

Quality of Goods Produced By Small and Medium Enterprises as A Determinant of Their Growth in Kenya

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Abstract- Small and Medium Enterprises (SMEs) form the bulk of enterprises in Kenya currently standing at a population of over 7.5 million. They contribute about 80 percent of total employment and generate 92 percent of all new jobs in the country. In Kenya, SMEs contribute about 40 percent of the country's gross domestic product (GDP). Research has shown that in most countries, SMEs generate by far more employment opportunities than big companies or the public sector. Employment is the major source of livelihood globally. No wonder the search for employment is one of the greatest reasons that accounts for the Rural-Urban migration. The resultant consequence is strained resources and auxiliary facilities such as housing, schools, security water, power, sewerage and so on. Undoubtedly, growth of SMEs can check against these odds by creating equal employment opportunities within the rural areas and subsequently attracting development of infrastructure and presence of auxiliary services within those areas. Many studies have been conducted to determine factors that influence growth of SMEs. The mixed results can perhaps be explained by contextual differences (including both micro and macro environment operative) or the mix of variables observed. This study looked at the quality of the goods produced by the SMEs as one of the determinants of growth in four of SME subsectors; manufacturing metal items, wooden furniture, textiles and leather goods in Nairobi City County. This study used a survey research design. The target population was all registered SMEs operating in Nairobi City County, total number, 556. The sampling frame was all the SMEs from the four subsectors who are involved in manufacturing activities and these were 316. The sample size of 177 was picked randomly from the sampling frame. The data collected was mainly quantitative. This data was collected by way of a questionnaire served to owner managers, managers and senior managers of the enterprises. Both descriptive and inferential statistics were used to summarize the results. The study concluded that the quality of produced goods greatly influences growth of SMEs in Kenya with use of electrical power playing a catalytic role.

Index Terms- Growth, market information, small and medium enterprises, rural to urban migration.

I. INTRODUCTION

The definition of small and medium enterprises (SMEs) differs from country to country. In Kenya, enterprises are classified into a number of groups: those with less than 5 employees are referred to as micro enterprises, those with 5 to 49 as small scale enterprises, those with 50 to 99 employees are referred as medium enterprises with those with a 100 or more being referred to as large enterprises (Migiro & Wallis, 2006). Another method of classifying enterprises in Kenya is by their annual turnover. According to World Bank (2010), enterprises are classified according to their annual turnover as follows: those with turnover less than Ksh. 500,000 are referred to as micro enterprises. Those with turnover between Ksh. 500,000 and Ksh. 5 million are referred to as small enterprises while those with turnover between Ksh. 5 million and Ksh. 800 million are referred to as medium enterprises.

Small and Medium Enterprises play a crucial role in the development of most countries in the world. In a lot of cases, SMEs come to be as a result of reduction in job security in big firms and the public sector, increase in education levels and innovation. Small and medium enterprises come up when an economy of a country is not doing well and because of shrinking employment opportunities in the public sector (Masocha, Zindiye & Chiliya, 2012). When the economy of a country is doing well SMEs survive better because factors like credit become easily accessible and governments are able to improve pre requisite infrastructure for growth (IFC, 2011; OECD, 2010). These reports further submit that the SMEs that survive with a strong economy are more than those that fail.

Undoubtedly, growth and successful performance of SMEs is a global desirable in proliferation of entrepreneurship. Their operations is another factor that makes entrepreneurship and by extension SMEs to flourish globally. In Kenya, SMEs generate approximately two thirds of all new jobs annually (OECD, 2004). They account for half of the turnover in Kenya's business sector. According to Sagwe, Gicharu and Mahea (2011) small and medium enterprises contribute a lot as far as job creation in any country is concerned. The trio further argue that SMEs generate many more jobs in any country than the government or the large firms. Small and medium enterprises in Kenya however face numerous challenges (Kinyua, 2014). These include lack of infrastructure, access to credit, competition among themselves as well as from large firms, competition from

outside the country through cheap imports and insecurity (Bowen, Morara & Mureithi, 2009).

Entrepreneurial initiatives in both rural and urban areas play a big role in the development as well as growth of small and medium enterprises in Kenya. Toward this, the importance of developed physical infrastructure cannot be overlooked. To achieve her vision 2030 goals, Kenya is set to ensure improvement of physical infrastructure among other factors of production (Republic of Kenya, 2007). Reading from the same page on Kenya, the World Bank report (2017) acknowledges that the physical infrastructure contributes greatly to the development and growth of SMEs. ILO (2005) cites additional reasons for the lack of growth in SMEs as: lack of resources, limited motivation, focus on local markets, lack of business ideas and lastly, lack of business support initiatives. While the list of factors contributing to SMEs' growth may be endless, governments' commitment towards addressing these encumbrances is key to SMEs' realization of growth. Indeed Kenya's Vision 2030 has its initiative springing from entrepreneurship.

This paper places its focus on the quality of the goods produced by SMEs as a key determinant of SMEs' growth in Kenya. Many market opportunities are lost because of the quality SMEs present to the market. Review of influence of quality of produced goods in relation to SMEs' growth is discussed later in this study.

II. THEORETICAL REVIEW

A number of theories on enterprise growth exist. This study looks at two of the theories on enterprise growth in relation to the quality of goods an enterprise produces. It is perceived that customers prefer goods that are fit their purposes, aesthetically good and long lasting.

III. GREINER'S MODEL

Greiner's theory is about managing change in enterprise growth. As an enterprise grows, it passes through different phases or stages of growth. Greiner (1972) defines two terms that are often used to describe the processes through which enterprises go as they grow from one level to another. These are evolution and revolution. Evolution is a prolonged time of uninterrupted growth in an organization whereas revolution is time of troubles in an organization's life occasioned by growth. During some of these stages, an enterprise grows uninterrupted from either within the organization or from without. At other times, there may arise interruptions mainly from within the organization. If the management of a company fails to understand its developmental problems, it is likely to get stuck in its current state or altogether fail (Mainiero and Tromley, 1994).

According to Greiner (1986), as enterprises grow, they must have strategies for the growth and these are determined by the market opportunities. Once an enterprise gets to know the opportunities that exist in the market, they develop strategies and form structures to take advantage of the opportunities or meet any challenges that there may be in the market. One of the issues they have to deal with is access to market intelligence. This also entails knowing the quality of goods any particular market may want. For these organizations to get market intelligence, they must be connected to information sources and particularly telecommunication networks (Maltz & Kohli, 1996). Through market intelligence, a firm is able to compete with its rivals since it can get information that makes it get certain insights into the market. An enterprise must abandon the traditional methods of the newspaper or print media and get to the Internet (Baumgartner, Gottlob & Herzog, 2009). This broadens their reach for market information.

The Five Phases of Growth.

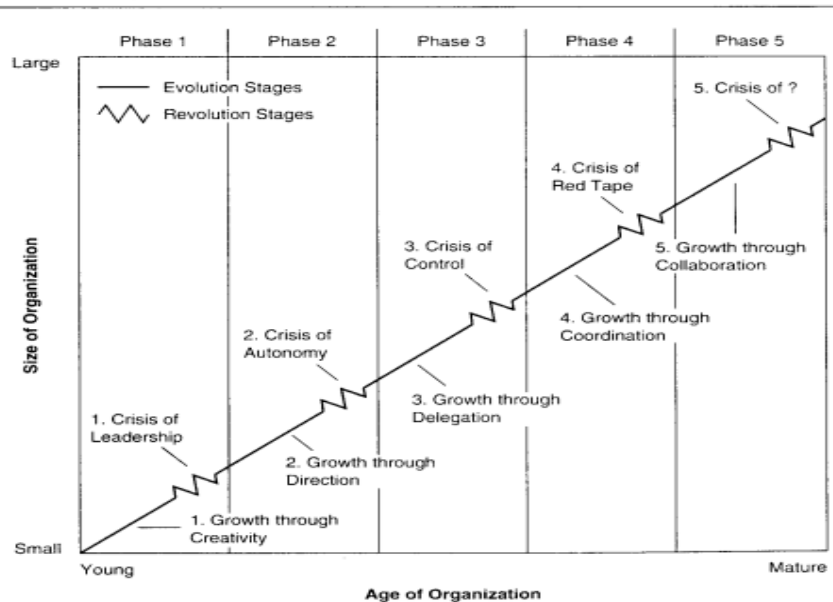


Figure 1: Five Phases of Enterprise

Source: Larry E. Greiner (1986).

Greiner's model shown in Figure 1 illustrates points at which management practices change with time from one phase to the other. This is because of the changes in growth that occur facilitated by new technologies, additional personnel and revenue from more efficient systems.

IV. TYEBJEE, BRUNO, MCINTYRE GROWTH MODEL.

Tyebjee, Bruno and McIntyre (1983) model deals with entrepreneurial marketing and especially for a manufacturing concern. Revenue from sales is a key determinant in the growth of an enterprise. The top management must give the much needed attention to the marketing of the enterprise products. They must market these products beginning with their acquaintances as they also take care of the cash flow of the enterprise (Gunaratne & Weerawardena, 2005). This is entrepreneurial marketing and it relies heavily on networks of

personal relationships. This is an outstanding feature of entrepreneurial marketing. Quality, which is defined as the distinctive attribute of a product plays a big part in attracting buyers of SMEs' products. The market demands that any manufacturer must bring to the market goods that will meet customer demands and hence bring in customer satisfaction (Wanjau, Gakure, Kahiri, & Magutu, 2013).

A modern way used in doing business is the use of electronic Commerce (Gelinias, Sutton & Fedorowicz, 2004). E-commerce on the other hand simplifies the way business is done. Monitoring cash flow in the business with branches in different places is made easy through electronic means. Buyers and sellers are able to meet over the Internet and they are able to transact business without travelling (Gelinias, Sutton & Fedorowicz, 2004). Technology has in great ways changed the way business is conducted world over. Thus through the use of electric power, instead of travelling to mitigate the problems highlighted by Tyebjee, Bruno, McIntyre Growth Model, one can solve them from a home station.

Entrepreneurial marketing is an important activity in SMEs especially in the early stages of an enterprise.

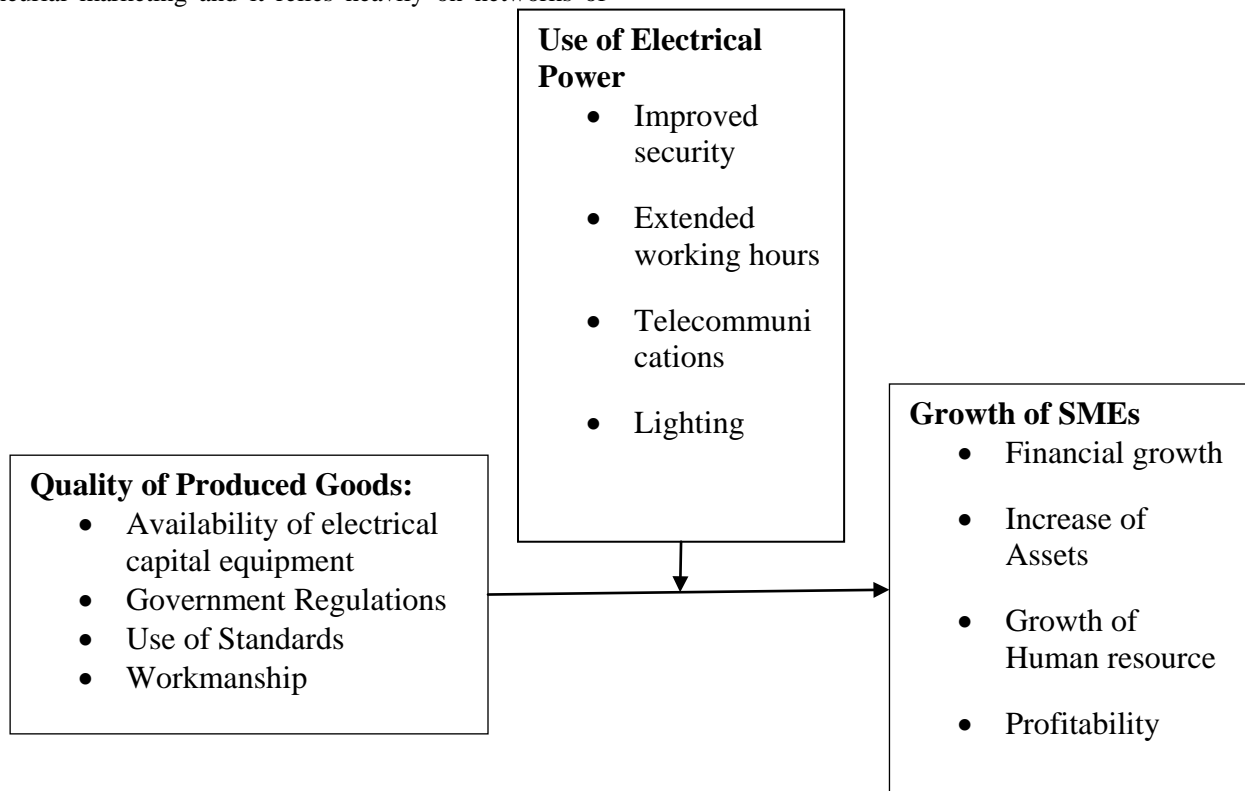


Figure 1: Conceptual Framework

Quality of Produced Goods

Quality to many has different meanings. Quality to some means zero defects or is a measure of excellence, conformance to requirements free from deficiencies and significant variations. This can be achieved through strict adherence to measurable and verifiable standards. This does achieve consistent output that satisfies specific customer or user requirements (Crosby, 1979). Electric power, a very useful part of infrastructure plays a catalytic role in production and marketing of products in SMEs.

Quality is defined as the distinctive attribute of a product plays a big part in attracting buyers of SMEs' products. The pressure from the market demands that any manufacturer must bring to the market goods that will meet customer demands and hence bring in customer satisfaction (Wanjau, Gakure, Kahiri, & Magutu, 2013). To produce goods of good quality, an SME would have to use electricity for measuring equipment which operates mainly on electricity. In recognition for the need of quality products, the Kenya government has developed a national

quality, standards and anti-counterfeit policy. This body ensures that goods imported into Kenya must meet certain quality standards (ROK, 2010).

National grid electric power is a catalyst to SME development and growth as states Bose, Uddin, and Mondal (2013). They further argue that introduction of grid power causes investors to invest in various types of workshops. Joints produced through arc welding are by far stronger than those which would be produced through bracing and again it's cheaper to use electricity than gas. Thus use of electricity produces better quality work than what would be produced using industrial gas.

Capital equipment forms the base of manufacturing infrastructure in Kenya. ROK (2010) argues that beside physical infrastructure, the manufacturing industry contributes very little to the country's economic development because of its high dependence on manufacturing machine imports. For example, in the year 2009, the contribution of the industrial sector to the GDP was only 9.5% (ROK (2010). Machine tools are driven by electric power and they perform a lot of functions in the manufacturing industry. Machine tools and their accessories form a very critical part of the manufacturing sector and contribute greatly to the economic development of any country. With machine tools use, uniformity and quality of the products is ensured (ROK, 2010).

Quality is a feature in industrial products that is of great value to consumers. By use of standards, measurements of how close to the ideal can be ascertained. In a manufacturing concern, components for making different items are placed in bins where they are later picked from during assembling. With many manufacturing SMEs, and particularly in developing countries, the picking of component parts for assembling is done manually (Arham *et al*, 1985). However, with the use of electricity, jigs and fixtures are used and this presents a lot of advantages as items can now be produced that are uniform and made with a high degree of accuracy to meet the standards dictated by the market (NITC, 2012).

Workmanship, which may be defined as the level of skill with which a job is done or a product is made is a very important factor in producing quality goods and services. When jigs and fixtures are employed in the electric manufacturing machines, workmanship is not as important as it is in manual machines because machines' level of accuracy is too high as compared to manual ones (Carrlane, 2015). According to Carrlane (2015), the work is held in position by the jigs and at the same time the jigs guide the work. This makes it possible to mass produce with a lot of uniformity of the parts. Since these machines are driven by electricity, speed can be adjusted to various levels and hence control the volume of units produced. This will however be discussed in detail in the next section.

V. RESEARCH METHODOLOGY

This study used survey research design. This research targeted manufacturing SMEs who manufactured textile items, wooden furniture, metal items and leather goods within Nairobi City County. Data was collected from respondents who were owner managers or senior managers in the enterprises. According to data obtained from Nairobi County Licensing Office (2016), there were 556 licensed SMEs involved in manufacturing, selling

and repair activities of metal items, leather goods, textile items and wooden furniture. Of the 556 licensed SMEs, 316 were SMEs involved in manufacturing activities in the four subsectors. Stratified and random sampling were employed yielding a sample size of 177 by Slovin's formula (Altares *et al*, 2005). A total of 177 questionnaires were administered to owner managers of SMEs in the four sub sectors randomly in a drop and pick later method. The response rate was 141 (80%) which is acceptable (Saldivar, 2012). The reliability and validity of the data collection instrument were tested and yielded results of above 0.6 for reliability (Haele & Twycross, 2015). The study sought to establish whether access to market information has an influence on the growth of small and medium enterprises in Nairobi City County. Analysis was carried out to test the hypothesis that access to market information has no significant influence on the growth of SMEs in Nairobi City County.

VI. RESEARCH FINDINGS AND DISCUSSION

The study was conducted on 177 respondents who were served with a questionnaire. Out of the 177 questionnaires, 141 questionnaires were returned. Thus the response rate was 80%.

VII. RELIABILITY OF DATA COLLECTION INSTRUMENT

Reliability is a measure of consistency of a measuring instrument. If a test is carried out on respondents and the same test is repeated on the same respondents under the same circumstances, the results should be the same (Heale & Twycross, 2015). This would mean the results are showing consistency. According to Heale and Twycross (2015), any value above 0.7 in Cronbach's scale is acceptable although Bajpal (2011) puts minimum value at 0.6. Table 1 shows the Cronbach's reliability coefficient values for the study.

Table 1: Reliability Coefficients of the Study Variable

SME Determinant	Growth	Number of Items	Reliability (Cronbach's coefficient)	Comment
Quality Products	of	13	0.943	Acceptable
Use Electrical Power	of	6	0.613	Acceptable
Growth SMEs	of	4	1.00	Acceptable

VIII. QUALITY ADOPTION INITIATIVES

The response of the respondents contacted about quality initiatives on their products showed that 79.4% were in agreement. It was noted that quality plays a big role in securing a market for their products. Adaptation of quality initiatives in many of the enterprises raised their revenue. Indeed 56 % agreed that their revenue went up and durability of their products too

increased. Most of the respondents ascertained their happiness due to this adoption of quality initiatives by their suppliers.

IX. INFERENCE STATISTICS

The researcher sought to establish the kind of influence quality adoption has on the growth of SMEs in Kenya and how strong the influence is. Inferential statistics were used to test the hypotheses put forward. The null hypothesis would be accepted if above the 5 % level of significance and rejected if below. Growth of SMEs was the dependent variable while quality of produced goods and use of electrical power (moderating variable) were the independent variables. This relationship was established through the use of bivariate or Pearson's correlation coefficients. The results showed that for: quality of produced goods, ($r = 0.691$, $p = 0.000$), and use of electrical power ($r = 0.828$, $p = 0.000$) the moderating variable; all indicate positive correlation and p - values of less than 0.001. It was noted that for any increase in access to market information enhanced SME growth.

Effect of Quality of Produced Goods on SME Growth- Multiple Regression.

Multiple regression is defined as a statistical method dealing with the formulation of a mathematical model to show the relationship between variables in a case where the independent variables are two or more (Kothari, 2004). The case at hand has one predictor variable, one moderating variable and one dependent variable. The effect of access to market information on the growth of SMEs was first tested and then with the moderating variable M. Table 1 has parameters that show the contribution a predictor (X_i) makes toward the output (Y), the growth of a SME.

Hypothesis: Quality of Produced Goods has no significant influence on the growth of SMEs in Kenya. Quality of Produced Goods and SME Growth- Model Summary

From Table 2, the coefficient of determination, R Square accounts for 47.7 % of the firms' growth. It is a measure of the firm's strength of association with all the independent variables while 47.4 % accounts for variance in the dependent variable. The remaining percentage can be explained by other factors that are not in the model. A coefficient of determination, R of 0.691 shows there is a positive correlation between the quality of produced goods and the growth of the enterprise. When quality of goods produced by an enterprise rises, customers start seeing attributes of the goods such as longevity, good performance, easy to use properties and this attracts more customers to buying the products. This likely brings more revenue to the company and therefore growth of the enterprise. The p -value was found to be 0.000. Thus the alternative hypothesis was found to be true. Thus, quality of produced goods has a positive relationship with the growth of SMEs. Further results from regression indicate that for every unit of increase in quality of produced goods change, growth of an enterprise changes by 0.975 while ANOVA results show a value of $F(127.025, 0.000)$ which is quite significant.

Table 2: Quality of Produced Goods and SME Growth Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.691 ^a	.477	.474	.67848

a. Predictors: (Constant), Quality of Produced goods(X2)

X. CONCLUSION

Access to market information was found in this study to play an important role in the growth of SMEs. From the results, it was found to play a pivotal role in the growth of SMEs. Its contribution to SME growth cannot be ignored. In this study, it was also noted that access to market information is greatly improved by the introduction of the use of electric power. Electric power in access to market information plays a catalytic role. With electric power, different communication machines can be energized and therefore be used to get market information. This is an input to a communication system that is indispensable. Market information is so related to business growth that enterprises should ensure that their businesses are well linked to sources of market information as this is how they can know where there are market opportunities for their products. It is therefore concluded that market information is an indispensable ingredient in enhancing growth of SMEs in Kenya.

REFERENCES

- [1] Altares, et al (2005). Elementary Statistics with Computer Applications. Manila: Rex Book Store.
- [2] Arham, F.A., Boucher, C., Muenjohn, N., & ASTM, (1985). Automated Manufacturing: A Symposium. San Diego: Issue 862.
- [3] Bajpal, N. (2011). Research Methods. New Delhi: Dorling Kindersley India Pvt Ltd.
- [4] Baumgartner, R., Gottlob, G., & Herzog, M. (2009). Scalable web data extraction for online market intelligence. Proceedings of the VLDB Endowment, 2(2), 1512-1523.
- [5] Bose, T., Uddin, R., & Mondal A. (2013). Impacts of Electricity Access to Rural SMEs, International. Journal of Managing Value and Supply Chains (IJMVSC). 4 (4) 17-27.
- [6] Bowen, M., Morara, M., & Mureithi, S. (2009). Management of business challenges among small and micro enterprises in Nairobi-Kenya. Nairobi: KCA journal of business management: 2(1)16-31.
- [7] Carrlane, (2015). Carrlane International Catalogue for jigs and fixtures. St. Louis: Carrlane Manufacturing Company.
- [8] Crosby, P.B. (1979). Crosby's 14 Steps to Improvement. Retrieved on 26th, July 2017 from <http://www.asq.org>
- [9] Gelinias, U. J., Sutton, S. G., & Fedorowicz, J. (2004). Business processes and information technology. Mason, OH: Thomson/South-Western.
- [10] Greiner, L. E. (1972). Evolution and revolution as organizations grow. Harvard Business Review (July-August issue) 37-46.
- [11] Greiner, L. E. (1986). Evolution and revolution as organizations grow. The Leader Manager. Arizona City: John Wiley & Sons.
- [12] Gunaratne, A., & Weerawardena, J. (2005). Predicting the course of small business internationalisation: An entrepreneurial marketing perspective. In Australia and New Zealand Marketing Academy Conference (ANZMAC, 2005) (pp. 36-43). Perth: University of Western Australia.
- [13] Heale, R. & Twycross, A. (2015). Validity and Reliability in Quantitative Studies. Retrieved June 13, 2017 from <http://www.ebn.bmj.com>.
- [14] IFC (2011). Financing SMEs in Kenya.5 (1)

- [15] ILO (2005). Support for growth-oriented women entrepreneurs in Ethiopia, Kenya and Tanzania. An overview report. Program on boosting employment through small enterprise development, job creation and enterprise development. Geneva: ILO.
- [16] Kinyua, A.N. (2014). Factors affecting the performance of small and medium enterprises in the Jua Kali sector in Nakuru town Kenya. IOSR Journal of Business and Management 16 (1) 80-93
- [17] Mainiero, L., & Tromley, C. (1994). Developing Managerial Skills in Organizational Behaviour: Exercises, Cases and Readings(2nd ed.) Englewood Cliffs, NJ: Prentice Hall
- [18] Maltz, E., & Kohli, A. K. (1996). Market intelligence dissemination across functional boundaries. Journal of marketing Research, 33 (February) 47-61.
- [19] Masocha, R., Zindiye S. & Chilya, N.(2012). The Impact of Government and Other Institution's Support on the performance of Small and Medium Enterprises in the Manufacturing Sector in Harare, Zimbabwe. International Journal of Business and Management. 3(6), 655-667.
- [20] Migiro, S.O., & Wallis, M. (2006). Relating Kenyan Manufacturing SMEs' Finance Needs to Information on Alternative Sources of Finance. South African Journal of Information Management 8 (1) 1-14
- [21] NITC (2012). Introduction to jigs and fixtures. Calcuta: NITC.
- [22] OECD (2010). Innovative SMEs and Entrepreneurship for Job Creation and Growth. Paper No.1. Paris: OECD.
- [23] OECD, (2004). Promoting Entrepreneurship and innovative SMES in a global Economy: Towards a more responsible and inclusive globalization, Instabul, Turkey. OECD.
- [24] ROK (2007). Kenya vision 2030. Nairobi: Government Printer.
- [25] Sagwe,J., Gicharu, S., & Mahea, T. (2011). A study on youth and womenEntrepreneurs' preparedness in Kenya: A case study of the Kenya Youth enterprise Development Fund and Kenya women enterprise fund beneficiaries using the TRISTART Business Evaluation Tool. Kenya Institute of Management. Nairobi: Kenya Institute of Management.
- [26] Saldivar, M.G. (2012). Primer Survey Response Rates. Tallahassee: Florida State University Press.
- [27] Tyebjee, T. T., Bruno, A. V., & McIntyre, S. H. (1983). Growing ventures can anticipate marketing stages. Harvard Business Review, 61(1), 62.
- [28] Wanjau, K., Gakure, R., & Kahiri, J., (2013). The Role of Quality Adoption in Growth and Management of Small & Medium Enterprises in Kenya. European Scientific Journal 9(7) 458-467.
- [29] World Bank (2017). Infrastructure for Economic Growth and Shared Prosperity in Kenya: Addressing Infrastructure Constraints, Promoting Economic Growth, and Reducing Inequality. Washington D.C: World Bank.

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