# EFFECT OF VENTURE CAPITAL INVESTMENT ON TECHNOLOGICAL INNOVATION IN LAGOS STATE, NIGERIA

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## ABSTRACT
*This study examined the effect of Venture Capital Investment on Technological Innovation in Nigeria. The study adopted a survey research design whereby structured 5-point Likert scale questionnaires were administered to a sample of four hundred and twenty-one (421) staff of Andela, Flutterwave and Paystack operating in Lagos State, Nigeria. Purposive sampling technique was adopted for the study. Partial least square (PLS-SEM) statistic was employed to test the hypotheses formulated of which the study found a positive and insignificant effect of Amount of investment on technological innovation in Nigeria. While, Number of investments has positive and significant effect on technological innovation in Nigeria. The study recommends that venture capitalists should encouraged to adopt a more hands-on, value-adding approach to supporting their portfolio companies, beyond just the provision of capital. Also, to leverage the positive impact of investments on technological innovation in Nigeria, stakeholders including venture capitalists, policymakers, and entrepreneurs should focus on fostering an environment conducive to increasing investment activity. This can be achieved through initiatives that promote investor confidence, streamline regulatory processes, and encourage diversification of investment across various technology-intensive sectors.*
**Keywords:** *Venture Capital Investment, Amount of investment, Number of investments, Technological, Innovation, Nigeria.*

## INTRODUCTION
Technological innovation has indeed been a driving force behind economic growth, societal advancements, and industry transformation globally. Historically, nations that have embraced and promoted technological innovation have seen significant gains in productivity, competitiveness, and quality of life (Schwab & Zahidi, 2023). The rapid pace of technological advancement has continued to shape the global economy, with key areas like information technology, biotechnology, clean energy, and artificial intelligence fueling transformative change (OECD, 2022). These innovations enable countries to address complex issues more effectively, from environmental challenges to healthcare, thus fostering sustainable economic growth and improved societal outcomes (World Economic Forum, 2023).

In recent decades, countries such as the United States, China, Germany, and South Korea have emerged as leaders in technological innovation. These nations have created ecosystems that support research and development (R&D), provide robust intellectual property protections, and encourage collaboration between academic institutions, private enterprises, and government agencies. The rise of innovation hubs like Silicon Valley in the United States and Shenzhen in China exemplifies how concentrated efforts and investments in technology can yield substantial economic and societal benefits (Mazzucato, 2018).
Venture capital (VC) has played a pivotal role in fostering technological innovation. VC provides the necessary funding for startups and emerging companies that often operate at the cutting edge of technology. These investments are typically high-risk but have the potential for high rewards, driving breakthrough innovations and the commercialization of new technologies. In the United States, for instance, venture capital has been instrumental in the success of tech giants such as Apple, Google, and Facebook (Gompers & Lerner, 2021).

Venture capitalists not only provide financial resources but also bring managerial expertise, industry connections, and strategic guidance, helping startups navigate the complex journey from idea to market. The symbiotic relationship between venture capital and technological innovation has been well-documented, highlighting the importance of VC in accelerating technological progress and economic growth (Kortum & Lerner, 2020).

Nigeria, the largest economy in Africa, has recognized the critical role of technological innovation in achieving sustainable development and economic diversification. Historically reliant on oil exports,

Nigeria has faced challenges such as fluctuating oil prices and economic instability. Consequently, there has been a concerted effort to diversify the economy by fostering innovation and entrepreneurship in technology-driven sectors.

In recent years, Nigeria has seen the emergence of a vibrant tech ecosystem, particularly in its major cities like Lagos, Abuja, and Port Harcourt. The country boasts a growing number of tech startups, incubators, and innovation hubs that are driving advancements in fintech, healthtech, agritech, and edtech, among other sectors. Nigerian startups such as Paystack, Flutterwave, and Andela have gained international recognition and attracted significant venture capital investments (Bright, 2019).

The venture capital landscape in Nigeria has evolved considerably, with both local and international investors showing increased interest in the country's tech ecosystem. Despite the challenges of a nascent market, regulatory uncertainties, and infrastructural deficits, Nigeria has become an attractive destination for venture capital due to its large, youthful population and growing internet penetration.

Recent data indicates that venture capital investment in Nigeria is on the rise, with significant deals and funding rounds taking place. For example, in 2020, Nigerian startups raised over $300 million in venture capital, a testament to the potential and dynamism of the tech sector (Partech, 2021). This influx of venture capital is expected to drive further technological innovation, create jobs, and contribute to economic growth.

The impact of venture capital investment on technological innovation in Nigeria is a critical area of study. Understanding this relationship can provide insights into how Nigeria can leverage venture capital to foster innovation, drive economic diversification, and enhance its global competitiveness. As Nigeria continues to develop its tech ecosystem, the role of venture capital will be instrumental in shaping the future of technological innovation in the country.

Technological innovation has been a critical driver of economic growth and development globally, yet Nigeria continues to face challenges in fostering technological advancements, particularly in its entrepreneurial and startup ecosystem. Venture capital (VC) investment has the potential to bridge the gap by providing the necessary funding, mentorship, and strategic support that startups need to scale and innovate. However, the extent to which venture capital investments in Lagos State, Nigeria have contributed to technological innovation remains unclear. Several startups still struggle to innovate due to inadequate funding, lack of infrastructure, and limited support networks, despite the growing presence of VC firms in the country.

Previous research has highlighted the crucial role of venture capital in fostering technological innovation. For instance, Gompers and Lerner (2021) demonstrated that venture capital significantly contributes to technological innovation and economic growth in developed markets such as the United States. Similarly, Kortum and Lerner (2020) found that venture capital-backed firms tend to be more innovative than non-venture capital-backed firms. However, these studies primarily focus on mature economies with well-established venture capital ecosystems, leaving a gap in understanding the nuances of venture capital's impact in emerging markets like Nigeria.

In the African context, research by Avnimelech and Teubal (2016) suggests that venture capital can drive technological innovation, but the findings are largely based on data from more developed African countries such as South Africa. The specific challenges and opportunities within Nigeria's unique economic and regulatory environment are not adequately addressed in the existing literature.

There is a growing body of work that supports the positive impact of venture capital on technological innovation in Nigeria. For example, a study by Bongo Adi (2020) indicates that venture capital investment has been instrumental in the growth of Nigeria's fintech sector, with startups like Paystack and Flutterwave achieving remarkable success and international recognition. Additionally, the Partech (2021)

report on African tech venture capital highlights Nigeria as a leading destination for venture capital investment on the continent, suggesting a robust relationship between venture capital inflows and technological innovation.

Contrarily, some researchers argue that the impact of venture capital on technological innovation in Nigeria may be overestimated. Eniola and Entebang (2015) contend that structural challenges such as inadequate infrastructure, regulatory bottlenecks, and limited access to early-stage funding hinder the effectiveness of venture capital in driving innovation. They argue that without addressing these underlying issues, the potential benefits of venture capital investment may not be fully realized. Similarly, Adegoke (2018) highlights that the nascent stage of Nigeria's venture capital ecosystem and the high-risk nature of the market can limit the scalability and sustainability of tech startups, thereby reducing the overall impact on technological innovation.

The contradictory findings and limited scope of existing research underscore the need for a comprehensive study on the impact of venture capital investment on technological innovation in Nigeria. This study aims to bridge the research gap by providing a nuanced analysis of how venture capital influences technological advancements within the unique context of Nigeria. By doing so, it seeks to contribute to the broader understanding of how emerging markets can leverage venture capital to drive innovation and economic growth.
The main objective of the study is to examine the effect of Venture Capital Investment on Technological Innovation in Nigeria. Specific are to;

i. Investigate the effect amount of investment on technological innovation in Lagos State, Nigeria.
ii. Evaluate the effect of number of investments on technological innovation in Lagos State, Nigeria.

**Hypotheses of the Study**

H01: Amount of investment has no significant effect on technological innovation in Lagos State, Nigeria.
H02: Number of investments has no significant effect on technological innovation in Lagos State, Nigeria.

## LITERATURE REVIEW

### Venture Capital Investment

Venture capital investment refers to the financing of early-stage, high-growth potential companies by specialized investment firms or funds. It is a type of private equity financing where investors provide capital and management expertise in exchange for an equity stake in the company (Gompers et al., 2021). Venture capital investment is the provision of financial capital and strategic guidance by investors to entrepreneurial companies with high growth potential. The investors, known as venture capitalists, typically take an equity stake in the company in return for their investment (Kenney & Zysman, 2019).
Venture capital investment involves the provision of equity capital by professional investors to new, growing, or innovative businesses. Venture capitalists aim to generate high returns by investing in companies with strong growth potential and successful exit strategies, such as an initial public offering or acquisition (Bernstein et al., 2017).

Venture capital investment is a type of private equity financing where investors provide capital to entrepreneurial companies with the potential for rapid growth and high returns. The investors, known as venture capitalists, typically take an active role in the management and guidance of the companies they invest in (Koga & Hirai, 2021).

### Amount of investment

The amount of venture capital investment refers to the total value or size of the financial capital provided by venture capitalists to a startup or early-stage company. This can range from a few hundred thousand dollars for seed-stage funding to tens or even hundreds of millions of dollars for more mature, high-growth ventures (Gompers et al., 2021).

The amount of venture capital investment represents the total equity financing raised by a company from venture capital firms or funds. This investment amount is typically provided in exchange for an ownership stake in the company, with the goal of supporting the firm's growth and development (Kerr & Nanda, 2015).

The amount of venture capital investment refers to the total monetary value of the equity financing provided by venture capitalists to entrepreneurial firms. This investment amount can vary considerably based on the company's industry, business model, management team, and other factors that drive the venture capitalist's valuation and investment decision (Koga & Hirai, 2021).

**Number of investments**

The number of venture capital investments refers to the total count or frequency of equity financing deals made by venture capital firms or funds within a specific time period, such as a quarter or a year. This metric provides insight into the overall level of venture capital activity and investment appetite in the startup ecosystem (Gompers et al., 2021).

The number of venture capital investments represents the total count of individual funding rounds or deals completed by venture capitalists with entrepreneurial firms. This statistic is often used to track trends and patterns in the venture capital industry, such as changes in investment volume, sector focus, and geographic distribution (Bernstein et al., 2017).

The number of venture capital investments refers to the total quantity of equity financing transactions conducted by venture capital providers with startups and early-stage companies. This metric is commonly used to assess the level of venture capital deployment and the overall investment activity within a given market or industry (Koga & Hirai, 2021).

**Technological Innovation**

Technological innovation refers to the creation and application of new technologies or significant improvements to existing technologies that result in enhanced products, services, or processes. It involves the successful commercialization of these technological advancements to create value for an organization or industry (Kaplan & Tripsas, 2008).

Technological innovation is the successful introduction of new technologies, products, or services into the market. It encompasses the entire process from the initial idea or invention to the final commercialization and widespread adoption of the innovation (Baregheh et al., 2012).

Technological innovation is the development and implementation of new technologies or significant improvements to existing technologies that result in increased efficiency, productivity, or competitiveness for an organization or industry. It involves the integration of scientific knowledge, technological capabilities, and market needs to create value-added products, services, or processes (Crossan & Apaydin, 2010).

**Empirical Review**

**Amount of investment and Technological Innovation**

Lawal et al (2024) examined the effects of amount of investment and technological innovation of domestic product in Nigeria. The study adopted ex post facto research design and Ordinary Least Squares to analyze secondary data obtained from the Central Bank of Nigeria's Statistical Bulletin and the World Development Indicators during the period 1999 to 2022. Granger causality test was also deployed to achieve the objective of the study and the study used E-views to analyze the data. The results based on multiple regression analysis revealed that amount of investment has insignificant effect on technological innovation of domestic product in Nigeria. The use of an ex post facto design is appropriate for this kind of research as it allows the examination of existing relationships between variables using historical data. However, such a design can also limit the ability to establish causality definitively because it is observational and does not involve manipulation or control of variables.

Ajao (2023) analyzed how different levels of investment influence technological advancements, assess the effectiveness of investment in fostering innovation, and identify potential barriers and facilitators in the Nigerian context. The methodology of this review involves a comprehensive analysis of both primary and secondary data sources. An extensive review of existing literature on investment and technological innovation, focusing on recent studies and reports specific to Nigeria. Gathering quantitative data on investment levels and technological innovation metrics from credible sources such as government reports, industry publications, and academic journals. Conducting interviews and surveys with key stakeholders, including investors, technology entrepreneurs, and policymakers, to gain qualitative insights. Utilizing statistical tools to analyze the correlation and causation between investment levels and technological innovation. Finding, there is a strong positive correlation between investment levels and technological innovation in Nigeria. Increased investment, particularly from venture capital and government funding, has led to significant advancements in various tech sectors. The selection of stakeholders for interviews and surveys might introduce bias, particularly if the sample is not representative of the broader population. Ensuring diversity and representativeness in the sample is crucial for obtaining balanced insights.

**Number of investments and Technological Innovation**

Olabode and Onikoyi (2024) focused on the effect of number of investments on technological innovation in Lagos State, Nigeria. The study adopted a descriptive research design. The targeted population consisted of 242 staff of both Zinox Technologies Limited and Spectranet Nigeria Limited in Lagos State distributed across various categories. Using the Taro Yamane sample size formula, a sample size of 151 was drawn from the population The researcher adopted the convenience sampling technique to select the choice of firm by selecting them based on their closeness to the researcher. The sample was stratified to ensure that all the members of the population were adequately represented. A purposive sampling technique was used in each stratum. Data was collected through a self-developed questionnaire. Content validity and Cronbach's alpha were used to test the validity and reliability of the research instrument. The collected data was analysed using inferential statistics using SPSS (Statistical Package for the social sciences). The findings revealed that number of investments has significant effect on technological innovation in Lagos State, Nigeria. The study is limited to Zinox Technologies Limited and Spectranet Nigeria Limited, which may not reflect the broader technological innovation landscape across other sectors or regions in Nigeria.

Akani and Obiosa (2020) examined the effects of number of investments on the technological innovation of deposit money banks in Nigeria. The study formulated four hypotheses and used panel data regression to analyze the secondary data extracted from the annual reports and accounts of the fourteen firms for the period 2009 to 2017. Findings of the study revealed that number of investments have positive and significant effect on the technological innovation of deposit money banks in Nigeria. The study focuses on fourteen firms, which may not be fully representative of all deposit money banks in Nigeria. Increasing the sample size could enhance the generalizability of the findings.

**Theoretical Framework**

**Resource-Based View (RBV)**

The Resource-Based View (RBV) was primarily developed by Wernerfelt, Birger in 1984, and further expanded by Barney, Jay B. in 1991. The RBV was developed to explain how firms can achieve sustained competitive advantage through the strategic management of their unique and valuable resources and capabilities. It emphasizes that firms should focus on leveraging internal resources, rather than relying solely on external factors, to achieve superior performance.

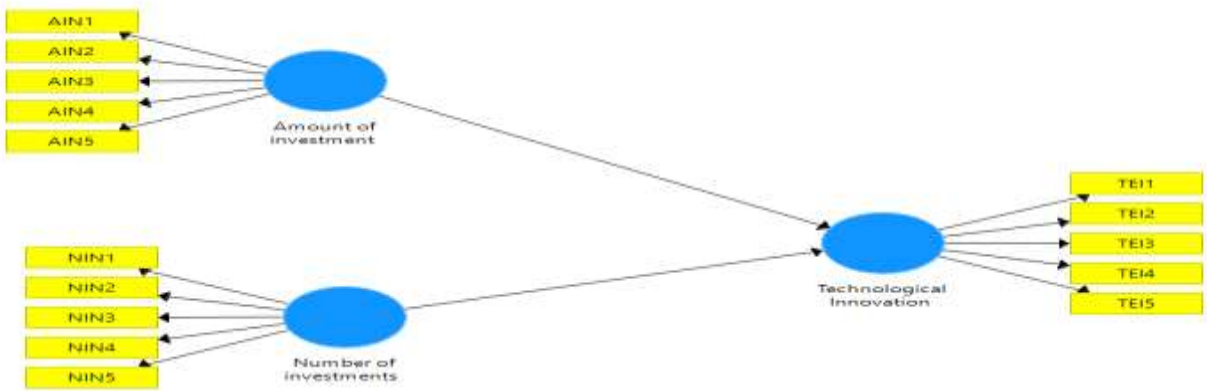
Critics argue that RBV does not adequately address the role of external environmental factors and market dynamics, which are also crucial for firm performance. Additionally, there are challenges in objectively identifying and measuring resources and capabilities, which can limit the practical application of the theory. In the context of Nigeria, the RBV provides a framework for understanding how venture capital (VC) investment can enhance technological innovation. By focusing on identifying and leveraging unique

resources and capabilities within Nigerian tech startups, VC firms can strategically allocate resources to support innovative projects. This approach helps startups overcome resource constraints and fosters the development of novel technologies that can address local and global challenges.

## METHODOLOGY

This study adopted survey research design and primary data was collected in order to test the hypotheses. The population of the study consist of 421 staff of Andela, Flutterwave and Paystack operating in Lagos State, Nigeria. Andela, Flutterwave, and Paystack are selected as notable examples of technological innovation companies in Nigeria because they have made significant impacts in their respective fields. Andela stands out for its innovative approach to talent development in Africa's tech industry. Flutterwave has revolutionized digital payments across Africa by providing a seamless and reliable payment infrastructure. Paystack has played a crucial role in advancing fintech innovation in Nigeria. As a payment gateway, Paystack enables businesses of all sizes to accept online payments easily and securely. They have contributed to the growth of e-commerce and digital financial services in Nigeria, enhancing financial inclusion and business efficiency. Purposive sampling technique was adopted for this study. Using Taro Yamane formula (1963) a sample size of 241 was arrived, with 15 percent attrition as advised by Israel 2013, and a 5-point Likert questionnaire was designed and sent electronically to respondents in order to elicit their responses.

The data collected were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the aid of SmartPls3. The model of the regression analysis is specified thus:




***Source: SMART-PLS Output, 2024***

## RESULTS AND DISCUSSION

*Data Presentation*

**Table 4.1: Administration of Instrument**

| Description | Responses | Percentage (%) |
|---|---|---|
| Completely filled and returned | 237 | 98 |
| Not properly filled but returned | 4 | 2 |
| Total | 241 | 100 |

***Source: Fieldwork, 2024***

The study distributed a total of 241copies of questionnaires which was a 15% increase in the sample size so as to account for unreturned questionnaire which may affect the minimal sample size and as indicated from the table 237 (91%) questionnaires distributed were completely filled and returned, 4 (2%) were not properly filled but returned. Subsequent analyses were conducted using the 306 instruments returned given a reasonable return rate of 98%.

*Data Analysis*

**Table 4.2: Factor Loadings of the Constructs**

| | Amount of investment | Number of investments | Technological Innovation |
|---|---|---|---|
| **AIN1** | 0.796 | | |
| **AIN2** | 0.799 | | |

| | | | | |
|---|---|---|---|---|
| **AIN3** | 0.762 | | | |
| **AIN4** | 0.655 | | | |
| **AIN5** | 0.744 | | | |
| **NIN1** | | 0.634 | | |
| **NIN2** | | 0.764 | | |
| **NIN3** | | 0.719 | | |
| **NIN4** | | 0.743 | | |
| **NIN5** | | 0.762 | | |
| **TEI1** | | | 0.727 | |
| **TEI2** | | | 0.769 | |
| **TEI3** | | | 0.756 | |
| **TEI4** | | | 0.623 | |
| **TEI5** | | | 0.719 | |

***Source: SMART-PLS Output, 2024***

### *Construct Reliability*

To establish internal consistency of the study constructs, the Cronbach's alpha and composite reliability were examined. According to Hair, et al., (2019) the minimum threshold for measuring composite reliability (CR) and Cronbach's alpha is 0.7.

### *Convergent Validity*

This explains the extent to which constructs converges to explain the variance of its items. It is assessed by evaluating the average variance extracted (AVE). The minimum value of the AVE should be higher than 0.50. All the constructs satisfied this requirement as shown in the table below and as such are valid for the study.

**Table 4.3: Construct Reliability and Validity of the Indicators**

| | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|---|---|---|---|---|
| **Amount of investment** | 0.737 | 0.766 | 0.825 | 0.591 |
| **Number of investments** | 0.830 | 0.870 | 0.765 | 0.601 |
| **Technological Innovation** | 0.768 | 0.771 | 0.843 | 0.519 |

***Source: SMART PLS Output, 2024***

### Discriminant Validity

Discriminant validity is the extent to which a construct is empirically distinct from other constructs in the structural model. Traditional methods such as Fornell-Larcker and cross loadings were used to assess discriminant validity however, Henseler et al. (2015) show that the Fornell-Larcker criterion does not perform well, particularly when the indicator loadings on a construct differ only slightly. As a replacement, Henseler, etal., (2015) proposed the Heterotrait-monotrait (HTMT) ratio of the correlations. The HTMT is defined as the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct. Discriminant validity problems are present when HTMT values are higher than 0.90 (Henseler, et al., 2015).

**Table 4.4: Heterotrait-Monotrait Ratio (HTMT)**

| | Amount of investment | Number of investments | Technological Innovation |
|---|---|---|---|
| **Amount of investment** | 1.000 | | |
| **Number of investments** | 0.801 | 1.000 | |
| **Technological Innovation** | 0.727 | 0.613 | 1.000 |

***Source: SMART-PLS Output, 2024***

**Test of Hypotheses**

The table below showed the path coefficients, t-values and p-values used to test the first four null hypotheses of the study:

**Table 4.5: Path Coefficient of the Model**

| Variables | Beta | T Statistics (\|O/STDEV\|) | P Values | Decision | $F^2$ Value |
|---|---|---|---|---|---|
| **Amount of investment -> Technological Innovation** | 0.019 | 0.266 | 0.790 | Accepted | 0.010 |
| **Number of investments -> Technological Innovation** | 0.703 | 10.806 | 0.000 | Rejected | 0.276 |

***Source: SMART-PLS Output, 2024***

***Hypothesis One***

**H01:** Amount of investment has no significant effect on technological innovation in Lagos State, Nigeria. The result from table 4.5 shows that Amount of investment has positive and insignificant effect on technological innovation in Lagos State, Nigeria, with $\beta = 0.019$ and $p = 0.790$. Thus, hypothesis one was supported and therefore accepted at 5% level of significance. Since there is enough statistical evidence to accept the null hypothesis, the study concludes that Amount of investment has positive and insignificant effect on technological innovation in Lagos State, Nigeria.

***Hypothesis Two***

**H02:** Number of investments has no significant effect on technological innovation in Lagos State, Nigeria**.**

The result from table 4.5 shows that Number of investments has positive and significant effect on technological innovation in Lagos State, Nigeria, with $\beta = 0.703$ and $p = 0.000$. This result does not support the null hypothesis two and was therefore rejected at 5% level of significance. Since there is enough evidence to reject the null hypothesis, the study therefore concludes that Number of investments has positive and significant effect on technological innovation in Lagos State, Nigeria.

*Discussion of Findings*

The first finding revealed that that Amount of investment has positive and insignificant effect on technological innovation in Lagos State, Nigeria, this implies that while investment in venture capital positively influences technological innovation in Lagos State, Nigeria, the effect is not statistically significant. In other words, despite the financial support provided through venture capital, there may be other factors or challenges within the Nigerian context that limit the full realization of technological innovation outcomes from these investments. This finding is consistent with that of Lawal et al (2024), who found similarly findings that amount of investment has insignificant effect on technological innovation of domestic product in Nigeria.

On the other hand, Number of investments has positive and significant effect on technological innovation in Lagos State, Nigeria, this implies that the quantity or frequency of investments made

through venture capital has a clear and measurable impact on technological innovation in Lagos State, Nigeria. The positive and significant effect suggests that increasing the number of investments, perhaps across various sectors or stages of technological development, can effectively stimulate innovation within the country. This finding agrees with the findings of Akani and Obiosa (2020) who found that number of investments have positive and significant effect on the technological innovation of deposit money banks in Nigeria.

## CONCLUSIONS AND RECOMMENDATIONS

The results of the first finding concluded that while venture capital investment in Nigeria has a positive relationship with the level of technological innovation, this relationship is not statistically significant. This implies that the mere infusion of capital into the Nigerian startup and technology ecosystem may not be the primary driver of increased technological innovation in the country.

On the other hand, the research findings indicate that the number of investments has a positive and significant effect on technological innovation in Nigeria. This suggests that as the number of investments in Nigeria increases, it leads to a corresponding increase in technological innovation within the country. Several factors may explain this relationship. Greater investment activity likely provides more capital, resources, and funding that can be channeled towards research, development, and commercialization of new technologies. More investments may also attract skilled talent, foster collaborations, and enable the acquisition of advanced equipment and infrastructure to drive technological progress.

### Recommendations

Based on the findings and conclusions above, the study recommends thus:

1. Encouraging venture capitalists to adopt a more hands-on, value-adding approach to supporting their portfolio companies, beyond just the provision of capital.
2. To leverage the positive impact of investments on technological innovation in Nigeria, stakeholders including venture capitalists, policymakers, and entrepreneurs should focus on fostering an environment conducive to increasing investment activity. This can be achieved through initiatives that promote investor confidence, streamline regulatory processes, and encourage diversification of investment across various technology-intensive sectors.

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## Research questionnaire

| S/N | Statement | SA | A | U | D | SD |
|---|---|---|---|---|---|---|
| | **Amount of investment** | | | | | |
| **AIN1** | The amount of investment in technology significantly influences our company's innovation capabilities. | | | | | |
| **AIN2** | Adequate funding for technological projects is readily available within our organization | | | | | |
| **AIN3** | There is a clear correlation between increased investment in technology and the rate of technological advancements in our industry | | | | | |
| **AIN4** | Employees feel that financial investments are effectively utilized to foster technological advancements | | | | | |
| **AIN5** | The level of investment in technology directly impacts our ability to stay competitive in the market. | | | | | |
| | **Number of investments** | | | | | |
| **NIN1** | Our organization makes sufficient investments in a variety of technological innovations | | | | | |
| **NIN2** | The number of investments our organization makes directly correlates with the level of technological advancements achieved | | | | | |
| **NIN3** | There is a strategic approach in our organization to diversify investments across different technological areas | | | | | |
| **NIN4** | There is a clear understanding among employees of how the number of investments impacts our overall technological innovation capability. | | | | | |
| **NIN5** | The decision-making process for investing in technology involves input from various departments to ensure comprehensive coverage of innovation opportunities. | | | | | |
| | **Technological Innovation** | | | | | |
| **TEI1** | Technological innovation is a priority within our organization | | | | | |
| **TEI2** | Our organization encourages employees to propose and develop innovative technological solutions. | | | | | |
| **TEI3** | There are clear processes and resources in place to support the development of technological innovations. | | | | | |
| **TEI4** | Our organization invests in training and development opportunities related to emerging technologies. | | | | | |
| **TEI5** | Technological advancements are regularly integrated into our strategic planning and decision-making processes. | | | | | |