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SME Growth Models: A case study on some selected Industries in Nigeria

Mohammed Shettima[1], Dr. Naveen Sharma[2,] Dr. Priyanka Banerji[3]
[1]*Research Scholar, (Economics Dept). School of Interdisciplinary & Liberal studies, Suresh Gyan Vihar University, Jaipur, India.*
[2]*Dr. Naveen Sharma, Associate Professor, Suresh Gyan Vihar University, Jaipur, India*
[3]*AssistantProfessor, School of Management, The North Cap University, Gurgaon, India.*
Corresponding Author: Mohammed Shettima

ABSTRACT: *The present day challenge has been the failure of small and medium-sized Enterprises (SMEs) in transforming themselves into large firms both regionally and globally. Being in point of fact that small businesses irregularly make substantial growth; academicians, management experts and government in many countries have been keen to discover what constraints prevent their growth. This study will utilise the secondary source of data collection which include; publications, journals, books, articles, reports, internet sources among others and Thiele-T statistical model will be used to show the disparities in the growth of five selected SMEs which is used as sample SMEs within a period of five years 2013-2017 in Nigeria and they include; the Arts & crafts, Rugs & carpets, Textile, Jewellery and Pottery industries. This study aims at examining the SME growth models and see to its effectual application which will contribute substantially to the growth of enterprises.*
Key words: *Growth models; Industries; Nigeria; SMEs; Thiele-T;*

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I. INTRODUCTION

Nigeria as a nation ultimately needs the Small and Medium Enterprises (SMEs) because they contribute meaningfully to its economic development. They are considered first in terms of output expansion, employment generation, income redistribution, promotion of indigenous entrepreneurship and production of primary goods to strengthen industrial linkages. The SME sector is responsible for about 70 percent of the total industrial employment in the country and between 10-15 percent of the total manufacturing output. The agricultural sector is said to comprise of mainly the SMEs which have promoted indigenous technology and increased utilisation of local raw materials and in terms of industrial growth the SMEs are the hope of the country. In the 1980s, which was referred to as the golden years of SMEs in Nigeria, were also considered as the years of the Nigerian Industrial Development Bank Ltd (NIDB) and the Nigerian Bank for Commerce and Industry (NBCI). They were Federal Government Development Banks established and charged with the responsibility of developing SMEs in the country. They supplied foreign exchange denominated loans for procurement of machineries and raw materials from foreign sources. The interest rate was very good and the payment period was between 5-7 years with about two years grace period during which only the interest was paid. Those in support used their equities to finance the purchasing of land and construction of buildings while the Commercial Banks provided the working capital. During this period, capacity utilisation reached 73.3 percent and the sector contributed immensely to the GDP of the nation. At that time Foreign exchange was abundant because the exchange rate was 65 kobo to the dollar. Promoters and banks were not discriminatory with regard to the types of project endorsed and financed. The economic policy in existence then was Import Substitution which means that one could substitute importation with local production without taking into consideration the availability of the local raw materials, thus many projects that were over-dependent on foreign raw materials were induced.

As the population of the youths keeps increasing in the country, several challenges have emerged both socio-economic and political. The SMEs are said to face these socio economic and political challenges where some of the limitations to job creation is the poor state of infrastructure and political instability. However this could be as a result of the endemic level of corruption which has eaten deep into the government's system, though the government is taking serious measures to address this problem. Nigeria, which has been blessed abundantly with so many human, natural and economic resources, but the major problem, has always been that of non-utilisation and mismanagement of these resources. As the environment lacks the ability for large scale industrialisation, the only way out is to create jobs through the Small and Medium Scale enterprises as in the case of other developing nations. Another major obstacle which the SMEs face is stringent regulatory policies. These firms tend to be poorly equipped with resources in dealing with problems arising from regulations such as means of communication, new technologies, research facilities etc. Policy makers are enjoined to ensure accessibility of these resources is not unnecessarily costly, complex or lengthy. However access to information about regulations should be made available to SMEs at minimum cost. If accessibility is achieved and made easy to SMEs, there will be greater use of information technology which has great potential of reducing the information gap.

In Nigeria the SMEs are considered as the aggregate generators of employment. They supply potential entrepreneurs and ensure sound competition amongst them. They also aid in mobilisation of local resources and reduce rural urban migration. As new jobs are being created, simultaneously new industries too are created where there is enabling adaptive technology and skill acquisition. The SMEs impact positively in income generation and poverty alleviation; and also facilitate the production of intermediate products for use by larger enterprises.

II. LITERATURE REVIEW

The role small and medium enterprises (SMEs) play in the economic and social development of a nation cannot be overemphasised. According to Effiom and Edet (2018), enterprises differ in sizes, structures and complexities, but in general they are been characterised by how the resources are been utilised towards achieving the predetermined goals at the end. They also made mention that enterprises are categorised into micro, small, medium and large organisations. On one hand, Micro enterprises are typically a business operating on a very small scale and employing small number of employees. M*icroenterprise*s operate with less than 10 people and is started with a small amount of capital. Most microenterprises specialise in providing goods and services for their local areas. However, it is not expected that they fulfill severe regulatory requirements and largely operate in the informal sector of the economy especially in developing economies. On the other hand, small and medium sized enterprises (SMEs) are larger in size, demands relative formal structure, are impacted substantially by business environmental factors and accounts for a larger percentage of all businesses in the "formal sector" of an economy. Dimoji et al (2016), Etuk and Michael (2014) asserted that, the prevalent nature of SMEs in virtually all sectors of the Nigerian economy and their position in national development is well established and recognised. These include enhancing diversification and expansion of industrial base, optimum utilisation of local raw materials and skills, increased government revenue, wealth and job creation, poverty reduction and curbing out the high level of rural-urban migration etc. The economic importance of SMEs are also said to impact greatly in the mobilisation of idle financial resources, creating competition among the firms by offering different products and services based on taste and preferences, reducing pressure on the demand for foreign exchange through import substitution, providing intermediate services and supplies to large firms, employment generation, source for innovation etc.

In an effort to realise the SMEs as drivers of economic growth and development in Nigeria through ensuring a switch from crude oil export as a major source of government revenue to an industrial and service driven economy, government of Nigeria made so many concerted efforts in terms of policy guidelines and interventions by initiating and implementing schemes and programmes at all levels to accelerate the growth, viability and sustainability of the SME sector. Agencies such as Small and Medium Enterprise Development Agency of Nigeria (SMEDAN), and the Bank of industry, for instance, were established to provide technical support and low interest loans, while the Small and Medium Enterprise Industries Equity Investment Scheme (SMIEIS) mandates commercial banks to invest at least 10% of their pretax profit in SMEs.

Sharma (2016), was of the opinion that if we can facilitate 100million SMEs to grow, it will be of great help. We want to solve the problems in payments, catalogues, logistics and marketing. We will invest to make SME business grow.

According to Oyedijo (2012) one of the most important characteristics of SMEs is their over-dependence on imported raw materials and spare parts. As a matter of fact, no industrial sub-unit under the SME category is exempted from this structural weakness. In addition to this, SMEs in Nigeria experience this great challenge of very poor inter and intra-sectoral linkages, and as a result lose benefits synonymous with economies of large-scale production. Izediuno, Alice and Daniel (2018) were of the opinion that SMEs can be viewed as machineries which are expected to create entrepreneurs who are ready to take risk, explore new ideas and assist in skill development. In most developing economies, unemployment is the greatest threat to economic growth and development. Hence, the creation of more vibrant SMEs could be a remedy to this unemployment challenge in these economies as well as reduce the problem of rural urban migration which is an increasing socio-economic problem in the developing economies to its barest minimum. This is because most of the enterprises in the rural areas are small scale in nature, and an increase in their change of survival will however give the rural dwellers some sort of relieve and confidence and most importantly improve their standard of living. They also asserted that the SMEs are expected to ensure the supply of high quality and intermediate products; thereby minimising the dependence on imported materials. The SMEs would also encourage indigenous technology and promote the establishment of import substitution industries which will further strengthen the domestic currency. They are expected to produce goods for exportation which will generate additional foreign exchange and hence help in strengthening the national currency and the balance of payment position. SMEs in general are expected to ensure better use of scarce financial resources and appropriate technology. According to Charles (2013), SMEs do not serve only as engine of the economy, but also as a motivating factor of economic diversification in other sectors of the economy. Estimation has been made that SMEs make up 70% of Ghana's GDP and 92% of its businesses. They also make up 91% of formalised businesses in South Africa and 70% of the manufacturing sector in Nigeria. The SMEs with innovative technology possess the great potential to internationalise and penetrate foreign markets both regionally and globally. Folusho (2015) asserted that with maximum support for SMEs they will have the capacity to significantly improve the standard of living of the populace and improve the economy of not only countries in the sub-Saharan Africa but the continent as a whole.

III. OBJECTIVES

1. Examine SME growth rate in selected industries
2. Ascertain constraints preventing their growth
3. Examine SME growth models

IV. METHODOLOGY

Data used in this research were sourced mainly from the secondary source which includes various publications, articles, journals, reports newspapers and internet sources. The study is empirical in nature and analytical in approach. To examine the SME growth rate in the selected industries the Thiele-T statistical model was used to show the disparities in their growth rates. This is going to be done with the help of the following formulae;

$$T = \frac{1}{n}\sum_{i=1}^{n}\left[\frac{Yi}{\mu}.\log\left(\frac{Yi}{\mu}\right)\right]$$

Where, Yi = share of each SME,
μ = mean,
n = total number of SMEs.

SME GROWTH RATE IN SELECTED INDUSTRIES

To achieve the first objective of the study which is examining the growth rate of SMEs in the five selected industries which were used as sample SMEs. Data was obtained from the NBS report 2017 and analysed it using the Thiele-T statistics model. The analysis is shown in Table 1 below.

Table 1 SME Growth rates in selected Industries.

	SELECTED SMEs	2013	2014	2015	2016	2017
1	Arts & Crafts	72	69	84	95	127
2	Rugs & Carpets	302	332	343	352	365
3	Textile	244	263	261	276	283
4	Jewellery	109	118	119	128	132
5	Pottery	86	102	93	111	145

Source: National Bureau of statistics report 2017

As shown in Table 1 above, the Rugs & carpets and Jewellery industries have experienced a steady growth rate throughout the period under review while the arts & crafts experienced a slight decline between 2013 -2014 and later in 2015 – 2017 there was a progressive increase. The textile and pottery industries both experienced an increase in the SME growth rate between 2013-2014 and later in 2015 there was a slight drop which later started to increase in 2016 -2017.

Table 2 and figures 1-5 below shows the results of Thiele-T statistics and its graphical representation.

Table 2 Behavior of SME growth in Selected Industries as measured by Thiele-T Statistics (%) values.

T-Values of selected SMEs	Review period (Years)				
	2013	2014	2015	2016	2017
Arts & Crafts	-0.08	-0.09	-0.03	0.03	0.22
Rugs & Carpets	-0.04	-0.01	0.01	0.02	0.03
Textiles	-0.03	0.00	-0.01	0.02	0.03
Jewellery	-0.04	-0.01	-0.01	0.03	0.04

Pottery	-0.08	-0.02	-0.05	0.01	0.18

Source: Thiele-T Statistics

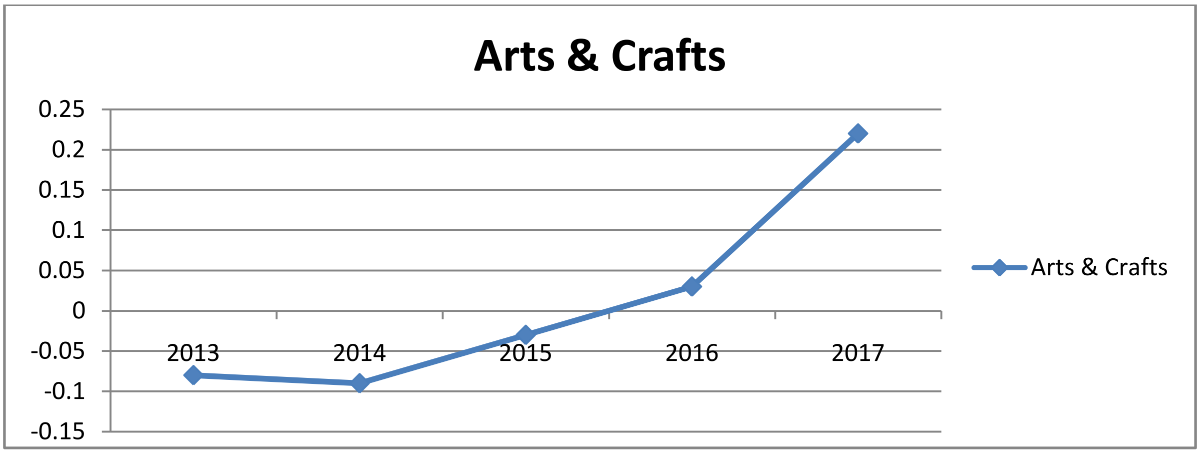


Figure 1. SME growth rate in Arts & Crafts Industry

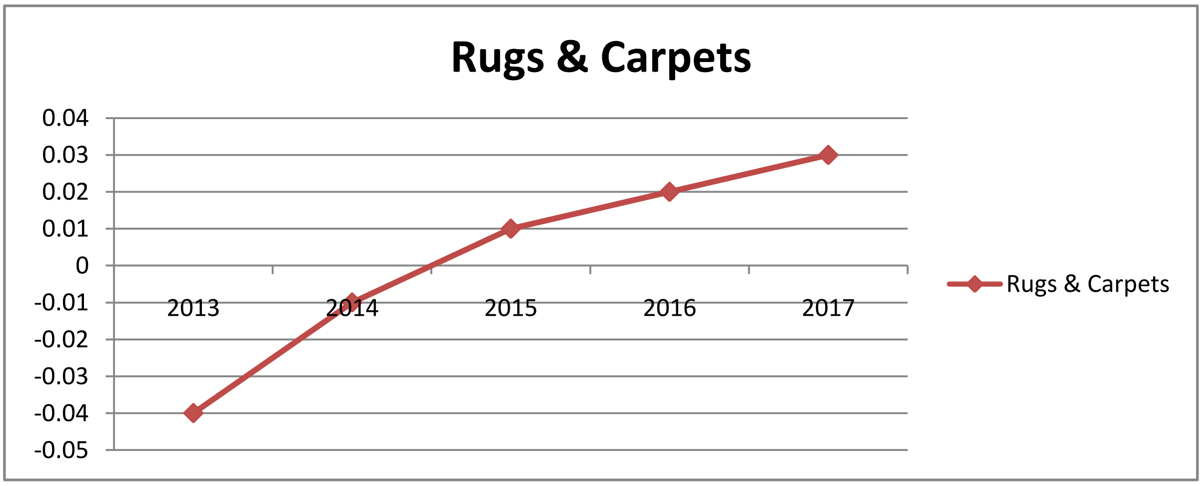


Figure 2. SME growth rate in Rugs & Carpets Industry

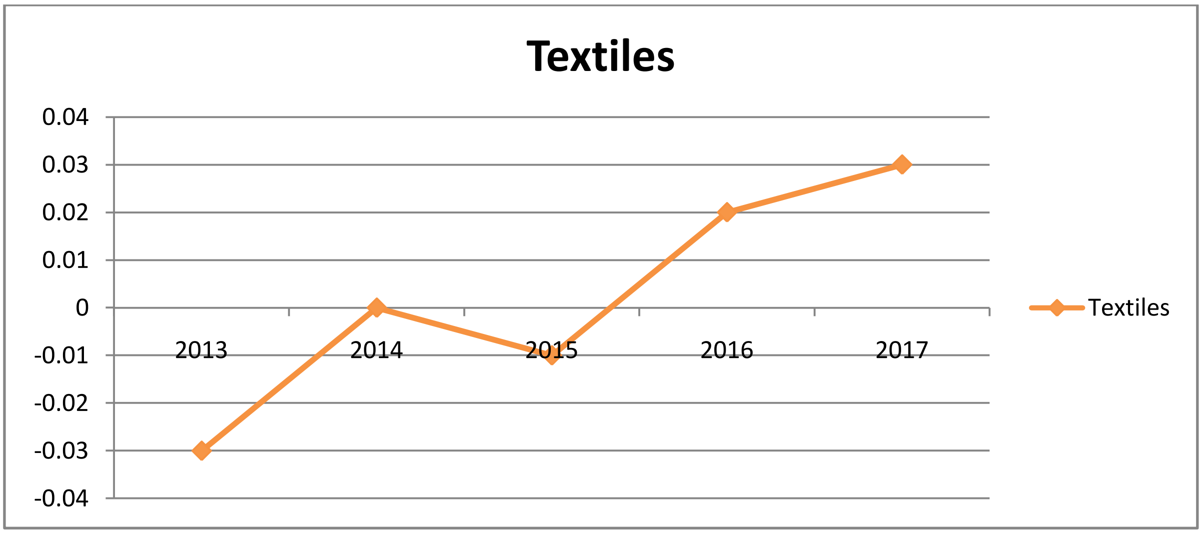


Figure 3. SME growth rate in Textiles Industry

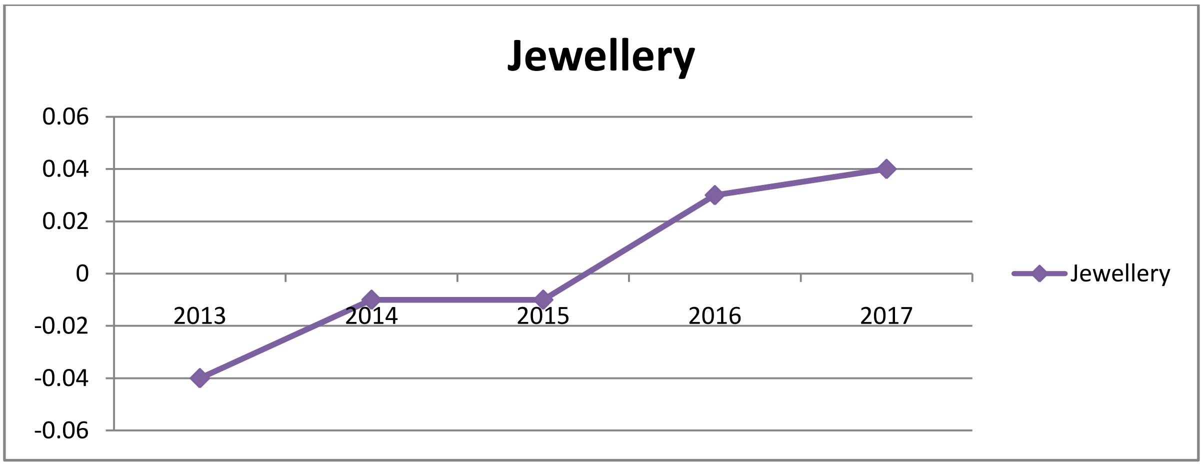


Figure 4. SME growth rate in Jewellery Industry

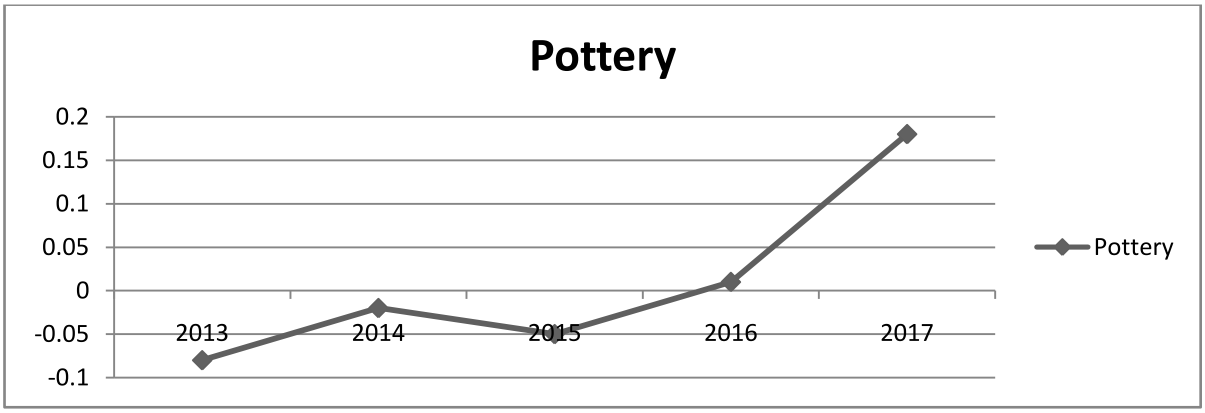


Figure 5. SME growth rate in Pottery Industry

As we can see in Table 2 and figures 1-5 above, there has been some disparities in the SME growth rates among the selected industries we used, and this might be due to some challenges been faced by the SMEs which may include;

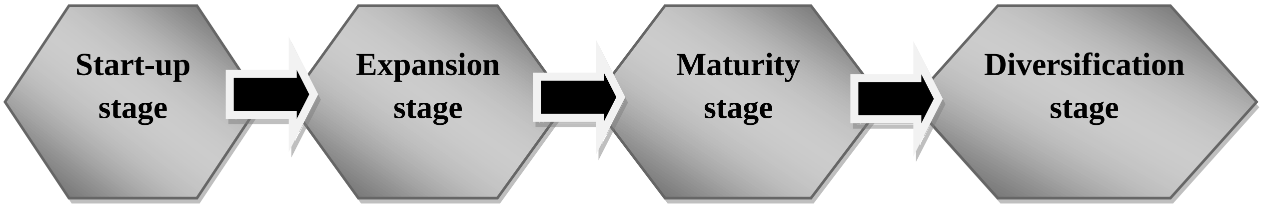
- ✓ inequity in finance
- ✓ lack of skilled training and development
- ✓ policy discontinuity
- ✓ lack of awareness
- ✓ insecurity
- ✓ ineffective market linkages
- ✓ lack of raw materials

With the growth rate analysis above which shows the growth rate of the SMEs, our first objective has been achieved and also the constraints stated which are responsible for the inadequate growth of the industries has made us to achieve our second objective.

BUSINESS GROWTH MODELS

- ✓ **SME stage model.**

Ortlieb (2019), has been a Business Advisor with Fast Capital 360 from the start and has helped thousands of small businesses grow with creative, fast and flexible funding options. His focus is on helping business owners achieve healthy returns on investments, improve profit margins and grow their revenue. Researchers have laid much emphasis on the issue of SME growth where it is viewed as a developmental phase in which every enterprise must pass through in a life-cycle of business. In some books of reading on the organisational life-cycle, some researchers drew attention to the cyclical quality of organisational existence where organisations are said to be born, grow, decline revive, and sometimes disappear. This citation implores a biological metaphor for business organisations which has been the source of much controversy in the literature of economics, business and sociology. However, the SME development or stages of life cycle may include; the start-up stage, expansion stage, maturity stage and diversification stage. With this enterprise life-cycle stages, it provides some evidence that businesses may in some cases progress sequentially through the stages as they evolve and develop. These stages are shown in the diagram below;



✓ **Simon's Satisficing Theory**

According to Brown (2004), Herbert Simon who was the first economist to formulate the behavioural theory of firm believed that the main objective of a firm is not to maximise profit but to satisfice profits. Herbert Simon stated that it shouldn't be expected that the main goal of a firm is to maximise profit but rather to attain a certain level of profit and holding a certain share of the market as well. He however based his view on the fact that since the firm is run under uncertainty, there is no assurance that profit will be maximised or not and he also made comparism between an organisation's behaviour and the behaviour of an individual in the theory. Just like an individual, a firm also has its own goals. These goals however depend on some key factors such as production price, sales, profits and past experiences. The goals also draw the boundary between satisfaction and unsatisfactory outcomes, and the firm may face three possible alternative situations which are;

a) the actual achievement may be less than the goals set,
b) the actual achievement may be more than the goal set
c) the actual achievement may be equal to the goal set as the case may be.

The first situation may be as a result of fluctuations in economic activity or decline in the quality and performance level of the firm and it may be that the firm has set its goals very high and unable to attain it, thus, the firm needs to revise its goals so as to achieve the necessary goals. On the other hand, the second and third alternative situation which states that the achievement may be more or equal to the set goals may be due to excellent performance of the firm or the firm experiencing some favourable economic conditions.

✓ **Williamson's Managerial Discretion Model**

Williamson formulated a managerial utility maximisation model as against the profit maximisation model. The model assumes that the owners and share holders of a firm are two different entities, where the share holders want to maximise the returns on their investments i.e. maximise profits, the managers on the other hand are more interested not only on their returns on investment but on the staff strength and cost. Hence Williamson's theory is related to manager's utility maximisation which is a function of staff cost, profits and discretionary funds. This can be expressed mathematically as;

$$U = f(S, M, D)$$

Where; U = Utility function
S = Staff Expenditure
M = Management Stock
D = Discretionary Investment
as $S \geq 0$, $M \geq 0$ and $D \geq 0$

Also the model assumes that the law of diminishing marginal utility applies in such a way that as additions are made to S, M and D, they would automatically yield diminishing marginal utility to the manager.

Furthermore, Williamson assumes price (P) as a function of output (X), expenditure on staff (S) and the environmental state (E), thus the demand function can be written as;

$$P = f(X,S,E)$$

Also
$$\frac{\partial P}{\partial X} < 0, \quad \frac{\partial P}{\partial S} > 0 \text{ and } \frac{\partial P}{\partial E} > 0$$

The above equation states that demand for X is negatively related to 0, but has a positive relationship with S and E. This simply implies that when demand increases, the output and expenditure on staff will also increase which will lead to increase in the cost of the firm and consequently an increase in price also.

✓ **Growth Maximisation Model of Marris**

As stated in a textbook on Managerial Economics by Dr. H.L. Ahuja, ***"Analysis of Managerial decision making"*** 8th Revised Edition 2018; a dynamic balanced growth maximisation model of the firm was developed by Rabin Marris, and he stated that "Modern big firms are managed by the managers and shareholders who are the owners of the firm and decide how the firms will be managed." Where the managers of the firm aim at maximising the firm's growth rate, the shareholders on the other hand aim at maximising their dividends and share prices. However, maintaining a link between the growth rate and share prices is actually what brought about the idea of developing a balanced growth rate model by Marris. The managers actually fix a growth rate level at which the firm's sales, profits assets grow to attain and if the manager fixes a high growth rate, he will have to incur more expenses on advertisement and research & development in order to increase the demand level of its products. The manager will also have to keep a larger percentage of the total profits of the firm and distribute it among the shareholders as dividends. These dividends tend to fall and consequently the share prices in the market will also fall. As the managers are said to be more concerned on the growth of the firm, they tend to fix a growth rate which maximises the market value of shares, give satisfactory dividends to shareholders and ensure job security. At the same time the shareholders (owners) also aim at a balanced growth of the firm because it guarantees fair return on investment. Thus both the managers and shareholders aim to achieve same objective.

V. CONCLUSION & RECOMMENDATIONS

The growing importance of SMEs in the economic growth and development of the nation particularly as it relates to the role the sub-sector plays in employment generation which is an economic development indicator is undeniable. Small and Medium Scale Enterprises constitute essential ingredients in the lubrication and development of any economy. In Nigeria the story is not different as there are a lot of Small and Medium Enterprises which really impact on the growth and development of the economy. Many other developing countries face challenges of inclusive growth, poverty, unemployment and more importantly underemployment. Most of the poor and unemployed, in order to improve their living standards, resort to establishment of their own businesses. Consequently, entrepreneurship and the setting up of small businesses is fast becoming a household name in most of these developing nations. This is because the so called "white collar" jobs that people clamour for are no longer enough to match the growing demand for them. Even, the laudable sectors historically known to be the largest employers of labour, such as agriculture and manufacturing, is either not seen as attractive to most graduates or are struggling. Others that are considered attractive to the white collar job seekers and growing strongly are not largely capital and technologically intensive and don't naturally absorb huge amounts of labour, as the SMEs are known to be more of labour intensive. Even those already with jobs are setting up other micro businesses to complement their income.

Finance been the life force of an industry, the financial institutions need to provide adequate amount of loan to the SMEs at an affordable interest rate as this is one of the greatest challenge been faced by SMEs. Providing a conducive atmosphere for the SMEs with adequate infrastructures, friendly and effective government policies, modern technology and security among others will enhance the growth of industries because as business grows demand and workload placed on the system will also increase and with all these components in place performance level of the business operations will increase.

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