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THEORETICAL PERSPECTIVE OF DYNAMIC CREDIT RISK ANALYSIS AND LENDING MODEL; EFFECTIVE TO ENTERPRISES OF FRAGILE ECONOMY

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“Success in Banking is attained not by avoiding risk but by effectively selecting and managing risk”

ABSTRACT

There is empirical evidence, which justifies the core functioning of money in economic growth and its correlation to the development of a Nation, which equally establishes the reason for the relevant role of Banks in every economy. The underpinning of this research is to present the necessity for the financial industry of undeveloped and developing economies very fragile in their functioning, to adopt the proposed theoretical perspective of dynamic credit-lending-risk analysis as an upgrade model over the existing static credit-lending-risk analytical approach, found to be ineffective to the productiveness of enterprises, emerging from such economies, hence creating frustration to the welfare practices of the State and heightening it unemployment tension.

Keywords: *Economics, Banking, Enterprises, Credit Lending, Credit Risk Analysis, Employment*

1. INTRODUCTION

In other, for the paper to deeply establish the bases of its argument, with the quality submission of theoretical-model-analysis. Some relevant terminology used herein, lacking precise definition in the taxonomy of economic science, has to be clearly defined in the context of this paper based on critical assessment of varied definitions adopted by scholars in the economic science community. And these two major technical terms are as follows;

i. Fragile Economy

ii. Credit Analysis & Risk

i. Fragile Economy

It is a term argued to have been coined by Morgan Stanley in 2013, representing emerging market economies that are too dependent on unreliable foreign investment to finance growth ambitions. Bruce & Jennifer (2013) defined the fragile economy as a National economic network to venerable metropolitan economies, consisting of networks of innovative firms, talented workers, risk-taking entrepreneurs, supportive Institutions and associations that cluster together in metropolitan areas and co-produce economic performance and progress. Demirek (2009), almost like the intent of the originator of the word, defined a fragile economy as an environment where firms rely heavily on external funds to finance its operational costs. However, in the context of this paper, the fragile economy will be defined as, “an economy, experiencing significant weakness in its currency, making it difficult to finance its account deficits and growth projects, contributing to a slow down and vulnerability in its welfare functioning”. There are numerous factors known to cause economic fragility of a State, for instance, weak political institution, poor constitution functionality, poor governance, poor financial-industrial policies, bad tax regulations, high cost of having a strong balance sheet as an enterprise, poorly developed investment market, high inflationary effect, complex bureaucracy, low capital adequacy of banks, and finally in respect of this paper, corruption. All the listed factors will be extensively diagnosed to establish a significant contribution to a fragile economy and a negative impact on Enterprise existence. Which will guide in analyzing the effectiveness of the use of Static-credit-

lending-risk-analysis for potential profitable Enterprises that emerge from such economies, which in most circumstances observed to be struggling to survive as businesses.

ii. Credit Analysis & Risk

Kagan (2018) defined credit analysis, as a type of analysis that an investor or bond portfolio manager performs on companies or debt issuing entities, to measure the entity's ability to meet its debt obligations. Which the content of this paper, do concur with the above definition to establish the bases of its theoretical assumptions. Banks remain a major conduit for the transformation of Savings into productive investments. And much particular in emerging countries where capital markets are still not sufficiently developed and where savers have limited access to direct-credit-risk-opportunities. Jonathan & Philippe (2013) state, Banks and Financial Systems should share the blame with profligate politicians, outdated socioeconomic models and a shift of the 'world's center of gravity' towards newcomers in the financial-economic warfare. And further argued, Banks cannot survive unless they take risks. The trick for them is to manage those risks without destroying shareholders value. The fatter the better, from creditworthiness point of view and without endangering depositors and creditors. It must be acknowledged, financial intermediaries like Banks do carry substantial credit and market risks. They act as the shock absorbers by removing it from their depositors' shoulders and charge a hefty fee for the services. It is observed, no individual with money to spare, that is Savings or Capital, will provide a credit on a commercial basis, unless she believes that the borrower has both the requisite willingness and capacity to repay the funds, advanced. To form such belief rationally, she must be satisfied that, the two questions can be answered in affirmative. Which are;

- a)The prospective borrower will be willing, so long as the obligation exists, to repay it?
- b)The prospective borrower will be able to repay the obligation when required under its terms?

To respond to these questions, a credit analyst will re-sought to a judgment of probability. Banks acceptance of credit risk is inherent to their operations, since the very reason for existence as banks, is the supply of credit through the advance of cash and the corresponding creation of financial obligations. Credit Risk in the perspective of this paper will be defined as, "the risk of money loss arising from the default of a counter-party on a fundamental financial obligation or

higher than expected loss of severity, arising from a lower than expected exposure at the time of default”. The following is a formulated assessment of credit risk in the framework of this paper assumed to be the generally accepted tradition of the banking industry:

- (a). Examining the obligator’s capacity and willingness to repay credit
- (b). The country risk and operational conditions as in its macroeconomic climate that the obliged is exposed to.
- (c).Examining the attributes of obligation from which the credit risk arises in the instance of legal or derivative risk and character of the currency.
- (d).Assessing credit risk and mitigation such as collateral utilization, pledges, guarantees, and insurance.

The concern herein is not the underlying probability of default but the degree of uncertainty associated with forecasting this probability. As Hale (1983) succinctly put across, if the pawnbroker lends money against a gold watch, he does not need credit analysis. He needs instead to know the price of the gold watch with respect to time. The Traditional Credit analysts of the banking sector are best known of sieving through a quantum of data ranging from cash flows, credit history, in its ratio and trend analysis to draw a probability line in terms of exposure to default, the recovery rate, and the loss at a given default target. This defined style of credit-lending-risk- analysis modeled and exhibited as ‘Figure E’ below in this paper, has become an accepted standard of the Banking practices. In the credit analytical perspective, there are two technical approaches available to the traditional banks in issuing credit support to a firm, which are

- I. Structural Model
- II. Reduced- form model

The [*Structural model (1)*], considers the ‘positions’ of stakeholders of the company, meaning their creditworthiness as a base to issue credit support to the company, while the [*Reduced-form model (2)*] seeks to predict, when a default may occur based on observable variables. Which this

paper, in conclusion, seek to critique the stringent application of the model (2) in the context of fragile economy, expressing doubt on the effectiveness and reliability to rely on model-2 as a general standard of metric application observed from the ex-post-facto study of developing economies, relying on observational experience from the Sub-Saharan Africa market hence provide the alternative model as a theoretical perspective.

2. EX-POST-FACTO CONDITIONS AS A SIGNIFICANT CAUSE TO FRAGILE ECONOMY AND POOR ENTERPRISE FUNCTIONING

Varied literature asserts a wide range of factors as contributive causes of a fragile economy, this paper narrows the cause-based analysis of the observable factors of a fragile economy, which the effects is translated to a poor functioning of productive Enterprises with difficulties to access quality credit facilities. The listed factors are below;

I.Weak Governance and Political Institution

II.Poor constitutional functionality

III.The poorly developed investment market

IV. Bureaucracy

V.Corruption

VI.Banks capital adequacy

I. Weak Governance and Political Institution

It was suggested by Adjil et.al (1997) as well as Feng & Chen (1997) that a political government, which is an active economic participant, can positively intervene to shape an environment to attract investment. They further argue that lower political capacity, indicate less ability to extract resources, which critically implies higher budget deficits and an increase in uncertainty. Finally, they observed that faced with low capacity, a country is more likely to create new taxes or increase existing ones, thereby reducing the return on investments. Which sum up to the fact that

capable government aligns their policies with sound macroeconomics criteria, while weak governments stress political survival and mostly exposed to challenges, which act as a huge frustration to Enterprise survival in such economy. When political Institution formed is captured as an ideological gloss through which the minority who exercise real power through the State and its monopoly, seek to conceal this fact from the subject population as Lenin (1917), did put it in his paper the State and Revolution, then the Institution become hopeless in its function denied in its expected benefit to its members, than to serve the interest of the political elite. In such a circumstance, Enterprises not engaging in cronyism, suffocate in a sound successful growth in such an economy, which is a common condition in Africa.

II. Poor Constitutional Functionality

In an economic environment, where the legitimacy of the State, the nature of its authority and the nature of its obligations to its citizens and of its citizens to it, lack clarity, with the constitution functioning not as the rule of law but the rule of men ruled by subjective and arbitrary will of particular men instead of objective determinant of general and public laws, as Kant (1724-1804) asserted, for a strong constitution, is a union of an aggregate of men under rightful law. In such a circumstance, the labour of men through their enterprises to serve the market as well as to generate private property are easily undermined, and mischievously destroyed in the spirit of plundering, which weakens the spirit of innovation, creativity and sacrifice through entrepreneurship for economic growth, a major challenge faced by Enterprises in fragile economy, Which is a major predicament in Africa.

III. Poor developed Investment Market

Poorly developed investment market could be defined as an economic environment, whereby either bank-based or market-based financial system is poorly developed in promoting long-run economic growth. Stiglitz (1985) submit that well-developed markets quickly and publicly reveal information, which reduces the difficulties and the cost for individual investors to acquire information becoming an incentive to attract investors to such environment easily. While Boot et.al (1993) acknowledged, Banks reveal of information is slow to public due to its long run

relationship with firms, however with Boot & Thakor (1997) added to the debate that, a coordinated coalitions of investors with Bank is better than uncoordinated with the market, where monitoring firms and reducing post-lending moral hazards is weak. Bhide (1993) also posits that liquid markets hold a myopic investor climate, making the bank-based system a preferable in policy guide and reliable theoretical practice. So in a fragile economy whereby both the Bank-based and Market-based financial system is underdeveloped, causes visionary enterprises to struggle in productivity and smooth growth. It is further observed in such an environment, investors hold the assumption that, there is a potential high risk to invest in the privates sector of such economy, despite the evidence that the sector may be holding the highest volume of transaction performance in their macroeconomic environment. And even if, it is considered by Investors as an environment to support, they then expect it to be politically guaranteed, a process that slows economic growth and stiffen innovations in private enterprise paradigm.

IV. Bureaucracy

As Niskanen Jr. (1990) argued, a large part of our population wants to expand the role of government particularly to alleviate poverty and improve the environment, correspondingly large part of our population is exasperated by the methods of bureaucracy and dissatisfied by its performance, just as Max Weber (1864-1920) recognized bureaucracy as the characteristic form of public administration for a State with extended territorial sovereignty developed, and has become the standard definition guiding this form of organization in our contemporary times. Von Mises book 'bureaucracy', had established relevant information, he argued, 'bureaus' specialized in the supply of those services with the value of which cannot be exchanged for money at per-unit rate. As a consequence of the above, 'bureaus' cannot be managed by profit goals and the economic calculus, therefore, must be centrally managed by the pervasive regulation and monitoring of the activities of subordinates with the absolute solution, to reduce the scope of government. Enterprise success in both endogenous and exogenous climate of a State depends much on strategic exploitation of opportunities in respect to time. In an advent of competition, time become a valuable commodity to take advantage of, which fragile economy drawn in complex bureaucracy, lacking respect to time and speed of the market development as a result of

a system architecturally designed to serve self-interest and political elite, downplaying the struggle of an entrepreneurs effectiveness and Enterprise efficiency is observed to be the major cause of venture collapsing in such economies.

V. Corruption

Olken & Pande (2012) posits that, survey evidence suggests that corruption is rampant in the developing world and more prevalent in developing countries than in rich ones and justify further, there is a situation where ‘bureaucrats’ official salaries were less than their market wage in expectation of the corrupt rents, they would obtain. Mocan (2008) finds that the income and education of the individual have positive impacts on the likelihood of being asked for a bribe in developing countries. There are an Instances, reported by Reinikka & Svensson (2004), using public expenditure tracking survey, they compared the amount of special education block grant sent down from the Central government of Uganda, with the amount of the Block grant received by the schools. They estimated a leakage rate of 87%. Another instance, which Olken (2007) report of a rural road project. He compares the official amount spent on the road to an independent engineers, estimate of what the road actually cost to build, in which engineers dug core sample of the roads to estimate material quantities, did price surveys to estimate local prices, and interviewed villagers to estimate actual wages paid, it was realized, some amount of materials disappeared during construction. And an estimated missing expenditure in respect of the village claim and the engineering estimation to the promoted cost was approximately 24% per average. Olken & Pande (2012) did further argue that corruption lessens the government’s ability to correct an external challenges. If someone can bribe a police officer or a judge instead of paying an official fine, the marginal cost of breaking the law is reduced from the official fine to the amount of the bribe. Furthermore argued, if the police officer extracts the same bribe regardless of whether the person has broken the law, the marginal cost of breaking the law falls to zero, and the law ceases to have a disincentive effect altogether. An environment which has a strong network of corruption driven in complex innovative dealings, any honest transactions, which should be the hallmark of any successful and credible enterprise, becomes difficult, as a result, a long term progression of such a venture in competing against its counterpart in the strong economic environment becomes questionable.

VI. Capital Adequacy of Banks

In the studies of Inoue et.al (2019) on lending behaviour of Banks, they submitted, when a substantial adverse shock hits the economy and many borrowers become insolvent and banks face impaired capital. There are two types of lending behaviour observed, which are, stagnant lending in a capital crunch environment and forbearance lending. With the stagnant lending in a capital crunch, the banks decrease credit to borrowers, irrespective of whether they are good or bad borrowers. While that of Forbearance lending, the banks conduct window-dressing to avoid the realization of capital losses and thus allocate more credit to insolvent borrowers, with the hope that their situations will improve with also the premise that, the impaired banks adopt this lending behaviour as a considerable effort to avoid further deterioration of their balance sheets. In practice, it implies the stagnant lending in a capital crunch involves the issue of overall credit under-supply to all borrowers. Whereas forbearance lending involves the issue of credit allocation to low-quality borrowers. As the spirit of this paper seeks to promote a proactive lending model very effective in a fragile economy, it then concludes, such a fragile economy will require a very vibrant banking industry.

Diamond (1984) and Calomiris & Wilson (2004) argued that, in the models of banking, under asymmetric information, the emphasize lies on the potential conflict of interest, which is between the banks and depositors. And such an informational problem, encourages the banks to offer short-term-low-risk debt, concentrating mostly on the balance sheet risk of their capital and thus insulating depositors from this risk. Therefore it is important to determine whether banks are well capitalized enough to absorb their balance sheet risk and stabilize the banking system. Since the theoretical proposition of the paper on dynamic-credit-risk analysis and lending is established on the premise of a vibrant banking sector of a fragile economy, this does then promote a debate on signals of an economy to serve as a predictive power for Banks failure. Haldane (2014) and Bulow & Klemperer (2015) pointed out that regulatory measures of Bank Capital do not necessarily have predictive power for Bank failures. Empirically, Haldane & Madouros (2012) and Sarin and Summers (2016) measured Bank risk using both regulatory measures and market measures. And realized, the market measures, which is defined as the Capital ratio in the value of equity relations to total assets has the most explanatory power in predicting banks failure, secondly, the regulatory measures of bank capital in respect to Basel accord. The limitation of

this paper was to ignore the theoretical factors that anchors economic vibrancy that supports bank operations in credit-lending. In fragile economy for instance the arguments of Khwaja & Mian (2008) and (Jimens et.al. 2012; 2014) in studying the bank loans level data and firm-level panel data did help to appreciate the omitted variable problems in controlling borrower-side factors in bank loan equation and relied squarely on the theoretical pathway for effective credit-lending for a successful industrial progression. Which we believe further studies in the recommended areas, could explore these factors, empirically.

3. DYNAMIC CREDIT RISK ANALYSIS & LENDING MODEL

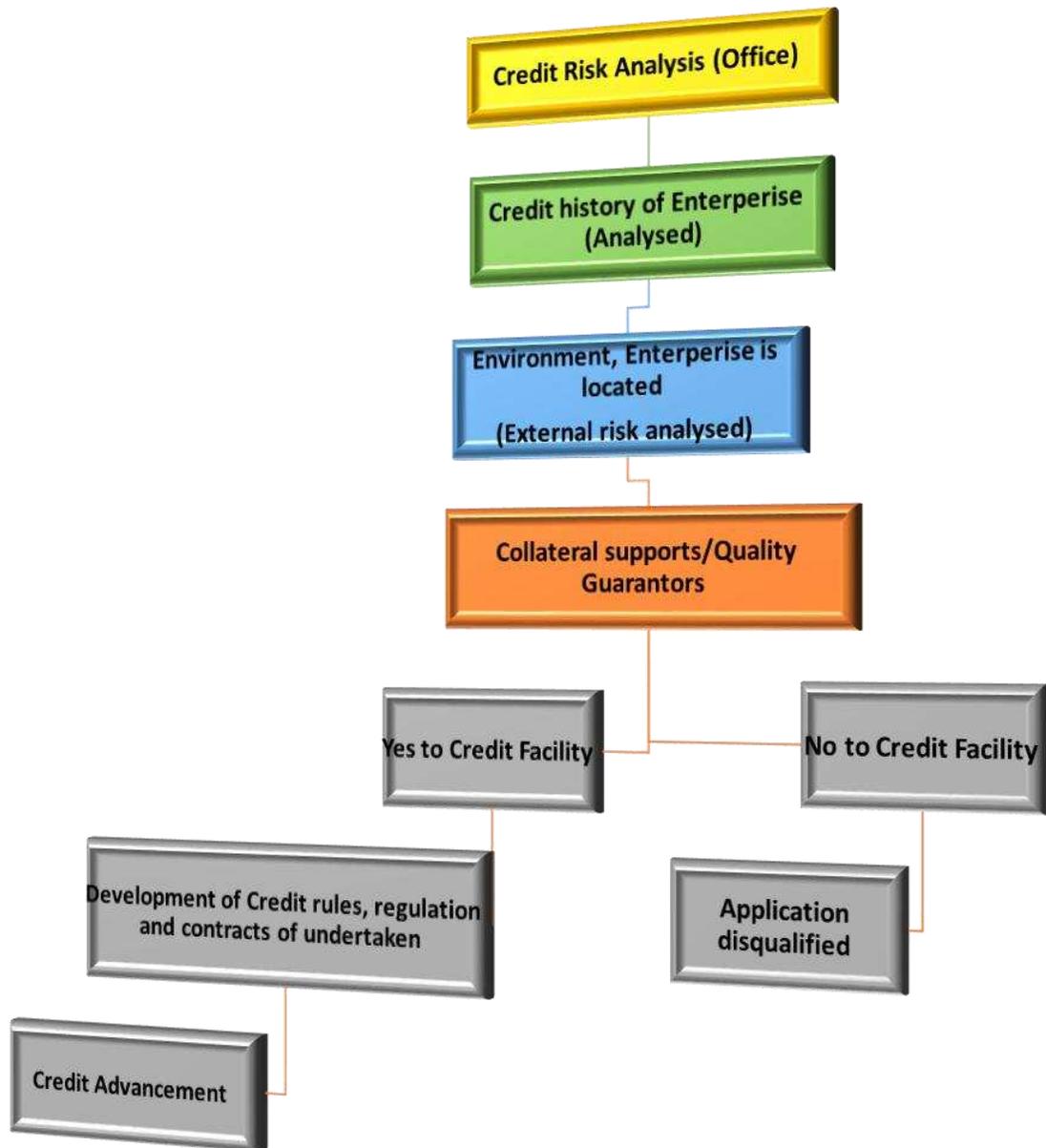
This section of the paper seeks to analyzed the current used method of credit-risk-analysis used by the traditional banks for credit lending and termed it as Model ‘E’ in the context of this paper with an established model evidence of the inefficiency of such method process utilization in a fragile economy of Sub-Saharan Africa and the proposition of an upgraded model termed by this paper as Model ‘D’ to address the weaknesses of model ‘E’ application in fragile economy. In the theoretical settings of model ‘E’, it is observed per practical experience that, this kind of methodical tool is only useful and applicable to agencies having a historical operational existences and financial performance in an economy, which the method rely on averagely three (3yrs) historical operational data performance and financials for a quantification forecast as a criteria for credit application and approval. And then followed with other risk-metric assessment and analytical tools. Enterprises chosen and analyzed on the scale of probability forecast on it credit-risk-analysis is expected to meet at least the four major required criteria outlined below as parametric conditions;

- i. The Enterprise is assured of profitability for short, medium and long term
- ii. The Enterprise has passed credibility test
- iii. The Enterprise has a successful historical data of operational performance.
- iv. The Management credibility and integrity test

When these parameters are met, then the actual Credit risk analysis of the Banks of the Financial Institution is generally observed to follow the model below in a diagram format, defined by the paper as ‘Static Credit Analysis’.

Fig. A1. Model 'E'

How the Credit lending analysis is conducted by the traditional banks



E. T. Senzu (2020), Credit-Lending- risk analysis model structure

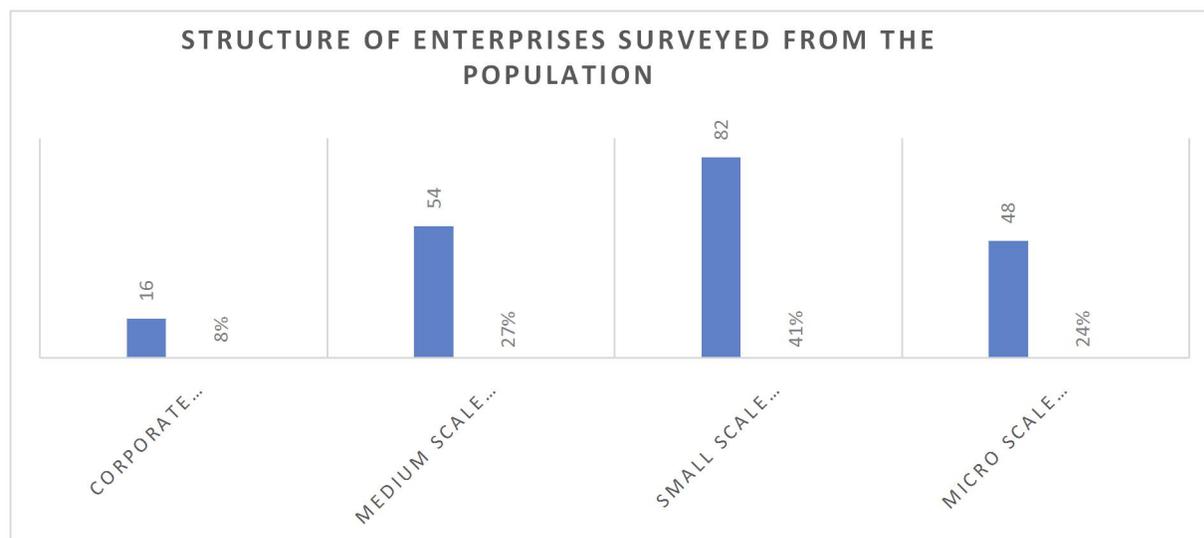
In the examination of the efficiency of Model 'E', passing through an empirical and evaluation test as an Old Static Banking approach in credit-risk-analysis, experimented in the following chosen countries, as a sample frame for the idealized fragile economies, the six below countries were chosen

1. Ghana
2. Nigeria
3. Uganda
4. Liberia
5. Zimbabwe
6. Sierra Leone

On the field survey study a total of two hundred (300) companies were engaged within this six countries targeting both the Small and Medium Scale Enterprises and corporate agencies, as a case study approach in respect to Best and Kaln (1998), as they argue that, case study probes deeply and analyzed interactions between factors that explain present status or influence change. The size of the sample, which was two hundred (300) companies engaged, was believed by the researcher as sufficient enough to be a good inference as Fink and Kosecoff (1995) posit, the size of a population from which the sample of a particular size is drawn has virtually no impact on how well a sample is likely to describe a population. Finally, Fowler (1993) did also assert, a sample size of one hundred and fifty (150) respondents could describe a population of fifteen thousand (15,000) or five hundred million (5,000,000) with virtually the same degree of accuracy, assuming all other aspects of the design and sampling procedure were the same.

This three hundred (300) companies selected were based on their interest for Credit facility within the period when the research study was conducted, which the researcher through a complex difficulties had access to credit application data in the period of 2018 October to 2020, February from the Financial Institutions and Corporate banks I privately solicited for such a peculiar data support for academic reason and was granted under caution condition. With the accessibility to such secondary data, it was easier to draw structure composition of agencies to engage for this academic exercise, which the findings computed as Figure A2 below, defining the structural component of the Enterprises surveyed as a sample frame of the population size targeted

Fig. A2



E. T. Senzu, 2020; field Report

To examine the efficiency of Credit-lending-risk-analysis of Model ‘E’ in the chosen fragile economies, the following questions were asked as the guideline to the field survey as stated below

Q1. How many of the companies, had their credit facility approved among the three hundred companies who applied for the credit facility? Interrogation to the data submitted to me by the Banks I contacted. The findings were tabled as (X1)

Table X1

Types of Companies	Percentage of Company Size (%)	Granted Credit Facility (%)
Corporate Companies & Multinationals	8%	4%
Medium Scale Enterprise	27%	8%
Small Scale Enterprise	41%	3%
Micro Scale Enterprise	24%	0%
	100%	15%

E. T. Senzu, 2020; field Report.

A total of three hundred (300) companies, did apply for the credit facility marked as 100% sample framework from October 2018- February 2020, with the response observed as follows, only 15% (45 companies) out of the 100% population size accounting for three hundred (300 companies) loan applications were considered for credit facility approval, by going through *Model 'E' Credit-Lending-Risk-Analysis* according to the analyzed data from the major lending banks within the selected countries the population size was deduced from. This empirically submit the high inefficiency rate in the application of current credit risk analysis method defined in this paper as [*Model 'E' Credit-lending-risk-analysis*], shown above describing it function procedure as p.11 of this paper demonstrate. The next effort as the researcher was to examine the cause behind the weakness of the application of such a traditional credit-risk-analytical banking model, which led to a friendly identification of identified clients to this lending banks with a special interest to assist their companies through international fund-raising of either equity or debt funding but will want to know why their application to the banks for a credit facility were rejected, despite the banks response towards credit disqualification were available in my research lab. The question below was asked either from their Chief Executive Officer (CEO) or Chief Financial Officer (CFO)

Q2. Why was your company disqualified, despite meeting the parametric conditions stated above, as the Enterprise being profitable, credible and has historical data of operational performance and competent management of high repute?

Findings were tabalized as X2, below.

Table X2.

Reasons behind Credit disqualification

Response	Rate
1 Credit history suffered discrepancies with the reason of most, to avoid tax burden	34%

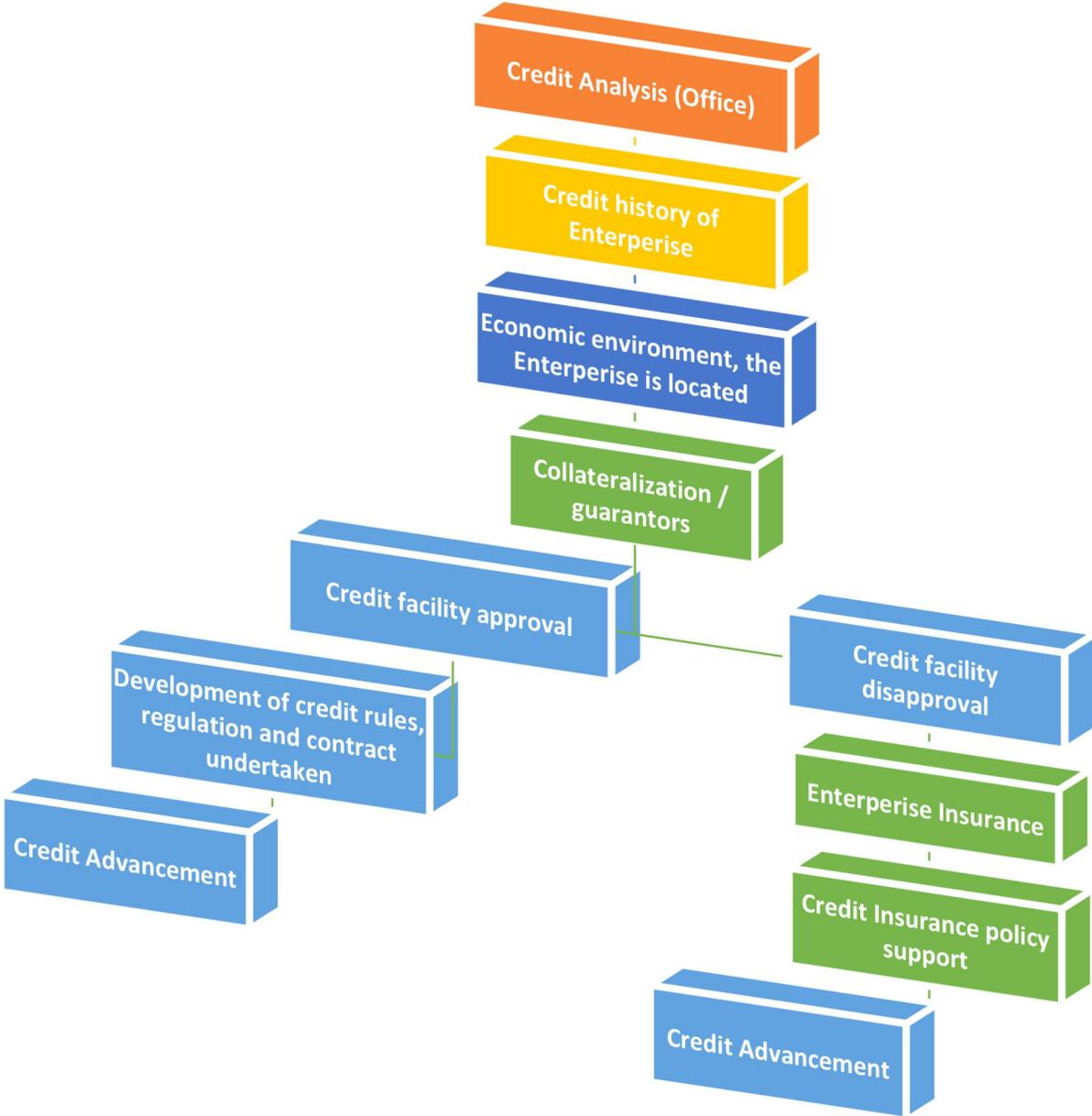
2	A weak economic environment due to weak governance capacity	22%
3	Weak collateralization and guarantors	12%
4	High Interest rate, making the credit facility dis-interesting	15%
5	Unreliable location of the Enterprises	2%
		85%

E. T. Senzu, 2020; field report

Even though the data information, suggest that the targeted respondents, some had more than one reason to be denied credit facility by these banks, however, the data analysis rather dwell much on the core factor among the list of factors resulting to each of the engaged companies to be denied the credit facility.

The outcome of the study suggest the credit application disqualification of the companies by the banks is justified strictly by the model of the Bank credit analysis, any other relevant information beyond the scope of synthesis by the ‘Model -E’ method of analysis assumes the project or business not to be potentially valuable towards the bank credit system. With the researcher suggesting an alternative model as a proactive method to be considered for credit risk analysis as an upgrade of above-defined model-E with a newly proposed name as Model- ‘D’ framework of Credit-Lending-Risk-Analysis, which is supposed to be an efficient methodical tool for credit-risk-analysis in fragile economy to the benefit of Enterprise growths in such regions. With the Model ‘D’ framework designed below as Fig. A3

Fig. A3.



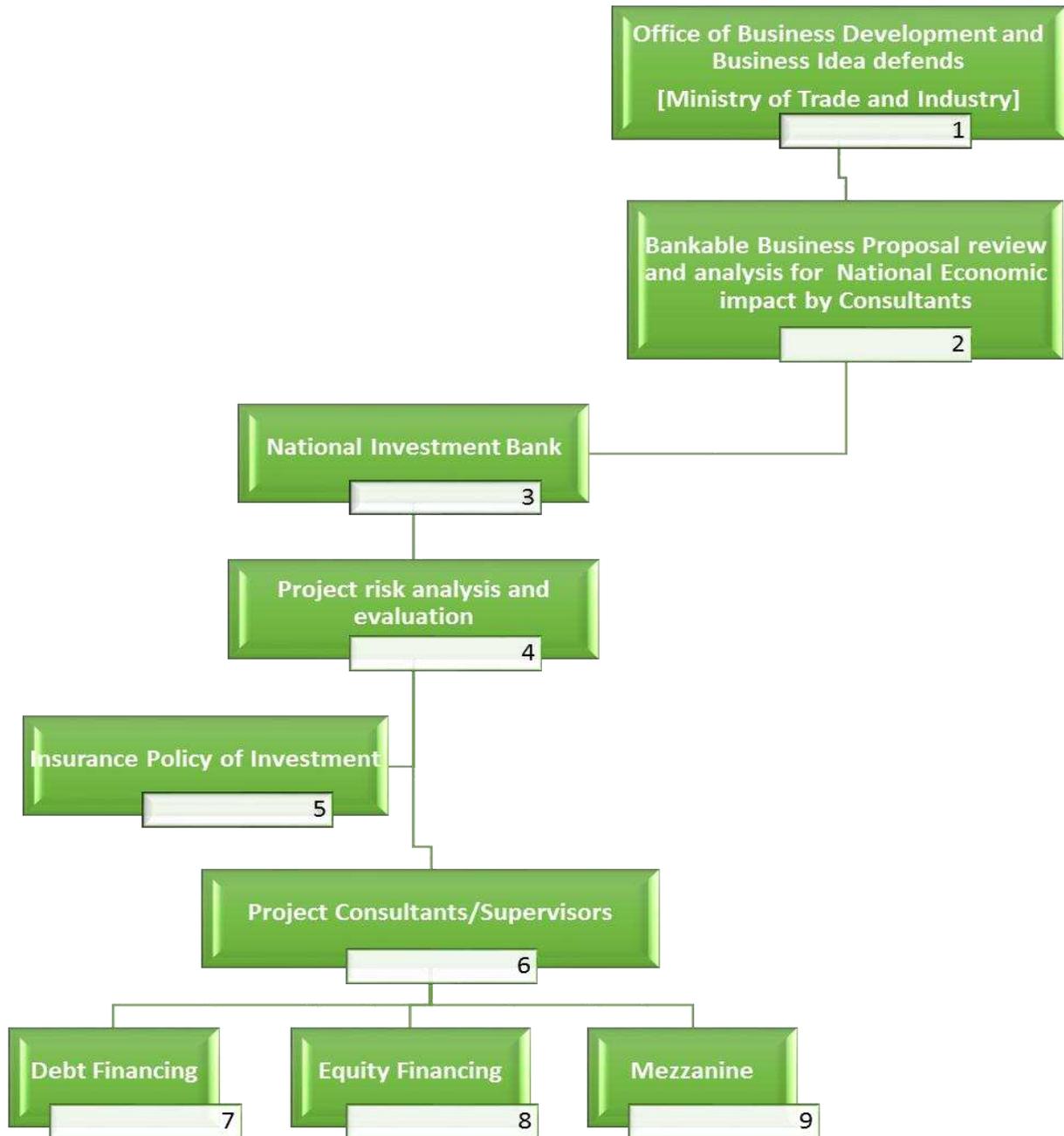
Senzu (2020) Model D- Credit-Lending-risk analysis structure

The above Model 'D' as shown by Fig. A3 as a Credit-Lending-Risk-Analytical tool, which is stimulatingly prescribed as a dynamic and relatively efficient in its structural analysis comparable to Model 'E' as shown in Fig. A1 is a suggested analytical method of credit-lending-risk-analysis promoted by this paper as an alternative analytical method to rely upon because it takes into consideration the triggers of a fragile economy, which act as an obstacle to smooth and innovative growth of Enterprises of such an economy under financial constraint situation. The Model 'D' adopt and stresses its analytical tool on the parametric qualification of the Enterprises as prescribed by Model -E analysis, if such are met, whatever identified risk, will mitigate it for easy credit accessibility for Enterprise progressive functioning. However, the weakness of Model 'D' Credit-lending- risk-analysis, is its inability to assess start-up ventures or businesses having zero years of historical operations and performance.

Which the researcher further postulate Model 'S' as an upgrade credit analytical tool of Model 'D' for a potentially viable venture, when it is in a quixotic stage. For a Country to adopt Model 'S', then the government of such a fragile economy, should have an interest of private sector empowerment as an engine of its economic growth, while it innovatively channel most of its graduate students into entrepreneurship; then the proposed model 'S' designed below to address credit-risk-analysis and lending will require a central Institution termed as [*SME-EXIM-BANK*] as a proposed name enacted by Law in its operational existence, with its source of funding generated by Public-Private-Partnership (PPP) to guide successful implementation of the model. Then the ultimate parametric qualification of venture proposal is to prove the significant contribution of such an idealized venture impacts on Gross domestic production of such economy when project risk analysis is carefully analyzed and quantified. It only on such orientation that the model 'S' framework shown below as Fig. A4 will be feasible for application.

Fig.4 Model 'S'

SME-EXIM BANK STRUCTURE FOR CREDIT ANALYSIS



E. T. Senzu (2020) model 'S' credit-lending-risk analysis structure

factors held constant. Then the equation below is the summarization of productive Enterprise of a fragile economy.

$$E_p = [(P_{ct} \cdot e^r) + (\dot{P} \cdot C_{ct})] \dots \dots \dots \text{eq.2}$$

It further assumed that quality employments is a correspondent of good wage-earning in a fragile economy, hence with the below formula;

$$e^q \cong e^r \dots \dots \dots \text{eq. i}$$

The paper, therefore, argue that a quality functional banking in every economy depends on the credit lending rate to the market and Enterprise productivity to build capital adequacy with the summarized formula below;

$$K\dot{B} = \text{Constant} (C^l + E_p) \dots \dots \dots \text{eq. 3}$$

$$K_{t+1}\dot{B} = \{(C_t^{l+1} + ([P_{ct+1} \times e^r] + [\dot{P} \times C_{ct+1}]))\} \dots \dots \dots \text{eq.4}$$

The equation (4) depicts that a capitalized bank will sustain its adequacy of capital at the optimum level in respect to its market transaction, if only it performs well in its credit lending rate within an economic environment of a good earning rate for employees, high production with increasing market demand or consumption rate.

In the contemporary Africa economy, its welfare states depend on the quality of policy in both fiscal and monetary relating effectively to each other, hence in reference to equation (1) above and assuming that monetary policy core goal is to promote vibrant banking system of adequate capital then the equation below justify that condition.

$$M_p \cong K_{t+1}\dot{B} \dots \dots \dots \text{eq. ii}$$

$$WF = [F_p \cdot M_p] \dots \dots \dots \text{eq. 1}$$

$$WF = F_p \{(C_t^{l+1} + ([P_{ct+1} \times e^r] + [\dot{P} \times C_{ct+1}]))\} \dots \dots \dots \text{eq. 5}$$

The final model equation depicts that in a sound functioning Welfare state, it will require a quality fiscal policy which is consistent and defined as constant to the equation (5) to activate a

high credit lending rate, high productive capacity of the economy, high earning rate, including a high purchasing power with a corresponding market consumption demand.

5. CONCLUSION AND RECOMMENDATION

There are three models, which the paper has presented, beginning with the old traditional Credit-lending-risk-analysis as an approach adopted generally by the domestic financial market of Africa, mostly the banking sector, with the first model framework defined by this paper as Model 'E' with it the weakness of application explored and discussed in respect to fragile economies. As a result, the paper further postulate an advanced version of credit-lending-risk-analysis termed as Model 'D' and 'S' methods, which is structurally defined in the earlier pages for efficient application in fragile economy, depending on the 'life-span' of the venture, either with three (3) years historical performance of productive existence, and Zero (0) year productive existence, in other words, a venture in an idealistic stage, for the Banks to re-sought to the use of Model-S' and 'D' instead of 'E' model analysis framework for credit lending. These additional models developed theoretically, is to help widen the risk analytics and assessment scope of Enterprises in accessing funds in a fragile economy, unlike the straight-jacket-approach, which denied most potential and successful ventures the platform to prove their viability in both the short, medium and long term productivity growth, due to financial constraint.

The researcher does recommend, any further research in this area of studies should focus on lending behaviours of Banks in a fragile economy, approach, and methods to improve its potency and sustainability.

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