

## **VENTURE CAPITAL FINANCING AND PERFORMANCE OF SMALL AND MEDIUM SCALE ENTERPRISES IN NIGERIA**

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**Abstract:** This study examined the relationship between venture capital financing (VCF) and performance of Small and Medium-scale Enterprises (SMEs) in Nigeria from 2011 to 2023. The study used SMEs profitability, job creation of SMEs and the number of SMEs to proxy performance of SME's. The relevant data was sourced from Central Bank of Nigeria (CBN) statistical bulletin and World Bank database and analysed using unit root test and least square regression. The result revealed that SMEs profitability and number of SME's, exhibit significant relationship with venture capital financing, while non-significant relationship exist between venture capital financing and SME performance in terms of job creation. The growth in profitability and number of SME's without growth in job creation is viewed as lopsided growth pattern. The study advocates for SME's extensive and sustainability growth policies from the Federal Government of Nigeria in order to enhance job creation among the SME's.

**Keywords:** Venture Capital financing, SME's profitability, Number of SME's, Job creation

### **INTRODUCTION**

The pursuit of long-term economic growth and development has reemphasized the importance of financial access, particularly for small and medium-sized enterprises (SMEs), which are regarded as critical drivers of economic growth, employment generation, and innovation in both developed and developing economies

Small and Medium Scale Enterprises (SMEs) are businesses or enterprises that operate on a smaller scale, with limited investment and turnover (Aremu & Adeyemi, 2011). These enterprises typically have fewer personnel and generate lower revenues compared to larger enterprises (Organization for economic cooperation and development OECD, 2021). As defined by CBN small and medium scale enterprise is any enterprise with a maximum asset base of N500 million (excluding land and working capital). This decline has severely impacted key sectors such as wholesale and retail, ICT, and manufacturing, affecting employment and overall economic growth. (PWC 2020)

Small and Medium scale Enterprises are considered to be one of the principal driving forces in economic development of both developed and developing nations, as they generate employment, help in diversifying the economic activity and makes a significant contribution to export trade through utilization of locally available resources, absorbing labour, penetrating new market and generally expanding the economy in creative and innovative way (Usman, Isah & Tanko, 2018). However, if SME's will remain relevant in achieving social economic development in any economy, they need productivity increase which can be achieved through financing (Akingnnola, 2011).

Nevertheless, one of the major challenges faced by the SME's in Nigeria is inadequate funding, characterized by their inability to access credit from many financial institutions due to their stringent lending policies, making most of them to rely on their retained earnings for their investment, hence difficult to achieve growth and sustainable development (Mbotto, Offiong and Udoka 2018). To that effect, venture capital finance has emerged as a crucial source of funding for SMEs, allowing them to innovate, grow, and compete in a more globalized environment.

Venture capital financing are capital provided by firms who invest alongside management in young companies or early start-up businesses that are not quoted on the stock market in exchange for stock or shares in the future (Biney 2018). The origins of venture capital can be traced back to the post-World War II era, when investors began to realize the potential of funding high-risk, high-reward projects (Daramela, 2012).

The first VC firm, American Research and Development Corporation (ARDC) was founded in 1946 by Georges Doriot. ARDC's most notable investment was in Digital Equipment Corporation, which provided a massive return on investment and helped establish the potential of VC funding (Mike Mc Peak 2023).

These institutions are designed to provide medium and long term financing, with provision of technical and managerial services, in addition to monitoring effectively the progress of the investee firms (Effiom & Edet, 2018). If properly managed, Venture capital has the tendency to encourage entrepreneurship, job creation, and diversification of the economy (Nigeria corporate finance, 2024). Though the role of VCs is well documented in western developed economies, limited attention has been paid to it by SMEs in emerging markets like Nigeria (Jiang et al, 2014), thus the need for this study.

Again, previously, researchers like Ojo and Adegboye (2020) focus primarily on the financial benefits of venture capital investments, while Eniola (2021) considers the role of VC in providing financial backing to SMEs, without thoroughly investigating its impact on job creation, and operational sustainability and profitability. Thus, this study seeks to fill these gaps by ascertaining the effect of venture capital financing on SMEs profitability, examining the effect venture capital financing on job

creation of SMEs and determining the effect of venture capital financing on the number of SMEs in Nigeria from 2011 to 2023.

## **REVIEW OF LITERATURE**

### **Venture Capital Financing**

Venture capital (VC) financing refers to investment provided by venture capitalists to startups and small businesses with high growth potential but high risk. Venture capitalists typically provide funding in exchange for equity in the company, offering not only financial resources but also strategic guidance and managerial support. This funding is vital for startups that lack access to traditional forms of financing, such as bank loans or public equity offerings (Davies & King, 2018).

The venture capital process generally involves several stages, beginning with seed capital and progressing through early-stage and growth-stage investments. Seed capital is the initial funding provided to help startups develop their business idea into a viable product or service. Early-stage investments support companies that have developed a prototype and are beginning to enter the market, while growth-stage investments are intended to scale operations and expand market reach (Chemmanur & Fulghieri, 2019). Each stage involves different levels of risk and return, with venture capitalists carefully evaluating potential investments based on a company's growth prospects, market potential, and management team (Zhang & Jang, 2020).

One of the important aspects of venture capital financing is the evaluation process. Venture capitalists use a combination of quantitative and qualitative criteria to assess potential investments. Financial metrics such as projected revenue growth, profit margins, and return on investment are critical factors, but qualitative aspects such as the entrepreneur's experience, market opportunity, and competitive landscape are also significant. This comprehensive evaluation helps venture capitalists identify promising startups with the potential for substantial returns (Black and Gilson, 2019).

Venture capitalists often take an active role in the companies they invest in, providing strategic advice, mentoring, and access to their networks. This involvement can significantly enhance the likelihood of a startup's success by improving its business model, market strategy, and operational efficiency. Furthermore, venture capitalists may also influence key business decisions, including hiring practices, product development, and market entry strategies (Emerah et.al, 2020).

The impact of venture capital financing extends beyond individual startups to the broader economy. Venture capital-funded companies are often at the forefront of technological innovation and economic growth. Firms backed by venture capital are more likely to introduce new products and services, create jobs, and contribute to economic development. The presence of a robust venture capital sector can stimulate entrepreneurial activity, attract additional investment, and foster a culture of innovation (Hsu, 2020).

Venture capital investments are inherently risky, with a significant proportion of startups failing to achieve their growth targets. Additionally, the expectations and demands of venture capitalists can sometimes lead to conflicts over business direction and control. Effective communication and alignment of goals between investors and entrepreneurs are crucial for mitigating these risks and ensuring successful outcomes (Baldwin and Rafiqzaman, 2020).

### **Effects of Venture Capital Financing On SMEs Profitability**

Venture capital financing often provides the necessary capital for SMEs to scale their operations, invest in research and development, and expand their market reach. This increased capacity for growth can lead to higher revenues and improved profitability. Venture capital-backed SMEs tend to experience faster revenue growth compared to non-VC-backed firms, primarily due to the substantial investment in innovation and market expansion. Additionally, venture capitalists often bring valuable expertise and networks to the table (Achugbu, 2017).

The active involvement of venture capitalists in strategic decision-making, management practices, and operational improvements can positively influence SME performance. This support includes mentorship, business development advice, and connections to potential customers, partners, and suppliers. Such involvement can enhance the efficiency and effectiveness of SME operations, thereby contributing to higher profitability (Black & Gilson, 2019). VC investors typically require detailed reporting and performance monitoring, which encourages SMEs to adopt best practices and focus on key performance indicators. This rigorous approach to performance management can lead to improved operational efficiency and profitability by ensuring that SMEs are aligned with their business goals and market demands (Eke, 2019).

### **Venture Capital Financing and SMEs Job Creation**

Venture capital financing aids SMEs, particularly those in their early stages, as it provides the necessary capital to scale operations and pursue growth opportunities that might be inaccessible through traditional financing sources. This type of financing involves equity investments made by venture capitalists in exchange for ownership stakes in high-potential startups. Venture capital funding enables SMEs to expand their operations, develop new products, and enter new markets, all of which contribute to job creation (Egu et.al, 2024).

One of the primary ways venture capital financing impacts job creation is by supporting business expansion. SMEs receiving venture capital funding often use the capital to increase their production capacity, enhance their technological capabilities, and expand their market reach. These growth activities typically require hiring additional staff, which directly creates new jobs. Venture capital-backed SMEs tend to experience faster growth in employment compared to non-VC-backed firms, primarily due to their enhanced capacity for scaling operations (Biney and Gan, 2018).

The presence of venture capital financing has a broader impact on the job market beyond the individual SME. Successful venture capital-backed SMEs can stimulate job creation within their local economies and industries by fostering innovation and driving economic growth. This ripple effect can create additional employment opportunities in related sectors, such as supply chains, service providers, and ancillary businesses (Aman, 2023).

Venture capital financing contributes to job creation through its focus on high-growth sectors and industries, such as technology and biotech. These sectors often have high potential for innovation and expansion, leading to significant job creation opportunities. Venture capital-backed firms are more likely to introduce new products and technologies, which can create a wide range of jobs, from research and development positions to manufacturing and sales roles (John, 2023).

### **Venture Capital Financing and sustainability of SMEs**

The availability of venture capital financing can significantly influence the existence of SMEs by enabling them to undertake various business activities that are vital for their sustainability. For instance, Venture capital funding often supports research and development (R&D) initiatives, which are essential for innovation and product development. By investing in R&D, SMEs can develop new products and services, improve their competitive edge, and adapt to changing market conditions, thereby increasing their chances of long-term survival (Manyani, 2014).

The influence of venture capital financing on SME existence also extends to market expansion and scaling efforts. Venture capital funding enables SMEs to enter new markets, increase production capacity, and explore additional revenue streams. These activities can help SMEs diversify their business operations and reduce dependency on a single market or product line, thereby strengthening their position and resilience in the market (Kauffman & Lee, 2019).

The dependency on venture capital can also pose risks for SMEs. The need to meet the expectations of venture capitalists can sometimes lead SMEs to adopt aggressive growth strategies or make short-term decisions that may not align with their long-term goals. This pressure can affect the stability and sustainability of the business, potentially impacting its existence in the long run (Achugu, 2017).

### **Challenges of Venture Capital financing**

However, Venture capitalists usually expect rapid returns on investment, which can put undue pressure on SMEs to prioritize short-term gains over long-term growth, often resulting in unsustainable business practices as SMEs accepting venture capital often means giving up significant equity and control in their company, which can limit decision-making flexibility and affect profitability. Again, founders might prioritize the venture capitalist's agenda over what is best for the company (Adedeji and Yusuf, 2018)

Venture capitalists may push for automation and lean staffing to increase profitability at the expense of job creation (Olaniyi and Olayemi, 2020). The formal application and vetting process for receiving venture capital is often complicated, making it difficult for small-scale entrepreneurs to access funds. This reduces the overall number of SMEs that could benefit from venture capital (Adekunle, 2021).

The high expectations and pressures from venture capitalists can sometimes lead to conflicts over business strategies and priorities. These conflicts can affect decision-making processes and potentially impact profitability if not managed effectively. Additionally, the need to meet aggressive growth targets and financial performance expectations can place significant pressure on SMEs, which might affect their overall stability and profitability (Gikomo, 2013).

The focus of venture capitalists on achieving high returns can lead to short-termism, where SMEs prioritize immediate financial gains over long-term sustainability. This emphasis on short-term performance might drive SMEs to pursue high-risk strategies that could compromise long-term profitability and business viability. Therefore, while VC financing can provide significant benefits, it is essential for SMEs to balance the pursuit of rapid growth with sustainable business practices (David, 2023).

## **Theoretical Review**

### **The Resource Based Theory**

The Resource based theory of entrepreneurship, propounded by Birger Wernerfelt in the year (1984), argues that access to resources by founders is an important predictor of opportunity-based entrepreneurship and new venture growth. This theory stresses the importance of financial, social and human resources as cited by Kwabena Nkansah Simpeh (2011). Financial, social and human capital represents three classes of theories under the resource-based entrepreneurship theories. This theory suggests that people with financial capital are more likely to acquire resources to effectively exploit entrepreneurial opportunities and set up a firm to do so. If Venture capital (VC) financing provides SMEs with access to critical financial resources, which are often scarce and difficult to obtain through traditional financing methods, according to the Resource based theory, these financial resources can be considered valuable and rare, giving SMEs a competitive edge in their respective markets. The infusion of capital allows SMEs to invest in growth opportunities, innovate, and expand operations, directly impacting their performance. For example, the ability to finance research and development, marketing, and scaling operations can differentiate an SME from its competitors, contributing to superior performance (Barney, 2011).

### **Empirical Review**

Aman (2020) explored the impact of Venture Capital Funding on the Performance of Small and Medium-Sized Enterprises (SMEs) in Russia using correlation matrix and focusing on internal

organizational structuring and human resources management. The findings affirmed that venture capital funding significantly and positively influences the growth and performance of SMEs. John (2023) conducted a study investigating the influence of venture capital financing on Start-up Success through a comprehensive review articles, conference papers, and relevant academic publications. The study concluded that venture capital financing substantially contributes to start-up success by providing not only financial resources but also valuable managerial expertise, industry connections, and guidance. David (2023) examined the relationship between venture capital and other Sources of Finance through a literature review of both qualitative and quantitative studies. The findings highlighted the significance of venture capital financing in conjunction with other financial sources. Baldwin & Rafiquzzaman (2020) explored the role of financial management skills in the performance of SMEs in Malawi using OLS method. The study revealed that proficiency in financial management supports various aspects such as capital raising, profitability, investor confidence, risk mitigation, strategic decision-making, access to credit and financing, and tax compliance. Effective financial management contributes to long-term sustainability while balancing growth objectives with profitability. Biney and Gan (2018) investigated the impact of venture capital financing on small and medium enterprises' growth and development in Ghana using both propensity score matching and difference-in-difference estimation techniques. The result showed a positive and significant correlation between venture capital financing and SMEs' growth in the context of employment and sales in Ghana. Achugbu (2017) investigated the impact of venture capital (VC) financing on the growth of innovative 30 start-up companies in Nigeria using content analysis method. It was found that venture capital financing had an impact on the growth of innovative start-ups.

Manyani (2014) investigated effect of venture financing on small and medium scale enterprises in Bindura Urban, Zimbabwe using content analysis and the results indicated that the majority of SMEs in Bindura used their own savings, family and friends to finance their businesses. This is because, the financing options available to Bindura SMEs are impracticable to support the capital required for their operation because of stringent requirements and lack of collateral security. Gikomo (2013) investigated the effect of venture capital financing on the growth of top 100 medium sized SMEs in Kenya using cross sectional research design. Using a regression model the study found out that there was a positive and significant relationship between growth in SMEs and venture capital financing. Memba, Gakure & Karanja (2012), studied the impact of venture capital on growth of Small and Medium Enterprises (SME) in Kenya and the findings revealed that venture capital had an impact on growth of SME they financed and that use of venture capital can be profitable in Kenya even in an inauspicious political and economic climate.

Dalberg Global Development Advisors (2012) assessed the impact of Multilateral Investment Fund's Venture Capital Program in Latin America using time-series data. The study examined impact of Venture Capital on companies' revenue and job growth using a pre and post analysis. The result revealed that Venture Capital-backed firms in the sample under. Afua (2011) studied the impact of venture capital financing on SMEs in the Tema Metropolis in Ghana using primary data and frequency counts and percentages as main statistical techniques. It was generally observed that SME's prefer self-financing and occasionally received support from financial institutions. While firms that had benefited from venture capital financing stated that they did not only receive capital inflow but was accompanied with monitoring, technical skills and expertise, access to management, marketing and distribution and reputation for attracting further finance.

Juha (2010) examined the effect of venture capital investment on small and medium enterprises in Finland using regression analysis. The result showed that venture capitalists have a positive effect on SMEs in Finland. Yap (2009) analyzed the effect of venture capital firm's reputation on its start-up company's long term operating performance and survivorship in Singapore. Using cross sectional data and regression method. The result showed that venture capital companies' market share and IPO share have strong and positive association with the post-IPO long-term performance metrics, and the effects are statistically significant even after accounting for self-selection bias. Dagogo & Ollor (2019) examined the effect of venture capital financing on the economic value added profile of Nigerian SMEs using Paired t-tests and multiple regression analysis. The result showed that the percentage growth of average economic value added of Venture Capital -backed SMEs from 2003 to 2007 was 1,678 percent, whereas there was a reduction in the average of economic value added of non VC-backed SMEs by 3.3 percent. The result of the multiple regression analysis indicated that management support was the major driver in the high performance of VC-backed SMEs. Egu et.al (2024) examined the effect of venture capital financing on the Net sales, net profit and Return on Assets of SMEs in Cross River state, Nigeria. Data was collected from SMEs in Cross River State that registered with Corporate Affairs Commission and have used venture capital and analyzed using descriptive statistics of mean and standard deviation. The findings revealed that there was significant difference in net sales, net profit and return on assets after using venture capital financing. Emerah et.al (2020) explored the effect of venture capital on the performance of small and medium scale enterprises which have received assistance from VC in Nigeria using primary data and linear regression. The results showed that venture capital had a significant positive effect on the performance of small and medium scale enterprises in Nigeria.

## **METHODOLOY**

### **Research Design**

This study adopts an ex-post facto research design to explore the relationship between venture capital financing and performance of SMEs. This approach allows for the analysis of historical data to understand how venture capital financing influences the performance of SMEs. The study utilized secondary data sourced from World Bank Database and CBN Statistical Bulletin from 2011-2023.

### **Model Specification**

The study adapted regression model of Emerah et.al (2020) which states thus;

$$\text{Profit} = b_0 + b_1\text{NA} + b_2\text{S} + ut \dots \dots \dots \text{eq 2}$$

Where:

Profit= Performance (dependent variable).

NA= Net Assets (independent variable)

S = Sales (independent variable)

VC = Venture capital

The model was modified based on the objectives of this study as follows:

$$\text{SMEP} = \beta_0 + \beta_1\text{VCF} + \varepsilon$$

$$\text{JC} = \beta_0 + \beta_2\text{VCF} + \varepsilon$$

$$\text{NSME} = \beta_0 + \beta_3\text{VCF} + \varepsilon$$

Where:

PFR = Performance of SMEs

VCF = Venture Capital Financing

SMEP = Small and Medium Scale Enterprises (SMEs) Profitability

JC = Job Creation

NSMEs = Number of Small and Medium Scale Enterprises (SMEs).

Bo is the intercept,  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are the coefficients of the models explanatory variables, and  $\varepsilon$  is the error term, capturing other factors that influence SME performance not included in the model.

### **Method of Data Analysis**

Data was analyzed using correlation matrix, unit root test and simple regression analysis with the help of E-views 19 statistical software to ensure robustness and accuracy of results.

## **4. DATA PRESENTATION AND ANALYSIS**

In this section, the descriptive statistics for the independent and dependent variables under consideration are analysed in table 1 in terms of its mean, median, maximum, and minimum values.

**Table 1:** Descriptive statistics of the model variables

	TVF	SMEP	EMPR	NSME
Mean	341.1000	75.48801	56.45291	93596.64
Median	104.1000	44.82284	56.65900	86309.00
Maximum	893.7000	355.0400	57.59100	129980.0
Minimum	24.40000	10.74789	55.02600	70441.00
Std. Dev.	366.1616	100.7340	0.801387	24904.86
Skewness	0.569576	2.126215	-0.313778	0.673362
Kurtosis	1.488715	6.612544	2.049998	1.774567
Jarque-Bera Probability	1.641590 0.440082	14.26958 0.000797	0.594152 0.742988	1.519538 0.467775
Sum	3752.100	830.3681	620.9820	1029563.
Sum Sq. Dev.	1340743.	101473.3	6.422219	6.20E+09
Observations	11	11	11	11

Source: E-Views 11

Key: TVF-Total Venture Financing (\$' million); SMEP-SME Profitability (₦' Billion); EMPREmployment Rate; NSME-Number of SMEs.

Table 1 shows that Total Venture Financing (TVF) had a mean value of \$341.1 million, indicating the average level of venture financing across the 11 observations. The median value, at \$104.1 million, is significantly lower than the mean, suggesting that the data is skewed by a few higher values, which is confirmed by a positive skewness of 0.57. The standard deviation of 366.16 highlights considerable variability in venture financing amounts, with the maximum reaching \$893.7 million and the minimum being as low as \$24.4 million. The Jarque-Bera test value of 1.64 and the probability of 0.44 indicate that the data is not significantly different from a normal distribution. SME Profitability (SMEP) displays a mean of ₦75.49 billion, with a median value of ₦44.82 billion, showing that the profitability figures are positively skewed, as indicated by the skewness value of 2.13. This positive skewness, coupled with a maximum value of ₦355.04 billion, suggests a small number of highly profitable periods significantly influence the average. The standard deviation of 100.73 indicates substantial variation in SME profitability across the observations. The Jarque-Bera statistic for SMEP is 14.27 with a probability of 0.0008, which suggests that the distribution is not normal. Employment Rate (EMPR) showed a mean value of 56.45%, with a median of 56.66%, indicating that the data is closely clustered around the

central value, with a narrow range between the maximum (57.59%) and minimum (55.03%). The standard deviation is relatively small at 0.80, showing minimal variation in the employment rate. A negative skewness of -0.31 suggests a slight skew towards lower values. The Jarque-Bera statistic is 0.59, and the associated probability of 0.74 indicates a normal distribution. The Number of SMEs (NSME) has a mean value of 93,596.64, with a median of 86,309, indicating that the data is moderately skewed, with a skewness of 0.67. The maximum value is 129,980 SMEs, while the minimum is 70,441, resulting in a relatively large standard deviation of 24,904.86, showing significant variability in the number of SMEs across the periods. The Jarque-Bera statistic of 1.52 and a probability of 0.47 imply that the number of SMEs is normally distributed.

### Correlation Matrix

To examine the association among the variables, the Pearson correlation coefficient is used and the results shown below.

**Table 2:** Correlation analysis of the model variables

	TVF	SMEP	EMPR	NSME
TVF	1.0000	0.3926	-0.2089	0.6879
SMEP	0.3926	1.0000	-0.0148	0.7026
EMPR	-0.2089	-0.0148	1.0000	-0.3163
NSME	0.6879	0.7026	-0.3163	1.0000

Source: E-Views 11

TVF has a moderate positive correlation with SME Profitability (SMEP) at 0.3926, suggesting that higher levels of venture financing are somewhat associated with improved profitability in SMEs. Additionally, there is a strong positive correlation between TVF and the Number of SMEs (NSME) at 0.6879, implying that increased venture financing is linked to a rise in the number of SMEs. However, TVF is weakly and negatively correlated with the Employment Rate (EMPR) at -0.2089, indicating that higher venture financing does not directly translate to improvements in employment.

SME Profitability (SMEP) exhibits a moderate positive correlation with TVF (0.3926) and a strong positive correlation with the Number of SMEs (0.7026). This indicates that higher profitability fosters the expansion of SMEs. The correlation between SMEP and Employment Rate (EMPR) is near zero (-0.0148), suggesting no significant relationship between SME profitability and employment levels.

The Employment Rate (EMPR) shows a weak negative correlation with most variables in the model. It has a slightly negative correlation with TVF (-0.2089) and NSME (-0.3163), indicating that increases in venture financing and the number of SMEs might not directly improve employment rates. The correlation of SMEP with EMPR (-0.0148) further supports the lack of a significant relationship.

The Number of SMEs (NSME) has a strong positive correlation with both TVF (0.6879) and SMEP (0.7026), showing that more SMEs are associated with higher venture financing and profitability. However, it is negatively correlated with EMPR (-0.3163), suggesting that an increase in the number of SMEs may not necessarily lead to higher employment rates, and could be related to other economic factors.

**Unit Root Test**

Null Hypothesis (H<sub>0</sub>): The variable X has a unit root

Alternate Hypothesis (H<sub>1</sub>): The variable X has no unit root

**Table 3:** ADF test for model variables

Variable			ADF	Prob
TVF	Level	1(0)	-2.241621	0.2031
	First difference	1(1)	-3.544585	0.0335
SMEP	Level	1(0)	0.824572	0.9894
	Second difference	1(2)	-5.160095	0.0051
EMPR	Level	1(0)	-1.804293	0.3593
	Second difference	1(2)	-3.828532	0.0225
NSME	Level	1(0)	0.001716	0.9367
	Second difference	1(2)	-4.540349	0.0133

Source: E-Views 11

The data was subjected to unit root test through Augmented Dickey-Fuller (ADF). The result in Table 3 below showed that TVF is stationary at first difference while others were stationary after the second differencing

**Test of Hypothesis One**

H<sub>0</sub>: There is no significant effect of venture capital financing on SMEs' profitability.

H<sub>1</sub>: There is a significant effect of venture capital financing on SMEs' profitability.

The robust regression output for the test of hypothesis one is shown below as follows:

**Table 4:** Regression output for the test of hypothesis one

Dependent Variable: SMEP

Method: ML ARCH - (BFGS / Marquardt steps)

Date: 10/04/24 Time: 21:16

Sample: 2011 2023

Included observations: 13

Method: M-estimation

M settings: weight=Bisquare, tuning=4.685, scale=MAD (median centered)

Huber Type I Standard Errors & Covariance

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	13.62293	6.640446	2.051508	0.0402
TVF	0.088560	0.014787	5.989167	0.0000
Robust Statistics				
R-squared	0.516273	Adjusted R-squared	0.472298	
Rw-squared	0.891493	Adjust Rw-squared	0.891493	
Akaike info criterion	39.54740	Schwarz criterion	41.92473	
Deviance	4187.662	Scale	10.66823	
Rn-squared statistic	35.87012	Prob(Rn-squared stat.)	0.000000	
Non-robust Statistics				
Mean dependent var	66.14179	S.D. dependent var	94.74549	
S.E. of regression	94.08482	Sum squared resid	97371.49	

Source: E-Views 11

The R-squared value of 0.516273 implies that the model explains about 51.6% of the variability in SME profitability. The adjusted R-squared value of 0.472298 accounts for the number of predictors, slightly lowering the explained variability to 47.2%. The R-squared value of 0.891493 indicates that the model's robustness check shows a very high degree of fit when considering the robustness adjustments (e.g., M-estimation). The constant term (C) is 13.62293, with a standard error of 6.640446 and a z-statistic of 2.051508, which is statistically significant at the 5% level (p-value = 0.0402). The coefficient for TVF is 0.088560, with a very low standard error of 0.014787 and a highly significant z-statistic of 5.989167 (p-value = 0.0000). This indicates that for every 1-unit increase in venture financing, SME profitability increases by approximately 0.089 units. The highly significant relationship between TVF and SMEP underscores the importance of venture financing in driving SME profitability, making it a critical factor.

**Decision Rule:**

The results of the robust model provide valuable insights into the relationship between Total Venture Financing (TVF) and SME Profitability (SMEP). Since the p-value is less than .05; we reject the null

and accept the alternate; thus, “*There is a significant effect of venture capital financing on SMEs profitability*”.

**Test of Hypothesis Two**

H<sub>0</sub>: There is no significant relationship between venture capital financing and SME performance in terms of job creation.

H<sub>1</sub>: There is a significant relationship between venture capital financing and SME performance in terms of job creation.

The robust regression output for the test of hypothesis two is shown below as follows:

**Table 5:** Regression output for the test of hypothesis two

Dependent Variable: EMPR

Method: ML ARCH - (BFGS / Marquardt steps)

Date: 10/04/24 Time: 21:26

Sample: 2011 2023

Included observations: 13

Method: M-estimation

M settings: weight=Bisquare, tuning=4.685, scale=MAD (median centered)

Huber Type I Standard Errors & Covariance

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	57.08170	0.366898	155.5792	0.0000
TVF	-0.001062	0.000817	-1.299791	0.1937
Robust Statistics				
R-squared	0.144681	Adjusted R-squared	0.066925	
Rw-squared	0.197117	Adjust Rw-squared	0.197117	
Akaike info criterion	18.13191	Schwarz criterion	19.28805	
Deviance	7.770636	Scale	0.740841	
Rn-squared statistic	1.689456	Prob(Rn-squared stat.)	0.193673	
Non-robust Statistics				
Mean dependent var	56.68923	S.D. dependent var	0.933489	
S.E. of regression	0.914156	Sum squared resid	9.192498	

Source: E-Views 11

The R-squared value of 0.144681 indicates that the model explains only 14.5% of the variability in the employment rate. The adjusted R-squared of 0.066925 suggests that after accounting for the number

of predictors, the model's explanatory power drops to about 6.7%. The R-squared value of 0.197117 indicates a slight improvement in model fit when robust methods are applied, but the overall fit remains modest. The constant term is 57.08170, with a very small standard error of 0.366898 and an extremely high z-statistic of 155.5792 (p-value = 0.0000). This indicates that when TVF is zero, the employment rate is expected to be around 57.08%. The coefficient for TVF is -0.001062, indicating a small negative effect of venture financing on the employment rate. However, the z-statistic of -1.299791 and p-value of 0.1937 indicate that this relationship is not statistically significant. This suggests that venture financing does not have a meaningful direct impact on the employment rate in this model, as the negative coefficient is not strong enough to infer a clear effect.

**Decision Rule:**

The model results provide insights into the relationship between Total Venture Financing (TVF) and EMPR. Since the p-value is greater than .05; we reject the alternate and accept the null; thus, "There is no significant relationship between venture capital financing and SME performance in terms of job creation".

**Test of Hypothesis Three**

Ho: There is no significant effect of venture capital financing on the number of SMEs in Nigeria.

H1: There is a significant effect of venture capital financing on the number of SMEs in Nigeria.

The robust regression output for the test of hypothesis three is shown below as follows:

**Table 6:** Regression output for the test of hypothesis three

Dependent Variable: NSME

Method: ML ARCH - (BFGS / Marquardt steps)

Date: 10/04/24 Time: 21:43

Sample (adjusted): 2013 2023

Included observations: 11 after adjustments

Method: M-estimation

M settings: weight=Bisquare, tuning=4.685, scale=MAD (median centered)

Huber Type I Standard Errors & Covariance

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	73557.91	5183.673	14.19031	0.0000
TVF	70.70524	10.62025	6.657585	0.0000

## Robust Statistics

R-squared	0.405339	Adjusted R-squared	0.339266
Rw-squared	0.920088	Adjust Rw-squared	0.920088
Akaike info criterion	27.84287	Schwarz criterion	27.20228
Deviance	7.87E+08	Scale	5928.051
Rn-squared statistic	44.32344	Prob(Rn-squared stat.)	0.000000

## Non-robust Statistics

Mean dependent var	93596.64	S.D. dependent var	24904.86
S.E. of regression	21646.35	Sum squared resid	4.22E+09

Source: E-Views 11

The model addresses heteroskedasticity concerns and provides both robust and non-robust statistics to evaluate the strength and significance of the variables. The R-squared value of 0.405339 means that the model explains about 40.5% of the variation in the number of SMEs. The adjusted R-squared value of 0.339266 shows that after accounting for the number of predictors, i.e., 33.9%. The R-squared value of 0.920088 demonstrates a very strong fit when robustness adjustments are applied. The model appears to explain 92% of the variability in the number of SMEs.

The constant term is 73,557.91, with a standard error of 5,183.673 and a z-statistic of 14.19031 (p-value = 0.0000), which is highly significant. This implies that when TVF is zero, the number of SMEs is expected to be around 73,558. The significance of this constant shows that, independent of venture financing, there is a baseline number of SMEs. The coefficient for TVF is 70.70524, with a small standard error of 10.62025 and a very high z-statistic of 6.657585 (p-value = 0.0000). This indicates, that for every \$1 million increase in venture financing, the number of SMEs increases by about 70.71.

### Decision Rule:

The model results provide insights into the relationship between Total Venture Financing (TVF) and the no. of SMEs. Since the p-value is less than .05; we reject the null and accept the alternate; thus, “*There is a significant effect of venture capital financing on the number of SMEs in Nigeria*”.

### Conclusion and Recommendation

From the result of the analysis, it was revealed that venture capital financing plays a crucial role in enhancing the performance of small and medium-sized enterprises (SMEs) through increment in profitability and number of SME's though, no significant relationship existed between venture capital financing and job creation.

The study concludes that non-existence of significant relationship between VCF and job creation in SME's in Nigeria despite the existence of positive significant relationship that exist between VCF and SME's profitability and number of SME's is an indication of lopsided growth pattern, as economically, increase in number of SME's and profitability supposed to create more job opportunities.

Based on the findings, the study recommends for an intensive and sustainability growth rate policies in favour of SME's in Nigeria that will bring significant and sustainable growth in SME's which will lead to job creation.

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## APPENDICES I

Year	Early Stage	Later Stage	Seed Stage	Total Venture Financing	NSME	EMPR	SMEP
2011	10.2	5.2	3.5	18.9		58.133	15.61
2012	15.8	8.4	4.8	29		57.845	13.86
2013	20.5	12.6	7.2	40.3	72838	57.591	15.35

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2014	25.6	15.2	8.6	49.4	72838	57.341	16.07
2015	30.2	18	9.9	58.1	70441	57.054	12.95
2016	32.4	21.4	11.1	64.9	75380	56.659	10.75
2017	701.5	124.1	10.1	835.7	73081	56.293	10.75
2018	20	0	4.4	24.4	86309	56.006	44.82
2019	224.1	0	23.3	247.4	90748	55.805	123.93
2020	44.9	56.6	2.6	104.1	97988	55.026	62.51
2021	81.3	781.6	30.8	893.7	129980	55.507	83.74
2022	60.3	703	27.5	790.8	129980	56.703	94.46
2023	80.5	551	11.8	643.3	129980	56.997	355.04

Source: Statistics Database/World Bank Database/CBN Statistical Bulletin