Texila International Journal of Academic Research
ISSN: 2520-3088
DOI: 10.21522/TIJAR.2014.12.04.Art020

Effects of Institutions on Entrepreneurship Development in Developing Economies

Ayorinde A Ezekiel[1*], Umar Lawal Aliyu[1]
[1]*School of Business and Management, Texila American University, Georgetown, Guyana*

Abstract

This study is galvanized by an accelerating disturbing debate in the circle of researchers relating to the effect of institutional influences on entrepreneurship development in the emerging economies. This study investigates the effect of combined formal and informal institutional factors on entrepreneurship development in developing economies. To accomplish the stated objectives, the empirical work of this study engaged secondary data-sets that covered 20 developing countries spanning between 1996-2022 and analyzed the data using the following estimation techniques: Panel Ordinary Least Square (POLS), Feasible Generalized Least Square (FGLS), Fixed Effect (FE), and Random Effect (RE) approach. The results of the study revealed that a unit increase in each employed institution has positive or negative effect on entrepreneurship development in emerging economies. The study recommends among other things that; deepening the developments of money deposit and micro-financial institutions to facilities credit to various individuals or organizations that embrace self-employment as well as the identification by the governments of the emerging economies of those economic factors that can make GDP growth to promote self-employment in their various countries. This study therefore concludes that institutional influences have varying positively and negatively impact on entrepreneurship development in emerging economies.

Keywords: *Developing Economies, Entrepreneurship Development, Institutional Theory, Institutional.*

Introduction

Entrepreneurship is an economic and existential factor, which when well combined with quality institutions drive's Gross Domestic Product (GDP) with commensurate impact on the country's economy. Entrepreneurship serves as a catalyst for economic development in developing countries by fostering innovation, creating employment opportunities, enhancing competitiveness, increased national income, and poverty reduction. It involves establishing new businesses, leading to more employment opportunities and improved financial stability for individuals [8, 20, 31].

However, the place of institutional frameworks cannot be relegated for the important support system it provided in promoting entrepreneurship, drive economic growth and shape the opportunities, incentives, and constraints entrepreneurs faces in developing economies. The entrepreneur activities are broadly influenced both by formal and informal institutions. Formal institutions are the noticeable ‘‘rule of the game’’, such as constitutional law and a national legal code [6, 23]. These rules can be shaped or tailored and modified instantly to match to varying economic circumstances. Contrarily, informal institutions are the unnoticeable rules of the game, comprised of norms, values, decent behaviours, and codes of conduct that describe a given context. Informal rules are usually not lawfully enacted and tend to take longer to amend. Informal and formal

Received: 23.08.2025 ***Accepted: 22.09.2025*** ***Published on: 31.10.2025***
****Corresponding Author: ayoezekiel1@gmail.com***

institutions often exist side by side. Through their combined actions, economic agents like entrepreneurs can bring about institutional change. *I*nstitution is recognized as the primary source of development and also as a factor that is responsible for the poor performance of developing countries because the institutional constraints in each country define a set of payoffs to political/economic activity that does not better-off productive activity. This have help to explained why entrepreneurship prevalence often do not translate into development in real institutional context [6, 28].

It is imperative to note that, though institutions are existent in all economies, there is still a great deal of diversity within them, and that one of such distinction between conventional and emerging economies can be portrayed in the context of institutional arrangements. So, if one is interesting in studying entrepreneurship within or across countries, the expansive nexus between entrepreneurship, economic development and institutions is an essential area of examination. This nexus is particularly important in assisting to comprehend why the relative additions of entrepreneurship can differ substantially across countries and regions. While, some researchers are concerned with how entrepreneurship development will thrive given the institutional context of a country, others also emphasized that what is completely absent in countries with dulled economic performance is not entrepreneurship as such but the correct institutional context for entrepreneurship to commence and to be socially advantageous [24]. He explains further that what is important for development are the rules that individuals comply with and how these rules are outlined or sketched and implemented. On a contrary, while many researchers believed that institutions in developing economies hold an important explanatory power to explain understanding of entrepreneurship, some felt that institutions in most developing economies are notoriously weak and so it is not likely that these institutions will hold an important explanatory power to allow comprehension of entrepreneurship in developing economies [13].

The objective of the study is to develop an understanding of institutional influences on entrepreneurship development and also to investigate relationship that exists between Institutions and Entrepreneurship Development in developing economies. This study will furnish entrepreneurs, international organizations and the policy-makers of countries with information on how entrepreneurial development institutions supports act as catalysts in the entrepreneurial ecosystem. Hence, this paper is organized as follows: the Literature Review accommodating the concept of entrepreneurship, institutional theory, Formal and Informal Institutions, including evidence from developing economies. The next sections addresses the Methodology, embraces Research design, Data collection strategy, model specification and Data analysis; Presentation of result; Discussion of Findings and Conclusion capped the discussion.

Literature Review

Conceptual Literature

Institutions are defined as the rules and norms that individuals follow in their daily lives, the formal and informal limitations and their enforcement features. Scott study's reviewed that, institutions are "social structures that have reached a high degree of resilience (and are) composed of cultural-cognitive, normative, and regulative elements that, together with combined activities and resources, provide stability and meaning to social life". In summary, the business and entrepreneurial activities are defined by the institutional structure established in a society. Further, definition of institution in context as social technologies consisting of rules-

routines, established norms, rules, constraints, and incentives that operate as mechanisms of governance for exchanges among individuals [28, 30].

This institutional framework figured-out the main principles which include the regulations, norms and restrictions both in formal and informal aspects with respect to political, legal and social matters. “Formal laws is defined as those regulations that are pronounced clearly in written terms” while “informal institutions described the non-explicit norms created in a country”. In other words, they are made up of values, patterns of behavior, traditions and beliefs that structure the culture of a particular context. The three different perspectives divisions of institutions recognized by the academics are: coercive, regulatory and cultural-cognitive [23, 32].

Entrepreneurship is defined as a process of identifying opportunities, facilitating innovation, and grabbing risk. An important aspect of entrepreneurship is that individuals establish new enterprises [22]. It is also the process of commencing a business; employing a manifest ability and eagerness of individuals, on their own, in teams, within and outside existing organizations, to perceive and establish new economic opportunities (new products, new production methods, new organizational schemes, and new product-market combinations) and to introduce their ideas in the market, in the face of uncertainty and other impediments, by making decisions on location, form, and the usage of resources and institutions [37]. It also means the activities of trying to obtain investment and production opportunity, establishing an enterprise to embrace a new production process, deepening capital, employing labour, organizing the supply of raw-materials, detecting site, launching a new method and commodities, finding out new sources of raw materials and choosing top managers of day to day affairs of the venture. Entrepreneurship is categorized into two types: opportunity- and necessity-driven entrepreneurship.

Opportunity-driven entrepreneurs comprise the participants in the risk-taking whose primary reason for commencing a business is to maximally accomplish a promising opportunity, hike their income, or accomplish personal goals while individuals who commenced a business as a result of a lack of alternative employment opportunities fall into this class of necessity-driven entrepreneurs.

Entrepreneurship Development is a dynamic process that is influenced by institutional conditions and the existing incentives structure [4]. it entails activities carried-out by institutional agencies of government and supporters of entrepreneurship to improve entrepreneurial skills and mindsets and advance skill acquisitions. Skill acquisitions can be attained through structural training, building entrepreneurial culture and attitude, and capacity-building programs [20].

Developing Economies illustrate countries with relatively low standard of living, under-developed industrial bases, and moderate to low Human Development Index (HDI). This index is comparative measure of poverty, literacy, education, life expectancy, and other factors for countries globally [37].

Institutional Theory

In low developing economies, institutions that influence entrepreneurship development are multifaceted. Therefore, an understanding of institutional theory can assist policy makers and entrepreneur to navigate the institutional landscape and devise meaningful strategies to promote entrepreneurial activities in developing economies.

Institutional theory propounded by Peter Berger, remains concerned with the rules of the game in a given environment like a business environment. The theory explains that all societies have classified laws and regulations (formal institutions) that define the

lawful rules of the game and also unclassified rules and regulations (informal institutions) which socially-shared conventional or unwritten, established, transmitted and administered outside of officially legitimated channels [23]. Further study emphasized on institutional theory applicable to entrepreneurship implies that entrepreneurs must comply to operation in institutions so as to gain approval and credibility and resources from essential correspondent onlookers and stakeholders of a specific society. Whereby, entrepreneurs resolute to assemble essential human and financial resources by persuading plausible resource components of the legitimacy, suitability and attraction of their intended activities relative to one or more socially established system of appraisal, [32]. Institutional theory framework thus suggests that the behavior of individuals, as well as organizations, are incorporated in and influenced by institutional arrangements [28]. The key assumption of this theory when employed to entrepreneurship may be that: environment-changing social forces fashion entrepreneurial achievement more than does economic efficiency, so, entrepreneurs should pursue to correspond their approaches with the norms, beliefs and regulations of their host societies' institutions or alter the rules of the game in their favour.

Formal and Informal Institutions in the Developing Economies

Formal Institutions

The formal institutions or environments in the context of developing economies are discussed below:

Institutional policy (Government Institutions): Better institutionalized public policy facilitates entrepreneurial development and activity while contrary is the opposite especially public policy related to entrepreneurship [39]. In emerging economies, the causes and implications of informality vary significantly [38]. The process of formalizing a business was greatly inefficient, tasking and time-consuming in developing economies. The importance of unofficial norms and networks is additionally raised by the combination of weak and incompetent national-level institutions [36]. Additionally, the association between corruption, in the form of bribery to government officials, and tax obedience is an essential but below-studied problem in many developing countries [27]. In an emerging economy, entrepreneurship is mainly looked into by governments as part of their trade and labour policies. In other words, governments find it confronting to establish particular entrepreneurial regulations that mainly give support to entrepreneurs. It is, hence, necessary to untie the burdensome restrictions that many governments impose to ease the process of commencing a firm and the trip for potential entrepreneurs. Further study emphasized that economic policies should encourage entrepreneurs to participate in general entrepreneurial activity that leads to economic growth in developing economies [17].

Access to capital (Financial Institution): In most emerging economies, entrepreneurs confront challenges in respect of access to finance or borrowing from financial institutions for business commencement [8]. Additionally, many of the entrepreneurs in the developing economies are less likely to gain access to and employ formal funding like bank loans, other credit facility options; and supplier credit, pointing to the fact that there may be limitations to access to credit. Consequently, most financial institutions demand some kinds of collateral, like a house, personal property, a piece of machinery or accounts receivable and trustworthiness [15]. In an evolving economy, when commencing a business, entrepreneurs are more likely to make use of their own and family savings instead of seeking for finances from banking organizations or other small financing organizations [29]. Entrepreneurial-based

financing organizations or micro-finance organizations that have emerged as an important policy tool for empowering entrepreneurs to pursue self-employment and reduce unemployment [33], as well as wider sustainable development have not met up to standard in these countries.

Education (Higher Education Institutions): Higher education institutions play an essential role in fostering entrepreneurship by providing the necessary resources, mentorship; and networking opportunities to convert creative ideas into profitable business ventures. Entrepreneurship education equip students with entrepreneurship shills, knowledge; and mindset improves their preparedness to move into the competitive job market . The positive impact of higher education students' entrepreneurship support has been confirmed by various scholars in their works [4, 35].

Government Expenditure: In recent time, the role of government in stimulating entrepreneurial activity has received global recognition because of the rising importance of entrepreneurship in economic growth. The main reason is that governments can transfer and redistribute resources among individuals with various levels of entrepreneurial productivity and mitigate the distortions in entrepreneurial resources.[39].

Informal Institutions

The informal institutions or environments in the context of developing economies are discussed below:

Cultural context: Cultural factors are comprehended to be the support of the household and close associates, institutional support (public or private), the consumption habits of the internal market, and the tradition of starting a business. In other words, it is the set of norms, values, and codes of conduct that advance social acceptance and approval of entrepreneurial activities, and that endure over time, the culture of a country or region directly influence the development of new ventures and the economic development [21]. Also, many researchers in their various scholarly works have pointed to the powerful influence that culture plays on the entrepreneurial activity in developing economies; most women entrepreneurs who reside in emerging economies have a higher extent of hardship or tough time as a direct result of the standards and cultural values that are prevailing in their societies [7]. Other numerous impediments develop as a result of culturally entrenched discriminatory socio-cultural norms and practices, which appeared in legislative and legal frameworks and institutional support systems in developing economies [15]. Although, some of the studies also reveal positive, negative or mixed effect on entrepreneurship development. [12].

Social Network: Resources sourced from social network can support entrepreneurs to triumph over difficulties, challenges; and even survival [12]. Social network also provides a convenient communication channel between entrepreneurial enterprises and external organizations for timely and valuable pieces of information [11, 19].

Evidence from Developing Countries

In the study on the impact of entrepreneurial ecosystem factors (institutional, organizational and individual levels) on women's ability and willingness to become entrepreneurs in Saudi Arabia using quantitative method to analyze secondary data from GEM. It suggested that broader institutional factors can impact women the more to becoming entrepreneurs in the country [2].

Further careful analysis of the effects of economic, social, and technological factors (institutional factors) on sustainable entrepreneurship over time in developing economies employing partial least squares structural equation modelling (PLS-SEM) to test three hypotheses. Finding indicated that all the three employed categories positively

impacted sustainable entrepreneurship over time but technological factor impact on sustainable entrepreneurship was less significant. It suggested that governments should focus on improving the aspects or variables related to social factor since it gave best result [8].

The use of analytical results based on 41,156 observations from 46 countries to examine formal and informal institutions as contingency variables on the relationship between entrepreneurial resources (institution) and entrepreneurial start-ups. Finding revealed that resource factors (human, financial, and social capitals) significantly affected entrepreneurial start-ups [23].

To further understand the institutional forces for promoting entrepreneurial development in higher learning institutions (HLIs) in Tanzania. The study was conducted using thematic analysis method to analyze both the primary and secondary data. Finding revealed that functional, active, mutually reinforcing and properly organized formal institutions enhanced entrepreneurship development in Tanzania. [25].

An investigative enquiry on the effect of the institutional environment (formal and informal institutional factors) that influences female entrepreneurs in an emerging country in Bangladesh using partial least squares-structural equation modelling. The study found that entrepreneurial attitudes, cultural context, institutional policy, family roles and education (all institutional contexts) were positive and significant on female entrepreneurship in Bangladesh. The study concluded that Bangladeshi government must aid women in starting their individual enterprises financially. The study suggested that Bangladeshi government and authorities take initiatives to decrease political and social issues that impede women's ability to make reasonable strategic choices [32].

Studies through research analyze the influences of formal and informal institutional factors on entrepreneurial activity among men and women in the context of Saudi Arabia using Mann-Whitney U test and a binomial logistic regression analysis on collected primary data. Findings revealed that while formal and informal institutional factors are reliable predictors of men entrepreneurship in Saudi Arabia, it was only informal institutional factors that are more reliable predictors of women's entrepreneurship behavior in the country. It suggested many checks for various institutions so as to hike entrepreneurship among each gender [1].

Researchers conduct a survey to investigate the determinants of informal entrepreneurship in Africa employing a cross-section of 21,954 firms from 47 African countries with many multivariate models to examine the factors that are related to the decision of firms to register at the commencement of their operations and the length of time to remain unregistered. Finding revealed that corruption, political instability, crime rate, infrastructure (electricity and transportation), access to land and finance, influence the entrepreneur's decision to register their firm at the start of its operation while the length of time firms remain unregistered revealed to be positively correlated to access to finance and infrastructural availability and negatively related to crime and political instability [13].

Organization of Economic, Cooperation and Development examined how higher education institutions are supporting innovation and entrepreneurship in the surrounding communities of eleven universities located in six countries in Latin America. Finding indicated that selected institutions were actively supporting entrepreneurs (universities students, but also local entrepreneurs) through courses, incubation and acceleration activities. It further showed that during COVID-19 pandemic, universities endured to stay afloat and keep a steady stream of support to entrepreneurs and partners [37].

Further conducted research to analyze the influence of institutional factors (political stability, government effectiveness, regulatory quality, a robust rule of law and others) on entrepreneurship development in 48 countries using qualitative comparative analysis to analyze sample data collected from GEM and the Global Innovation Index. The study found that the effect of institutional factors on the level of entrepreneurship differs according to the socioeconomic features of each country. It suggested that future research should examine how to standardized institutional configuration to move away from necessity to opportunity entrepreneurship [30].

Methodology

Research Design

This study will adopt *ex-post facto* research because data needed for analysis depends on secondary data preferred for the purpose of actualizing the research objectives. The study area covers the developing economies across the world. Organization of Economic, Cooperation and Development. To include Albania, Belarus, Ukraine, Egypt, Nigeria, Angola, Ethiopia, South Africa, Costa Rica, Cuba, Mexico, Jamaica, Argentina, Brazil, Venezuela, Iran, China, Indonesia, Papua New Guinea and Fiji.

Data Collection

The study was conducted based on secondary data source collection relevant to the research, providing insights into quality of institutional support, entrepreneurship, economic development and business ecosystems. The data for analysis is extracted from World Development Indicators database, Global Entrepreneurship Monitors Index database and others from the sampled countries for the period of 1996 - 2022. Consequently, it was ethically considered to safeguard the integrity and credibility of the study.

Data Analysis

Model Specifications

From the theoretical propositions of Institutional theory which was modified by a study carried out to investigation the roles of big businesses and institutions in entrepreneurship [33]. Thus, the original model as presented in equation (1.1)

$$Entrepreneurship_{it}=f(\text{key}_{it,}\ \text{Demand}_{it,}\ \text{Supply}_{it,}\varepsilon_{it}) \quad 1.1$$

where i denotes the country, t indicates the time, and $Entrepreneurship_{it}$ is a measure of entrepreneurial activity, Key_{it} is a vector of the variables of interest in country i at time t. Demand_{it} is a vector of demand-side determinants of entrepreneurship, i.e., GDP Per Capita, and FDI level in country i at time t. Supply_{it} is a vector of supply-side factors determining entrepreneurship, i.e., Pop-total and Edu-tertiary in country i at time t. Demand_{it} and Supply_{it} are the vectors of control variables, which are consistent with the efficient method and are assumed to increase the accuracy of the parameter estimates and decrease bias ε_{it} is the error term.

$$Entrepreneurship_{it} = (\text{Institutional variables}_{it} + \text{Demand side factors}_{it,} + \text{Supply side factors}_{it,} + \text{Control variables}_{it} + \varepsilon_{it}) \quad 1.2$$

$$Entrepreneurship_{it} = (\text{Entrepreneurial finance}_{it} + \text{Govt Policy}_{it} + \text{Govt Entre Programmes}_{it} + \text{Entre. Programme}_{it} + \text{GDP}_{it} + \text{FDI}_{it} + \text{Pop}_{it}it + \text{Entre. Eduaction}_{it} + \varepsilon_{it}) \quad 1.3$$

The above equation is subjected to modifications by including some intervening variables into this present study, equation (1.3) is hereby modified and specified accordingly in order to achieve the stated objective two of the study.

$$\text{Entre. Dev}_{it} = (\text{Entre. finance}_{it} + \text{Institutional Regulatory Quality}_{it} +$$

$\text{Govt. Expenditure}_{it} + \text{Education}_{it} + \text{Culture}_{it} + \text{Social Network}_{it} + \text{GDPPC}_{it} + \text{FDI}_{it} + \text{POP}_{it} + \varepsilon_{it}$ 1.4

Equation (1.3) had been modified to get equation (1.4). Entrepreneurship Development, Institutional Regulatory Quality, Govt. Expenditure and Social Network had been added to arrive at equation (1.4).

Econometrically,

$$ED_{it} = \beta_0 + \beta_1 EF_{it} + \beta_2 IRQ_{it} + \beta_3 GE_{it} + \beta_4 EDU_{it} + \beta_5 CUL_{it} + \beta_6 SN_{it} + \beta_7 GDPPC_{it} + \beta_8 FDI_{it} + \beta_9 POP_{it} + \varepsilon_{it} \quad 1.5$$

$$ED_{it} = \beta_0 + \beta_1 lnEF_{it} + \beta_2 IRQ_{it} + \beta_3 lnGE_{it} + \beta_4 lnEDU_{it} + \beta_5 CUL_{it} + \beta_6 SN_{it} + \beta_7 lnGDPPC_{it} + \beta_8 lnFDI_{it} + \beta_9 POP_{it} + \varepsilon_{it} \quad 1.6$$

$$Self - Emp_{it} = \beta_0 + \beta_1 lnEF_{it} + \beta_2 IRQ_{it} + \beta_3 lnGE_{it} + \beta_4 EDU_{it} + \beta_5 CUL_{it} + \beta_6 SN_{it} + \beta_7 lnGDPPC_{it} + \beta_8 lnFDI_{it} + \beta_9 POP_{it} + \varepsilon_{it} \quad 1.7$$

where

Self-Emp = Self-employed workers

lnEF = log of entrepreneurial finance

IRQ = Institutional Regulatory Quality

lnGE = log of Government Expenditure

EDU= Education

CUL = Culture proxied by Control of corruption

SN = Social Network

lnGDPPC = log of Gross Domestic Product Per Capita

lnFDI = log of foreign Direct Investment

POP = Population (% of total population ages 15+)

β_1 - β_9 = Parameters or slopes to be estimated.

β_0= Constant term for ED equation

i = denote number of countries (1-20)

t = denote number of time units (1-32)

ε = Stochastic disturbance term to capture omitted variables or error terms.

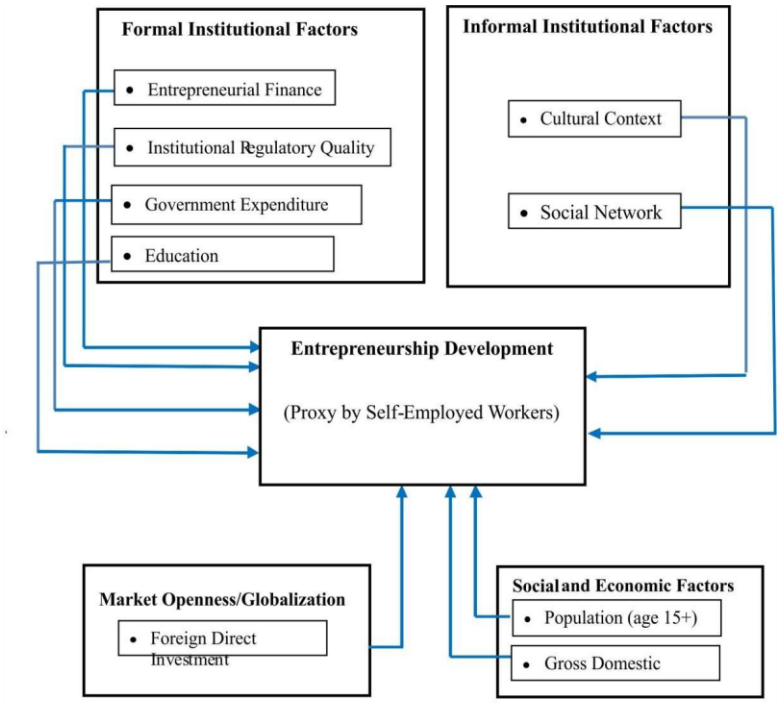

Figure 1. A Model of the Effects of Institutional Factors on the Entrepreneurial Development Proxy by Self-Employed Workers.

Source: Adapted from Y. Bakkar, S. Durst, & W. Gerstlberger, 2021, Journal of Risk and Financial Management 14: 174. https://doi.org/10.3390/jrfm14040174

A priori Expectation: All institutional variables are expected to be positively related to self-employed workers (entrepreneurship development). If all the formal and informal institutional variables increases so will also the self-employed workers (entrepreneurship development) and vice-versa.

Data Analysis Strategies

The various fundamental tests and estimation techniques employed are presented. To estimate equation (1.6) for the purpose of achieving the research objective, panel co-integration technique is adopted. It is an order of tests that are usually distributed and can take in unit specific drift and slope commonly and also cross-sectional dependence in addition. The proposition of panel co-integration estimation technique is splitted into three stages. The first stage addresses the testing of stationarity, i.e panel unit root test. The next stage addresses test for panel co-integration and the last stage handles the estimations of both the long-run and short-run equations (Panel Auto-Regressive Distributed Lag, PARDL). Panel data method which can cope with both sizeable cross-sectional dimension (large N) and time series dimension (large T) has the capacity of eliminating spurious regression. In furtherance to investigating the relationship between institutional factors and entrepreneurship development in developing countries using Panel Ordinary Least Square (POLS), Feasible Generalized Least Square (FGLS), Fixed Effect (FE), and Random Effect (RE) was utilized.

Empirical Results

This section presents the results of the conducted analyses to examine the objective of this study i.e to investigate the relationship that exists between each institution and entrepreneurship development in developing economies. Table 1.0 presents the estimated regression results of institutional factors on entrepreneurial development, measured by self-employment rates. The result shows that entrepreneurial finance has a significant positive impact on self-employment in the POLS (0.282, with $p < 0.01$) and the FGLS (0.217, with $p < 0.01$) models. However, the fixed and the random effect shows no significant effect. Similarly, institutional regulatory quality has a significant positive impact on self-employment in the POLS (11.09, with $p < 0.01$) and the FGLS (13.01, with $p < 0.01$) models; however, the estimates from the fixed and the random effect show insignificant positive coefficients. There is a mixed result regarding the impact of government expenditure on self-employment. The POLS and the FGLS showed significant negative coefficients (-0.298 and -0.270) whereas the fixed and the random effects have significant positive coefficients (0.042 and 0.038). The impact of education on self-employment is consistently positive and significant in all the models; POLS, 0.108; FGLS, 0.205; FE, 0.110; RE, 0.116.

However, the impact of culture on self-employment is consistently negative and significant in all the models; POLS, -25.31; FGLS, -26.26; FE, -4.471; RE, -5.217. Similarly, the impact of social networks on self-employment is consistently negative and significant in some of the models; POLS, 0.058 with $p < 0.05$; FE, -0.047 with $p < 0.01$; RE, -0.046 with $p < 0.01$. There is no statistical evidence for the impact of GDP growth impact on self-employment in the context of this study. Moreover, the impact of FDI on self-employment is consistently positive and significant in all the models; POLS, 0.449; FGLS, 0.535; FE, 0.095; RE, 0.096. Contrarily, the impact of above age 15 population on self-employment is consistently negative and significant in all the models; POLS, -2.7; FGLS, -2.67; FE, -0.233; RE, -0.305. The coefficient of adjustment shows that about 31.6%-98.9% of the variation in self-employment is explained by the institutional variables and the control variables. The significance of the computed F-stat signifies that all the variables are jointly significant in explaining self-employment across

the models. The standard error or regressor suggests that the FGLS model fits the data better due to the smaller standard error of the regression.

Table 1. Regression Estimates of the Institutional Influences on Entrepreneurial Development

Independent Variables (IV):	**DV: Self-Employment**			
	POLS	**FGLS**	**F-E**	**R-E**
Entrepreneurial Finance	0.282***	0.217***	-0.013	-0.009
	(0.037)	(0.029)	(0.017)	(0.018)
Institutional Regulatory Quality	11.09***	13.01***	0.512	0.742
	(1.797)	(1.393)	(0.557)	(0.588)
Government Expenditure (%GDP)	-0.298***	-0.270***	0.042**	0.038**
	(0.088)	(0.065)	(0.017)	(0.018)
Basic Education	0.108***	0.205***	0.110***	0.116***
	(0.108)	(0.029)	(0.018)	(0.020)
Culture	-25.31***	-26.26***	-4.471***	-5.217***
	(1.759)	(1.362)	(0.786)	(0.833)
Social Network	-0.058**	-0.005	-0.047***	-0.046***
	(0.025)	(0.017)	(0.008)	(0.009)
GDP growth	0.003	0.051	-0.032	-0.029
	(0.114)	(0.076)	(0.025)	(0.026)
FDI (% GDP)	0.449***	0.535***	0.095**	0.096**
	(0.144)	(0.127)	(0.039)	(0.041)
Population 15+ (% Total)	-2.700***	-2.670***	-0.233***	-0.305***
	(0.131)	(0.106)	(0.055)	(0.060)
Constant	201.0***	193.0***	51.31***	55.22***
	(9.101)	(7.370)	(3.459)	(4.574)
Adj. R2	0.740	0.854	0.989	0.316
F-Stat.	163.3***	332.8***	1685.0***	27.26***
SE	12.37	0.976	2.561	2.696
Breusch-Godfrey LM Test	3923.9***			
Redundant Fixed-Effect Test			1634.1***	

*Note: * p< 10%, ** p < 5%, *** p < 1%*

Source: Author's computation, 2025.

Discussion of Findings

This section presents the discussion of the findings of the empirical analyses carried out based on the objectives of the study.

Firstly, the result shows that entrepreneurial finance has a positive and significant effect in the POLS (0.282, $p < 0.01$) and FGLS (0.217, $p < 0.01$) models, indicating that access to credit fosters self-employment in developing countries. This is evident in countries such as Kenya and Nigeria, where the expansion of microfinance institutions and commercial bank loans has allowed small businesses to grow, particularly in the informal sector. The rise of Equity Bank in Kenya and Bank of Industry in Nigeria has contributed significantly to entrepreneurial activity by providing credit facilities tailored to micro, small, and medium enterprises (MSMEs) [29]. However, in fixed effects (-0.013, $p > 0.1$) and random effects (-

0.009, $p > 0.1$) models, the relationship becomes insignificant, indicating that within-country variations over time may not necessarily translate to higher self-employment, possibly due to regulatory constraints or misallocation of funds.

Also, it can be observed in the result that regulatory quality exhibits a strong positive impact in POLS (11.09, $p < 0.01$) and FGLS (13.01, $p < 0.01$), implying that better governance and efficient regulatory frameworks enhance self-employment. Countries like Rwanda and Mauritius, which have improved their Ease of Doing Business rankings by simplifying business registration, reducing corruption, and streamlining tax policies, have seen a surge in entrepreneurship. Rwanda, for instance, reduced the time required to register a business from 24 days in 2005 to less than 6 hours today, leading to higher self-employment rates [9]. However, in fixed effects (0.512, $p > 0.1$) and random effects (0.742, $p > 0.1$) models, the effect is insignificant, suggesting that short-term regulatory changes may not immediately affect self-employment, as entrepreneurs require time to respond to policy shifts. This result aligns with the institutional theory which propounds that strong institutions reduce uncertainty and transaction costs, thereby encouraging self-employment [28].

On the impact of government expenditure, there are mixed results. For instance, government expenditure has a negative effect in POLS (-0.298, $p < 0.01$) and FGLS (-0.270, $p < 0.01$) models, indicating that higher public spending may discourage self-employment. This is seen in South Africa and Brazil, where extensive social welfare programs and government employment opportunities reduce the incentive for individuals to pursue self-employment [35, 38]. In contrast, in fixed effects (0.042, $p < 0.05$) and random effects (0.038, $p < 0.05$) models, the relationship turns positive, suggesting that long-term government investments in infrastructure and education may eventually create a more conducive environment for self-employment. This result is more reasonable due to the heterogeneity adjustments in the fixed and random effect models.

Furthermore, it can be observed in the results that basic education has a consistent positive effect across all models (POLS: 0.108, $p < 0.01$; FGLS: 0.205, $p < 0.01$; Fixed Effects: 0.110, $p < 0.01$; Random Effects: 0.116, $p < 0.01$). This result is consistent with countries like Ghana and Vietnam, where educational reforms have focused on vocational and entrepreneurial training, and have experienced rising self-employment rates. Also, Ghana's National Entrepreneurship and Innovation Programme (NEIP) has capitalized on education to foster start-ups and small businesses. Theoretically, this result aligns with the human capital theory which argues that education enhances problem-solving skills and business acumen, making individuals more likely to engage in self-employment.

Moving on, the result shows that the culture variable has strong negative coefficients in all models (POLS: -25.31, $p < 0.01$; FGLS: -26.26, $p < 0.01$; Fixed Effects: -4.471, $p < 0.01$; Random Effects: -5.217, $p < 0.01$), which suggests that corruption discourages self-employment. In countries like Nigeria and Bangladesh, high levels of corruption force entrepreneurs to pay bribes, leading to increased operational costs and discouraging business formation [14, 26, 34]. This result does not stand alone but has theoretical justification in the institutional anomie theory which states that corruption weakens formal business structures, pushing individuals into informal self-employment.

Moreover, the regression results indicate that social network consistently has a negative effect on self-employment across multiple models. The POLS estimate shows a negative and significant coefficient (-0.058, $p < 0.05$), while the Fixed Effects (-0.047, $p < 0.01$) and Random Effects (-0.046, $p < 0.01$) models confirm the negative relationship. However, the FGLS estimate (-0.005, $p > 0.1$) suggests an

insignificant relationship, implying that in some cases, increased internet penetration does not strongly affect self-employment at a broader scale. In countries like India and South Africa, the rapid expansion of the Internet has led to a greater preference for formal employment opportunities, as digital connectivity allows individuals to access remote jobs, digital platforms, and multinational employment rather than engage in self-employment [9, 31]. Many young people in India, for example, are opting for gig economy jobs on platforms such as Upwork, Fiverr, and Amazon Mechanical Turk rather than starting their businesses. Similarly, in South Africa, the increasing use of digital banking and e-commerce has made formal employment in tech-based firms more attractive than informal self-employment. As internet penetration increases, many businesses become digitized, reducing the necessity for informal self-employment in traditional sectors.

However, unlike other variables, GDP growth does not show a significant effect on self-employment. The regression estimates for GDP growth are statistically insignificant across all models (POLS: 0.003, $p > 0.1$; FGLS: 0.051, $p > 0.1$; Fixed Effects: -0.032, $p > 0.1$; Random Effects: -0.029, $p > 0.1$). This suggests that fluctuations in economic growth do not directly translate into changes in self-employment levels. This outcome is consistent with real-world observations in developing economies such as Nigeria, where periods of high GDP growth have not necessarily resulted in higher self-employment rates. For example, Nigeria experienced an average GDP growth rate of 6% from 2000 to 2015, but this period saw an increasing shift towards formal employment rather than self-employment. Similarly, Brazil's economic expansion from 2002 to 2013 led to more wage employment opportunities, reducing the need for individuals to rely on self-employment as a primary source of income. The structural change theory explains this phenomenon by arguing that as economies grow, labour moves from traditional self-employment in agriculture and informal businesses to more structured wage employment in industries and services. Moreover, the opportunity-pull and necessity-push theory suggests that in times of economic growth, individuals are "pulled" into higher-paying jobs, while in economic downturns, they may be "pushed" into self-employment out of necessity [37].

It can be inferred from the result that FDI has a positive and significant impact in all models (POLS: 0.449, $p < 0.01$; FGLS: 0.535, $p < 0.01$; Fixed Effects: 0.095, $p < 0.05$; Random Effects: 0.096, $p < 0.05$). In Vietnam and Malaysia, increased FDI has contributed to self-employment by creating supply chain opportunities for local entrepreneurs [3, 10].

Lastly, the result shows that the proportion of the population aged 15+ has a strong negative effect on self-employment (POLS: -2.700, $p < 0.01$; FGLS: -2.670, $p < 0.01$; Fixed Effects: -0.233, $p < 0.01$; Random Effects: -0.305, $p < 0.01$). In countries like India and Egypt, where rapid population growth has led to formal job creation, self-employment rates have declined [18]. This aligns with the Lewis model of development, which states that as economies grow, labour shifts from informal self-employment to structured wage employment.

Summary and Conclusion

The results of Panel Ordinary Least Square (POLS), Feasible Generalized Least Square (FGLS), Fixed Effect (FE), and Random Effect (RE) estimation techniques revealed various results ranging from positive, mixed and negative relationships between each institution and entrepreneurship development; and while some results showed statistical significance, others showed statistical insignificance. This shows that these findings are in line with the findings of some earlier researchers who the above results are in tandem with theirs. It is recommended that Governments of developing economies should further deepen the developments of money-deposit and micro-

financial institutions that can provide credit facilities to various individuals or organizations and as well invest enormously in human capital like education, health and infrastructural facilities as investments in these critical areas can catapult entrepreneurship development to the next level in developing economies. According to the findings of this study, future research can focus on Government Policies and Assessing the extent of shocks transmission from institutional changes to entrepreneurship development in developing economies.

Conflict of Interest

The authours declare no known conflicts of interest regarding the manuscript.

Acknowledgements

I am grateful to Dr. Ojarotade Adegbola for his helpful comments on the earlier draft and who worked with me on previous related research. All errors are mine.

References

[1]. Abdullah, A., Tojo, T., & David, U., 2024, Female entrepreneurship in the start-up ecosystem of Saudi Arabia, *Journal of Enterprising Communities*: People and Places in the Global Economy, 18(5).

[2]. Abdullah, A., Tojo, T., & David, U., 2022, The influence of institutions on early-stage entrepreneurial activity: a comparison between men and women in Saudi Arabia, *Journal of Entrepreneurship in Emerging Economies*, 15(5).

[3]. Abidin, N. Z., Saraih, U. N., & Rashid, I. M. A., 2022, The effect of foreign direct investment on wage in Malaysian manufacturing sector: New Evidence Using ARDL. Management & Accounting Review, 21(2) *Journal of Entrepreneurship in Emerging Economies*, 15(5).

[4]. Amao-Taiwo, B., Shittu, A., & Yinusa, O., 2023, Higher education student entrepreneurship support services: Implications for the development of entrepreneurial skills, *Covenant Journal of Entrepreneurship*, 7(1), 42-51.

[5]. Bernatzki, T., Busse, M., & Hoekstra, R., 2022, Promoting Rwanda's business environment: Impact of reforms and drivers of change. *Development Policy Review*, *40*(2), 578.

[6]. Bakkar, Y., Durst, S., & Gerstlberger, W., 2021, The impact of institutional dimensions on entrepreneurial intentions of students—International evidence, *Journal of Risk and Financial Management* 14: 174. https://doi.org/10.3390/jrfm14040174

[7]. Bullough, A., Guelich, U., Manolova, T. S., & Schjoedt, L., 2022, "Women's entrepreneurship and culture: gender role expectations and identities, societal culture, and the entrepreneurial environment", *Small Business Economics*, 58(2), 985-996.

[8]. Chaves, V. J. C., Ribes, G. G., & Moya, C. I., 2024, Effect of the economic, social and technological factors on sustainable entrepreneurship over time, *Journal of Business Research*, 173, 114457.

[9]. Choi, J., Dutz, M. A., & Usman, Z., 2020, The future of work in Africa: Harnessing the potential of digital technologies for all. *World Bank Publications.*

[10]. Dao, T. B. T., Khuc, V. Q., Dong, M. C., & Cao, T. L., 2023, How does foreign direct investment drive employment growth in Vietnam's formal economy? Economies, 11(11), 266. https://doi.org/10.3390/economies11110266

[11]. Dianez-Gonzalez, J. P., Camelo-Ordaz, C., 2019, The influence of the structure of social networks on academic spin-offs' entrepreneurial orientation, *Industrial Marketing Management*, 80, 84-98.

[12]. Drummond, C., McGrath, H., O'Toole, T., 2018, The impact of social media on resource mobilization in entrepreneurial firms, *Industrial Marketing Management*, 70, 68-89.

[13]. Ejiogu, A., Okechukwu, O., Ejiogu, C., Owusu, A., & Adeola, O., 2022, 'Determinants of informal entrepreneurship in Africa', *International Journal of Entrepreneurship and Small Business* 45(1), 35-61. https://doi.org/10.1504/IJESB.2022.120552

[14]. Ejiogu, A., Ejiogu, C., & Ambituuni, A., 2018, "The dark side of transparency: Does the Nigeria

extractive industries transparency initiative help or hinder accountability and corruption control?" *The British Accounting-review*, available at: https://doi.org/10.1016/j.bar.2018.10.00

[15]. Franzke, S., Wu, J., Froese, F. J., & Chan, Z.X., 2022, "Female entrepreneurship in Asia: a critical review and future directions", *Asian Business and Management*, 21(3), 343-372.

[16]. Gloria, L. O. M., Juan, C. R. A., & Katherine, Y. L. M., 2022, Culture as an obstacle for entrepreneurship, *Journal of Innovation and Entrepreneurship,* 11:46.

[17]. Hechevarría, D., Bullough, A., Brush, C., & Edelman, L., 2019, "High-growth women's entrepreneurship: fueling social and economic development", *Journal of Small Business Management*, 57(1), 5-13.

[18]. Horne, R., 2024, Employment and social trends by region. *World Employment and Social Outlook*, 2024(1), 37-60

[19]. Huatao, P., Bingbing, L., & Yang, L., 2022, How social network influences the growth of entrepreneurial enterprises: Perspective on organizational and personal network, *SAGE Journals.*

[20]. Inegbedion D. O., & Oghojafor B. E. A., 2021, Entrepreneurship education and elimination of unemployment among graduates and non-graduates of tertiary institutions in Nigeria. *Journal of Women Empowerment and Studies*, 01(02), 6-16

[21]. Kara, A., & Dheer, R. J., 2023, The relationship between culture and entrepreneurship: the role of trust, *International Entrepreneurship Management Journal*, 19, 1803-1833.

[22]. Kusa, R., Duda, J., & Suder, M., 2021, Explaining SME performance with fsQCA: The role of entrepreneurial orientation, entrepreneur motivation, and opportunity perception. *Journal of Innovation & Knowledge*, 6(4), 234–245. https://doi.org/10.1016/j.jik.2021.06.001

[23]. Li, T., 2024, The joint effects of formal and informal institutions on entrepreneurial startups: a global perspective, *International Studies of Management & Organization,* 54(4).

[24]. Miyajima, M. K., 2023, The Link between Social Grant and Employment in South Africa. *International Monetary Fund. Selected issues papers* 2023(039). http://doi.org/10.5089/979400243493.018

[25]. Mollel, E. S., Chachage, B., & Pasape, L., 2024, A framework for enhancing entrepreneurship development in higher learning institutions (HLIs) in Tanzania, *International Journal for Multidisciplinary Research*, 6(3), E-ISSN: 2582-2160.

[26]. Mojishola, E., 2024, Effect of Corruption on Entrepreneurial Development in Nigeria. *Journal of Policy and Development Studies*, *17*(2), 79-91.

[27]. Mozumdar, L., Materia, V.C., Hagelaar, G., Islam, M. A., Velde, G.V.D., & Omta, S.W.F., 2022, "Contextuality of entrepreneurial orientation and business performance: the case of women entrepreneurs in Bangladesh", *Journal of Entrepreneurship and Innovation in Emerging Economies*, 8(1), 94-120.

[28]. North, D. C., 1990, Institutions, institutional change and economic performance. Cambridge. *Cambridge University Press.*

[29]. Ogunsanwo, O. F., & Olowo, S. O., 2020, Role of Bank of Industry on small scale entrepreneurial development in Nigeria. *American International Journal of Business Management*, *3*(3), 19-24.

[30]. Pau, S. P., Irene, C., & Alicia, M. T., 2022, Institutional factors affecting entrepreneurship: A QCA analysis, *European Research on Management and Business Economics.*

[31]. Sindakis, S., & Showkat, G., 2024, The digital revolution in India: bridging the gap in rural technology adoption. *Journal of Innovation and Entrepreneurship*, 13(1), 29.

[32]. Sobhan, N., & Hassan, A., 2023, The effect of institutional environment on entrepreneurship in emerging economies: female entrepreneurs in Bangladesh, *Journal of Entrepreneurship in Emerging Economies*, Emerald Publishing Limited 2053-4604. https://doi.org/10.1108/JEEE-01--0028

[33]. Shanji, X., & Taeyoung, P., 2023, The roles of big businesses and institutions in entrepreneurship: A cross-country panel, *Journal of Innovation & Knowledge*, 9.

[34]. Spyromitros, E., & Panagiotidis, M., 2022, The impact of corruption on economic growth in developing countries and a comparative analysis of

corruption measurement indicators. *Cogent Economics & Finance*, 10(1), 2129368.

[35]. Wanli, D., & Juan, W., 2023, The effect of entrepreneurship education on the entrepreneurial intention of different college students: Gender, household registration, school type, and poverty status, *PLoS ONE* 18(7): e0288825.

[36]. Welter, F., 2020, "Contexts and gender–looking back and thinking forward", International *Journal of Gender and Entrepreneurship*, 12(1), 27-38.

[37]. World Bank, 2020, Doing business: Institutional quality and economic performance in Africa. Washington, DC: *World Bank*.

[38]. Williams, C. C., Adom, K., & Horodnic, I. A., 2020, "Determinants of the level of informalization of enterprises: Some evidence from Accra, Ghana", *Journal of Developmental Entrepreneurship*, 25(1), 2050004.

[39]. Yoon, H., Kim, N., Buisson, B., & Phillips, F., 2018, "A cross-national study of knowledge, government intervention, and innovative nascent entrepreneurship", *Journal of Business Research* 84: 243-252.