# Modelling the Impacts of Innovation Diffusion on Entrepreneurial Development in Ekiti and Ondo States, Nigeria

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## ABSTRACT

This study explores the nexus between innovation diffusion and entrepreneurial development in Ekiti and Ondo states, Nigeria. Recognizing the region's historical and cultural legacy in enterprise, this research examines how contemporary drivers such as government policy, technological advancement, creativity, and resource availability impact entrepreneurial performance. While prior studies have focused heavily on multinational corporations, this work centers on public sector innovation and small to medium-sized enterprises (SMEs). In achieving this, a random sampling was adopted to select the study participants in responding to the research questionnaires. Consequently, three hundred and eighty-five (385) self-administered questionnaires were analysed descriptively, while structural equation modelling (AMOS graphics, version 22) was used in analysing the impact of innovation diffusion and entrepreneurial development. The outcome of the survey revealed that the government policy, technological advancement, creativity, and technological innovation have an impact on entrepreneurial development. Findings from this research will inform policymakers and provide a replicable model for other developing economies.

**Keywords:** Creativity, entrepreneurial development, policy, technological advancement, and resource.

## INTRODUCTION

Nigeria's entrepreneurial landscape is rooted in a rich history of small-scale industries, trade networks, and technological ingenuity, while pre-colonial societies such as the Hausa, Yoruba, and Igbo demonstrated strong traditions of craft, manufacturing, and commerce (Eneji, Nnandy, Gukat & Odey, 2018). However, colonial structures disrupted this ecosystem, introducing external dependencies and weakening indigenous production. Despite being resource-rich, Nigeria struggles with underdeveloped entrepreneurial infrastructure and over-reliance on foreign technologies (Enyivigbo, Esimai, & Anthony, 2023). With a rich history of small-scale industries and handicrafts, Nigeria's entrepreneurial potential remains untapped. Innovation diffusion—the spread of new technologies, business models, and creative practices—has become critical in revitalizing local enterprise and fostering self-reliance. It is pertinent to note that, innovation is crucial for economic growth, and technological diffusion can drive entrepreneurship. Despite its importance, the integration of technology diffusion in social entrepreneurship literature is sparse. Consequently, this study seeks to evaluate how innovation diffusion influences entrepreneurial development in Ekiti and Ondo States, Nigeria, with particular emphasis on the role of government policy, technological advancements, creativity, technological innovation, and resource availability.

## LITERATURE REVIEW

Throughout history, researchers have tried to understand and predict the concept of technological innovation paradigms. Many theories have been developed over time that provide with explanations of emergence of new technological systems in terms of diffusion, acceptance and benefit and also pointed out why some users become addicted to use certain technologies or become dependent upon them.

**Entrepreneurship and Innovation**

Entrepreneurship involves the discovery and exploitation of economic opportunities, often under conditions of uncertainty (Shane & Venkataraman, 2000). Innovation is central to this process, with entrepreneurs serving as agents of change (Schumpeter, 1934). Technological entrepreneurship, in particular, combines scientific knowledge and business acumen to drive industrial competitiveness (Aderemi et al., 2008). However, Favour *et al*. (2024) delves into the intricate dynamics of entrepreneurship in the global economy, focusing on the pivotal roles of technological advancements and globalization. The study's primary aim is to unravel the complexities and evolving nature of entrepreneurial success in the 21st century, examining how technology and global integration shape new business ventures. Employing a qualitative and theoretical approach, the research methodically synthesizes a wide array of literature, offering a comprehensive analysis of the current entrepreneurial landscape. The findings of the study reveal a multifaceted entrepreneurial ecosystem, significantly influenced by digital transformation and global market integration. Conclusively, the study underscores the necessity for entrepreneurs to adapt to rapidly changing business environments, advocating for strategic innovation and adaptability as essential tools for sustainability and growth. It posits that the future of entrepreneurship will be characterized by increased digitalization, innovation, and a focus on sustainable and inclusive growth. Moreover, Nwokebuife, Han, Mintah, Nnaemeka, and Ofori (2021) described innovation to be the desire for change in an organization. Every dynamic organization is linked to growth, and technological change is the most common form of change in this regard. With new management, the change may be in the field of organizational development. Both of these elements have a significant influence on the production process. Every technical advancement must be carefully handled, or it will become redundant and ineffective (unfit) in meeting people's socio-economic needs.

**Government Policy**

A policy can be defined as a plan of action agreed and chosen by a group of people, organization, or political party. In business, policies can be categorized as internal or external. The internal policies guide and spell out how business activities are run. The internal policies, also known as business policies, are set by the owners and management of a business, and determine their scope of operations (Oviatt & McDougall, 2005). But these business policies are dependent and often influenced by the overall government policies within the economy in which entrepreneurs operate. The government policies therefore, are external policies which are not within the direct control of the entrepreneurs within the economy. Government policy significantly influences entrepreneurial outcomes. In contexts like Nigeria, policies can serve as catalysts or constraints depending on regulatory complexity, tax structures, and the quality of institutional support (David & David, 2015). Programmes like SMEDAN and GEEP aim to enhance SME viability (Oliyide, 2012), but their implementation varies across regions.

**Technological Advancement**

Technological advancements reduce entry barriers and expand market access for entrepreneurs (Adriaens & Faley, 2011; Ibikunle, 2022). ICT tools enable data-driven decision-making, market visibility, and efficient operations (Matthew et al., 2020). However, the digital divide and infrastructural deficits remain major bottlenecks. According to Amal, Karine and Sascha (2023), public and private stakeholders increasingly rely on digital technologies to foster entrepreneurial ecosystems while pursuing the goal of sustainable competitiveness, which entails ensuring economic, environmental, and social development. Recently, the emergence of the twin transitions concept portraying an incontestable complementarity between digital and green transitions has led to calls for further research. Few studies have however investigated the antecedents of nations' sustainable competitiveness. The present study fills this gap in the literature and quantitatively evaluates the effect of digitalization on entrepreneurial activity and sustainable competitiveness.

**Creativity and Resource Availability**

Creativity, defined as the ability to generate novel and useful ideas, is essential for entrepreneurial differentiation. Additionally, access to financial, human, and technological resources plays a pivotal role in translating ideas into viable ventures. SMEs in Nigeria often face constraints in both creativity application and

resource mobilization. Alice *et al*. (2024) carried out a study to examine the effectiveness of Entrepreneurship Development Programme (EDP) offered by the Institute of Co-operative Management (ICM) on the venture creation aspect of the trainees of this institute. The researchers collected data from 404 respondents trained by ICM using a structured schedule through face-to-face interview and telephone calling. Data was analyzed using SPSS software. The findings reveal that the EDP training influences its trainees to become the first-generation entrepreneurs in their families. A significant 68.56% established their ventures post-EDP training. Additionally, the study highlights the marked changes in both occupation and income levels of EDP participants. According to the findings of the study, there is a need to check the efficacy of the system of loan sanction as it affects the process of venture creation. The task of creating jobs is enormous. To employ the growing number of youths entering the working-age population in Sub-Saharan Africa and South Asia alone, 28 million jobs will be required per year. This will necessitate a significant rise in both wage and entrepreneurial employment. Consequent upon the research of Olowe *et al*. (2017), technological entrepreneurship development programme (TEDP) has been described as one of the instruments adopted by the Nigerian government to support entrepreneurship development in Nigeria.

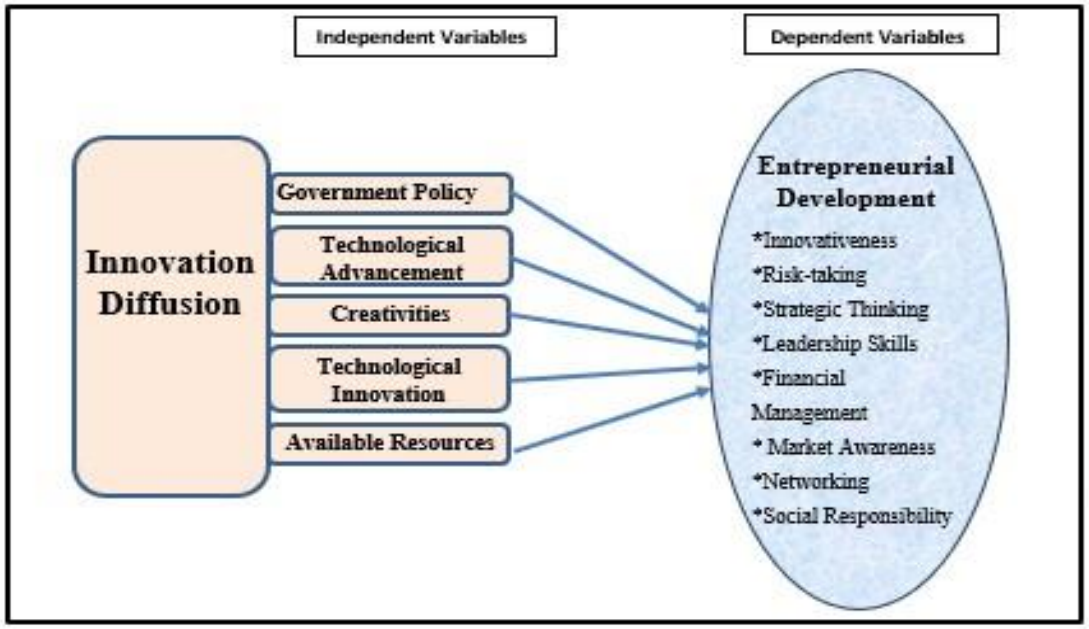
### Research Gap

Most existing literature focuses on multinational-led innovation, overlooking the role of local governments and SMEs in technology diffusion. This study addresses that gap by focusing on the Ekiti and Ondo states of Nigeria.

### Conceptual Framework

Innovation diffusion, which serves as the independent variable and impacts entrepreneurial development are identified to be government policy, technological advancement, creativities, technological innovation, and available resources. The independent variable is entrepreneurial development, which is categorized under innovativeness, risk-taking, strategic thinking, leadership skills, financial management, market awareness, networking, and social responsibility.

Figure 1: Conceptual framework of impacts of innovation diffusion on entrepreneurial development




## MATERIALS AND METHODS

### Research Design

This study adopts a quantitative research design to investigate the influence of innovation diffusion on entrepreneurial development. Structured questionnaires were administered to SMEs across manufacturing, IT, and banking sectors in Ekiti and Ondo states.

### Population and Sampling

The target population includes SME owners and key stakeholders in innovation hubs and public enterprise support institutions. Probability sampling approach was adopted to select the research respondents, and chosen from the Ekiti and Ondo states of Nigeria. The administered questionnaire consisted of the demographic information of the study respondents, and the innovation diffusion factors affecting the entrepreneurial development.

### Data Collection

Primary data was collected using a standardized survey instrument validated by experts in entrepreneurship and innovation studies.

### Variables and Analysis

The independent variables are: government policy, technological advancement, creativity, technological innovation, and available resources. The dependent variable is entrepreneurial development. The questionnaire was based on 5-point Likert scale and calibrated thus: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. Moreover, collection of data was done through self-administered questionnaires; and through the reliability test, it resulted in an acceptable Cronbach's alpha, as indicated hereafter. In achieving the purpose of the study, three hundred and eighty-five correctly filled, valid and usable questionnaires were used for the analysis. The questionnaires were administered through physical contact and e-mails in both Ekiti and Ondo States. The missing data were treated and replaced using the SPSS software. Besides, the respondents comprised digital entrepreneurs, lecturers, business owners, bankers, and investors. In the analysis, exploratory factor analysis using the SPSS version 22 software was employed in establishing the structure of the measurement models, classifying the items into six factors, while the Kaiser-Meyer-Olkin (KMO) as well as the Bartlett's test of sphericity was engaged in confirming the instrument validity by assessing the sample adequacy and multivariate normality of the study variables. Moreover, the structural equation modelling (SEM) further validated the measurement models through the use of AMOS software by establishing satisfactory goodness-of-fit (GFI) indices of the variables of the study.

## RESULTS AND DISCUSSION

### Demographic Information of the Respondents

The demographic information of the respondents during the survey is detailed in the following segments.

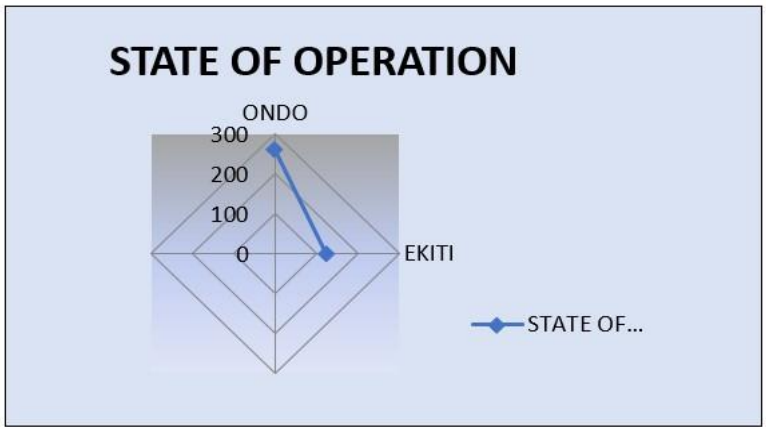
### State of operation

Table 1 and Figure 2 comprise of the frequency (f) and percentage (%) distribution of the respondents on state basis. Polling highest is the frequency of 260 (67.5%) participants which are from Ondo, followed by Ekiti, which is 125 (32.5%). However, all the states under consideration were adequately represented without any bias.

Table 1: State of operation

| S/N | Number of Years | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| 1 | Ondo | 260 | 67.5 | 67.5 | 67.5 |
| 2 | Ekiti | 125 | 32.5 | 32.5 | 100.0 |
| | Total | 385 | 100.0 | 100.0 | |

Figure 2: State of Operation



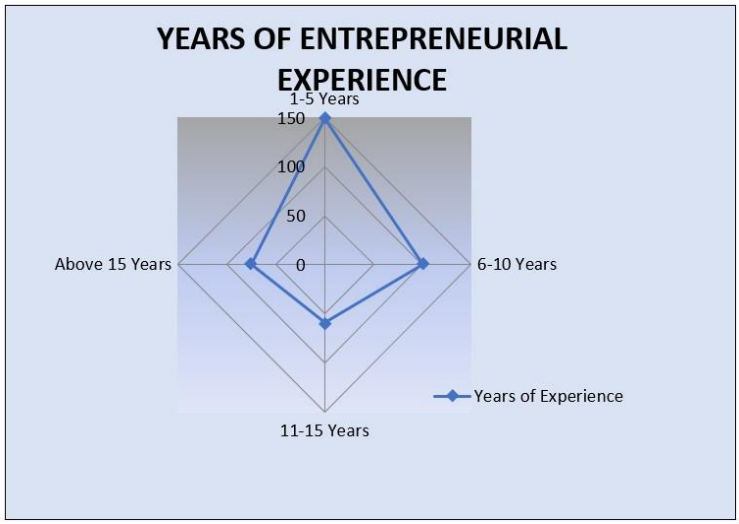

**Entrepreneurial Experience of Respondents**

Table 2 and Figure 3 show the years of entrepreneurial experience (YOEE) of the respondents. The YOEE of the respondents of 1 – 5 years is 33.2%, the respondents between 6- and 10 years' experience is 23.9%, respondents between 11 and 15 years is 24.2%, while respondents that are above 15 years is 18.7%. However, with 66.8% (23.9 + 24.2 + 18.7%) of the respondents having an experience above 5 years, their responses (opinions) are sufficiently adequate and useful for the analysis.

Table 2: Years of Entrepreneurial Experience of Respondents

| S/N | Number of Years | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| 1 | 1-5 years | 128 | 33.2 | 33.2 | 33.2 |
| 2 | 6-10 years | 92 | 23.9 | 23.9 | 57.1 |
| 3 | 11-15 years | 93 | 24.2 | 24.2 | 81.3 |
| 4 | Above 15 years | 72 | 18.7 | 18.7 | 100.0 |
| | Total | 385 | 100.0 | 100.0 | |

Figure 3: Years of Entrepreneurial Experience




**Highest Academic Qualifications**

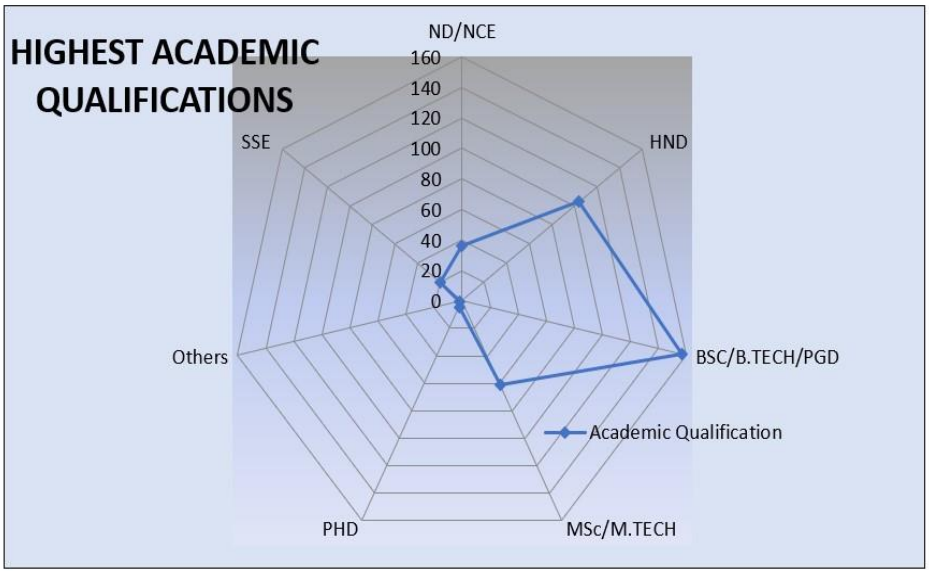
The highest academic qualification as presented in Table 3 and Figure 4 shows the holders of SSE certificate (5.2%), ND (9.4%), HND (27.0%), BSc/B.TECH/PGD (40.8%), MSC/TECH (15.8%) and PHD (1.3%), while 0.6% failed to declare their qualifications, and fall under "others". Summarily, it indicates that over 90% of the

respondents are holders of diplomas and degrees. However, by considering the academic achievements and experiences of the respondents in the entrepreneurial activities their contributions are vital and significant.

Table 3: Highest Academic Qualification of Respondents

| Academic Qualifications | Frequency | Percentage | Valid Percent | Cumulative Percent |
|---|---|---|---|---|
| SSE | 20 | 5.2 | 5.2 | 5.2 |
| ND/NCE | 36 | 9.4 | 9.4 | 14.6 |
| HND | 104 | 27.0 | 27.0 | 41.6 |
| BSC/B.TECH/PGD | 157 | 40.8 | 40.8 | 82.4 |
| MSC/M.TECH | 61 | 15.8 | 15.8 | 98.2 |
| PhD | 5 | 1.3 | 1.3 | 99.5 |
| Others | 2 | .6 | .6 | 100.0 |
| Total | 385 | 100.0 | **100.0** | |

Figure 4: Highest Academic Qualifications



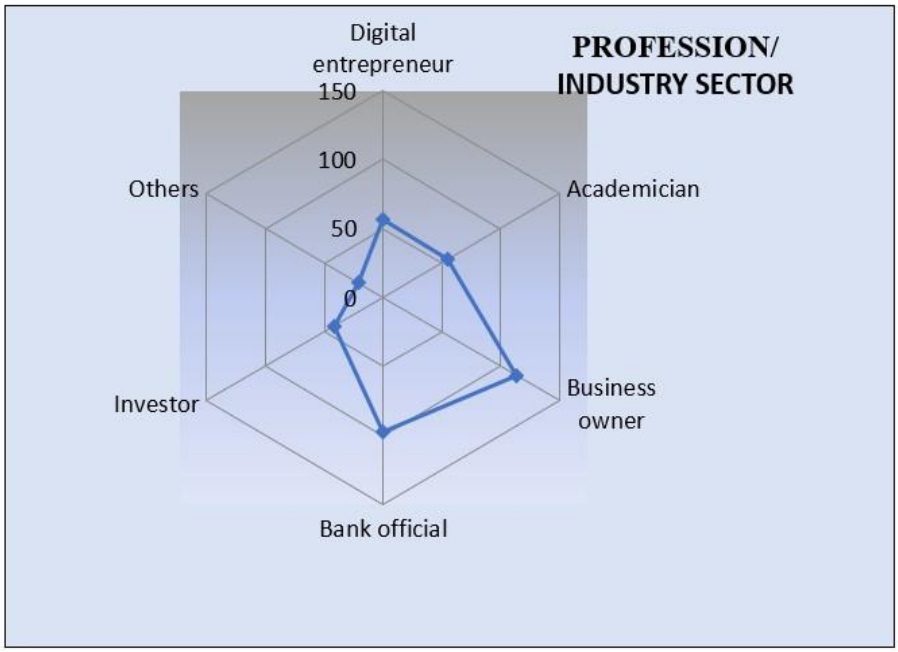

**Profession/Industry Sector**

The professions (areas of specialization) are digital entrepreneur (14.8%), academic (29.1%), business owner (29.4%), bank official (25.2%), investor (10.9%), and others (5.5%), as presented in Table 4 and Figure 5. Greater percentage of the respondents are directly involved in entrepreneurial development and innovation; hence, their involvement made it possible to know the impacts of innovation on entrepreneurial development.

Table 4: Profession of Respondents

| Profession | Frequency | Percentage | Valid Percent | Cumulative Percent |
|---|---|---|---|---|
| Digital entrepreneur | 57 | 14.8 | 14.8 | 14.8 |
| Academic | 55 | 14.3 | 14.3 | 29.1 |
| Business owner | 113 | 29.4 | 29.4 | 58.4 |
| Bank official | 97 | 25.2 | 25.2 | 83.6 |
| Investor | 42 | 10.9 | 10.9 | 94.5 |
| Others | 21 | 5.5 | 5.5 | 100 |
| Total | 385 | 100.0 | **100.0** | |

Figure 5: Profession/Industry Sector




**Analysis of participants' responses on impacts of innovation diffusion on entrepreneurial development**

The analyses in the following sections show the responses of the respondents in relation to the impacts of innovation diffusion on entrepreneurial development in Ekiti and Ondo states, Nigeria. The design of the questionnaire was for the respondents to indicate their opinions in respect to attributes of entrepreneurship development, and impact of government policy, technological advancement, creativity, technological innovation, and available resources. In consideration of the study, emphasis is laid on the factors that have effects on entrepreneurial development. However, six significant constructs were developed to be factors affecting impacts entrepreneurship viz; Entrepreneurship attributes, Innovation, Government Policy, Technological Advancement, Creativity, Technological innovation, and Resource Availability. The following six codes were ascribed respectively to the constructs: Government policy (GP): 10 items, Technological advancement (TAD): 12 items, Creativity (CR):12 items, Technological Innovation (TIN): 12 items, Available resources (AR):12 items, Entrepreneurial attributes (ED): 27 items, altogether making 85 constructs.

**Exploratory Factor Analysis (EFA)**

Exploratory factor analysis (EFA) connotes one of the approaches used in the analysis of individual influences of all the items that make up a construct or variable. However, regarding the testing of the EFA, sample size is commonly a determining factor in taking decision, either to drop or accept an item. The occasion where an item is dropped (Tanko *et al.,* 2017), it indicates that such an item is less than the threshold value (Tabachnick and Fidell, 2014). The authors suggested several factor loadings, but with the characteristics of the ongoing research, factor loadings with a value of 0.50 are considered appropriate. Consequently, factor loadings above this value are considerably accepted and used for the analysis. Prior the EFA was the determination of the mean scores (MS) and the standard deviations (SD) of the 85 constructs, and had the lowest MS of 3.3273, and highest being 4.1283, while the SD had a minimum value of 0.81 and the highest being 2.5. This confirmed the significance of all the items, but based on the responses of the respondents. Moreover, principal component extraction via promax rotation was adopted in achieving the relevant six factors (components). For the suitability of the sample, Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were carried out; shown in Table 3. Following the EFA, 66 items out of the 85 items derived from literature were found to be above the 0.50 factor loading cut-off. Moreover, principal component extraction via Promax rotation was adopted in achieving the relevant six factors (components). In addition, Table 6 shows the six rotated component matrices. It is also shown that 66 items out of the 85 items derived from literature are found to be above the 0.50 factor loading cut-off. The deleted items (19 NOS) that could not measure up to the 0.50 cut-off threshold include ED4, ED5, ED9, ED10, ED11, ED27, GP2, GP3, GP9, TAD2, TAD3, TAD4, CR2, TIN2, TIN4, TIN8, TIN9, TIN11, and AR6.

Table 5: KMO and Bartlett's Test

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .850 |
| Bartlett's Test of Sphericity | Approx. chi-Square | 11894.474 |
| | df | 3570 |
| | Sig. | .000 |

The value is an acceptable one, being above the accepted minimum of 0.5, while the Barlett's test of sphericity is significant ($p < 0.05$).

Table 6: Exploratory Factor Analysis

| | Rotated Component Matrix | | | | | | |
|---|---|---|---|---|---|---|---|
| **CODE** | **COMPONENTS** | **1** | **2** | **3** | **4** | **5** | **6** |
| ED1 | I feel confident in my ability to generate innovative ideas that can solve business problems. | .581 | | | | | |
| ED2 | I regularly seek new ways to improve products or services within my business. | .592 | | | | | |
| ED3 | Innovation is a core value in my entrepreneurial approach. | .667 | | | | | |
| ED6 | I feel comfortable making decisions quickly, even with limited information. | .584 | | | | | |
| ED7 | I have a clear long-term vision for my entrepreneurial journey. | .522 | | | | | |
| ED8 | I often plan strategically for the growth and sustainability of my business. | .512 | | | | | |
| ED12 | I actively develop my leadership skills to better manage my entrepreneurial ventures. | .637 | | | | | |
| ED13 | I have a strong understanding of financial management practices, such as budgeting and cash flow management. | .589 | | | | | |
| ED14 | I am confident in my ability to secure funding and investment for my entrepreneurial ventures. | .586 | | | | | |
| ED15 | I consistently track the financial health of my business and take appropriate action when necessary. | .580 | | | | | |
| ED16 | I am able to identify new market opportunities and trends relevant to my business. | .692 | | | | | |
| ED17 | I constantly seek feedback from customers to refine and improve my products or services. | .729 | | | | | |
| ED18 | I monitor competitor activities and market dynamics to adjust my business strategy accordingly. | .571 | | | | | |
| ED19 | I actively engage in networking events to build relationships with other entrepreneurs and industry leaders. | .703 | | | | | |
| ED20 | I seek out mentorship and advice from experienced entrepreneurs to improve my business. | .656 | | | | | |
| ED21 | I believe in the power of partnerships to grow and scale my business. | .640 | | | | | |
| ED22 | My entrepreneurial ventures prioritize social and environmental sustainability. | .767 | | | | | |
| ED23 | I actively contribute to the well-being of my community through my business activities. | .648 | | | | | |
| ED24 | I take ethical considerations into account when making business decisions. | .614 | | | | | |
| ED25 | I am constantly learning new skills to improve my entrepreneurial abilities. | .538 | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ED26 | I adapt my business practices quickly in response to changing market conditions. | .637 | | | | | |
| GP1 | Government policies play a crucial role in fostering a conducive environment for entrepreneurial development. | | .731 | | | | |
| GP4 | Government incentives, such as tax breaks or grants, are effective in encouraging entrepreneurial activities. | | .676 | | | | |
| GP5 | Government programs that provide mentorship and training for entrepreneurs have a positive impact on business sustainability and growth. | | .664 | | | | |
| GP6 | Government funding opportunities for research and innovation benefit entrepreneurial ventures in their early stages. | | .637 | | | | |
| GP7 | Government policies effectively address the challenges faced by women and minority entrepreneurs in accessing resources and opportunities. | | .732 | | | | |
| GP8 | The government should provide more support for entrepreneurs in navigating complex legal and regulatory landscapes. | | .674 | | | | |
| GP10 | Entrepreneurs are adequately informed about the various government programs and initiatives available to support their businesses. | | .565 | | | | |
| TAD1 | It is quite believed that technological advancement is for the success of modern entrepreneurs | | | .544 | | | |
| TAD5 | Technological advancement changes the way one interacts with customers and market one's products or services | | | .569 | | | |
| TAD6 | Challenges or barriers are encountered when trying to adopt new technologies within one's business | | | .616 | | | |
| TAD7 | As a result of implementing technological solutions in business, cost savings or efficiency improvements are experienced | | | .502 | | | |
| TAD8 | Technological advancement has made it easier or more difficult for individuals to enter the realm of entrepreneurship | | | .529 | | | |
| TAD9 | Technological advancement has made it easier for individuals to enter the realm of entrepreneurship | | | .545 | | | |
| TAD10 | Emerging technologies such as artificial intelligence or blockchain plays a crucial role in the future of entrepreneurial development | | | .524 | | | |
| TAD11 | Due to technological advancement, businesses get expanded more rapidly | | | .624 | | | |
| TAD12 | Entrepreneurs will continuously adapt and evolve their technological strategies in response to changing market demands | | | .568 | | | |
| CR1 | Creativity plays a crucial role in fostering innovation within entrepreneurial ventures | | | | .766 | | |
| CR3 | Creativity enables entrepreneurs to identify and capitalize on new business opportunities. | | | | .573 | | |
| CR4 | The ability to think creatively gives entrepreneurs a competitive edge in the market. | | | | .643 | | |
| CR5 | Creative problem-solving skills are essential for overcoming challenges in entrepreneurial endeavors. | | | | .763 | | |
| CR6 | Creative individuals are more likely to adapt to changing market conditions and trends. | | | | .514 | | |
| CR7 | Creativity enhances the overall flexibility and adaptability of entrepreneurial ventures. | | | | .663 | | |
| CR8 | Creativity is a key driver of product/service differentiation in the entrepreneurial landscape. | | | | .747 | | |
| CR9 | Innovative ideas stemming from creativity lead to the development of unique value propositions for customers. | | | | .803 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CR10 | Successful entrepreneurs are those who continuously seek creative solutions to business problems. | | | | .766 | | |
| CR11 | Entrepreneurs who prioritize creativity are better equipped to navigate uncertainty in their business environment. | | | | .732 | | |
| CR12 | Creativity contributes to the sustainability and growth of entrepreneurial ventures over time. | | | | .815 | | |
| TIN1 | Technological innovation has greatly enhanced the opportunities for entrepreneurs to create new products or services. | | | | | .611 | |
| TIN3 | The availability of advanced digital tools and software has facilitated the scalability of small businesses and startups. | | | | | .677 | |
| TIN5 | Access to the latest technological advancements is a critical factor for entrepreneurial success in today's competitive landscape. | | | | | .655 | |
| TIN6 | Entrepreneurs who embrace emerging technologies are better positioned to adapt to changing market trends and customer preferences. | | | | | .500 | |
| TIN7 | Technological innovation increases the efficiency and productivity of entrepreneurial ventures, leading to higher chances of success. | | | | | .621 | |
| TIN10 | Technological innovation has reduced barriers to entry for aspiring entrepreneurs, enabling them to launch businesses more easily. | | | | | .537 | |
| TIN12 | Collaboration with tech startups and innovation hubs can provide established entrepreneurs with fresh ideas and perspectives for growth. | | | | | .593 | |
| AR1 | The availability of financial resources significantly impacts the growth potential of entrepreneurial ventures. | | | | | | .745 |
| AR2 | Access to a network of mentors and advisors is crucial for the success of entrepreneurs. | | | | | | .656 |
| AR3 | Adequate access to physical infrastructure and technological resources enhances the efficiency of entrepreneurial operations. | | | | | | .703 |
| AR4 | The availability of relevant market data and research tools is essential for making informed business decisions. | | | | | | .690 |
| AR5 | Entrepreneurs who have access to a diverse talent pool are better positioned for long-term success. | | | | | | .638 |
| AR7 | Access to funding sources such as venture capital and angel investors is essential for fueling the growth of startups. | | | | | | .697 |
| AR8 | Entrepreneurs with limited access to industry-specific knowledge and expertise face challenges in navigating their market. | | | | | | .618 |
| AR9 | Availability of government support programs and incentives positively impacts the growth trajectory of entrepreneurial ventures. | | | | | | .713 |
| AR10 | Well-equipped co-working spaces and incubators provide valuable resources and networking opportunities for entrepreneurs. | | | | | | .709 |
| AR11 | Entrepreneurs who can leverage existing relationships and partnerships have a strategic advantage in the market. | | | | | | .736 |
| AR12 | The availability of legal and regulatory support services is essential for ensuring compliance and risk management in entrepreneurial ventures. | | | | | | .547 |
| Extraction Method; Principal Component Analysis.<br>Rotation method: Promax with Kaiser Normalization. | | | | | | | |
| Rotation converged in 12 iterations | | | | | | | |

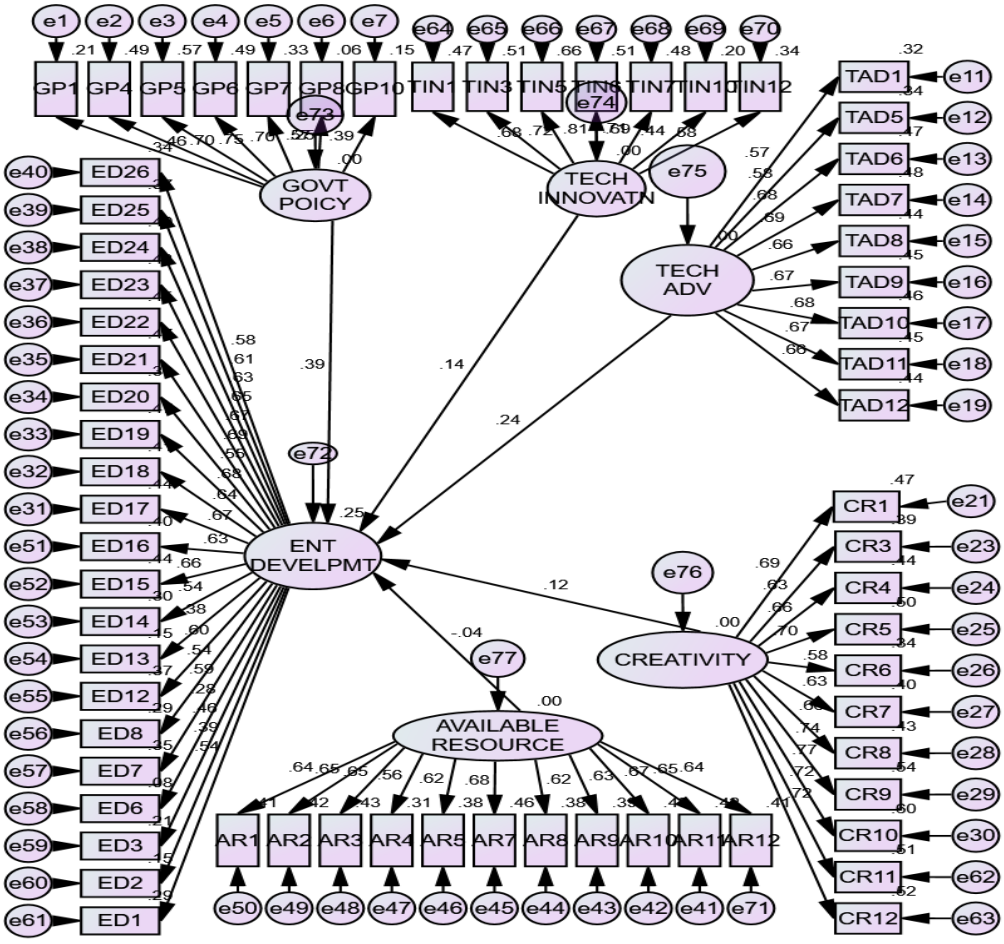
**Reliability of Instrument and Confirmatory Factor Analysis**

Reliability test of each item was carried out via Cronbach's alpha, while the values obtained and high level of significance indicate that they all met up with the requirement (Awang, 2015). This indicates that the outcome

would enable stakeholders to be aware of the impacts of innovation diffusion on entrepreneurial development. However, confirmatory factor analyses were carried out on the constructs in order to establish the goodness of fit of the models. Moreover, the modus operandi involved in respect to achieving a fitted model was to be sure that every factor loading equaled to (=) or above (>) 0.6 (Oke, 2016), indicating that factor loading less than 0.6 was unquestionably expunged. The conditions for acceptance of the model were to see that the modification indices, such as Goodness of Fit Index (GFI), Tucker Lewis Index (TLI), Comparative Fit Index (CFI), and Normed Fit Index (NFI) are higher than 0.90 (>0.9). The Chi-square's ratio (chi-sq), as well as the Degree of freedom (df) must not be higher than 5.0, that is, Chisq/df ≤ 5.0. In addition, the Root Mean Score Error Approximation (RMSEA) should cleave to a lower value of 0.08, that is, < 0.08. The situation where a revised or adjusted model is needed is where the initial CFA, the hypothesised model and the structural equation models (SEM) could not fulfil the minimum requirement of the modification indices (Awang, 2015).

As seen in Figure 6, government policy, technological innovation, technological advancement, and creativity are found to influence the entrepreneurial development, as the regression weight estimates are found to be 0.389, 0.143, 0.244, and 0.118 respectively, while available resource (-.041) is not significant, hence the construct is removed. Available resources were completely excluded from the revised model due to an insignificant contribution and poor model fit. Its exclusion suggests that resource availability (financial, human, or infrastructural) may not independently influence entrepreneurial development without being supported by enabling policies or technology. Consequently, all its items were deleted in the revised model, despite decent initial loadings (mostly > .60). This might not be unconnected with cross-loading or multicollinearity: The items may have overlapped with other constructs (like Government Policy or Technological Advancement), causing them to be dropped during model refinement. Another reason might be insufficient statistical significance despite good face validity. However, this result does not necessarily mean resources aren't important, but it suggests that in the context of the data, other factors like creativity, technology, and leadership had more statistical impact. Also, all items having less than 0.6 factor loading are subsequently removed in order to have a model fit.

Figure 6: Initial model of Impacts of innovation diffusion on entrepreneurial development



While analyzing this study, we tested a structural equation model using SPSS and AMOS to explain the impacts of innovation diffusion on entrepreneurial development. Taking support of this model, we investigated innovation diffusion which is examined in five dimensions: government policy, technological advancement, creativity, technological innovation, and available resources. The entrepreneurial attributes were tested under innovativeness, risk-taking, strategic thinking, leadership skills, financial management, market awareness, networking, social responsibility, and adaptability. However, while testing the model, innovation diffusion is explained as the independent variable, while entrepreneurial development is explained as the dependent variable. It was discovered during the analysis that, available resource has no impact on entrepreneurial development, hence it was expunged. Equally, innovativeness, risk-taking, and strategic thinking, as part of the attributes under entrepreneurial development, could not meet up with the requirements of the model, hence they are been trimmed out of the model. It was also found out that, government policy has a higher impact on entrepreneurial development, while others followed respectively, viz: technological advancement, creativity, and technological innovation. However, the study's finding is consistent with previously published studies (Oviatt & McDougall, 2005; Audretsch, Grilo & Thurik, 2007; David & David, 2015; Adriaens & Faley, 2011; Ibikunle, 2022; Matthew *et al.,* 2020; Alice *et al*., 2024; Olowe *et al*., 2017).

Figure 7: Modified and final model of impacts of innovation diffusion on entrepreneurial development

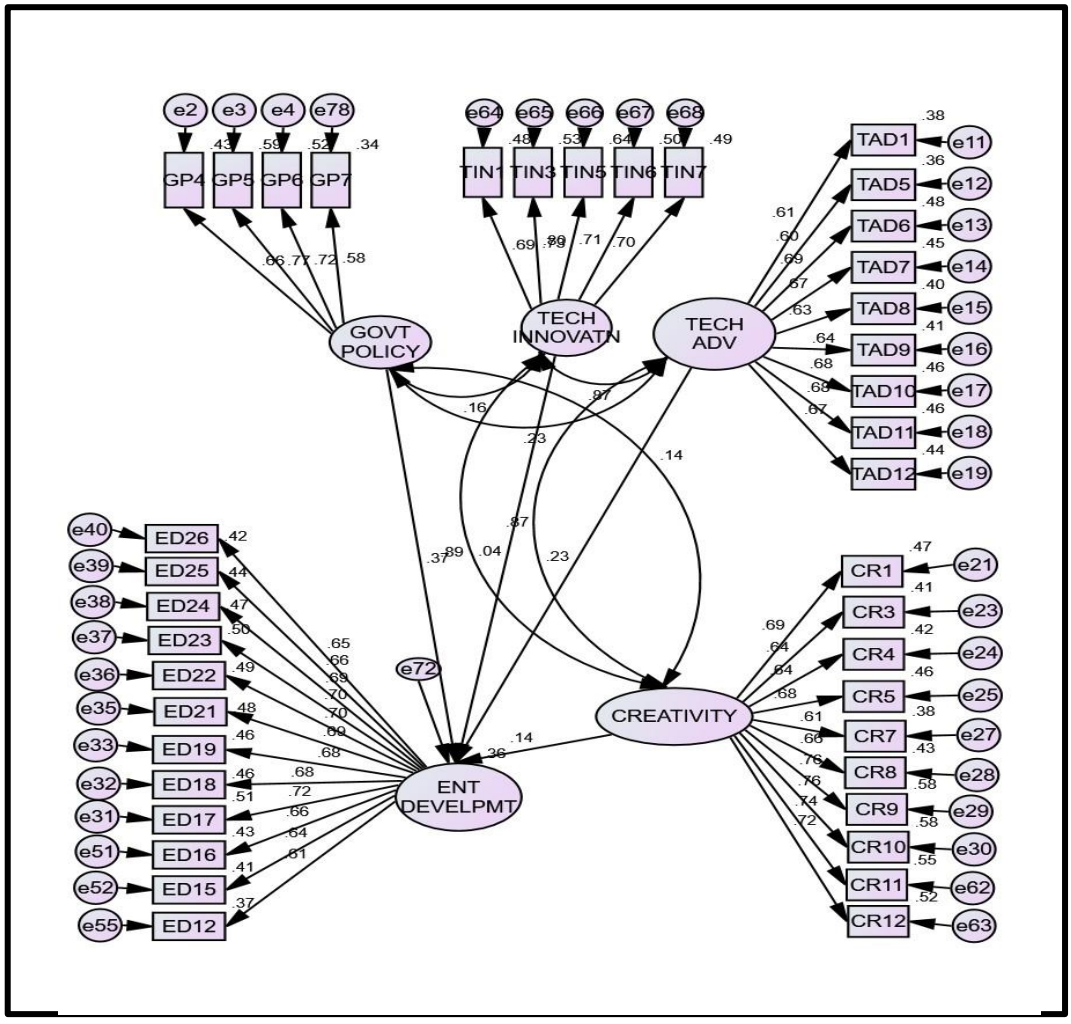
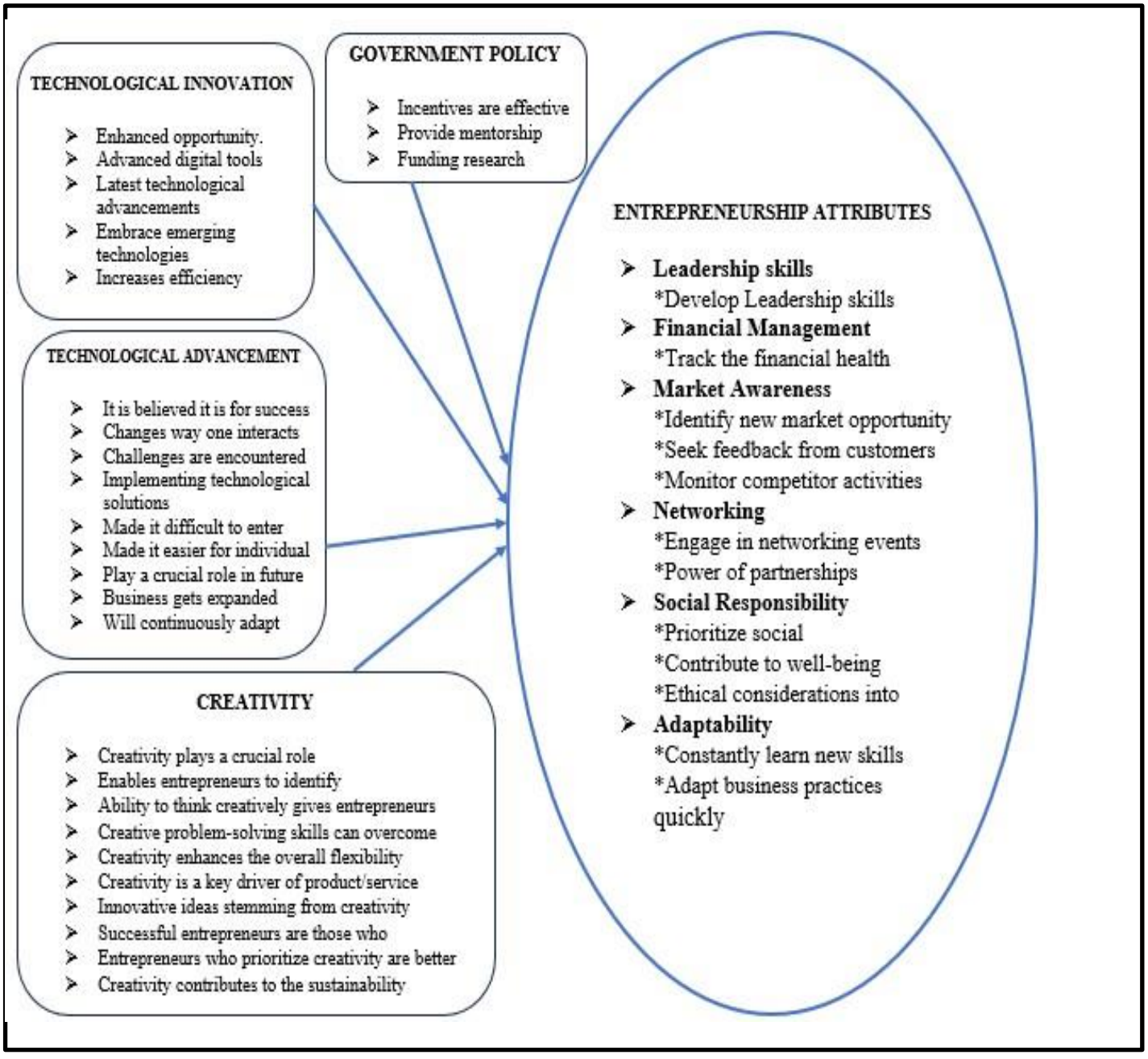



Figure 8 is the final model of impacts of innovation diffusion on entrepreneurial development. The attributes of entrepreneurial development are 12 items, government policy (3 items), technological innovation (5 items), technological advancement (9 items), and creativity (10 items). Experts were contacted for the validation of the model, and their contributions were satisfied with the developed model; in terms of adequacy and feasibility. However, a model of impacts of innovation diffusion on entrepreneurial development has been developed. The development of the model is hinged on the responses of the research participants, which was externally validated by experts. The model demonstrates the need for the inclusion of certain items, which came up under the constructs. However, the four (4) constructs (components), which are independent variables, are indispensable

in issues related to the study. Moreover, entrepreneurship development attributes (dependent variables) include leadership skills, management of financial matters, creation of market awareness, engagement in networking events, prioritising social responsibility, and adaptability. Consequently, Table 7 shows the summary of the components and variables contained in the model after several trimmings, modifications, and adjustments to reach the model fit goodness based on the SPSS AMOS graphics used for the structuring of the model. Furthermore, it is imperative to have a model developed in relation to the impacts of innovation diffusion on entrepreneurial development, as this will enable stakeholders to have awareness of the impacts of innovation diffusion, and for these stakeholders to know their responsibilities. Moreover, regulations governing the practice of entrepreneurship will be enforced. It is, however, believed that the right implementation of the model will contribute more to the diffusion of innovation, which will invariably improve the entrepreneurial process in Ekiti and Ondo States of Nigeria. However, these confirm the achievement of the research objectives and provide empirical backing for the diffusion of innovation theory in a Nigerian context.

Figure 8: Model of impacts of innovation diffusion on entrepreneurial development




Sequel to the developed model, shown in Figure 9 is the path diagram of the model of impacts of innovation diffusion on entrepreneurial development.

Figure 9: Path diagram of the model of impacts of innovation diffusion on entrepreneurial development


Table 7: Summary of the impacts of innovation diffusion on entrepreneurial development

| Constructs | Standardised direct effects |
|---|---|
| Entrepreneurial development <--Government policy | 0.37 |
| Entrepreneurial development <--Technological advancement | 0.23 |
| Entrepreneurial development <--Creativity | 0.14 |
| Entrepreneurial development <--Technological innovation | 0.87 |
| Entrepreneurial development <--Available resources | 0.04 (Deleted) |

Table 7 contains a summary of the impacts of innovation diffusion on entrepreneurial development. For government policy (0.37), it has the strongest positive impact on entrepreneurial development. This shows that government policy significantly influences entrepreneurial development. Even after model revision, its effect remains high, indicating consistent support from policy-related initiatives. For technological advancement (0.23), it was moderate; indicating that as the model was refined, technological advancement showed even more importance for entrepreneurs. Moreover, creativity (0.14) has a weak impact on entrepreneurial development, suggesting that creativity is not a major driver when considered alongside other variables. Additionally, technological innovation (0.23) has a moderate impact.

## CONCLUSION

This study provides a pragmatic lens into the role of innovation diffusion in fostering entrepreneurial development within Ekiti and Ondo States, Nigeria. Despite Nigeria's rich history of indigenous enterprise and technological ingenuity, modern entrepreneurship continues to grapple with infrastructural deficits, policy inconsistencies, and a fragmented innovation ecosystem. The research underscores that effective diffusion of innovation, facilitated by enabling government policies, technological advancement, and creativity, is vital for sustainable entrepreneurship. Consequently, by focusing on the public sector and SMEs, this study fills a crucial gap in existing literature that has predominantly centered on multinational corporations. The findings are expected to inform both policy formulation and practical strategies for nurturing a more innovative and inclusive entrepreneurial environment in the region. Ultimately, enhancing innovation capacity at the grassroots level is not only essential for economic development but also for achieving the broader goals of employment generation and poverty reduction in Nigeria.

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