be used to take decisions on the provision of amenities to a community or a country. Its usage is prominent in socio-economic survey and job activity analysis. At the end of the research, it should have been able to answer questions such as , what, who, where, how and when. The views of a society, a community or country can be solicited through the usage of descriptive research. It is directed at making careful observations and detailed documentation of a phenomenon of interest and must be based on the scientific method, which are more reliable than casual observation. (Bhattacharjee A, 2012, 6)

Explanatory research is mostly conducted to explore a new phenomenon, that is a study which has not been tackled. It does not involve comparison and factors of change. Researchers use this form to gain insight in unknown area by formulating a problem for specific investigations to be done. The researcher is always guided by concepts which aids him to arrive at facts. It tries to connect the dots in research, by identifying causal factors and outcomes of the target phenomenon. (Bhattacharjee A, 2012, 6)

Experimental research is mostly conducted to test relationship under controlled situation. Controlling of conditions means that the phenomenon or the condition should not be allowed to change while the experimentation is going on. It is often considered to be the "gold standard" in research designs, which is one of the most rigorous of all research designs. Its internal validity is the unique strength due to the ability to link cause and effect through treatment manipulation, while controlling for the spurious effect of extraneous variable. (Bhattacharjee A, 2012, 83)

### **3.2.2 Research Methodology**

Research methods are the techniques used to conduct a study. They represent the tools of the trade, and provide the researcher with ways to collect, sort and analyze information so the researcher can come to some conclusions. (Walliman N, 2011, 7). It is mostly made up of theoretical and empirical type of data.

Theoretical methods provide explanatory principles for a phenomena, which is mostly based on an abstract rather than a reality referred level. On the other hand, empirical method requires from the writer to gather data which could be done by either experimenting or observing a phenomenon. (Walliman N, 2011, 7).

Models are developed to explain the gathered data or hypothesis are established to find the relationship between the data and relevant variables of the environment. The results of empirical research should be able to be replicated as adherence to this method implies the use of objective, reliable and valid research methodology and criteria.

Qualitative research is an umbrella term for a wide variety of approaches and methods for the study of natural social life. The information or data collected and analyzed is primarily (but not exclusively) nonquantitative in character, consisting of textual materials such as interview transcripts, fieldnotes, and documents or visual materials such as artifacts, photographs, video recordings, and internet sites, that document human experiences about others or self in social action and reflexive states. (Saldana J, 2011, 4). Other authors defined qualitative research as "a research that is based on descriptive data that does not make (regular) use of statistical procedures" ( Mackey, A. Gass, M. 2011, 162)

A social phenomenon can be explained and understood with the help of a qualitative research, which basically makes use of interviews, documents, observations and others, to gather information. Information mostly gathered are data collected from respondents who have personal experiences in a

particular subject matter, introspection, stories about life, interviews, observations, interactions and visual texts which is of greater significant to people's life. Naturalistic inquiry remains solidly grounded in the nonfictional realm of social reality for its investigation, yet its write-ups can employ expressive and creative literary components (Saldana J, 2011, 5)

Researchers using qualitative methodology in conducting studies usually use their senses such as eyes, ears and intelligence to collect in-depth perceptions of targeted population, places and events. Several methods are used in this kind of methodology, which usually include, direct observation, open-ended surveys, focus groups, in-depth interviews, oral history, participant observation, ethnographic observation and content analysis. (Ashley C, 2018)

The usage of direct observation is mostly done by observing the movement of people or respondents as they go about their normal activities, without interfering. The respondents in this type of survey are often in the known and it must be conducted in a public setting. Open ended surveys allow respondents to express their views in their own words rather than a suggested answer, as in the case of quantitative methodology. It could be used to solicit from views from voters on why they voted for a certain candidate in an election for instance

Focus groups are usually a small group of respondents, who are engaged in a conversation to derive data from them, by asking specific questions. Their make is usually between 5 to 15 people in a particular community and are usually used by social scientists to examine a current trend prevailing.

In other ways, in-depth interview could be used to conduct a research by speaking to respondents in a face to face setting. Questions are mostly formulated already as the researcher is going to interview the respondents. They may choose to follow the questions accordingly but could allow the conversation flow without scripts.

This methodology has its advantages and disadvantages. Its major advantage is, it creates an in-depth understanding of the attitudes, behaviour, interactions, events and social processes that compromise everyday life. Governments especially stand a great chance to benefit from this methodology, as social interventions can be provided to citizens after a careful study of the challenges being faced.

Despite the advantages qualitative methodology has in terms of data collection, there are disadvantages that hamper the methodology. The scope usually formed in this methodology is limited which makes the

generalization of the study highly impossible. Researchers also must use caution with these methods to ensure that they themselves do not bring undue personal bias to their interpretation of the feelings.

The essence of quantitative research is the study of the relationships between variables. For quantitative researcher, reality is conceptualized as variables and the ultimate objective is to find out how different variables are related to each other, and why. (Punch, F, K. 2012, 19). Other authors define quantitative methods as the research that involves the interplay among variables after they have been operationalized, allowing a researcher to measure study outcomes (Martin E, W. Bridgmon D. K, 2012, 3). In a nutshell, it examines the relationship between variables with the primary goal being to analyze and represent that relationship mathematically through statistical analysis.

One common feature associated with quantitative research methods is, they are numerical in nature and they are analyzed using mathematical and statistical methods. At the end of the study, the conclusion must be either to confirm or disconfirm a phenomenon. Some variables are identified that are used in the research work, then data collection is followed

Quantitative data is mostly sourced from surveys, observations or secondary data. Surveys usually involve the usage of questionnaires, which are series of questions developed for the sole purpose of gathering information from respondents. Technology in recent times have made it possible and easy for researchers to develop and disseminate questionnaires online as web based surveys are adopted. Most questions to be answered are always closed ended with multiple-choice answers. They are then analyzed, which usually involve graphs such as pie chart, bar charts and percentages. Questionnaires increases speed of data collection, low or no cost requirements, and higher levels of objectivity compared to other methods of primary data collection.

Observations are mostly implemented by watching what people do as they go by their normal duties. There are controlled observations, natural observations and participant observations. Controlled observations are carried out in a standardized procedure with each participant or respondent randomly allocated an individual variable. Natural observation involves studying the spontaneous behavior of participants in natural surroundings. The researcher simply records what is seen in whatever way they can. Whiles participant observation joins the group of respondents to have a deeper understanding of their lives.

### **3.3 Overview of Model and Methodology used for this Research**

The researcher intends to use a practice-based model in conducting the thesis. The intention of using a practice-based method is to come out with a product which is focused on solving the revenue leakages in SMEs in Ghana. The intention of developing an application is to come up with an alternative to already established applications on the market. Taking into consideration the real challenges faced by SMEs in revenue mobilization and coming up with practical solution, is what the application seeks to achieve. There are Enterprise Resource Plan Systems (ERPs) on the market which help organizations in their operations, but these ERPs have features that do not necessarily apply to the local concepts in Ghana. With this kind of research, it is important to make a thorough analysis to come out with the right information, which could help entrepreneurs make decisions

Due to the descriptive nature of the research, the researcher intends to use quantitative methodology to conduct the research. Data is collected from respondents through the administration of questionnaires to business owners, who are the prime respondents to ascertain a phenomenon as well as decide on its implementation and usage in solving the problem of revenue leakages. The services of a facilitator in Ghana was engaged to help in the administering of questionnaire, since the researcher is not domicile in the that country.

These respondents are made up business owners of SMEs in the manufacturing, retailing, warehousing business situated in either Ghana or Finland. The researcher expects a sample size of fifty (50) respondents to answer the questionnaires, which is believed to represent the numerous SMEs spread across these two countries. The idea of choosing the three line of business, namely, manufacturing, retailing and wholesaling is because of their transactions with the company which could serve as a fertile ground for illegal transactions such as theft. They have distributors who are responsible for delivering goods to customers. Most of them have vans used for the distribution and are in constant contact with them, paving the way for illicit business between the deliverer and the customer that might not be in the good interest of the business owner. This could be averted with the implementation of an application that can track and monitor all transactions between the customer and the employee.

The designing of the application will consider the challenges business encounter in their business operations that gives opportunities for employees to exploit the company. These challenges are mostly cultural based, which could be countered by employing similar cultural practices in a technology and de-

ploying it for organizational use. Furthermore, other software application being used in Finland by entrepreneurs will be assessed and incorporated in the design of the application. The application will be deployed in a cloud which could make it easily assessible to both management and employees. Distributors are given devices such as tablets with preinstalled application, to be used in the transaction. Managers do not have to be present physically while an employee deals with a customer, but rather the application will reveal every single transaction being performed.

Data will be presented to them in the form of charts, graphs or a table. This makes it easy for decisions to be taken since pictorial evidence is given along side analysis on sales and distribution. Employee performance is clearly presented in a chart form to aid business owners to arrive at conclusions that will be at the advantage of the business.

### **3.4 Data collection methods and tools**

Data collection is very crucial to the successful completion of this study. The study made use of both primary and secondary data. Much emphasis was placed on the primary data to ascertain the true picture of the phenomenon. Primary data is those which are collected afresh and for the first time, and thus happen to be original in character. (Kothari C.R., 2008). They are collected with the sole aim of being the foundation for the analysis in the study. Primary data are unpublished and mostly reliable, authentic and objective. Because they are raw data without the touch of humans, its validity is of more importance to the secondary data. Most of the primary data are sourced from experiments, surveys, interviews, questionnaires as well as observations.

Secondary data on the other hand, are those which have already been collected by someone else and which have already been passed through the statistical process (Kothari C.R., 2008). They are mostly data collected from a source that has already been published in any form. It could serve as an important data source especially when primary data is not readily available. There are numerous sources of secondary data which could be used to gather information. Books, journals/ periodicals, magazines, published electronic sources, e-journals and others can all provide secondary data to researchers.

The questionnaire used in this study was made up of twenty questions, seeking to solicit information from entrepreneurs on how their sales revenue was being monitored. The researcher categorized it to



parts such as revenue, technology and basic information about the company. Both open and closed ended questions were present, with closed ended questions predominant.

For the purposes of data collection for the study, the researcher employed the services of a facilitator purposely for respondents based in Ghana. Various SMEs were assessed to include entrepreneurs who are engaged in manufacturing, retailing and wholesaling activities.

To be able to collect the data, the facilitator briefed respondents as directed by the researcher on the kind of study being conducted. Then emails were collected for the purposes of sending questionnaires, while new ones were created for those who did not have. The researcher then forwarded the questionnaires with a unique link to the questions to be answered as agreed. But for entrepreneurs who were known by the researcher, the link to the questionnaire was sent to them directly to be answered without the aid of a facilitator.

Furthermore, respondents were supervised by the research facilitator, who ensured the questions were responded to accurately as possible to fulfill the research goals. Upon completion, the facilitator informed the researcher, which paved way for further analysis of the results.

For respondents in Finland, the researcher engaged them face to face to explain the purpose of the study and thereafter, unique links were sent to the emails collected. The facilitator faced some challenges, as entrepreneurs were not willing to partake in the study, while others did not respond to the emails sent to them.

## 4. RESEARCH ANALYSIS

This chapter presents the analysis of the empirical evidence that was sort concerning this research. As discussed earlier, questionnaires were administered to respondents (entrepreneurs) in both Ghana and Finland to solicit their thought and inquire about their current practices within the organisation on how revenue are being monitored.

The study sought to examine whether there are practicable solutions for small and medium enterprises in Ghana and Finland to realize their full potential. In other words, are there any practical benefits for revenue mobilization, real time information and decision making when applications are used in revenue monitoring? Also, are there any challenges that small and medium enterprises face in revenue monitoring and will the introduction or use of a sales monitoring application be accepted of made available? If yes or no, what are the reasons and would its use lead to maximizing profit in the organisation.

### 4.1 Information on Respondents

Respondents were drawn from both Ghana and Finland, with the focus on entrepreneurs who own business in various sectors such as manufacturing, retailing, wholesaling and others. A total of 65 questionnaires were sent through the emails of respondents, with 50 responding to it, giving it a 77% response rate. The 50 respondents comprised of 35 (70%) males and 15 (30%) females, as shown in the diagram below.

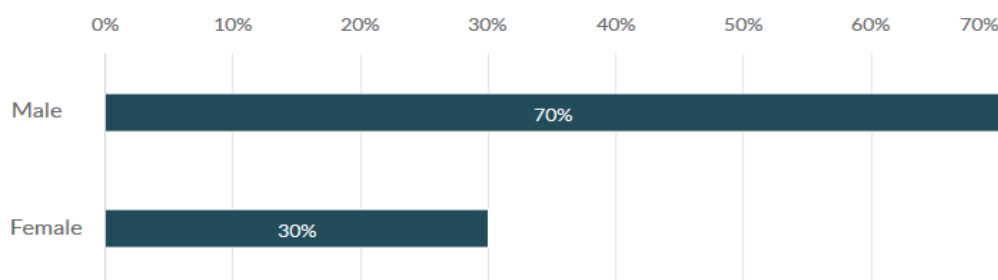


FIGURE 3. Gender of respondents

The study further revealed that most of the entrepreneurs or business have fewer employees, with 72% of them having between 0 – 5 employees. This could be as a result of the small nature of most of the business and their ability to employ many workers. The figure below depicts the number of employees the entrepreneurs have at their disposal.

	<b>N</b>	<b>Percent</b>
0 - 5	36	72%
6 - 15	10	20%
16 - 25	1	2%
Over 25	3	6%

FIGURE 4. Number of employees

#### 4.2 Location of business

The respondents were asked of their business location, whether in Finland or Ghana. According to the responses received, 44 of them representing 88% have their businesses located in Ghana, while the rest (6), making 12% have their businesses in Finland, as clearly seen from the diagram below.

	<b>N</b>	<b>Percent</b>
Ghana	44	88%
Finland	6	12%

FIGURE 5. Business location

Furthermore, to be able to make fair judgements around the experiences of the respondents, the study found that all respondents have been in business at least in the last one year with the highest of them been fifteen years in operation.

#### 4.3 Form of Business

In most cases, setting up small business require huge financing irrespective of the type of business one may want to venture into. In Ghana for instance, most entrepreneurs start going into retailing and later move into wholesaling due to start up financial constraints. This was evident in the study that was conducted. Of the total number of respondents, 27 representing 55.1 % are those in the retailing business, while 20.4% and 6.12% are the wholesaling and manufacturing business. Aside these three, nine respondents, representing 18.4% were in other form of business such as, banking and other services. This can be seen from the figure below.

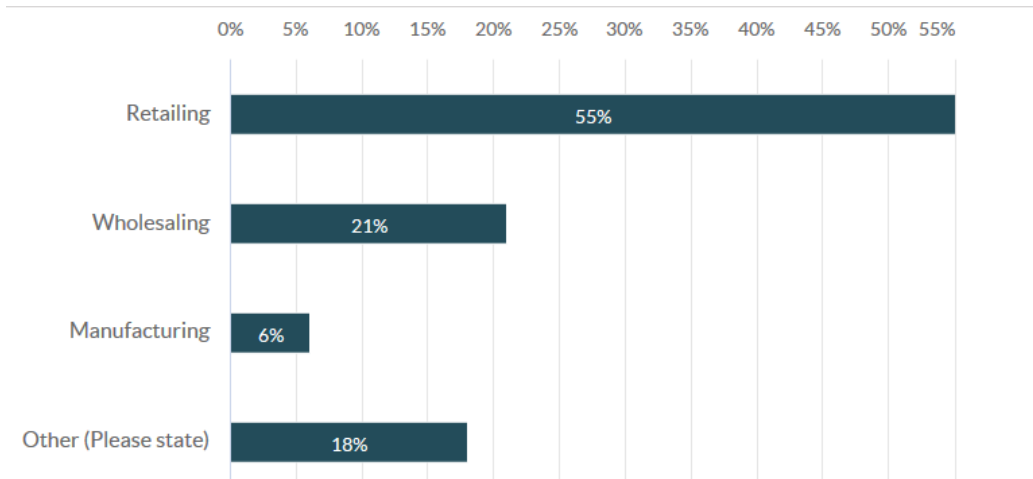


FIGURE 6. Form of business

When comparing small businesses in Ghana and Finland, the researcher realized that, most of the businesses in the two countries were engaged in retailing as a form of business. 50% of the respondents in Finland are involved in retailing, while the other half are involved in services. On the other hand, businesses located in Ghana are mostly in the retailing business (56%). A further 23% in wholesaling, 7% in manufacturing and 14% in other forms of business such as provision of services. This can be seen from the figure below.

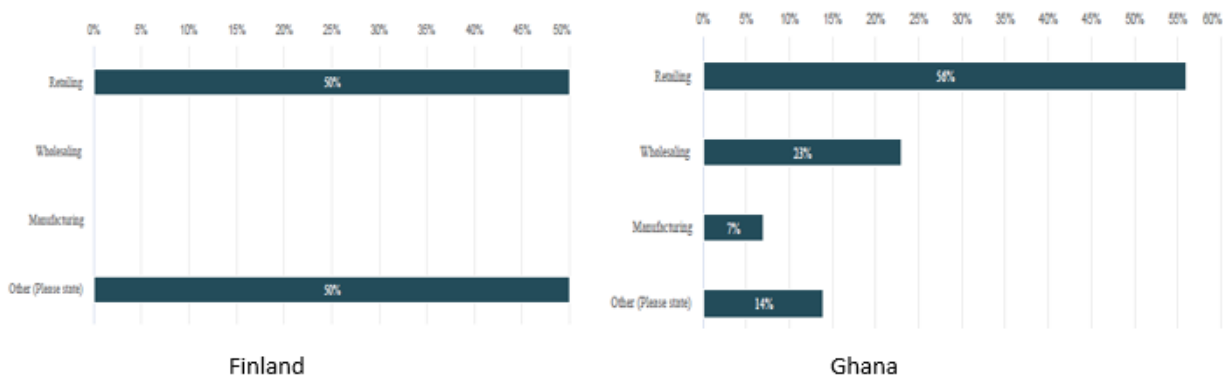


FIGURE 7. Comparison of forms of business between Ghana and Finland

#### 4.4 Medium of Sale

The type of sales in most cases can be a mixture of all available mode. In this study, the results showed that direct sales to customers is mostly practiced by small and medium enterprises. With a total of 46 responses, representing 92% of the total respondents, direct sales topped the list, followed by sales on credit (38%) and on hire purchase, representing 18% or 9 responses. It must be noted that an entrepreneur

can have a mixture of all the sales medium, be it direct sales, high purchase, on credit as can be seen from the diagram below.

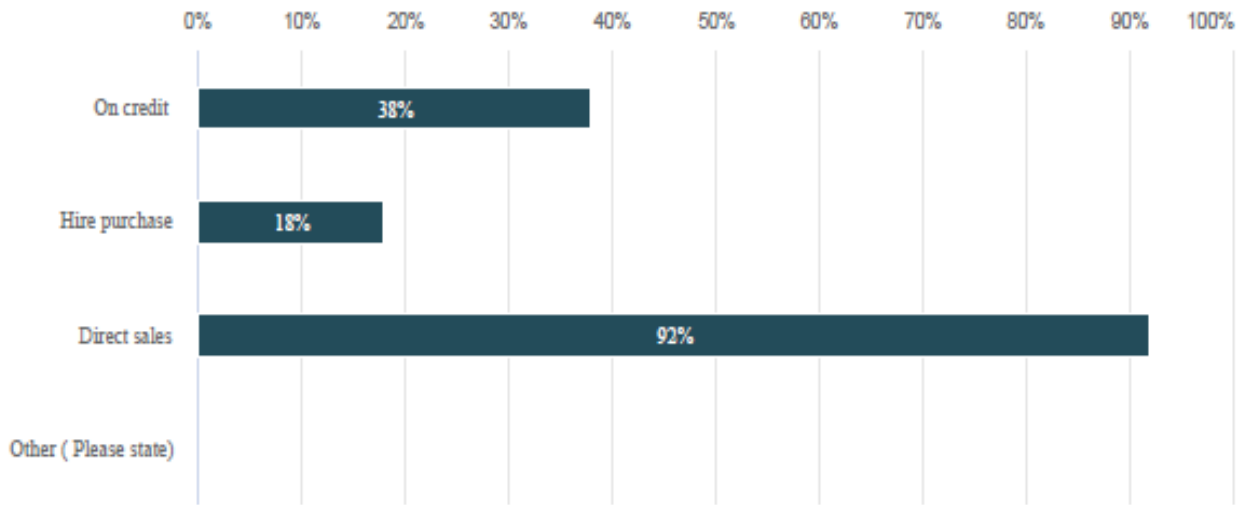


FIGURE 8. Medium of sale

All the SMEs in both countries have a mixture of different medium of sale. But, the medium of sale that was synonymous among the two was direct sales. All the respondents in Finland have direct sales, with 17% adding credit to their medium of sales, while 91% of the respondents in Ghana involve in direct sales. 39%, 20% have credit and hire purchase as another medium of sales respectively. This can be seen from the figure below.

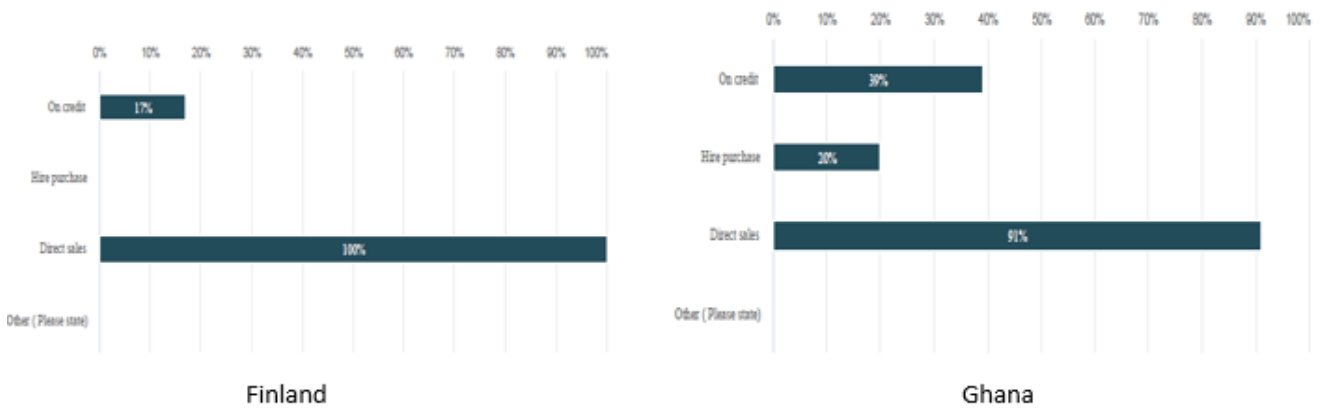


FIGURE 9. Comparison of medium of sale between Ghana and Finland

#### 4.5 Monitoring revenue within the organisation

Revenue mobilization with regards to SMEs come with various challenges and these tend to hamper growth and the maximization of profits. In the questionnaire, respondents were asked how they monitor revenue and the challenges that are mostly faced in the quest to monitor daily sales and revenue within their respective organisation. Results showed that, 35 respondents representing 69.9% use booking keep- ing as a method of monitoring revenue. These are the conventional ways most entrepreneurs in Ghana specifically use. In most cases, these are done privately in retail stores by the owners whereas those involved in wholesaling and manufacturing may outsource to professionals in accounting with a charged fee. However, it was interesting to note that some respondents (8%) still memorize data as a means of monitoring revenue. In the case of applying any software applications, 24% of the total respondents were found to be using an application as a means of monitoring revenue within their organisation. This can be shown the figure below.

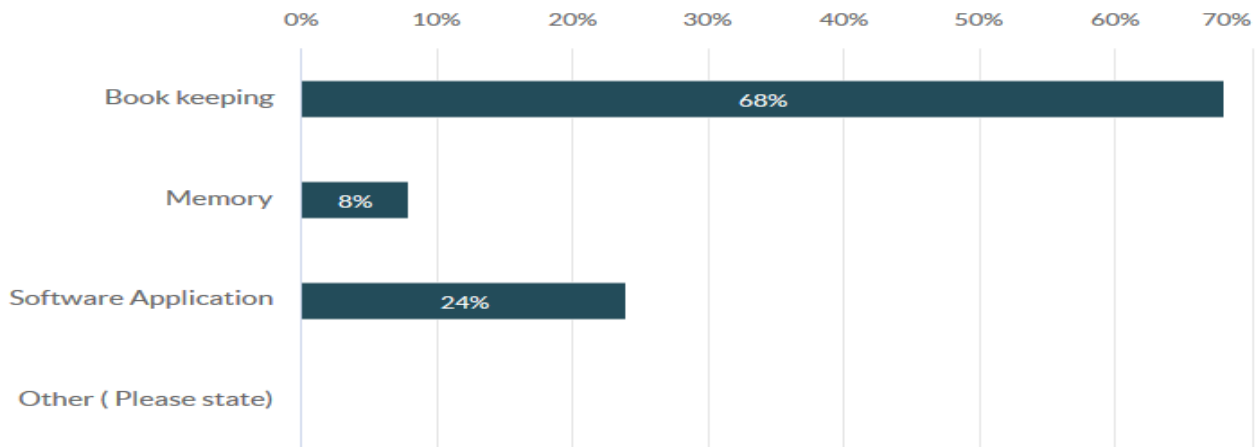


FIGURE 10. Monitoring revenue within the organisation

Bookkeeping is popular form of monitoring revenue in both SMEs in Ghana and Finland. This is evident in the diagram below as 67% of the respondents in Finland engage in book keeping while 68% of the respondents in Ghana involve book keeping as a form of monitoring revenue. The second most popular form of monitoring is the usage of software application. In addition to book keeping some of the respondents in Finland (33%) use software application, while 23% in Ghana use software application. But only respondents in Ghana use memory as another form of monitoring revenue in their organisation.

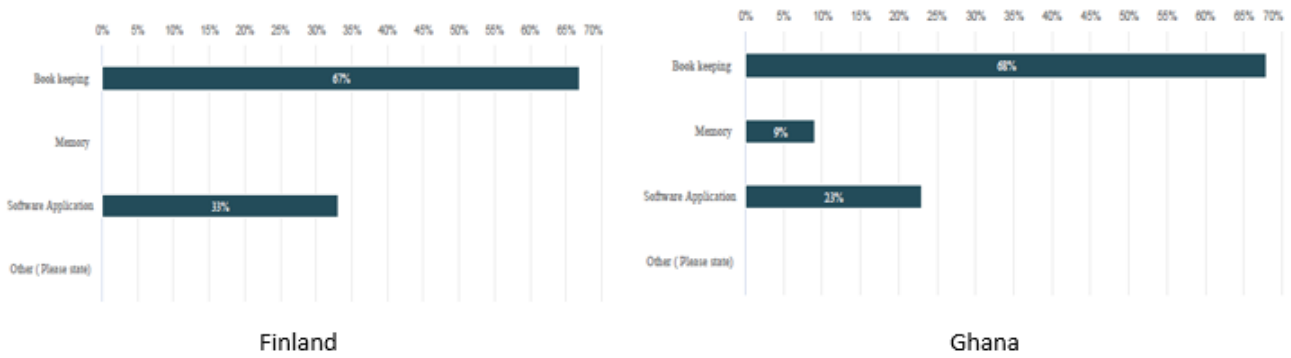


FIGURE 11. Comparison between Ghana and Finland on monitoring revenue within the organisation

**4.6 Challenges involved in the current system**

However, 76% of the respondents openly disclosed various challenges that are encountered with their current system of revenue monitoring. Some of these challenges were, poor records keeping by salesperson, the right personnel to manage their software, power outages, not being able to determine the quantum of profit gained and expenses incurred in production. The various responses as shown in the diagram below are from respondents from both Ghana and Finland.

Y	Poor records keeping by salespersons
Y	I don't have any challenge
Y	The manual system of bookkeeping does not help due to the volumes of documents, receipts and files one has to handle.
Y	Not so much a problem to think of.
Y	the right personnel to manage the software
Y	Power Outage. Due to some technical errors in our lightening system, our lights have not been stable that is what we are facing now
Y	Not able to determine the quantum of profit gained and expenses incurred in production.
Y	Not to accurate. Guess its because everything is done manually
Y	I am unable to monitor effectively because I do not have a proper recording system.
Y	Difficulty in doing computation and selective inquiries
Y	The human errors associated with taking cash as well as minor thefts.
Y	Difficult to track changes as everything is done manually
Y	when a client is being refused a visa
Y	Low capital
Y	There has not been consistent book keeping.
Y	1. System not able to monitor or generate business performance report 2. System doesn't support stock taking 3. System not able to compare and contrast stock levels as against sales made 4. System cannot be used when electricity goes off.
Y	Continue recording
Y	1.financial problems 2.papers tear 3.water pours on the books
Y	Data loss due to revenue and Inventory Book missing and difficulties in tracking how much the business makes daily.
Y	No record of data on sales. Wrong entries of sales made
Y	Human behavior
Y	Erratic flow of revenue
Y	Lack of honesty in debtors fulfilling payments. Inadequate information in relation to tracking customers

	Responses
Y	Incomplete payments of debts Location problems of clients
Y	Workers under disclosing actual sales when I'm away.
Y	no challenges, bookkeeping provides all the info.
Y	Nothing for now
Y	Lack of customers willingness to settle debts on time as agreed upon
Y	Late settlements of debts
Y	Occasional theft and non disclosure of sales
Y	High cost of accounting services
Y	Some expenses don't are overlooked and as such doesn't get to book keeping
Y	Leakages through improper disclosure by sale personnel
Y	Delays in payments by customers when goods are sold on credit
Y	nothing
Y	Inconsistent daily sales

FIGURE 12. Challenges involved in the current system

#### 4.7 The Medium of payment

Entrepreneurs are in a better position to monitor their revenue when there is a system in place to aid them when payment is being performed in a transaction. The study asked respondents the medium used in payment. Most respondents used a mixture of various payment method for the transaction. 82% of the respondents receive direct cash as a medium of payment, while 44% use bank transfers. Mobile money transfers are also popular amongst the entrepreneurs as 54% of them use it in transactions, while 12% use debit or credit cards to make payments.



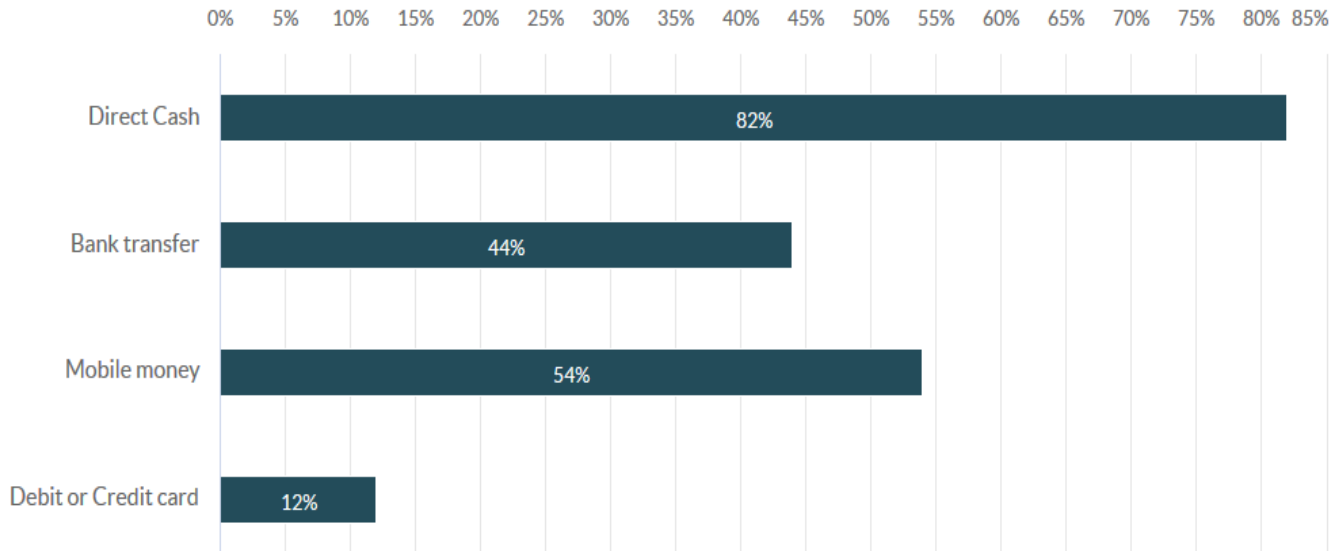


FIGURE 13. Medium of payment

Also, it can be noted that most of the entrepreneurs (92%) keep their revenue and cash in the bank for some keeping. Few will put their savings in an investment, whereas none did not agree to the idea of putting their revenue in the office. This could be a bad idea as it could attract robbers to the organisation.

The medium of payment among SMEs in the two countries differ from each other. While bank transfer is the most used form of payment in Finland (67%), direct cash is the main form of payment among companies in Ghana (86%). Both direct cash and debit and credit card payments are used in Finland, as 50% of the respondents use both. On the other hand, mobile money payments is mostly used alongside direct cash, as 61% of the respondents use it. 41% of the respondents use bank transfer while only 7% use debit or credit card payments. This can be seen from the diagram below.

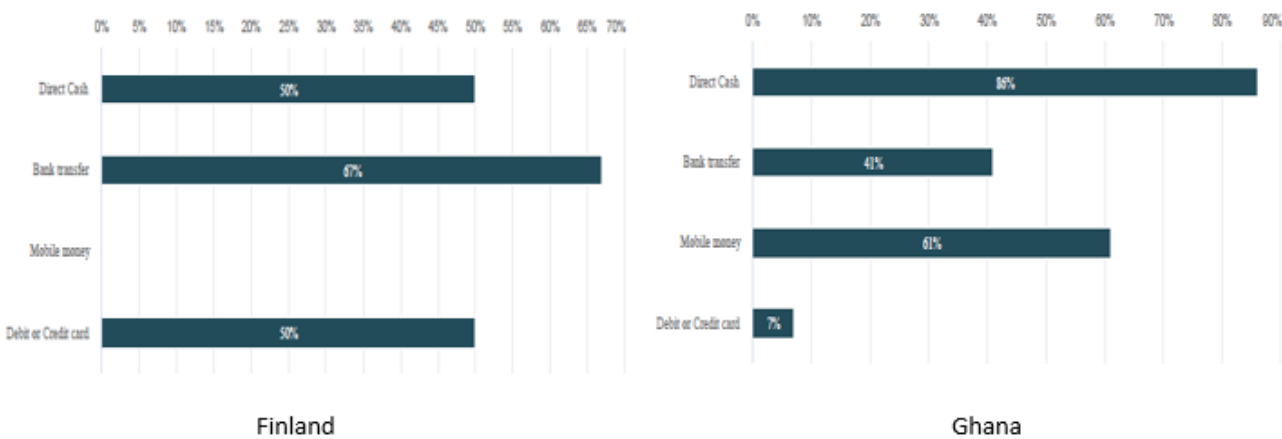
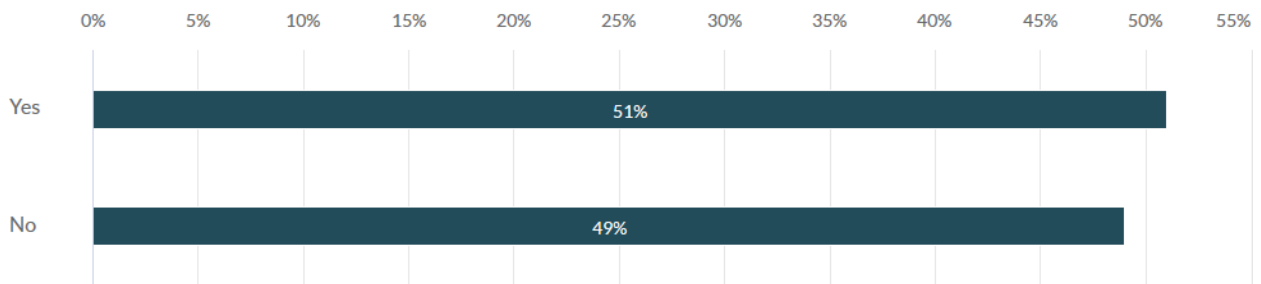


FIGURE 14. Comparison of medium of exchange between Ghana and Finland

### 4.8 Knowledge of any software application

In most cases, there are small and medium sized enterprise owners who may be constrained to the application of modern technology in their operations which might be because of numerous challenges ranging from finances, lack of knowledge and others. The question sought to answer and fulfil the objective of creating the awareness and if possible applying sales and revenue monitoring application to these businesses.

Respondents were asked whether they had knowledge of any software that could be used to monitor sales within their organisation. Of the total number of respondents who answered that question, 24 representing 51% knew of any software, while 23 representing 49% had no knowledge of an application. Those who answered No, had to skip to question 15 to continue the questionnaire. The rest who knew a software application went on to answer questions that followed immediately.



	N	Percent
Yes	24	51.06%
No	23	48.94%

FIGURE 15. Knowledge of software application

Knowledge of a software application is very important to the success of revenue monitoring in the organisation. It is interesting to note that only 20% (1) of the respondents in Finland have knowledge of software application that can be used in their operations, while 80% have no knowledge of any application. In contrast, 55% of the respondents have knowledge of software application that can be used in their operations, while 45% do not. The diagram below depicts the information.

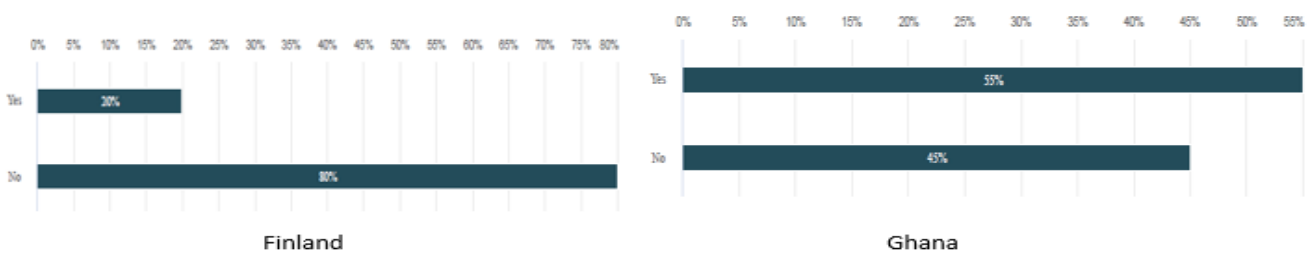


FIGURE 16 Comparison of knowledge of software application

### 4.7 Usage of software application

With regards to the number that answered Yes to the question of knowledge with regards to an available software application, 39% are using the software while the remaining 61% although have knowledge of its existence, are not using software application. In most cases as have been mentioned, there may be reasons for which these small businesses may not be using the application for revenue monitoring. In the diagram below, respondents answered to issues such as cost of obtaining the application, lack of interest and lack of knowledge in the software.

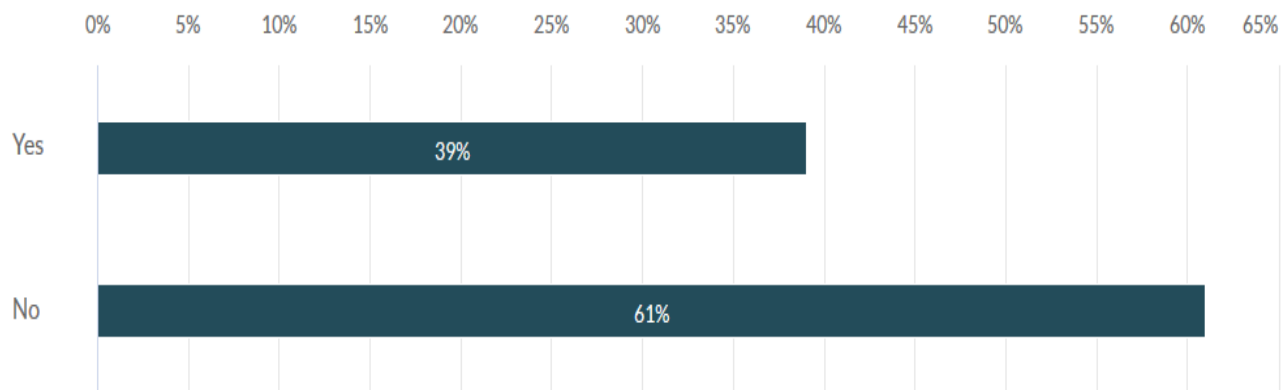


FIGURE 17 Usage of software application

Respondents were made to rate how convenient the application being used was from a range of one to (5), with 1 being least convenient and 5 being convenient. Per the respondents who answered that question, it was fairly convenient as majority of them rated their current system a four

Of the respondents who answered Yes, 40% of them in Ghana use software application in their operation, while 60% do not use software application. Also, only one person in Finland uses software application in its operations, which can clearly be seen in the diagram below.

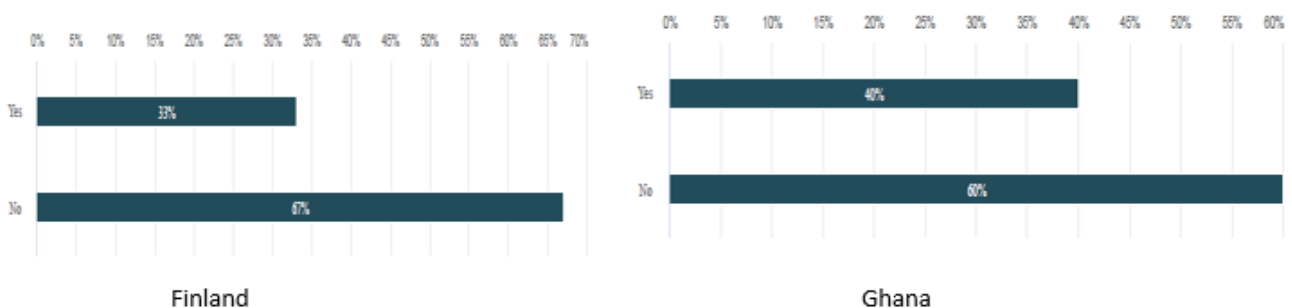


FIGURE 18. Comparison between Ghana and Finland on the usage of software application

It also emerged that, respondents who are not using any software application might be interested in applying it in their processes as 86% of the respondents answered Yes to the question, whether they will be interested in using software application in their revenue monitoring, with 11% undecided, whereas 3% were not interested in any software application. This can be seen from the figure below.

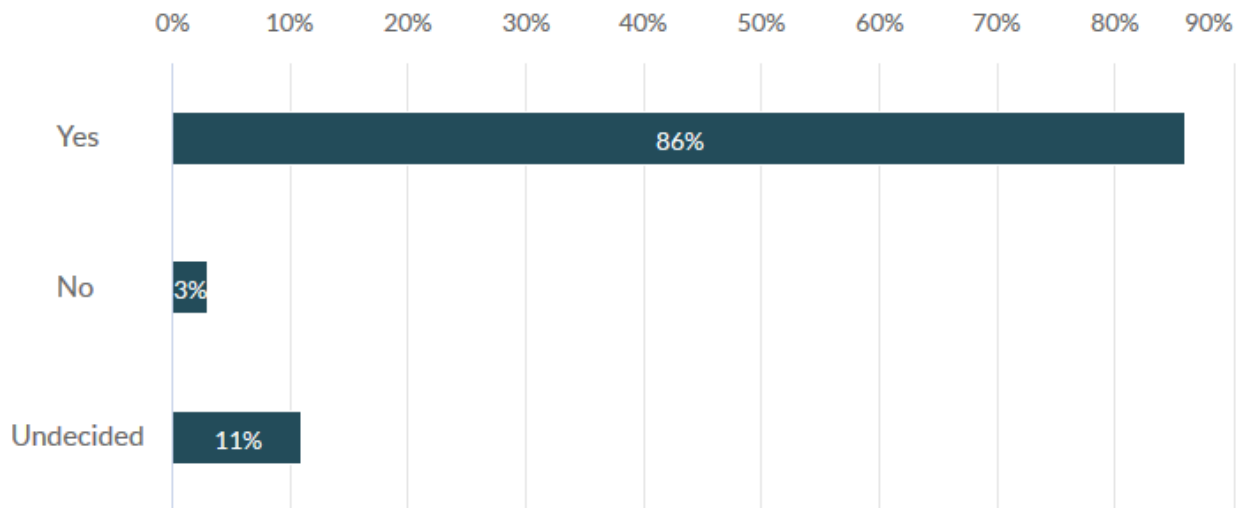


FIGURE 19. Interest in using technology or software application in revenue monitoring.

#### 4.8 How often inventory is made in the organisation

Another important aspect of using a software application is how well it can monitor stock. Inventory management have advantages to the organisation, such as knowing what to sell first or last, too help curb theft among staff and so on. When asked how often inventory is monitored, 22% answered to making daily stock taking, while 46% do weekly stock taking and 30% do monthly stock taking. Only 2% had a different stock taking period as can be seen from the diagram below.

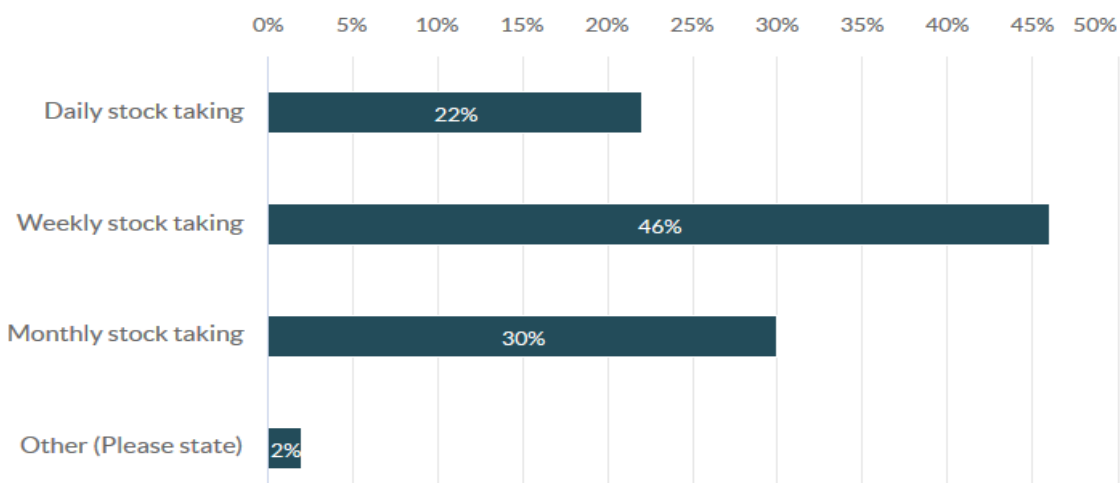


FIGURE 20. Stock taking period

Stocking taking in SMEs in Finland are mostly done on monthly basis as depicted in the diagram below. 50% of the respondents conduct stock taking on monthly basis, 33% weekly and 17% do their stock taking on daily basis. In comparison to Ghana most of the respondents conduct their stock taking on weekly basis, with 48% of them engaged in that. 27% of the respondents conduct their stock taking on monthly basis. Daily stock taking is done by 23% of the respondents, whereas 2% have other times of conducting stock taking.

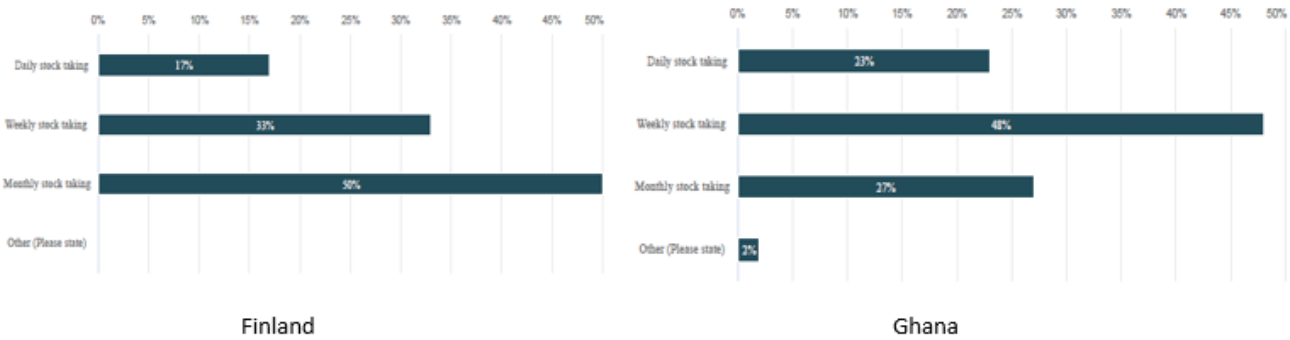


FIGURE 21. Comparison between Ghana and Finland on stock taking period.

**4.9 Location of warehouse**

Stock taking are mostly done in warehouses and storages of organizations and if not done in probably, it could lead to revenue loss. Majority of the respondents have warehouses where goods are kept for inward distribution. 38% of the respondents have their warehouses situated on the premises of the company, 18% have theirs out the premises of the company. Respondents also have virtual warehouses as 4% of them indicated that in the questionnaire. But it should not be ignored that 40% of the respondents do not have warehouses at all. This could be due to their line of business where majority of them are retailers. The diagram below throws more light on this.

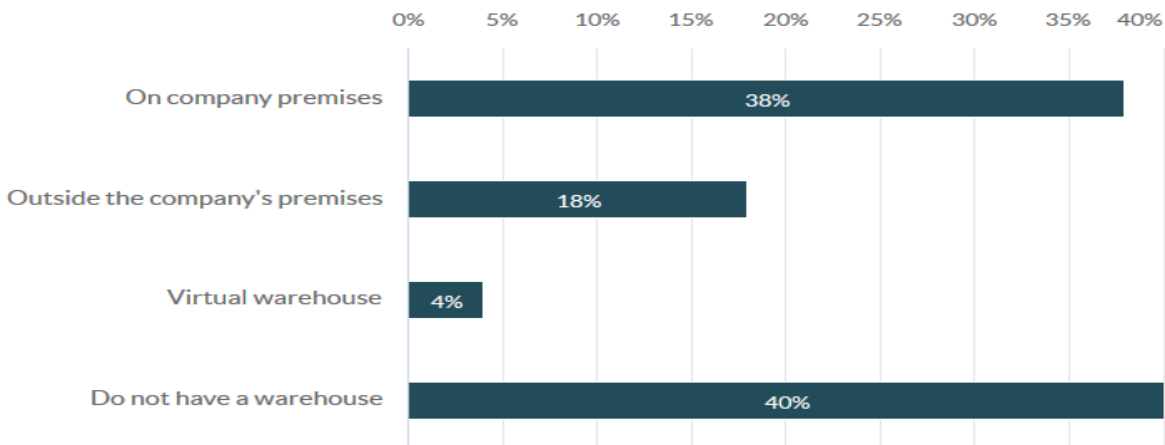
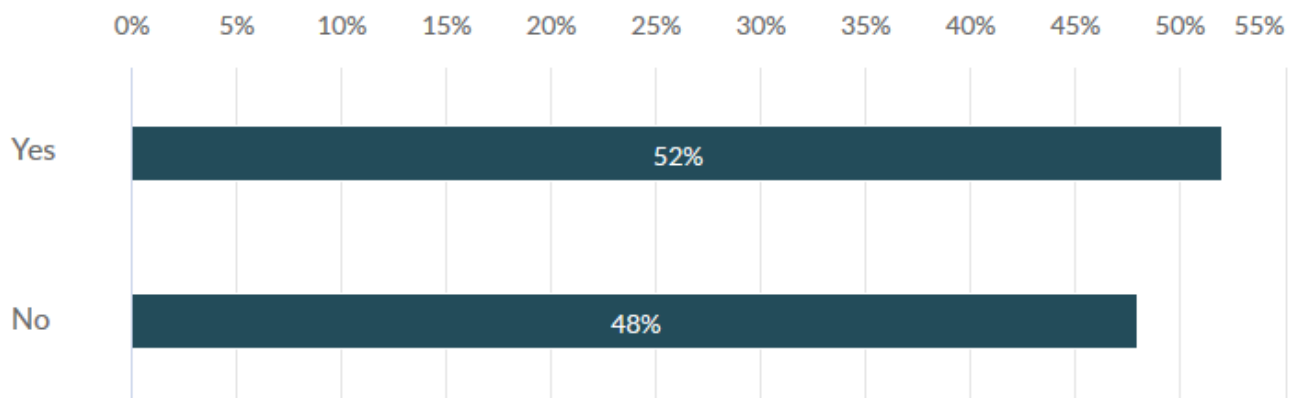


FIGURE 22. Location of warehouse

According to the study conducted, most organizations have different ways of disbursement of goods to customer. Of the total number of respondents, most distribution was performed on the organization's premises as 67% of the customers picked up the products themselves. 55% distributed the goods to the clients to their premises, while 16% involved the services of courier to distribute goods to their clients.

#### 4.10 Customer Database

It is also worth noting that, to be able to maximize revenue, small businesses must always keep records of customers. In most cases, there may be recalcitrant customers who might prove difficult repaying goods ordered on credit or hire purchase. Therefore, it is in the best interest of organizations to keep a database of customers to avoid incurring bad debt, which might have adverse effect on their operations. With regards to having a database of customers, 52% of the respondents indicated that, they have database of their customers, while 48% did not have database of their customers as indicated in the diagram below.



	N	Percent
Yes	26	52%
No	24	48%

FIGURE 23. Customer database

#### 4.11 Rate of contact

Respondents were asked the number of times they are in touch with their customers. This is important to the survival of the organisation, because when customers are always happy when organizations show concern as well as helping them to keep track of transactions that might be performed between them and the customers. The questionnaire asked respondents how often they keep in touch with customers, and of all the responses, 45% of the respondents kept weekly contacts with their customers, 22% kept

contact with their customers on daily and monthly basis, while 11% kept contact with customers on different occasions. This can clearly be seen from the diagram below.

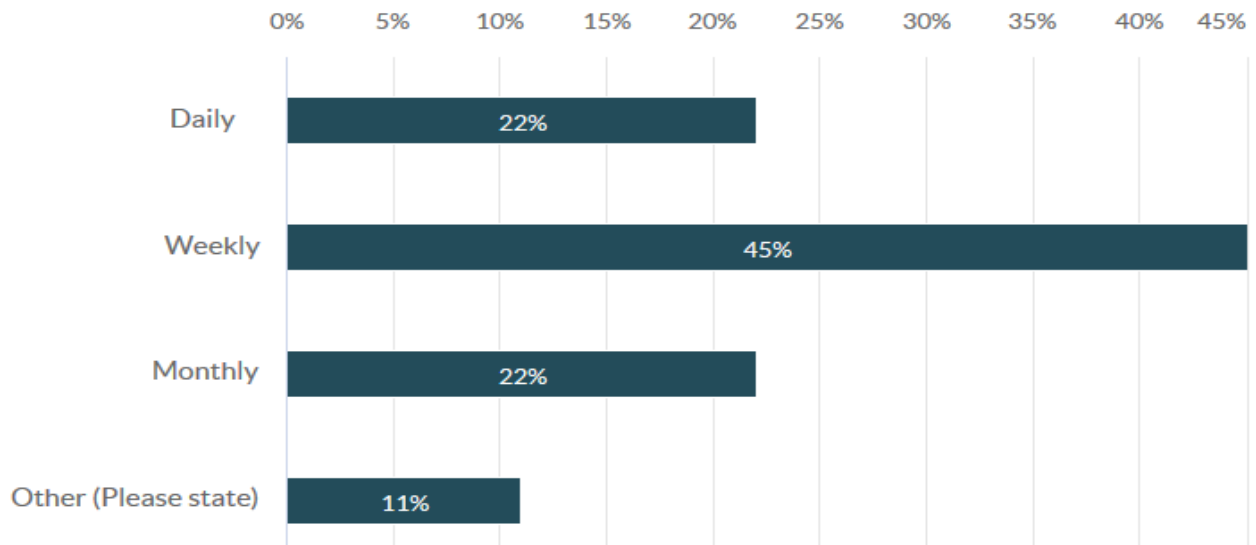


FIGURE 24. Rate of contact

The outcome of the study conducted shows diverse views on how organizations are well versed in technology and the extent to which they go to prevent leakages in their operations. These outcomes presented in graphs depict the situations entrepreneurs find themselves in while going about their normal duties. It is worth noting that, some entrepreneurs acknowledge the fact that, there are leakages within their system and in the known of ways to solve these leakages but are short of the means. In other words, their finances may not support technologies that can help prevent the leakages.

## **5. RESEARCH FINDINGS AND RECOMMENDATIONS**

This chapter discusses the results and findings on revenue leakages in small and medium sized enterprises, a comparison between Ghana and Finland. The significance of this research is to assess the revenue leakages in SMEs and compare two countries to ascertain how entrepreneurs seek to solve this problem. In other words, the research is aimed at coming up with practical solution for organizations in these two countries to realize their full sales potential. Again, it is establish the benefits of using practical solutions, which is to reveal the competitive advantage it would have on other application on the market. Furthermore, the study is to establish operational excellence of the application to the organisation, which is improving efficiency and profitability in the organisation.

The responses given by respondents through the answering of questionnaires are what the findings are based on. Then the discussions are presented based on the findings which is the empirical or primary data as well as secondary data, which can be found in chapter two.

### **5.1 Summary of Research**

The intention of the researcher is to come out with a practical study that is capable of solving leakages in SMEs' revenue. A software application which takes into consideration of the problems that were enumerated by the respondents. Therefore, it was appropriate to conduct a practical based research, which brought to bear a software application which seeks to solve the problem.

Questionnaires were administered to respondents in the SME sector in Ghana and Finland to solicit their views on how revenue is monitored which could solve revenue leakage problems in their organisation. Fifty respondents returned their answers out of the 70 questionnaires that were administered, with most of the SMEs in Finland failing to return theirs.

Webropol was used in the designing as well as analyzing the questionnaire, which was access on the school's portal. As questionnaires were disseminated through various emails of entrepreneurs and them being returned, webropol analyzed the results and presented them in charts for easy interpretation.



## 5.2 Discussion

In this study, revenue leakages that exist among small and medium enterprises have been analyzed by comparing the SME sectors in Ghana and Finland. The success of business activities mostly depends on the ability to use proper record keeping methods to monitor sales, record transactions and so on. The ability for SMEs to use book keeping largely in monitoring revenues was appreciate and encouraged to be continued. With regards to small and medium enterprises keeping book of accounts, the study proved that most businesses either keep records of accounts through proper bookkeeping. These practices are believed to be a step in the right direction towards the monitoring of sales and revenue to aid in maximizing profits

Furthermore, on the use of software applications for revenue monitoring, it was pointed out that a lesser number of businesses engaged are actively using software applications. This calls for the need to introduce an application since the study showed the willingness to use, with reasons such as cost involved to nonexistence of adequate knowledge in software, cited as reasons for not using it in their operations. The researcher therefore is of the view that, educating entrepreneurs, making software applications cheaper and easily accessible as well as providing training would enhance their understanding and the need to use it.

On the other hand, one interesting revelation in relation to revenue leakages that is worth addressing relates to the various challenges that SMEs face in the bid to monitor revenue. The study indicated numerous problems such as difficulties in basic computation of revenues, human errors because of manually entering data, data loss through theft and other disasters, lack of honesty on the debtors in fulfilling payments and so on. It is therefore the researcher's belief that the introduction and use of an application software will contribute to curtailing these problems enumerated.

The desire to accept, apply available software for revenue and sale monitoring was revealed in the study to the extent that most SMEs included in the study have the willingness to make way for such applications. The research found evidence that showed, there are adequate knowledge about applications that could be used to monitor revenue. However, in most developing businesses where revenues fall within a certain amount of revenue per year, the willingness to invest in a software application which may be managed at a higher cost in near to zero. In such instances, businesses keep to applying memories to collect debts and of customers. Again, the inability to use available applications is in the lack of knowledge in software. It is therefore recommended for technological firms to educate small businesses

to raise interests in the use of applications that may be of benefit for the business development and maximizing profits.

### **5.3 Recommendations**

For further studies, the researcher recommends for expanding the study by including businesses from different sectors to make a comparison on how each of them is using and benefiting from the importance of technology. Also, for future studies, government institutions especially in developing economies may be encouraged to adopt systems for revenue monitoring. For instance, in hospitals where there may be theft for medicines etc., applying revenue monitoring applications can help reduce corruption and theft.

It is important to note that, organizations cannot realize their full sales value with the usage of technology without the entrepreneur establishing rules and regulations for the employees to use the application. Entrepreneurs must enforce rules that could deter employees from going contrary to the functionality of the application. In other words, there could be saboteurs within the organisation who could work against the software application for their selfish gain. Therefore, it will be to the advantage of the entrepreneur to ensure strict adherence to the usage of the technology.

## 6. CONCLUSIONS

There is no denial with regards to the important role technology plays in setting up a revenue management system, hence helping firms to get closer to maximizing profit. However, to ensure proper revenue management or monitoring require the involvement of all stakeholders to ensure its success. The aim of the study was;

- To come out with practicable solutions that entrepreneurs who own businesses in Ghana and Finland to realize their full sales value could use in preventing leakages within their organisation.
- To establish the benefits of using practical solutions, which is to reveal the competitive advantage organizations will have on their competitors.
- To reveal the advantages of using software application in revenue monitoring within the organisation.

The descriptive nature of the research afforded the researcher to use quantitative methodology in conducting the study, where questionnaires were designed and disseminated to respondents who were mainly entrepreneurs in Ghana and Finland. The questionnaires were structured in a way that could help solicit information from respondents on how they can monitor their revenue within the organisation, hence blocking the leakages within their organisation. A facilitator in Ghana was on hand to assist respondents to fill the questions, whereas respondents in Finland were engaged face to face and subsequently questionnaires were administered to them through their emails for easy analysis.

The level at which technology is used in monitoring revenues and sales has been explored extensively in diverse literatures as expected on the onset of this study, mostly in advanced economies as compared to developing economies like Ghana. For example, in the study, there are evidences of near to 50% no knowledge with regards to any software application used in revenue monitoring.

The study surprisingly found the desire in more SMEs ability to use bookkeeping methods and this encouraging to an extent. The study therefore has had the focus of stressing on the fact that applying technological methods for collecting information on customer, recording sales and monitoring revenues contributes largely in making decisions and maximizing profits, hence blocking leakages with the involvement of a software application.

Although the methodology used was fitting for the study, it came with its challenges, as some respondents were unwilling to give information, while others did not respond to the questionnaires sent. But the researcher was able to reach the target number of fifty respondents, which paved way for the analysis.

In assessing the research problems and its aims, the researcher was able to fulfill them when respondents who do not involve technology in revenue monitoring were of the view that, if given the opportunity, they could employ the usage of software application in revenue monitoring process. By this assessment, it wouldn't be out of place if the researcher concludes that there is a need to use technology or software application to a large extent, to monitor revenue, which could lead to increase profitability.

The researcher is of the view that, future researches could focus mainly on one country to assess their peculiar problem, as conditions existing in each country differ. Although the world is a global village and technology seems to cut across all divides, but the facts remain that, it would be prudent for any researcher or a developer to focus on a country or countries within the same continent, where there might be similarities in cultures, to come out with technology that could be useful in their setting.

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## Questionnaire

Dear respondent

Thank you for taking time off your busy schedule to answer this survey. The questionnaire seeks to solicit information from you as an entrepreneur on how revenue leakages within your organisation are being solved. It will be much appreciated if all questions are answered for better analysis.

This questionnaire takes maximum of five minutes and all information provided are anonymous. It is part of an academic process for the completion of Master's in International Business Management. Entrepreneurs will have a greater perspective on the revenue being generated as well as how to solve any loophole within their systems, with the usage of technology.

Best Regard

Samuel Asare Forkuo

Centria University of Applied Sciences

MBA – International Business Management.



## Questions

1. Tick one box

A. Male

B Female

2. Where is your business located

A. Ghana

B. Finland

3. How long have you been in business?

-----

Industry

4. What is the form of your business?

A. Retailing

B. Wholesaling

C. Manufacturing

D.

Other \_\_\_\_\_

5. How many employees do you have?

A. 0-5

B. 6 – 15

C. 16 – 25

D. Over 25

### Revenue

6. What is the medium of sale within the organisation

A. On credit

B. Hire purchase

C. Direct Sales

D.

Other \_\_\_\_\_

7. How do you monitor revenue within the organisation?

A. Book Keeping

B. Memory

C. Software Application

D. Other \_\_\_\_\_

8. What are the challenges involved in your current system of revenue monitoring?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

9. What is your mode of payment?

- A. Direct cash                      B. Bank transfer                      C. Mobile money  
D. Debit and Credit card

10. Where do you save cash revenue?

- A. Bank                      B. In the office                      C. Invest  
D. Other \_\_\_\_\_

11. Do you know of any software application that can be used to monitor your sales value

- A. Yes                      B No.

If No skip to question 15

12. If Yes, are you using this software application?

- A. Yes                      B No.

13. If Yes, how convenient is the software, please rate 1 – 5, 1 being least convenient, 5 being more convenient

\_\_\_\_\_

14. If No, what is the reason for you not using the software application?

- A. Cost involved  
B. Lack of knowledge in the software  
C. Lack of interest.  
D. Other \_\_\_\_\_

15. If No, would you be interested in using software application in your revenue monitoring system?

- A. Yes                      B. No                      C. Undecided

16. What is your monthly revenue range (euros/ cedis)

- A. Under 1000  
B. 1000 - 10000  
C. 10,001 – 50,000  
D. Over 50,000

17. How often do you monitor your inventory?

- A. Daily stocktaking
- B. Weekly stocktaking
- C. Monthly stock taking
- D. Other \_\_\_\_\_

18. Where is your warehouse located

- A. On company premises
- B. Outside the Company's Premises
- C. Virtual Warehouse
- D. Do not have a warehouse

19. What is your mode of distribution

- A. Courier services
- B. Personal transportation
- C. Client/ customer pick up
- D. Other \_\_\_\_\_

20. Do you have a database of your customers?

- A. Yes
- B. No

21. If Yes, how often do you keep in touch with them?

- A. Daily
- B. Weekly
- C. Monthly
- D. Other (Please state) \_\_\_\_\_

Thank you so much for participating in this survey and I appreciate your time and effort into answering the questionnaire.