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EFFECTS OF PUBLIC GOODS AND EXTERNALITIES ON THE GROWTH OF SMALL AND MEDIUM ENTERPRISES

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ABSTRACT

Small and Medium Enterprises (SMEs) are reffered to as a bussiness that falls between small operations and large corporations typically defined by having 50 to 250 employees and generating a moderate annual revenue. Therefore, They are widely known as important drivers of creating employment, economic growth, reduction of poverty, and transformation of industries. A part from their contribution to national economies, SMEs often come across several challenges which prevent them to expand and be sustainable. Public goods and externalities are goods or services that everyone can use and one person use does not reduced another person ability to use them also it is difficult to stop people from using them. Among the challenges that affects SMEs as critical are infrastructure, security, transportation, networks, education and communication systems which are essential for conducting business which enhance quality productivity. On the other hand are positive or negative effects of an economic activity that affects peoples who are not directly involved in that activity. Externalities, whether positive or negative, they may significantly influence enterprise performance and how enterprises compete with others in the market. This article therefore reviews the effects of public goods and externalities on the growth of SMEs by combining theoretical and empirical literature. The article is based on Public Good theory by (Samuelson1954) The Externality, Theory (Pigou1920) the Endogenous Growth Theory (Romer,1986), and Institutional Theory (North, 1990). According to this authors' there is evidence from previous studies which demonstrates that when public goods are invested it helps in generation of positive spillover effects which helps in enhancing, production, innovation and market development among SMEs. On the other hand, negative externalities

such as environmental contamination, overcrowding, and market failures force additional costs that reduce bussiness productivity and endurance. This article identifies gaps that exist in literature,mainly relating to global south economies where there is an inadequate public infrastructure and institutional inefficiencies which continue to constrain SME growth and development. This article concludes that governments should reinforce investments in public goods and implement policies which should aim at minimizing negative externalities while maximizing positive spillovers.Such actions are necessary for promoting growth of SME development and long-term growth of economic.

KEYWORDS: Small and Medium Enterprises, Public Goods, Externalities, Economic growth, Infrastructure, positives pillovers, Marke failure, Innovation.

1. INTRODUCTION

Small and Medium Enterprises comprise an important fragment of economies worldwide and are considered as framework for growth and innovation.According to the World Bank report SMEs account for approximately 90 percent of businesses which contribute to more than 50 percent of employment globally (World Bank, 2020).According to (Beck et al 2005)In global south economies,SMEs plays an important role in reducing poverty, promoting entrepreneurship and helps in generating income opportunities. According to economic theory by Samuelson(1954) he suggested that the business environment significantly affects an enterprise performance. According to him public goods and externalities are among the fundamental determinants that affects productivity and competitiveness. Samuelson found out that public goods are characterized by non-rivalry and non-excludability, which means that one individual's consumption does not diminish another person's ability to consume the same good and does not reduce the good. Examples of public goods include, roads, public security, education system, communication, and infrastructure. Samuelson (1954) argued that markets often fail to provide public goods efficiently because individuals have incentives to free ride. which is a situation where individuals are motivated to benefit from shared resources, public goods or other hard work of others without contributing their fair share of the cost or effort. According to Stiglitz (2000) He argued that government should involve itself in public goods and exernalities so that they becomes essential and sufficient when there is provision of these goods.It also helps in accessibility of quality public goods, lowers transaction costs, increases market ease access, and promotes the efficiency of businesses. Externalities arise when the actions of one economic agent affect the welfare of others without compensation (Pigou,

1920). Positive externalities create benefits for third parties, while negative externalities impose costs on society.For example, technological innovation generates knowledge spillovers that benefit other firms, whereas industrial pollution creates health and environmental costs (Coase 1960). Positive externalities contribute significantly to SME growth through knowledge transfer, innovation diffusion, and clustering effects (Porter1998). According to Rommer (1986) knowledge spillovers constitute an important source of endogenous economic growth meaning that long term economic growth is driven by factors inside the economic system human capital innovation and knowledge rather than external factors thus they increase productivity and technological advancement. Likewise Lucas(1988)emphasized the importance of human capital externalities in stimulating economic development in many global south economies, however, inadequate provision of public goods and the prevailling of negative externalities continue to constrain SMSEs development.Weakinfrastructure,unreliable,electricitysupply,poortransportat-ion networks, and institutional inefficiencies increase operational costs and limit the competitiveness of SMEs (Ayyagari et al 2007).According to Fafchamps(2004)These challenges are particularly evident in Sub-Saharan Africa where deficiencies in infrastructure have been identified as major impediments, to business growth. Further more, globalization and technological advancement have intensified the importance of public goods and externalities in shaping business performance. Modern SMEs increasingly depend on digital infrastructure, communication networks and innovation ecosystems, that generate, spillover effects capable of enhancing productivity and competitiveness (Audretsch & Keilbach2004). Therefore, understanding the relationship between public goods, externalities and SME growth is essential for designing policies that promote sustainable economic development. Whereas negative externalities such as environmental degradation and congestion increase operational costs (Pigou 1920; P

2. Literature Review

2.1 Concept of Small and Medium Enterprises

According to the organization for economic co-operation and development (OECD 2019).The definition of SMEs varies across countries and institutions and that SMEs are enterprises that employs fewer employees than 250 workers.The World Bank (2020) also defines SMEs based on three indicators which includes employment, annual sales, and how assets are valued .According to Storey (1994) He argued that SMEs represent an important component of economic development due to their flexibility, how they adapt and their ability

to promote innovation.On the other hand Schaper and Volery(2007)argued that SMEs are critical sources of employment creation and entrepreneurial development. According to Beck et al. (2005) SMEs contribute approximately 60 percent of employment and 40 percent of GDP in the global south economies.Their importance in promoting growth has attracted interest from policymakers and researchers.

2.2 Concept of Public Goods

Public goods are commodities characterized by non-rivalry and non-excludability according to(Samuelson1954).Samuelson argued that Because excluding individual from consumption is difficult and that one person's using public goods does not reduce availability goods to others, private markets often fail to provide these goods resourcefully. According to Stiglitz (2000) He emphasizes that government intervention is important to ensure that public goods are provided in an adequate manner. According to him public goods includes, Roads and transportation infrastructure, national defense and security,public education,communication networks, healthcare systems and Judicial institutions. Barro(1990) argued that government expenditure on infrastructure contributes to positively economic growth by promoting private sector productivity. In the same way, Aschauer (1989) found out that public capital investment significantly influences production.

2.3 Public Goods and the Growth of Small and Medium Enterprises

According to Samuelson(1954) public goods are characterized by non-rivalry meaning one persons use doesn’t diminish the availability of that good and non-excludability,meaning it is impossible to stop non payers from accessing them simultaneously and nobody can be charged directly for using them they face free rider problem and usually require government funding rather than private markets provision. Government intervention becomes necessary to ensure their adequate provision(Stiglitz, 2000).

Barro (1990) argued that Infrastructure is among the most important public goods that influence SME growth. Others includes Roads, electricity, water supply, communication networks,and that public security reduce production and transaction costs thus it improves easy accessible to the market . Aschauer(1989)argued that public infrastructure investment lead to increase in productivity by enhancing the efficiency of private-sector activities. Similarly, Calderón and Servén(2004) found that improvements in infrastructure significantly promote economic growth and reduce income inequality.

2.4Transportation Infrastructure and SME Growth

When there is good transportation infrastructure, movement of goods and services becomes easy, thereby it help in reducing operational costs and increasing competitiveness.According to Porter (1990) argued that it enhance easy access to efficient transportation networks that enables firms to exploit economies of scale and expand their markets.Calderón and Servén(2004)also observed that insufficient transport infrastructure constrains productivity and limits business to expand, particularly the global south nations. Fafchamps (2004) on the other hand argued that roads that have poor networks in African countries increase transaction costs which leads to negatively effect on enterprises performance.A study conducted by Aterido,Hallward-Driemeier and Pagés(2011)discovered that firms operating in environments which have improved infrastructure demonstrate higher productivity and greater employment growth than those operating in areas with scarce or inadequate public facilities.

2.5Electricity Supply and SME Performance

When there is reliable electricity it will promote productivity and competitiveness. According to Reinikka and Svensson (2002), when their is power outages there is increase in production costs and reduction of profitability among firms.In many global south economies,unreliable electricity supply forces businesses to invest in alternative energy sources, eg solar, hydroelectric, Geothermal and biomass which increase operating expenses. Ayyagari, Beck, and Demirgüç-Kunt (2007) identified that poor infrastructure, mainly electricity shortages, as one of the major constraints facing SMEs in global south economies.Similarly,Dollar,Hallward-Driemeier, and Mengistae(2005) found out that when there is poor infrastructure it significantly reduce firm productivity and export competitiveness.

2.5 Education as a Public Good

According to Lucas(1988) Education makes human capital available and promotes entrepreneurial skills. He argued that when investments is done in education it generates positive spillover effects that improve productivity and promotes economic growth.Human capital when accumulated it contributes to technological innovation and promotes enterprise growth and competitiveness. According to Becker (1993), education also increases workers' skills and productivity, therefore enabling firms to a dopt to new technologies and improve efficiency.Romer(1990) further emphasizes that when there is knowledge there is easy

contribution of economic growth through innovation and technological advancement. Empirical evidence by Hanushek and Woessmann(2008) demonstrated that when there is quality education there is strong economic performance and enterprise development, through knowledge that has been acquired.

2.7Public Security and Business Growth

Security refers to protection of society from threats such as crime or foregn attacks and it is another important public good affecting enterprise growth.

According to NorthS(1990)institutions and legal systems has help in reducing uncertainty and transaction costs, therefore creating an enabling environment for economic activities.Collier (2007) noted that when there is insecurity there is discouragement on investment and reduction of economic productivity. Similarly,Acemoglu and Robinson(2012) argued that when there is effective institutions and rule of law are they help in determining of economic development and business success.

2.8 Externalities and Economic Growth

Externalities it is an intended cost or benefits that affects an unrelated third party who not chose to incur that cost or benefits, they occur when the activities of one individual or firm affect the welfare of others without compensation (Pigou 1920). Externalities can be either positive or negative depending on whether the effects generate benefits or costs to third parties.Coase(1960) externalities arise because property rights which reffers to legal and economic rules that dictates how resources assets, ideas are owned used and transferred are imperfectly defined,resulting in market failures. Governments often intervene through regulations, taxation, or subsidies to internalize externalities and improve economic efficiency.

2.9 Positive Externalities and SME Growth

Positive externalities promotes spillover benefits that enhance productivity, innovation, and competitiveness. Spillovers knowledge represents one of the most important positive externalities affecting SMEs.Rommer(1986) argued that ideas and technological innovations increases returns and contribute to growth according to him technology consist of instructions on how to combine resources to create greater value unlike physical goods an Idea can be shared globally at a zero additional cost.He argued that technological progress is driven by people and firms actively investing in research and development to maximize profits.

Endogenous growth.

According to Arrow(1962)experimental learning promotes productivity because firms are able to accumulate knowledge through experience gained.This knowledge regularly spills over to other firms,which enable them create broader economic benefits.Audretsch and Keilbach(2004) found out that knowledge spillovers inspire entrepreneurial activity and promote regional economic development according to him knowledge does not automatically spills over into the economy instead a knowledge filter blocks new ideas from being commercialized by rigid incumbent therefore enterprenueurs are the ones who break through this filter by starting new bussiness to commercialized underutilized research driving labour productivity and regional growth .Similarly, Audretschand Feldman (1994) came up with observation that when there is innovation clusters it is easy to generate technological diffusion that promote enterprise growth.

3. Industrial Clusters

According to Porter (1998)emphasises that when there is geographical concentration of firms it creates positive externalities through shared suppliers,labor markets and knowledge exchange,it enhance competitiveness through productivity innovation and new bussiness formation Clustered firms easily benefit from lower transaction costs and are able to get improved access to specialized services. Marshall (1890) acknowledged three sources of agglomeration economies: which are define as follows: Labor market pooling –it reffers to a large concentration pool of workers with specialized skills which reduces search and training costs for employers,it also lower risk for workers.It describes how a dense concentration of professional in the same region foster informal learning, **spill over and rapid skills** -Input sharing- reffers to use of single resource data stream or hardware device across multiple system or user. Knowledge spillovers-it refers to information technical skills and trade secrets naturally diffuse through face to face interactions informal networking and employee movement. Because new knowledge is difficult to completely contain it spills over allowing others to benefits, built upon and innovate without paying for the original research. Henderson (2003) argued that industries are clustered in one geographical area to improves productivity and innovation among firms.

3.1 Human Capital Externalities

Lucas(1988)proposed that investing in education benefits beyond the individual level.Skilled workers lead to higher productivity and high technological diffusion.Moretti (2004) found out

that when educational is increased there Is attainment of producing positive spillovers that creates wages and productivity across industries.

3.2Technological Externalities

Rommer (1990)Unlike previous neoclassical models like solow model that treats technology as a mysterious external force Romer endogenized it by demonstrating that technology is a product of deliberate profit driven human effort.Technological externalities drive long run economic growth. through technology diffusion firms are able to benefit from innovations developed by others.Jaffe, Trajtenberg, and Henderson (1993) found out that innovations promotes spillover which goes beyond and promotion of overall industrial development.

4.Negative Externalities and SME Growth

4.1Environmental Pollution

Pigou (1920) argued that environmental pollution represents an example of market failure because those who pollutes the environments do not bear the full social costs of their actions.On the other hand environmental degradation affects how business productivity operates through increased expenditures of health and how resource are depleted(Tietenberg & Lewis, 2018).Porter and Van der Linde(1995), however, argued that environmental regulation and design should be properly put in place to encourage innovation and competitiveness.

4.2Traffic Congestion

According to Prud'homme and Lee(1999), traffic congestion leads to transportation cost and this leads to loss of production, which negatively affects economic efficiency by increasing how people travel and reducing labor productivity. He argued that due to SMEs located in congested urban areas they often incur higher logistics costs and face delays in supply chains.

4.3Crime and Insecurity

World Bank Enterprise Surveys (2010) indicate that crime and insecurity is a major challenges to enterprise development in global south nations.

Collier(2007) also found out that whenever there is weak institutions and insecurity there will be private investment and reduction of economic growth.

4.5Market Failures and Information Asymmetry

Information asymmetry occurs when one party in a transaction possess more or better knowledge than the other this knowledge gap typically where a seller knows more about a product than a buyer can distort pricing,create unfair advantages and leads to market inefficiencies that limit access to credit and increase transaction costs(Stiglitz&

Weiss1981).According to Akerlof(1970)when there is imperfect information it leads to adverse selection and reduction of market efficiency. SMEs end up being vulnerable because lenders often lack adequate information regarding their creditworthiness; one party uses hidden information to their advanatage.

5.Empirical Literature Review

5.1Evidence from global south economies

Aschauer (1989) uses data from the United States, and found out that public infrastructure investment positively affects productivity and economic growth.The study concluded that when there is government expenditure on roads, communication systems, it promotes private-sector performance.

Barro(1990)employed endogenous growth models and argued that productive public expenditure contributes positively to the long-run economic growth.Calderón and Servén (2004) uses a panel data from over 100 countries, he establishes that infrastructure development reduces inequality and promotes economic growth. Hanushek and Woessmann (2008) found out that educational quality increases economic performance through human capital accumulation. Audretsch and Keilbach (2004) observed that knowledge spillovers encourages entrepreneurship and regional growth.

5.2Evidence from global south economies

Beck, Demirgüç-Kunt, and Levine (2005) found that SMEs contribute to employment and economic development but they are limited by inadequate infrastructure and institutional weaknesses which refers to the gap between the intended effects of an organization or legal system and its actual outcome. Fafchamps (2004), studying African economies, and found out that poor transportation methods and communication networks increases transaction costs and limit enterprise growth.Ayyagari et al. (2007) reported that when there is infrastructure deficiencies, corruption, and financial constraints it constitutes to major barriers for SME develop in global south economies.Dollar et al.(2005)using firm-level data from developing countries,found out that firms operating in better business environments have higher productivity and high export performance. Aterido et al. (2011) established that when there is improvement in infrastructure significantly it will enhance employment growth among firms.

5.3Evidence from Sub-Saharan Africa

Reinikka and Svensson (2002) examining Ugandan manufacturing firms, found out that unreliable electricity supply reduces productivity and lead to high operational costs.Bigsten

and Söderbom (2006) argued that African enterprises come across numerous constraints, which includes inadequate infrastructure and weak institutions, which limit their potential for growth. Goedhuys and Sleuwaegen (2010) demonstrated that in innovation improves firms positively.

Theoretical Review.

According to John. W. Creswell(2018)A theoritical review represent theories that explain the relationship among variables in a study and helps reasecher interprets findings within an existing body of knowledge. In this article,theoretical review provides a framework through which the relationship between public goods, externalities, and the growth of Small and Medium Enterprises (SMEs) can be understood to the readers it has used economic theories to explain and show relationship on how government intervention,institutional arrangements, technological progress, and spillover effects influence enterprise growth and overall economic development. Kerlinger and Lee (2000).

This article is supported by the following theories.

Public good theory,externality theory, endogenous growth Theory, and Institutional Theory.

Public Goods Theory

Public Goods Theory pioneered by Samuelson (1954)who argued that definite goods have characteristics that make rivalrous and non-excludable, meaning that consumption by one individual does not reduce its availability or quality for good for anyone else and this makes private markets inefficient to provide them.Samuelson(1954)argued that market mechanisms that is price signals driven by supply and demand to automatically allocate resources it often fail to allocate public goods efficiently because individuals have incentives to free ride. Consequently,government intervention becomes essential to ensure enough provisions.Musgrave (1959) further expanded Public Goods Theory by identifying that government should have allocation function as one of its primary responsibilities of the public sector.According to Musgrave(1959)it is the role of governments to provide public infrastructure, education, healthcare, and security because private markets cannot efficiently supply these goods.According to Stiglitz (2000) he argued that public goods are important thus it helps in correcting market failures and promoting economic efficiency.He argued that transportation infrastructure,judicialsystems,communicationnetworks,and public education benefits to extended individuals and consumers.

Assumptions of Public Goods Theory

According to Samuelson(1954)Public Goods Theory is based on the following assumptions: Public goods are non-rival in consumption meaning one person used does not reduce the availability to the other person.

Public goods are non-excludable –it is difficult to stop people from using it.

And that Government intervention is necessary to correct market failures.

Criticism of Public Goods Theory

Despite its importance, Public Goods Theory has faced several criticism.

Coase(1960)revolutionized the economic understanding of public goods and externalities by challenging the traditional assumption that only strict private property right or top government can prevent market failure and resource degradation he argued that market failures associated with public goods can sometimes be managed through clearly defining property rights and voluntary negotiations.Furthermore,Ostrom(1990)argued that communities can learn to manage successfully common resources eg fisheries forests and irrigation,without heavy government intervention. She argued that economist who advocates for one size fits all solution to public goods arguing that neither purely private property rights nor central government regulation are universally the most efficient systerms.

Externality Theory

Externality Theory was developed by Pigou (1920) in his seminal work The Economics of Welfare. Pigou demonstrated that market transactions often produce effects on third parties which may not reflect in market prices.

According to Pigou (1920), externalities arise when private costs differ from social costs, and that Positive externalities helps in creating social benefits, whereas negative externalities enforce costs on society. According to Pigou (1920) examples of positive externalities include:Education,technological innovation,R&D,Knowledgediffusion,negative,externalities include: Environmental pollution,Noise,traffic congestion and Crime. Pigou (1920) argued that government intervention through taxes and subsidies is able to internalize externalities and restore economic effective.

Assumptions of Externality Theory

Pigou's theory assumes that:

Markets may not account for all social costs and benefits therefore it fails. Externalities affect how resources are allocated. Government policies can correct market failures and social welfare which can be improved through appropriate interventions that are relevance to SME Growth.Positive externalities enhance SME performance through knowledge spillovers,

innovation, and technological diffusion.Rommer(1986) argued that ideas are non-rival goods therefore knowledge spillovers enhance sustainable economic growth.Marshall(1890) identified industrial clustering as an important source of positive externalities. According to Porter (1998) clusters improve competitiveness by facilitating information sharing through innovation. on the other hand,negative externalities such as pollution and congestion increases production costs and reduce profitability according to(Tietenberg & Lewis2018).

Criticism of Externality Theory

Coase(1960) criticized Pigou's reliance on government intervention. He argued that externalities can be resolved through bargaining among affected parties or between affected parties if property rights are clearly defined and transaction costs are low.Demsetz (1967) on the other hand argued that property rights evolve to internalize externalities and enhance efficient allocation of resource.

Endogenous Growth Theory

Endogenous Growth Theory emerged as a response to the limitations of neoclassical growth models.Romer (1986) who argued that technological progress originates within the economy rather than being determined externally.According to Romer(1986)investing in knowledge,innovation, and human capital increase returns and promote economic growth that are long term. Lucas (1988) also extended the theory by emphasizing the role of human capital accumulation. He argued that developing education and skills create external benefits that promote production throughout the economy.Romer (1990)further emphasized that research and development activities creates technological spillovers thus promote growth.

Assumptions of Endogenous Growth Theory

The theory assumes that:

Spillover affects leads to positive externalities which is relevance to SME Growth. paul (1986) and 1990) goods are non-rival goods,One firm using a mathematical formular or software code does not prevent another firm from using it simultaneously. Increasing returns to scale, while traditional inputs like capital and labor face diminishing return, the accumulation of knowledge yields increasing returns,production becames more efficient as total stocks of ideas grows.Imperfect competition-firms must have temporary monopoly power via patent rights or trade secrets to profit from innovation.If copying were free and instant no one would invest in research and development (R&D).

Criticism of Endogenous Growth Theory

According to Jones(1995)he criticized Endogenous Growth Theory for overestimating the impact of research and development on economic growth. Mankiw,Romer and Weil (1992) also argued that the models alone does not sufficiently explain income divergence across countries, in spite of these criticisms,Endogenous Growth Theory still remains highly important in explaining how knowledge and innovation contribute to enterprise development across many nations.

Institutional Theory

Institutional Theory was developed by North (1990) He defined institutions as formal and informal rules governing how human interacts.According to Him institution helps in reducing uncertainty and transaction costs, thereby it helps in facilitating economic activities.Acemoglu and Robinson (2012) argued that inclusive institutions promote economic growth by protecting property rights and encouraging investment. Williamson (2000) argued that if there is effective institutions then there will be an improve efficiency and reduction of opportunistic behavior.

The following are the Assumptions of Institutional Theory

According to Institutional Theory there is an assumption that:

Institutions influence how economy performs .organizations conforms to the social cultural and regulatory norms of their environment to gain legitimacy and ensure survival. Institutions are Governance structure it encompass regulative laws normative expectation and cognitive beliefs that define acceptable social conduct.Pursuit of legitimacy organization adhere to institution rules to be perceived at legitimate by society stakeholders and peers which is critical for long term survival. Institutional inetia -instituions inherently resist rapid change.They exhibit stability and tend to channel new arrangement according to established historical paths. Isomorphism

Organization facing similar environmental pressure tend to become increasingly homogenously in their structure process, and culture.W.S (2001) Meyer J W (1977).

Criticism of Institutional Theory

Critics argue that institutional change is often difficult and slow (Williamson, 2000).Rodrik,Subramanian, and Trebbi (2004) contend that geography and trade may also influence economic development alongside institutions.

Nevertheless,Institutional Theory remains essential for understanding how governance structures affect SME growth.

Research Gap

Contextual Gap

According to Aschauer, (1989; Barro1990 and (Calderón & Servén, 2004). previous studies have concentrated on industrialized countries such as the United States and European economies. They argued that there is limited evidence that existed regarding countries of the global south economies, particularly Sub-Saharan Africa.

Methodological Gap

Ayyagari et al. (2007) And Beck et al (2005) argued that most studies have employed cross-sectional designs, only few studies adopted longitudinal approaches which is capable of capturing dynamic relationships over time.

Theoretical Gap

Many empirical studies rely on a single theoretical perspective. Limited attempts have been made to integrate Public Goods Theory, Externality Theory, Endogenous Growth Theory, and Institutional Theory to explain SME growth comprehensively Samuelson (1954) and pack H(1994).

Conceptual Gap

Trebby(2004) argued that previous studies have examined infrastructure, finance, and institutions independently, while neglecting the combined effects of public goods and externalities on SME growth.

Geographical Gap

Research focusing on East Africa remains limited despite the significant role of SMEs in employment creation and poverty reduction.

METHODOLOGY

Research Philosophy

This article is based on the positivist research philosophy, Saunders, Lewis &Thornhill(2019).Which assumes that social phenomena can be objectively measured and analyzed using scientific methods Creswell(2018)aurgued that positivism helps in empirical observation and statistical analysis which explains the relationships among variables.The researchers preferred to used positivist paradigm it was found appropriate because the study seeks to establish the influence of public goods and externalities on SME growth through measuring of indicators.

Research Design

The article adopts adescriptive and explanatory research design. According to John .W. crewel(2014)descriptive research helps researcher to describe trends, attitudes or opinions of population by studying a sample of that population it also enables the researcher to understand the characteristics of variables which are being investigated, whereas explanatory research examines cause-and-effect relationships among variables(Kothari, 2004).According to Yin (2018)explanatory designs are preferred when investigating the effects of independent variables on a dependent variable.

Regression Model

Regression analysis is statistical technique used to estimate the relationship between a target outcome the dependent variable and on or more influencing factors the independent variable.It is widely used in economic research to determine the relationship between dependent and independent variables (Gujarati & Porter 2009). According to Wooldridge (2019)regression analysis is used to provide estimates regarding the magnitude and direction of relationships among variables.

The functional relationship is expressed as:

Mathematically it is express as:

Where:

SME = Growth of Small and Medium Enterprises.

PG = Public Goods.

PE = Positive Externalities.

NE = Negative Externalities.

Multiple Linear Regression Equation.

The econometric model is expressed as:

Where:

β = Constant term.

β = Coefficient of Public Goods.

β = Coefficient of Positive Externalities.

B = Coefficient of Negative Externalities.

ε = Error term

Variable

Public Goods (PG)

Positive (+)

Positive Externalities (PE)

Positive (+)

Negative Externalities (NE)

Negative (-)

According to Barr (1990) when government have productive expenditure It positively affects economic growth.Romer(1986)also argues that knowledge spillovers promotes productivity.On the other hand,Pigou (1920)argued that negative externalities reduce social welfare and economic efficiency.

Policy Implementation

Policy implementation plays an important role in maximizing the benefits of public goods while minimizing adverse externalities affecting SMEs.This article adopted the following policy implementation.

Investment in Infrastructure

There should be increase in investment in transportation systems, electricity supply, water infrastructure, and communication networks by the government.Aschauer(1989)argued that public capital investment influences productivity in appositive way.Similarly,Calderón and Servén (2004) found out that infrastructure development contributes significantly to economic growth and poverty reduction. And that when their is reliable infrastructure it lowers transaction costs and improves accessibility to the market among SME (Fafchamps 2004).

Human Capital Development

Human capital refers to the economic value of an individual skills, knowledge experience and health, it treats' people as economic tangible assets meaning that investment in education,training and well being directly increase productivity and future.Becker(1993)Lucas(1988)further emphasized that when there is human capital accumulation there is external benefits that trigger long-term growth therefore Governments should strengthen technical training institutions Entrepreneurship education and Research centers.

Innovation hubs.

Promotion of Innovation

Romer (1990) demonstrated that technological advancement is helpful for sustainable economic growth. Audretsch and Keilbach (2004) also argued that knowledge spillovers

enhance entrepreneurial activities, therefore Governments should promote, research and development, technology transfer, digital transformation and business incubation programs.

Strengthening Institutional Frameworks

North (1990) demonstrated that strong institutions reduce uncertainty and promotes economic activities. Acemoglu and Robinson (2012)on the other hand emphasized the importance of including institutions in promoting economic growth and development.They suggest that the government should do the following, enhance the rule of law, Reduce corruption, Simplify business regulations, and Strengthen property rights.

Environmental Regulation

Pigou(1920)proposed that taxation should be used as a mechanism for internalizing external costs. Negative externalities such as pollution should be control through effective policies. Porter and Van der Linde (1995) argued that a well-designed environmental regulation improves innovation and strategies which lead to competition.The following strategies were proposed by porter to the Governments, enforce environmental standards. Promote green technologies,encourage sustainable production and Support for Industrial Clusters.Porter(1998) argued that there is importance of industrial clusters because it helps in promoting competitiveness. Industrial clusters promote, shairing of Knowledge Innovation,Productivity, and economies of scale. Governments should establish Special economic zones.Innovation,parks and business incubation centers.

CONCLUSION

Samuelson, (1954; Barro 1990) Public goods and externalities are the main factors of SME growth and developing of economy. Public goods such as infrastructure, education, security, and communication networks provide the foundation for which businesses are able to operate effectively. From both theoretical and empirical studies there is an indication that investments in public goods enhance production,reduce cost of transaction, and promotes entrepreneurship (Samuelson1954;Barro1990).Positive externalities that arise from innovation,knowledge spillovers,human capital accumulation and industrial clustering highly contribute to the growth of enterprise according to(Romer1986)Lucas, 1988; Porter1998).On the other hand,negative externalities which include pollution,congestion crime, and asymmetry of information impose costs on firms and hinder them from growing economically (Pigou1920; Stiglitz & Weiss1981).

This article further establishes that quality institutional plays an important role in determining the extent to which public goods and externalities may influence SME growth and development. Effective governance and strong institutions helps in creating an enabling environment that enhance innovation, investment and technology (North 1990). This article concluded that for SME to be sustainable it requires good strategic government and government intervention that should aim at improving public goods provision and managing externalities.

RECOMMENDATIONS

From various authors this article recommends that:

For SME to be competitive Governments should increase expenditure on infrastructure development Invest in roads,electricity,communication systems,and public security which are important for promoting SME competitiveness, their should be education and human capital development which should be prioritized. Government should enhance, training and entrepreneurship programs together with policies which should be used to strengthened and improve innovation and productivity.Governments should support research and development, technological diffusion, and digital transformation.Government should establish Strong institutions with the role of reducing corruption and improving regulatory efficiency which should encourage investment and enterprisegrowth.Their should be environmental sustainability promotion. Appropriate environmental regulations should be implemented to minimize negative externalities.Cluster-based industrial policies should be encouraged Industrial clusters to be able to facilitate knowledge transfer and improve competitiveness among SMEs.

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