The Theoretical Models of Financial Acceleration in Entrepreneurship Development

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Abstract

The paper postulates Two (2) financial acceleration models: Entrepreneurship Structural Financial Model (ESFM) and Entrepreneurship Acceleration Financial Model (EAFM) to estimate entrepreneurship development in the context of acceleration principles in financial economics. The assumptions underlying the models are that there exists efficient interaction between the financial sector and that of entrepreneurship to accelerate economy growth. To attain this, the paper recommends for deliberate financial policies to support entrepreneurship development for sustainable development and shifting the focus of investment into entrepreneurship development. The paper therefore, suggests a paradigm shift in the literature to this important area of investment analysis and expects it to provoke new knowledge in entrepreneurship financing and development.

1 Introduction

The definition of entrepreneurship lacks a common language [1]. Entrepreneurship is also defined as the assumption of risk and responsibility in designing and implementing a business strategy or starting a business [2] and entrepreneurship can be referred to as a person who undertakes and operates a new enterprise or venture, and assumes some accountability for the inherent risks [3]. There is, however, no generally accepted definition of entrepreneurship [4, 5, 6, 7]. This paper defines entrepreneurship development "as the process of innovating, nurturing an enterprise and having access to means of financing it both in formal and informal financial sectors to a successful and sustainable level".

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A plethora of early theorists who viewed entrepreneurship development from a rather intuitive perspective can be traced back to some scholars [8, 9, 10]. However, a modern evolutionary theories of entrepreneurship can be referred to as the theory of human capital [11]; as a social networks [12]), and Neo-Schumpeter Economics [13]. Classical theorists also focused largely on entrepreneurship growth perspectives (a narrow path of development), instead of entrepreneurship development [14, 15, 16, 17]. However, several related studies have also been conducted to assess and explain the level (development) of entrepreneurship [18, 19, 20, 21] with appreciable progress.

Financial theories in entrepreneurship are grounded in classical economic theories in which entrepreneurial activity originate [22]. Development economics pays little attention to the process by which entrepreneurship development can lead to economic development. A stable macroeconomic environment provides the backdrop against which sound financial intermediation can take place both in the formal and informal sectors. This process of financial development and deepening though may not be a sufficient condition, can lead to serial entrepreneurships as a process for economic development of any nation. Many nations have come to terms that reliance on large firms to propel economic change for prosperity has yielded very little results. The over-reliance on giant firms (which are too big to fail) by many nations, have now led us to the current global economic and financial crises.

A properly funded entrepreneurship development can serve as a vehicle for structural transformation of countries from weak industrial base, low income, primary-sector based societies into high-income service, technology based societies and employment generating instruments, provided more financial resources and infrastructural provisions are channeled towards its deepening. On the policy framework, governments at all levels have been providing routine policies for entrepreneurship development such as provision of small credit facilities, but these are not enough for its sustainability. This paper therefore looks at the financial theories applicable in estimating entrepreneurship development as a dynamic process of acceleration for economic development. Another objective of this paper is to promote a paradigm shift of literature to further research into entrepreneurship development. The rest of the analysis of the models will be discussed as follows. Section 2 handles the theoretical literature, while section 3 is on the financial Models in entrepreneurship. This section also covers sections 3.1 and 3.2 on the analysis of Entrepreneurship Structural Financial Model (ESFM) and Entrepreneurship Acceleration Financial Model (EAFM) respectively. Section 4 covers conclusion and recommendation. The discussion that follows is on the review of the relevant literature.

2   The Review of the Literature

Entrepreneurship development is a multidimensional process with tremendous capacity to accelerate economic development. The literature suggests that economic theory does not consider much contribution from entrepreneurship development in the task of building a virile economy. In fact, there is no place for an entrepreneur in neoclassical theory [23]. A consistent theory of entrepreneurship development is missing within the concept of finance and economic analysis that can produce a sustainable empirically testable model. Nonetheless, some progress has been made in extending the understanding of entrepreneurship development in the process of economic development. It has been argued that the driving force of entrepreneurship development is the growth of micro,

small and medium enterprises which have been aptly referred to as engine of growth and catalyst for socio economic transformation of any country, because of their significant roles in the development and growth of various economies [22, 24, 25].

Micro, small and medium enterprises (MSMEs) represent veritable vehicles for the achievement of national economic objectives of employment generation and poverty reduction at low investment cost as well as the development of entrepreneurial capabilities including indigenous technology. The impact of this phenomenon is common in some developed nations, e.g., Germany, Great Britain, the United States of America and Canada. The economic successes of the South Pacific Region were hinged on the development of entrepreneurships and MSMEs. However, development in entrepreneurship has created interdependence and inter-linkages among manufacturing companies in the global village, and this in turn have induced gradual replacement of the traditional form of direct foreign investment with non-equity strategic alliance.

A research conducted shows that micro-enterprise and small business development programmes have become a relatively new and important research subject globally [26]. The results indicate that many development scholars and professionals believe by providing bridging finance to small businesses within low-income communities is a plausible development strategy to combat poverty. The research concluded that, despite widespread support for micro-enterprise and small business programs in both developed and developing countries, relatively little economic research has been devoted to rigorous analysis of entrepreneurship as a problem-solving strategy for low-income communities. It has also been suggested that entrepreneurship is critical to the maintenance of a healthy economy and if economic development is to be effective, new businesses in low income areas must be started through local initiatives [27, 28].

The positive role of entrepreneurship has also been emphasized in the economic [29] while distinguishing it from other economic agents. His successor to this idea, [30], shifted the field of entrepreneurship concentration to the importance of capital in economic development - thus, diverting away the focus on the entrepreneurship development in the economic process. A scholar [31] was the first to suggest the function of the entrepreneurship as an innovator and thus brought invention and innovation into discussion. He re-emphasised the ability of entrepreneurship to process knowledge and information, which makes the entrepreneurs a lively and economic agent. It was also suggested that entrepreneurship can be viewed entrepreneurship as the outcome of a capital investment decision to speculate on land, buy goods to run business and thus become entrepreneurs automatically [32]. This view was also supported another scholar [33].

However, Schumpeter's theory of entrepreneurial concept has to be seen as the platform for entrepreneurship development. Most of the economists work within the precincts of equilibrium dynamics and most of these are built on Schumpeter's doctrine on entrepreneurship. To reach equilibrium, Schumpeter suggests that economic actor's decision and actions have to be repeated over and over again in the same way, so that eventually all actors' plans coincide to end up in equilibrium. The static results of entrepreneurship does not allow for change [23]. The aim of Schumpeter was, however, to investigate how entrepreneurship development could accelerate economic development.

From the theoretical standpoint, entrepreneurship development has remained relatively under-researched. Both the theoretical and empirical evidences are very scanty. Thus, entrepreneurship development can be defined as the dynamic process of creating incremental wealth. The wealth is created by individuals who assume the major risks in

terms of equity, time and/or career commitment or provide value for some products or services [34]. The financial economists wonder why entrepreneurship has almost vanished in the literature of financial economics [23].

The discipline of the theoretical finance in entrepreneurship development has not been well connected in the literature. Most of the estimation techniques have been associated with descriptive theorizing rather than standard theoretical modelling [16, 17, 26, 27]. Decisions associated with descriptive statistical techniques may only provide a short-term solution to entrepreneurship development.

However, some works developed by some great financial economists in the areas of classical model of investments and acceleration principle provide are used for the development of our models [35, 36, 37, 38, 39 40, 42]. They are however not sufficient enough to account for long term perspective in entrepreneurship financing. The theoretical contributions of others on financial entrepreneurship are also very significant to our models [43, 44].

In addition, the fundamental idea in internal finance indicates that prospective entrepreneurs face liquidity constraints, and they are constrained by limits on the access to liquidity and the possession of and access to own capital would imply a higher likelihood of entrepreneurship development [43, 44].

In this respect, students of finance economics should begin to research on the appropriate financial techniques in estimating entrepreneurship financial requirements on long-term basis and in the light of global changes and complex environment in which entrepreneurs operate. This will also help decision makers in formulating policies that will accommodate a long term perspective of financial requirement of entrepreneurship that will accelerates investment in the economy [45, 46, 47].   As indicated in the literature [45], financial superstructure of an economy accelerates economic performance to the extent that it facilitates the supply of funds to the best user, i.e., to the place in the economic system where the funds yield the highest social return. This will allow financial market to expand its financial technology that will promote growth because it allows a higher rate of return to be earned on capital, and growth in turn provides a means to implement costly financial structures. Consequently, economy will grow in the long- run [47, 48].

The driving force to entrepreneurship development is financial development. This is because a robust financial sector will facilitate borrowing by the entrepreneurship through the intermediation of financial systems [49]. It will also have positive effect on consumption, investment, and production for sustainable economic growth. There are three ways [50] that will help in accelerating entrepreneurship development as: (i) encouraging a more efficient mobilization of resources and allocation of a tangible wealth through changes in wealth ownership and composition; (ii) encouraging a more efficient allocation of new investment in small and medium scale enterprises and other sectors that will yield sufficient growth for sustainable development in the real sector; and (iii) inducing an increase in the rate of capital formation and creating enabling environment for innovation and entrepreneurship development.

According to the literature, the guiding principle behind entrepreneurship development program is the financial initiative aimed at boosting the micro, small and medium enterprises (MSMEs) that will ultimately improve the socio-economic conditions of the rural people [51]. The theory postulates change as a process by which entrepreneurship development (ED) could lead to access to business network and education to rural entrepreneurial and this has become the hallmark of the new approach to promoting the

development of MSME [51].

The development of entrepreneurship can also be studied according to the level of entrepreneurship stages. A distinction can be made between the micro and macro level of entrepreneurship. Studies at the level of entrepreneurship could focus on market-specific determinants of entrepreneurship, such as profit opportunities and opportunities for entry and exit [52, 53]. Studies could also be conducted on the transformation processes from micro and small enterprises to medium and large scale industries.

From the preceding discussion, a building block has been established on the theoretical basis for finance in entrepreneurship development in the context of acceleration principle. The discussion on this and the development of our models which will draw its inspiration from the previous works by scholars in discussed above form our next discussion.

3   The Financial Models in Entrepreneurship

The analysis of the financial models in entrepreneurship development is divided into two (2) models as follows: *Entrepreneurship Structural Financial Model (ESFM)* and *Entrepreneurship Acceleration Financial Model (EAFM).* They are discussed as follows:

3.1 Entrepreneurship Structural Financial Model (ESFM)

The Entrepreneurship Structural Financial Model (ESFM) will follow the usual pattern of descriptive theorizing associated with entrepreneurship theorizing [16, 17, 22] provide an overview model of the organizational structure of credit facilities to entrepreneurship. The model produces a hierarchy of decisions from the loan-officer-firm relationship and ending with shareholders-bank regulator interaction as shown in Figure 1. The model shows the process organizational interaction with respect to decision making process and proceeds as follows: from small business borrower *to* bank loan officer *to* bank-senior manager *to* wealth holders *to* creditors and *finally* government regulations. This implies that relational lending provides access to finance by the financial intermediaries with little constraints, while at the same time controlling for problems of asymmetric information and consequently reduces the finance gap. The process of access to finance entrepreneurship is therefore a process as of acceleration. For example, entrepreneurship development can be defined as gradual advancement through progressive stages of growth to development from within and this development is systematic through which the individuals gain and apply skills, knowledge, insight, and attitude to manage work organization effectively [16, 17, 22, 54].
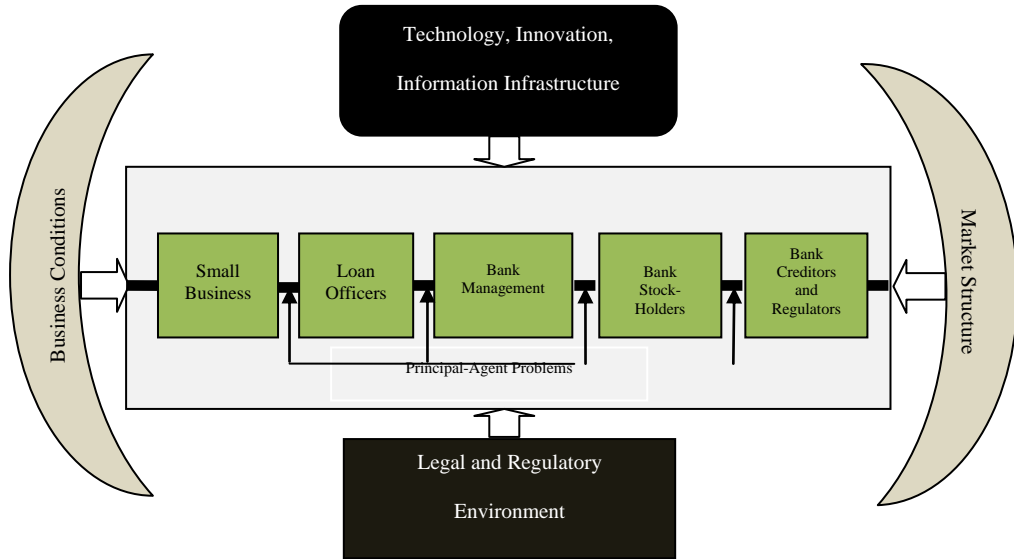
Figure 1: Framework for Relational Lending to Small Firm
Source: Berger and Udell (2002, p. F41, 22]

In the context of the above discussion, it can be suggested that the process of access to loan to entrepreneurship requires stages of growth of entrepreneurship to attract finance. There is also the problem of security, asymmetric information and the principal-agent dichotomy. Consequent on this, the paper provides entrepreneurship structural financial model as shown in Figure 2:
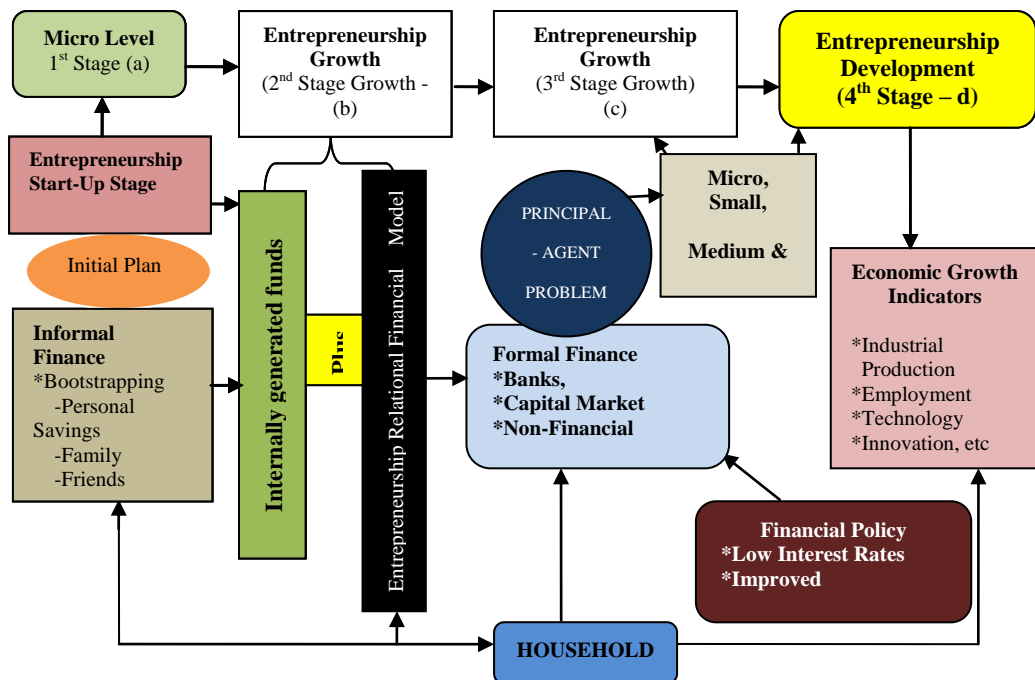

Figure 2: Entrepreneurship structural financial model (ESFM)
Source: Author

As we have indicated in the preceding discussion, the process of entrepreneurship development is a process of financial acceleration and growth [56, p.4]. From Figure 2, the entrepreneur has made a financial decision to invest his or her savings or disposable income plus any exogenous income from inheritance in micro or small scale project as depicted at the Micro level (a) (Micro industries). This is the start-up stage (micro enterprises) when financial requirements will be provided by the household, bootstrapping, angels, and other informal financial intermediaries. This stage covers the foundation work needed for creating a formal business plan, searching for capital, carrying out market activities and development of an entrepreneurship team [51, p.548; 54] This is also the stage at which the entrepreneur could not predict his future as 'growing-out' or 'growing in'.

As the firm progresses through the financial acceleration and growth process, the entrepreneurship will make judgmental investment and financial decisions to accelerate from micro level (a) – micro scale industries to small scale industries (the first stage of growth) indicated as (b) in Figure 2. The financing is expected to be achieved from the internally generated fund or the combination of both debt and internally generated fund or equity provided the project does not die or fail. Marketing and financial considerations in terms of competitive advantage in the financial markets are important at this stage of the development of entrepreneurship [40].

The second stage as shown in Figure 2, represents the growth stage of entrepreneurship and MSMEs when finance for expansion is required and can be provided by the cash flow such as profit, retained earnings, new shares, and non-bearing financial instruments. At this stage, the firm has changed from Micro Enterprises (MSE) to Micro and Small Scale Enterprises (MSSE). This stage requires major changes in entrepreneurship focus. The management is formal, information asymmetry is reduced, and the property rights have been verified. At this stage, product acceptability, elements of economies of scale, creation of new knowledge, and competition in the macroeconomic context are the focus of entrepreneurship [16, 17, 54].

This growth stage is also regarded as a transition from single entrepreneurship to managerial team-oriented leadership [51, p.549; 56, p.9). It is assumed at this stage that financial policy from the monetary authority will be sensitive to entrepreneurships access to capital in the financial market in terms of interest rates and infrastructural to enhance their growth. As the financial acceleration and growth increase, the firms will transform into third stage of growth-stage c in Figure 2. At this stage, we assume that any financing decision to be made by entrepreneurship to transit to (c) (third of growth) will be based on its ability to attract proportion of its financial requirement from the financial market provided the firm's assets have grown and the business operation is not informationally opaqued [16, 57].

The third stage indicates full-grown entrepreneurship where property rights can be ascertained and evaluated by the financial process of intermediation. This stage allows entrepreneurship to seek finance directly from the formal financial markets (financial intermediation) subject to principal-agent problems because of the uncertainty of the environment and desirability of risk sharing [22, p.102]. This is a critical stage for entrepreneurship to either remain in the industry or out of the industry. This is the period to generate new knowledge, be creative in terms of innovation, and new technology and obtain *additional capital* to finance these new ideas for expansion. This stage will eventually lead to serial entrepreneurship and entrepreneurship development (Figure 2 d). At the stage of entrepreneurship development, the concept of growth perspective will give

way to developmental perspective - the financing of which will be largely done by financial market with or without internally generated fund. It will also transform entrepreneurship development into higher economic development indicators i.e., employment, increased production capacity, and so on. This can be achieved in so many ways.

For example, many institutional policies can influence or transform entrepreneurship growth to entrepreneurship development. As indicated in the literature [58, 59, 60], it is generally accepted that policy measures can influence the development of entrepreneurship. According to them, government can exert influence on entrepreneurship in different ways; directly through specific measures and indirectly through generic measures i.e., through market structure and (indirectly) the number and type of entrepreneurial opportunities. This can also be done through a regulatory perspective, support policies or establishment of appropriate legislation and indirectly through policies not directly aimed at influencing the level of entrepreneurship [58, 59, 61].

The preceding discussion on the structural model of finance in entrepreneurship development show that micro industries could grow to medium enterprises given the required finance and appropriate policy that will sustainable their development. The next discussion focuses on the analytical framework of entrepreneurship growth and development.

3.2 Entrepreneurship Acceleration Financial Model (EAFM)

As indicated in the preceding discussion, Entrepreneurship Acceleration Financial Model (EAFM), will draw its strength from the intellectual work of many great scholars [22, 28, 34, 36, 37, 38]. It will also add some variants in the model to make it robust. As we have indicated, Entrepreneurship Acceleration Financial Model (EAFM) will be built on the intrinsic linkage between finance and entrepreneurship growth. The emphasis on finance is necessary because empirical evidence has shown that entrepreneurial choice is affected by liquidity constraints, investment growth in the real sector, and household consumption pattern [28, 62]. Before we proceed, the paper reviews some of the assumptions underlying its postulations.

Thus, we restate formally the Keynesian acceleration theory of investment which assumes that there exists for each consumer good some fixed proportion between the rate of production of that good and the stock of capital needed for its production. We consider a looser acceleration principle so that its strict technological view is seen as an economic or financial one. This loose view suggests that the value of the accelerator is not necessarily fixed over a period of the business cycle and that its value will be affected by calculations of future profitability extending over the life of the new assets.

We assume, as it were, that both the financial decision to become entrepreneurship and capital to finance the start-up are within the purview of the entrepreneur. From the literature exposition [22, 28, 36, 37], it is assumed that individual *i* has utility function of:

$$U(Y_i, \lambda_i) \tag{1}$$

where Y_i is income of the entrepreneurship and $_i$ is additional income from inheritance or gift, which could zero or equal to zero by individual(entrepreneurship) at period *i*. We know that the aggregate level of income in any period without government is:

$$Y_i = C_i + I_i \tag{2}$$

Abstracting form equation (2), we have investment and savings equations as:

$$I_i = (Y_i, \lambda_i), \quad \frac{\delta I_i}{\delta Y_i} > 0 \; and \qquad \frac{\delta I_i}{\delta \lambda_i} \geq 0 \tag{3}$$

$$S_i = (Y_i, \lambda_i), \quad \frac{\delta S_i}{\delta Y_i} > 0 \; and \qquad \frac{\delta S_i}{\delta \lambda_i} \geq 0 \tag{4}$$

Equations (3) and (4) state that both investment and savings of entrepreneurship are functions of income (Y_i) and exogenous income (λ_i) - non-bearing interest securities. If the exogenous income (λ_i) is zero, the equation becomes:

$$I_i = S_i \tag{5}$$

For personal savings of entrepreneur *i*, it is simply the difference between disposal income and consumption:

$$S_i = D_i + C_i \tag{6}$$

For the start-up firm, the entrepreneurs' savings and investment are equal. But in this case, the investment will be equal to disposal income if the entrepreneur forgoes consumption (C_i), thus,

$$I_i = D_i \tag{7}$$

Thus, both equations (5) and (7) satisfy the equilibrium condition of Keynesian model. We will denote D_i as $a_1Y^*_i$ to represent the initial capital (disposable income) plus exogenous income (λ_i) from any other means greater than zero. The investment equation of the start-up firm can be denoted as equation 8:

$$I_i = a_o + a_1Y_i^* + a_2\lambda_i \tag{8}$$

As we have said in the preceding section, if the entrepreneurship survives the turbulence of the competition in the market, a rational entrepreneurship will tend to expand or accelerate the growth of the firm by either using internally generated fund for expansion or securing funds from the financial intermediaries. This is, however, subject to the conditions that: (1) the assets of firm are large enough to accommodating the new capital, (2) the information about the firm is not opaque (Berger and Udell 1995), (3) the agency cost is low, and (4) the management ability of the entrepreneurship is satisfactory in repaying back the loan.

It should be noted at this point that financial factors should not be allowed to limit the growth of the firms less than the rate at which the economy grows so as not to slow down the level of development. Thus, we assume a smooth evolution in which the financial intermediation propels the growth of entrepreneurship proportionately in size and number and this growth is also in proportion to the growth aggregate investments, income and wealth of entrepreneurship.

To attain entrepreneurship development, it is a necessary to note, although not a sufficient condition, that external finance is crucial. This is because the retained earnings from the

cash flow may not be adequate to finance this expansion for accelerated growth. It also means that financial intermediaries will have to channel a greater proportion of non-spending of income by savers who are not entrepreneurs to investments in entrepreneurship. For example, the financial theories of investments, among others, stipulate that current level of the firm's cash flow may not be sufficient for capital expansion. As we have also noted, relatively new firms have a built-in-limit to their access to capital because of asymmetric information. This can limit the growth of an aggregate investment and thus reduces the level of access to capital by entrepreneurship.

The literature explains the importance of an aggregate cash flow as a determinant of limit of access to capital. It says that since depreciation rates are ordinarily quite stable, as are rates of dividend payment, the main factors influencing the volume of aggregate cash flow are variations in corporate profits - commonly, variations either in provisions affecting allowable deductibility of depreciation, investment tax credits or the basic income corporate tax [39].

In the elementary version of the cash flow theory of investment, it is noted that corporate profit, thus retained earnings, respond sensitively to fluctuations in national income Y and its rate of growth. In his version of cash flow theory, aggregate profit (π) depends positively on national income, but negatively on the stock of capital [39]. In the case of entrepreneurship, this will depend on disposable income (Y^*_i). This can be formally stated as:

$$\pi = a_1 Y_i^* - a_1 K_i \tag{9}$$

Taking account of lags, the aggregate profit of entrepreneurship becomes:

$$\pi = a_1 Y_{i-1}^* - a_1 K_{i-1} \tag{10}$$

As we have earlier indicated, if dividends depend positively both on profit and previously retained earnings, then it logically follows that retained earnings (and thus investments) depend upon income (positively) and upon capital (stock) negatively. Further simplification of equation (10) will produce new investment equation (11) of the entrepreneurship as:

$$I_i = a_1 Y_{i-1}^* - a_1 K_{i-1} \tag{11}$$

Equation (11) which can be regarded as entrepreneurship theory of investment shows that investment depends on purely financial consideration. Since we know that start-up transaction has to be profitable to yield retained earnings to finance part of today's investment decision and introducing new capital K_{i-1} to replace a_i, we can be more realistic to write the equation for simple acceleration theory as:

$$I_i = a_1 Y_{i-1}^* - (1 - \delta) K_{i-1} \tag{12}$$

Equation (12) also shows that investment of entrepreneurship rests on the level of income and upon the idea of acceleration principle. Re-arranging equation (12), dropping the constant a_1, replacing Y^*_I as K_i, Y^*_{i-1} as entrepreneurship development (E_D)[1] (measured as a ratio of total micro, small, medium enterprises to total registered corporate firms in the country), inserting equation (8) to reflect the start-up investment function of the entrepreneurship, and parameters a_1 to a_2, (could be zero or otherwise), we have:

$$EAFM_i = a_o + a_1 K_i^* + a_2 \lambda_i + (1 - \delta) K_{i-1} \tag{13}$$

Equation (13) which is the entrepreneurship financial acceleration financial (EFAM) asserts that entrepreneurship investment rests on the available capital generated from the initial investment by way of retained earnings, venture capital or any other sources outside the operation of the firm (could be zero or otherwise), and changes in the capital that is sourced from the financial intermediation which reflects the acceleration principle.

However, we must not forget that one of our assumptions is that the process of entrepreneurship development can only take place in an environment of financial deepening or development. Coming from this background, we would need to introduce financial proxy (financial acceleration) into the model. The reason for this is to be able to measure the causality between financial deepening and entrepreneurship development. Thus, the financial proxy (financial deepening) denoted $(F_{DY})^2$ - measured as a ratio of total credits to the economy to gross domestic income. It should also be mindful that the literature has confirmed that firm size (denoted θ) and age (denoted by β) of entrepreneurship are important elements in measuring the degree of access to capital in the financial market by small businesses [14, 15, 16, 17, 63].

To conform to simple concept of investment as postulated by Keynes, the cost of fund (denoted I_R) should also be included. The firm size (θ) and age (β) will be are included as dummy variables. Thus, equation (12) becomes:

$$EAFM_i = a_o + a_1 K_i^* + a_2 \lambda_i + (1 - \delta) K_{i-1} + a_4 I_R + a_5 F_{DY} + a_6 \vartheta + a_7 \beta + \xi \tag{14}$$

Equation (14) asserts that entrepreneurship financial acceleration financial (EFAM is determined by the retained earnings (K_i) from previous investments, income or investment from inheritance or venture capitalist or other non-interest bearing instruments (λ_i), financial acceleration [(1- δ)K_{i-1}]   i.e additional capital from the financial market reflecting changes in capital stock, level of interest rates (I_R), degree of financial deepening (F_{DY}),   firm size (θ), age of firm (β) and stochastic variable ξ.

4   Conclusion

The paper analyses the theories of entrepreneurship development in the context of finance and notes that they are syntheses of intuitive perspectives, descriptive in nature, innovative economics, and lacks a continuous testable analytical model. On the investment theory, the paper notes that despite tremendous contributions made by the best and brightest minds in finance and economics, there has been no appropriate consensus on the theories of investment and appropriate models for estimating entrepreneurship.

It is in this context, the paper has contributed to the body of literature in developing two models, namely, Entrepreneurship Structural Financial Model (ESFM) and Entrepreneurship Acceleration Financial Model (EAFM), to estimate entrepreneurship development in the context of financial acceleration.

To achieve the objective of the models, the paper recommends that financial policy must be tailored to accommodate specialized investment in entrepreneurship. By so doing, there will be tremendous growth in employment, rural development, per capita income, poverty reduction, and this in turn will accelerate economic development.

The paper also suggests a paradigm shift in the literature to this important area of

investment analysis and concludes that the theory of financial acceleration in entrepreneurship development as postulated will bring about accelerated economic development.

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Appendix

1.   The measurement of the entrepreneurship development can be looked at in two perspectives depending on the focus of research; viz
a.   If the objective is to measure the deepening in terms of growth in the number of micro, small and medium enterprises, one would consider the measure as the ratio of total number of registered micro, small, medium enterprise (T_{EF}) to total registered number of registered companies in the country *(T_{RF})*. Thus, the measurement will be:

$$E_D = \frac{T_{EF}}{T_{RF}} \; for \; T_{RF} > 0,$$

where:
E_D = Entrepreneurship development, T_{EF} =Total number of registered entrepreneurship firms,   and T_{RF} =   Total number of registered firms in the country.
b.   On the other hand, if it is to measure the financial deepening of entrepreneurship in the economy, that is the growth at which the financial institutions have impacted in terms of credit facilities in MSMS, one would measure entrepreneurship development (E_D) as the ratio of credit to small and medium scale enterprises (C_e) to total credit to the private sector of the economy (C_p). Thus, the entrepreneurship development will be proxied as:

$$E_D = \frac{T_{EF}}{T_{RF}} \; for \; T_{RF} > 0,$$

where:
E_D = Entrepreneurship development, C_e = Total credit to the micro, small and medium enterprises. C_p = Total credit the private sector.

2.   The measurement of the financial development/deepening can also be looked at in two perspectives depending on the focus of research; viz
a.   If the objective is to measure the financial deepening in terms of the degree of supply of financial assets to the economy, the measurement of the proxy will be:

$$F_{DY} = M_2/GDP$$

where:
F_{DY} = Entrepreneurship development
M_2 = Total Broad Money supply to the economy.
GDP = Gross Domestic Product.

b.   On the other hand, if it is to measure the deepening of the financial system in the economy, that is, the shallowness or otherwise of the financial development in terms of credit to the economy, financial deepening (F_{DY}) will be measured   as the ratio of credit to small and medium scale enterprises (C_{ec}) to Gross national products(GDP), that is:

$$F_{DY} = C_e/GDP$$

where:
C_e = Total credit to the economy
GDP = Gross Domestic Products.