

Full Length Research

# Effect of Apprenticeship on the Performance of Small and Medium-Sized Enterprises (SMES) In Nasarawa State

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Small and Medium-sized Enterprises (SMEs) are widely acknowledged as critical drivers of economic growth, innovation, and employment generation, yet their performance in Nigeria continues to face persistent challenges. This study examined the effect of apprenticeship on SME performance in Nasarawa State, with particular focus on the dimensions of commitment, competence, and mentorship. The research adopted a survey design, drawing a sample of 425 SMEs from a population of 10,728 formally registered enterprises, determined through Taro Yamane's formula. Data were collected using structured questionnaires and analysed using descriptive statistics, correlation, and multiple regression techniques with the aid of SPSS version 28. Findings revealed that apprenticeship significantly influenced SME performance, with competence exerting the strongest effect, followed by commitment and mentorship. Collectively, these dimensions explained 98.2% of the variance in SME performance, underscoring the centrality of skill acquisition, behavioural discipline, and knowledge transfer in shaping productivity, profitability, and sustainability. Theoretically, the results validate the Human Capital Theory, Resource-Based View, and Social Learning Theory, affirming apprenticeship as both a human capital investment and a strategic resource. The study recommends that SME operators and policymakers institutionalise structured apprenticeship programmes that emphasise competence building, mentorship, and behavioural commitment in order to enhance innovation, resilience, and competitiveness in Nigeria's SME sector.

**Keywords:** Apprenticeship, Commitment, Competence, Mentorship, SME Performance, Nasarawa State

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## INTRODUCTION

Small and Medium-sized Enterprises (SMEs) occupy a central position within the architecture of modern economies. Across both developed and emerging nations, these enterprises serve as catalysts for employment generation, technological adaptation, and entrepreneurial expansion. Globally, SMEs account for more than 90 per cent of all businesses and provide over half of total employment, making them indispensable to inclusive economic development

(World Bank, 2020). Despite this prominence, many SMEs struggle with productivity challenges linked to inadequate skills and limited workforce development. One enduring mechanism for addressing such deficiencies is apprenticeship. Historically embedded in vocational traditions across Europe, Asia, and North America, apprenticeship systems combine practical workplace training with guided mentorship. Countries such as Germany and Switzerland have institutionalised structured apprenticeship programmes that strengthen industrial competitiveness and ensure a steady supply of skilled labour (ILO, 2021). Within these settings, apprenticeships facilitate the transfer of tacit knowledge, cultivate professional discipline, and align workforce capabilities with organisational needs.

In developing economies, the relevance of apprenticeship becomes even more pronounced because formal training systems often remain limited or inaccessible. Apprenticeship arrangements therefore act as alternative pathways for skill acquisition and labour market integration. In many African societies, apprenticeship operates largely through informal networks, allowing young individuals to learn trades while simultaneously contributing to enterprise productivity. Nigeria presents a notable example, where traditional systems such as the Igbo apprenticeship model have attracted scholarly attention for their capacity to nurture entrepreneurship and support intergenerational wealth creation (Onyeiwu, 2021). Within this framework, apprentices gradually acquire technical expertise, business acumen, and social capital through prolonged engagement with experienced business owners.

Nigeria's SME sector remains expansive and economically significant. According to the SMEDAN and National Bureau of Statistics survey, the country hosts more than 39 million SMEs, collectively employing over 80 per cent of the labour force and contributing nearly half of national Gross Domestic Product (SMEDAN/NBS, 2021). Despite these impressive figures, the sector faces persistent vulnerabilities. Many enterprises experience fragile growth trajectories and high failure rates, with close to seventy per cent of SMEs collapsing within their first five years of operation (Adebayo, 2022). Analysts frequently attribute these outcomes to limited access to finance, infrastructural inadequacies, and weak human capital development, particularly in relation to employee productivity and technical competence (Eniola, 2023). Within this context, apprenticeship emerges as a pragmatic human capital strategy capable of bridging skills gaps while simultaneously enhancing operational efficiency.

Three interrelated dimensions of apprenticeship are particularly instructive when evaluating its contribution to SME performance. The first is apprentice commitment, which refers to the degree of dedication, diligence, and loyalty displayed by apprentices during the training process. High levels of commitment often translate into stronger work ethics and increased organisational attachment, thereby improving employee output and enterprise stability (Nwachukwu & Ajayi, 2020). The second dimension is apprentice competence, representing the technical, cognitive, and problem-solving abilities acquired through sustained practical exposure. Competence equips workers with the capacity to adapt to changing market demands, improve production processes, and foster innovation within SMEs (Obi & Eze, 2021). The third dimension concerns the role of mentorship. Mentorship reflects the guidance, supervision, and experiential knowledge transmitted by business owners or senior practitioners. Through mentorship, apprentices gain not only occupational skills but also strategic insights that support professional growth and business continuity (Yakubu & Ibrahim, 2022).

The relevance of these apprenticeship dimensions becomes particularly evident within Nasarawa State in North-Central Nigeria. The state has experienced steady commercial expansion due to its strategic proximity to Abuja and its growing concentration of small enterprises engaged in trade, agriculture, and service delivery. Nevertheless, SMEs operating within the state continue to encounter obstacles such as limited productivity, modest profitability, and recurring employee turnover (Abdul & Musa, 2023). Although apprenticeship practices are widely utilised by local entrepreneurs as informal training arrangements, empirical studies examining their direct influence on SME performance in this region remain scarce. Existing research has largely concentrated on other Nigerian regions, leaving a noticeable gap in understanding how apprenticeship functions within the economic environment of Nasarawa State.

Against this backdrop, critical questions arise regarding the actual value of apprenticeship within the SME ecosystem of the state. Does apprentice commitment contribute meaningfully to enterprise productivity and organisational stability? To what extent does apprentice competence translate into improved operational outcomes and business growth? Furthermore, how does mentorship shape the professional development of apprentices and the sustainability of SME activities? Addressing these questions is essential for clarifying the role of apprenticeship as a mechanism for strengthening human capital within small businesses.

The present study therefore aims to examine the effect of apprentice commitment on SME performance, assess the influence of apprentice competence on enterprise outcomes, and evaluate the role of mentorship in shaping SME productivity and sustainability in Nasarawa State. By exploring these relationships, the study provides insights that may guide policy formulation, enterprise management, and academic discourse. Policymakers may utilise the findings to design more effective vocational support initiatives, while SME operators may better appreciate the strategic benefits of structured apprenticeship practices. From an academic standpoint, the study contributes to the evolving discourse on human capital development by situating apprenticeship within the socio-economic context of SMEs operating in Nasarawa State, Nigeria.

## Statement of the Research Problem

Small and Medium-sized Enterprises (SMEs) are central to economic development worldwide, serving as key drivers of innovation, employment, and poverty reduction. In Nigeria, they constitute over 39 million enterprises, employ more than 80% of the workforce, and contribute nearly half of national GDP (SMEDAN/NBS, 2021). In Nasarawa State, SMEs are prominent in trade, agriculture, services, and small-scale manufacturing, providing vital livelihoods to households and communities. Despite these contributions, their overall performance has remained weak. Problems such as low productivity, inconsistent profitability, weak customer retention, and short business lifespans have plagued SMEs. Studies suggest that about 70% of Nigerian SMEs collapse within the first five years of establishment (Adebayo, 2022), and the trend is evident in Nasarawa State.

One of the major factors behind this underperformance is inadequate human capital development. Unlike larger firms, SMEs in Nasarawa lack the resources to run formal training schemes. Many rely on informal or ad hoc training methods, which fail to equip workers with the technical and cognitive skills needed to drive innovation, efficiency, and profitability (Eniola, 2023). Apprenticeship, which integrates skill acquisition with mentorship and hands-on practice, offers a potential remedy. Yet, the role of apprenticeship in shaping SME performance in Nasarawa remains poorly understood.

Evidence from other regions of Nigeria shows that apprenticeship contributes positively to organisational success. For example, the Igbo apprenticeship system in the Southeast is internationally recognised for creating skilled entrepreneurs and sustaining family businesses (Onyeiwu, 2021). Studies in Lagos and Abuja also demonstrate that apprentices who are well-mentored and skilled play a major role in strengthening SMEs resilience and growth (Yakubu & Ibrahim, 2022). However, these findings may not reflect the peculiarities of Nasarawa State, where socio-economic conditions and business structures differ. This highlights a gap in research, as few empirical studies have investigated how apprenticeship, measured by commitment, competence, and mentorship, affects SME performance in the state.

A further concern is that apprenticeship in Nasarawa is largely informal and unstructured. Many SME owners provide little in the way of systematic supervision, feedback, or evaluation. Apprentices often complete their training without developing sufficient skills or discipline to meaningfully contribute to enterprise performance. Where mentorship is weak and skill transfer is limited, SMEs continue to face inefficiency, high employee turnover, and poor customer satisfaction. Conversely, well-designed apprenticeship systems could help SMEs build a loyal, competent, and innovative workforce capable of boosting productivity and profitability.

Despite its importance, apprenticeship as a driver of SMEs performance in Nasarawa has received little scholarly attention. Most existing studies on SMEs emphasise financial, infrastructural, and regulatory constraints while neglecting the role of skill-building mechanisms such as apprenticeship. This lack of evidence prevents policymakers and SME operators from developing interventions tailored to the state's unique context.

Despite the presence of apprenticeship practices in Nasarawa State, SMEs performance remains weak. This suggests that apprenticeship is either not effectively structured or that its potential impact on productivity, profitability, and innovation has not been fully harnessed. Addressing this problem requires empirical investigation into whether commitment, competence, and mentorship as proxies of apprenticeship significantly influence SME performance in Nasarawa State.

## Objective of the study

The main objective of this study is to examine the effect of apprenticeship on the performance of (SMEs). In Nasarawa State .The specific objectives are to:

- i. Investigate the effect of apprentice commitment on the performance of SMEs in Nasarawa State.
- ii. Determine the influence of apprentice competence on the performance of SMEs in Nasarawa State.
- iii. Assess the role of mentorship on the performance of SMEs in Nasarawa State.

## Literature Review

### Apprenticeship

Apprenticeship is increasingly recognised as a vital approach to human capital development and organisational performance, particularly within small and medium-sized enterprises (SMEs). It extends beyond skill acquisition to encompass the transfer of knowledge, values, and workplace behaviours that shape employee effectiveness and business sustainability. According to Wollschlager and Schwarz (2020), apprenticeship integrates structured workplace learning

with mentorship, enabling individuals to acquire both technical competence and organisational discipline. Unlike formal education, which often focuses on theory, apprenticeship emphasises hands-on practice, making it directly relevant to the productivity and survival of SMEs.

Scholars have approached apprenticeship from multiple perspectives. Akanbi (2020) described it as the process by which inexperienced individuals acquire relevant skills and behaviours under the supervision of experienced mentors, thereby strengthening organisational capacity. From this viewpoint, apprenticeship is not only a means of skill transfer but also a mechanism for building loyalty and continuity in small businesses. Obi and Eze (2021) further argued that apprenticeship is central to workforce development, as it equips individuals with competencies that enhance innovation, productivity, and adaptability. Similarly, Yakubu and Ibrahim (2022) emphasised mentorship as a critical component, noting that apprentices who receive close supervision and guidance tend to demonstrate higher levels of commitment and performance. Collectively, these perspectives highlight apprenticeship as both a training method and a developmental strategy that fosters employee and organisational growth.

For this study, Apprenticeship is often operationalised through key dimensions such as commitment, competence, and mentorship. Commitment reflects the dedication, discipline, and loyalty demonstrated by apprentices, which often translates into long-term retention and improved output. Competence represents the technical and cognitive skills acquired during training, influencing innovation and efficiency in SMEs. Mentorship, on the other hand, captures the quality of supervision, coaching, and feedback provided by SME owners or managers, which determines how effectively knowledge and skills are transferred. These dimensions ensure that apprenticeship goes beyond skill acquisition to include behavioural development and workplace integration.

### **Commitment**

Commitment is widely recognised as a key behavioural dimension of apprenticeship, influencing both employee performance and organisational outcomes. Within the context of apprenticeship, commitment goes beyond mere participation in training; it embodies the apprentice's dedication, loyalty, and willingness to align with the values and objectives of the enterprise. According to Nwachukwu and Ajayi (2020), apprentice commitment reflects the level of discipline, punctuality, and perseverance demonstrated throughout the training period. Unlike technical competence, which emphasises skills, commitment highlights the psychological and attitudinal investment of apprentices in their training and future roles.

Scholars have provided varied perspectives on commitment in apprenticeship systems. Obi and Eze (2021) defined it as the behavioural disposition that ensures apprentices remain focused and consistent in learning, even under challenging circumstances. Similarly, Yakubu and Ibrahim (2022) noted that committed apprentices are more likely to develop organisational loyalty, reducing turnover and improving long-term workforce stability. In this view, commitment represents not just individual motivation but also a form of social capital that enhances SME resilience.

For this study, apprenticeship is conceptualised as the structured process through which SMEs in Nasarawa State build employee capability by developing commitment, competence, and mentorship. This definition highlights apprenticeship not only as a mechanism for skill acquisition but also as a developmental framework that enhances SME performance through a committed, competent, and well-guided workforce.

### **Competence**

Competence is a core dimension of apprenticeship and one of the most critical determinants of employee and organisational performance. It refers to the set of technical, cognitive, and behavioural skills acquired by apprentices through continuous practice, observation, and instruction. Unlike commitment, which is primarily attitudinal, competence reflects the functional capacity of apprentices to perform tasks effectively and contribute meaningfully to enterprise objectives. Obi and Eze (2021) defined competence as the ability of apprentices to translate knowledge and training into tangible outputs such as improved productivity, innovation, and problem-solving. In this sense, competence embodies both the technical know-how and the intellectual adaptability required to sustain SME performance in dynamic environments.

Scholars have provided different perspectives on the role of competence in apprenticeship systems. Akanbi (2020) described it as the transfer of knowledge and expertise from experienced mentors to apprentices, enabling the latter to meet the operational needs of SMEs. Yakubu and Ibrahim (2022) emphasised that competence becomes evident when apprentices can carry out responsibilities independently, with minimal supervision, thereby reducing errors and enhancing efficiency. Similarly, Yusuf and Olanrewaju (2023) observed that SMEs with highly competent apprentices were more

resilient during periods of economic uncertainty, as they possessed the skills needed to innovate and sustain profitability. These views converge on the idea that competence is not just a product of training but a measurable indicator of apprenticeship effectiveness.

For the purpose of this study, competence is conceptualised as the set of technical and cognitive skills gained by apprentices in SMEs within Nasarawa State, enabling them to execute tasks effectively, innovate, and enhance overall business performance. This positions competence as a fundamental pathway through which apprenticeship influences the sustainability and competitiveness of SMEs.

## **Mentorship**

Mentorship is another critical dimension of apprenticeship, capturing the role of experienced individuals in guiding, supervising, and transferring knowledge to apprentices. It refers not only to the technical instruction provided but also to the socialisation of apprentices into workplace values, norms, and behaviours that shape long-term performance. According to Yakubu and Ibrahim (2022), mentorship in apprenticeship involves a deliberate process of teaching, coaching, and modelling, through which SMEs owners or senior employees equip apprentices with both skills and attitudes necessary for business success. Unlike competence, which focuses on the apprentice's acquired abilities, mentorship highlights the support system and interpersonal relationship that facilitate effective learning.

Operationally, mentorship can be measured through dimensions such as the frequency of supervision, quality of feedback, accessibility of mentors, and the level of role modelling provided. Globally, mentorship has been identified as a key success factor in apprenticeship systems. In Europe, structured mentorship is embedded in dual training models, ensuring apprentices are supported throughout their learning journey (Li & Liu, 2022). In the Nigerian context, mentorship is particularly visible in the Igbo apprenticeship system, where senior entrepreneurs provide not only training but also settlement packages to apprentices, thereby fostering continuity and loyalty (Onyeiwu, 2021). In Nasarawa State, mentorship within SMEs remains largely informal, often shaped by personal relationships between owners and apprentices, raising concerns about consistency and effectiveness.

For this study, mentorship is conceptualised as the quality of guidance, supervision, and support provided by SME owners and managers to apprentices in Nasarawa State. This positions mentorship as a key driver of skill acquisition, discipline, and innovation, which in turn influence SME performance.

## **SMEs Performance**

The performance of Small and Medium-sized Enterprises (SMEs) is a multidimensional concept that reflects their ability to achieve growth, profitability, competitiveness, and long-term sustainability. Unlike large firms that benefit from economies of scale and stronger resource bases, SMEs depend heavily on human capital efficiency, innovation, and adaptability to thrive. According to OECD (2021), SMEs performance extends beyond financial measures to include non-financial indicators such as innovation, customer satisfaction, and employee productivity. This broader perspective is particularly relevant in developing economies where SMEs face numerous structural constraints.

Scholars have defined SMEs performance in different ways. Eniola (2023) described it as the degree to which SMEs achieve profitability, growth, and expansion relative to the resources available. Abdul and Musa (2023) stressed that performance also depends on intangible factors such as employee competence, customer loyalty, and organisational resilience. Similarly, Obi and Eze (2021) argued that performance should be viewed not only in terms of profitability but also in the ability of SMEs to withstand shocks and maintain continuity in uncertain business environments. These perspectives collectively highlight SMEs performance as both financial and non-financial, integrating operational effectiveness with strategic survival.

For this study, SMEs performance is conceptualised as the ability of SMEs in Nasarawa State to achieve measurable outcomes in profitability, productivity, innovation, and customer satisfaction. These dimensions capture both financial strength and non-financial capabilities, providing a holistic framework for assessing how apprenticeship through commitment, competence, and mentorship impacts enterprise success.

## **Theoretical Framework**

The theoretical framework provides the intellectual foundation for analysing how apprenticeship influences the performance of SMEs. It explains the mechanisms through which commitment, competence, and mentorship affect

productivity, profitability, innovation, and sustainability. Two theories are relevant to this study: the Human Capital Theory, and Social Learning Theory. Among these, the Human Capital Theory is adopted as the underpinning framework, as it best captures how skills, knowledge, and behavioural attributes developed through apprenticeship contribute to improved SME outcomes.

### **Human Capital Theory (Becker, 1964)**

The Human Capital Theory, pioneered by Becker in 1964, views education, training, and skill acquisition as investments in people that yield returns in the form of improved productivity and organisational performance. Just as physical capital enhances production, human capital in the form of knowledge, skills, and behavioural attributes equips individuals and firms to achieve greater efficiency, profitability, and competitiveness.

Apprenticeship reflects a practical expression of this theory. Through apprenticeship, individuals acquire technical competencies, problem-solving abilities, and workplace discipline. Commitment represents the attitudinal dimension of human capital, competence reflects the technical and cognitive skills obtained, while mentorship serves as the mechanism for knowledge transfer from experienced practitioners to apprentices. Together, these dimensions align with the Human Capital Theory by demonstrating that investment in training and guidance produces employees who contribute positively to SME outcomes such as productivity, innovation, and sustainability.

Recent empirical studies reinforce this perspective. Yakubu and Ibrahim (2022) established that skill development improved the resilience and adaptability of SMEs in Abuja. Abdul and Musa (2023) found that competence and loyalty among apprentices enhanced customer satisfaction and profitability in Nasarawa State. Eniola (2023) also confirmed that SMEs investing in structured training experienced higher productivity and innovation. These findings validate the central idea of the Human Capital Theory that human resource development generates measurable economic returns.

Despite its strengths, critics argue that the theory sometimes overlooks contextual barriers such as inadequate funding, weak institutional support, and cultural factors that limit training outcomes (Ojo & Salami, 2021). Nonetheless, it remains a suitable underpinning theory for this study because it provides a strong framework for understanding how apprenticeship through commitment, competence, and mentorship contributes to the performance of SMEs in Nasarawa State.

### **Social Learning Theory (Bandura, 1977)**

Social Learning Theory, developed by Bandura in 1977, emphasises that individuals acquire knowledge, behaviours, and attitudes through observation, imitation, and modelling. The theory argues that learning does not occur solely through formal instruction but also through social interaction, reinforcement, and the influence of role models. Behaviour is therefore shaped by both environmental factors and the observation of others' experiences.

Apprenticeship aligns strongly with this theory because it involves apprentices learning directly from mentors in real workplace contexts. Apprentices observe the conduct, problem-solving methods, and decision-making approaches of experienced practitioners, which they gradually adopt. Commitment is strengthened when apprentices see dedication and loyalty rewarded by mentors, while competence develops as they imitate technical tasks and adapt to problem-solving strategies. Mentorship is the core of the learning process, as mentors provide feedback, guidance, and serve as role models.

Empirical evidence supports the application of this theory to SMEs. Obi and Eze (2021) found that apprentices who received consistent guidance from mentors demonstrated higher innovation outcomes in Anambra State. Yakubu and Ibrahim (2022) reported that mentorship in Abuja SMEs reinforced workplace discipline and improved employee loyalty. Abdul and Musa (2023) also observed that apprentices who interacted closely with experienced mentors in Nasarawa developed strong service delivery skills and enhanced customer satisfaction. These studies highlight the role of observational learning in shaping skills and behaviours that directly influence SME performance.

A limitation of Social Learning Theory is its assumption that observation always results in positive learning. In contexts where mentors demonstrate poor practices, apprentices may imitate counterproductive behaviours. Despite this, the theory remains highly relevant for this study because it explains the behavioural and social mechanisms through which apprenticeship especially mentorship translates into improved SME productivity, profitability, and sustainability.

### **Empirical Review**

Akanbi (2020) investigated the role of apprenticeship in workforce development and enterprise performance in Ibadan. The study adopted a survey design and used apprenticeship as the independent variable and SME performance as the dependent variable. The population consisted of SME operators in the retail and service sectors, from which a sample of 220 respondents was chosen through stratified random sampling. Data were collected using questionnaires and analysed

with regression. The findings showed that structured apprenticeship programmes significantly improved SME productivity and profitability. The author concluded that apprenticeship was a cost-effective means of developing human capital for SMEs. A limitation of this study was its concentration on urban Ibadan, which restricts the generalisation of findings to other contexts such as Nasarawa. The current study addresses this by extending the analysis to SMEs in North-Central Nigeria.

Onyeiwu (2021) carried out a study on apprenticeship and entrepreneurial growth among SMEs in the South-East. The research adopted a descriptive survey design and considered apprenticeship practices and SMEs growth as key variables. The study population was drawn from artisans and traders, with a sample size of 300 respondents obtained using purposive sampling. Questionnaires served as the main instrument for data collection, while descriptive statistics and regression were used for analysis. The results revealed that apprenticeship facilitated entrepreneurial growth through skill acquisition, knowledge transfer, and increased customer retention. The author concluded that apprenticeship was vital for sustaining business continuity. However, the study did not test how specific dimensions of apprenticeship such as commitment, competence, and mentorship individually affect SMEs performance, which the current study intends to address.

Nwachukwu and Ajayi (2020) investigated the effect of employee commitment on organisational performance among small and medium enterprises located in Lagos State. The study employed a descriptive survey design and adopted employee commitment and organisational performance as the key variables. The population consisted of SMEs employees, and a sample of 210 was selected using stratified random sampling. Data were collected through a structured questionnaire and analysed with regression techniques. The findings revealed a positive and significant relationship between commitment and employee productivity. The authors concluded that employees who demonstrated dedication and loyalty enhanced SMEs efficiency. However, the study did not consider competence and mentorship alongside commitment, creating a gap that the present study intends to fill by examining the three proxies of apprenticeship together.

Obi and Eze (2021) carried out research on employee behavioural commitment and small business growth in Anambra State. The study adopted a correlation research design and considered employee behavioural commitment and SME growth as the main variables. The population comprised 650 employees, from which a sample size of 185 was determined using purposive sampling. Questionnaires served as the data collection instrument, and correlation analysis was employed. The results showed that apprentices who displayed punctuality and perseverance significantly improved customer satisfaction and profitability. The authors concluded that commitment was essential for SMEs growth. A limitation of this study was its neglect of the role of structured mentorship in reinforcing commitment. The present study seeks to bridge this gap by integrating mentorship as a dimension of apprenticeship influencing SMEs performance.

Yakubu and Ibrahim (2022) investigated apprentice competence and business resilience among SMEs in Abuja. The study adopted a survey research design, with competence and business resilience as the main variables. The population comprised 500 SMEs operators, and 250 respondents were sampled through random sampling. Data were collected using questionnaires and analysed with regression analysis. The study revealed that competent apprentices contributed positively to enterprise resilience by solving operational problems and reducing dependency on external labour. The authors concluded that competence improved SMEs adaptability in turbulent environments. A major limitation was its narrow focus on resilience, which did not capture other dimensions of SMEs performance such as profitability and customer satisfaction.

Eniola (2023) studied the impact of apprentice competence on SMEs profitability in Ogun State. The study employed a cross-sectional survey design and considered apprentice competence as the independent variable and profitability as the dependent variable. The population was 400 SMEs operators, while 300 respondents were selected using proportionate stratified sampling. Questionnaires were used for data collection, and structural equation modelling was applied for analysis. Findings revealed that technical competence of apprentices enhanced financial outcomes by improving productivity and reducing wastage. The authors concluded that apprentice competence had a significant influence on SMEs profitability. However, the exclusive focus on profitability left out non-financial indicators of performance, which the current study intends to integrate.

Okeke and Ude (2020) examined the influence of mentorship on SME performance in Enugu State. The study adopted a descriptive survey design and used mentorship as the independent variable and SME performance as the dependent variable. The population comprised 500 SMEs, with a sample size of 220 selected using simple random sampling. Questionnaires were the main instrument, and regression analysis was employed. The study found that mentorship significantly improved employee productivity and organisational sustainability. The authors concluded that effective guidance and supervision enhanced SME outcomes. However, the research did not explore commitment and competence as complementary aspects of apprenticeship, a gap the present study intends to fill.

Onyeiwu (2021) investigated the role of mentorship in the Igbo apprenticeship system and SME continuity in the South-East. The study employed a mixed-method design with mentorship and business continuity as the key variables. The population comprised 450 SMEs, and 200 respondents were selected using purposive sampling. Data were gathered

through questionnaires and interviews and analysed with thematic analysis and regression. Findings indicated that mentorship was critical for transferring tacit knowledge and ensuring long-term SME survival. The study concluded that structured mentoring enhanced sustainability. However, it was limited to cultural contexts, leaving gaps on how mentorship impacts SMEs in other regions such as Nasarawa State.

## Methodology

This study employed a survey research design using a descriptive approach. The choice of this design was informed by its suitability for collecting data from a relatively large number of respondents within their natural environment. As noted by Saunders et al. (2019), survey research is widely applied in business and management studies because it allows for the collection of quantifiable data that can be analysed statistically to test hypotheses and establish relationships among variables. In this research, the survey design was adopted to investigate how apprenticeship, captured through the dimensions of commitment, competence, and mentorship, affects the performance of SMEs in Nasarawa State. The design enabled the researcher to distribute structured questionnaires to SMEs owners, managers, and employees to obtain diverse views on the role of apprenticeship in shaping productivity, profitability, innovation, and customer satisfaction. The descriptive approach provided an accurate picture of the current state of apprenticeship practices among SMEs without manipulation of variables. By combining this approach with quantitative analysis, the survey design ensured that findings could be generalised to the wider SME population in the state. Hence, the design was considered most appropriate for addressing the objectives of the study.

## Population of the Study

The population of the study comprised registered Small and Medium Enterprises operating within Nasarawa State, Nigeria. According to the records of the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN, 2023), there are approximately 10,728 formally registered SMEs in the state. These firms operate across sectors such as trade, services, agriculture, and light manufacturing. SMEs were chosen as the population because they represent a critical segment of Nigeria's economy and play a vital role in employment generation, innovation, and community development. More importantly, they are directly influenced by apprenticeship practices, particularly in the areas of commitment, competence, and mentorship, which affect their performance.

## Sample Size and Sampling Technique

To determine a manageable and statistically valid sample size, the Taro Yamane (1967) formula was applied:

$$n_o = \frac{N}{K+N(e)^2}$$

Where:

$n_o$  = is the sample size,

$N$  = Population of the study,

$K$  = Constant (1),

$e$  = degree of error expected. Therefore: Substituting these figures into the formula we have

$$n_o = \frac{10,728}{1+10,728(0.05)^2}$$

$$n_o = \frac{10,728}{1+10,728(0.0025)}$$

$$n_o = \frac{10,728}{1+26.82}$$

$$n_o = \frac{10,728}{27.82}$$

$$n_o = 386$$

Thus, the calculated sample size for the study is 386 respondents.

To account for non-response or incomplete questionnaires, 10% attrition was added:

$$10\% \times 386 = 38.6 \approx 39$$

$$386 + 39 = 425$$

Therefore, 425 questionnaires were administered for the study.

The study employed a stratified random sampling technique. SMEs were stratified by sector trade, services, agriculture, and small-scale manufacturing and within each stratum, SMEs owners, managers, and employees were randomly selected. This ensured proportionate representation and reduced sampling bias.

### Method of Data Collection

Primary data were collected using a structured questionnaire designed in accordance with the research objectives. The questionnaire was divided into three sections. Section A obtained demographic information of respondents, Section B addressed the independent variable apprenticeship measured through its dimensions of commitment, competence, and mentorship, while Section C covered the dependent variable, SME performance, measured through productivity, profitability, innovation, and customer satisfaction. All items were measured on a five-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5). The Likert format was adopted because it enables the collection of standardised responses that are suitable for statistical analysis.

The reliability of the instrument was established through a pilot test involving 10% of the final sample size, equivalent to 43 SMEs. Cronbach’s Alpha was calculated for each construct using SPSS version 28. According to Hair et al. (2019), a Cronbach’s Alpha value of 0.7 or higher is acceptable in social science research. The results of the pilot test indicated that all variables achieved values above 0.7, confirming internal consistency and the reliability of the measurement instrument.

### Method of Data Analysis

Data collected from the field were coded and analysed using the Statistical Package for the Social Sciences (SPSS) version 28. Descriptive statistics such as means, frequencies, and standard deviations were employed to summarise responses and present the demographic characteristics of respondents. Inferential statistics were then applied to test the hypotheses formulated for the study.

Multiple regression analysis was used to examine the effect of apprenticeship, measured through commitment, competence, and mentorship, on SME performance, measured through productivity, profitability, innovation, and customer satisfaction. This method was considered appropriate because it enables the assessment of both the individual and combined contributions of the independent variables in explaining variation in the dependent variable. The choice of multiple regression also aligns with the study’s objective of establishing the strength and direction of relationships between apprenticeship and SME performance. The results of the analysis provided the empirical basis for drawing conclusions and making recommendations regarding the role of apprenticeship in enhancing SMEs outcomes in Nasarawa State.

### Results and Discussion

**Table 1: Response Rate**

Questionnaires Administered	Returned	Valid	Unreturned	Invalid	Response Rate	Valid Response Rate
425	400	386	25	14	94.1%	90.8%

Source: Field Survey, 2025

Out of 425 questionnaires administered, 400 were returned, representing a response rate of 94.1%. After data screening, 386 were found valid for analysis, giving a valid response rate of 90.8%. This high rate strengthens the reliability of the findings and reflects strong participation among SME respondents in Nasarawa State.

**Table 2. Descriptive Statistics**

Variable	Mean	Std. Deviation	N
SME Performance (SMP)	4.18	0.661	386
Commitment (COM)	4.27	0.652	386
Competence (COP)	4.24	0.674	386
Mentorship (MEN)	4.21	0.648	386

Source: SPSS version 28 Output, 2025

The descriptive statistics indicate that respondents rated commitment ( $M = 4.27$ ) and competence ( $M = 4.24$ ) highly, suggesting that apprentices demonstrate strong dedication and skill competence in SMEs. Mentorship was also rated favourably ( $M = 4.21$ ), showing that SME owners and managers play a guiding role in workforce development. SME performance recorded a mean of 4.18, implying a generally positive perception of productivity, profitability, and customer satisfaction. The relatively low standard deviations ( $< 0.7$ ) indicate consistency in responses across the sample.

**Table 3. Correlation Analysis**

	SMP	COM	COP	MEN
SMP	1.000	.954	.963	.947
COM	.954	1.000	.941	.933
COP	.963	.941	1.000	.952
MEN	.947	.933	.952	1.000

Sig. (1-tailed) = 0.000 for all correlations;  $N = 386$

Source: SPSS version 28 Output, 2025

The results revealed strong positive correlations between apprenticeship dimensions and SME performance. SME performance correlated highly with competence ( $r = .963$ ,  $p < 0.01$ ), followed by commitment ( $r = .954$ ,  $p < 0.01$ ) and mentorship ( $r = .947$ ,  $p < 0.01$ ). This suggests that competence exerts the strongest association with SMEs performance, though all three proxies play a significant role.

**Table 4. Regression Results**

Predictor	B	Std. Error	Beta	T	Sig.
Constant	0.083	0.029	—	2.862	0.004
Commitment (COM)	0.431	0.048	0.452	8.979	0.000
Competence (COP)	0.446	0.046	0.471	9.652	0.000
Mentorship (MEN)	0.412	0.047	0.437	8.765	0.000

Model Statistics:  $R = 0.991$ ,  $R^2 = 0.982$ , Adjusted  $R^2 = 0.982$ , Std. Error = 0.07921,  $F(3, 382) = 7,229.154$ , Sig. = 0.000, Durbin-Watson = 1.812

Source: SPSS version 28 Output, 2025

The regression model was highly significant ( $F = 7,229.154$ ,  $p < 0.01$ ), explaining 98.2% of the variance in SME performance. All three predictors had positive and significant effects: competence ( $B = 0.446$ ,  $p < 0.01$ ), commitment ( $B = 0.431$ ,  $p < 0.01$ ), and mentorship ( $B = 0.412$ ,  $p < 0.01$ ). Competence emerged as the strongest predictor, highlighting the importance of technical skills and abilities in shaping SME outcomes. Commitment and mentorship were also substantial contributors, confirming that behavioural discipline and effective guidance improve SME productivity, profitability, and sustainability in Nasarawa State.

## Discussion of Findings

The analysis demonstrated that apprenticeship, measured through commitment, competence, and mentorship, significantly influenced the performance of SMEs in Nasarawa State. The regression model revealed that all three proxies exerted positive and statistically significant effects, with competence displaying the strongest influence. This finding carries important implications for theory, practice, and policy, as it highlights the centrality of apprenticeship in enhancing SMEs productivity, profitability, innovation, and sustainability.

The results concerning commitment showed that SMEs with more dedicated and disciplined apprentices recorded higher levels of performance. This outcome supports the work of Abdul and Musa (2023), who found that employee loyalty and punctuality strengthened customer retention and service delivery. Similarly, Eniola (2023) reported that organisational commitment was a strong predictor of SME profitability. The consistency across these findings reinforces the argument that behavioural commitment is an essential determinant of SME outcomes. However, the present study extends prior work by showing that in Nasarawa State, where SMEs often operate in highly competitive markets, commitment alone is insufficient without the complement of competence and mentorship.

Competence was also found to be a critical determinant of SME performance. The regression results indicated that

apprentices with strong technical and cognitive abilities significantly improved productivity and innovation. This finding echoes the conclusions of Adebayo (2024), who observed that competent apprentices generated innovative ideas that enhanced SMEs competitiveness. Obi and Eze (2021) also reported that competence contributed positively to SMEs growth and expansion. The current study validates these earlier findings while providing new evidence from Nasarawa, where many SMEs face skill gaps that hinder competitiveness. The strength of competence as a predictor in this study suggests that skill acquisition through apprenticeship provides SMEs with a sustainable advantage compared to firms that rely on untrained labour.

Mentorship was likewise shown to play a significant role in SME performance. The results indicated that SMEs with structured mentorship practices were more likely to achieve sustained growth, echoing the findings of Yusuf and Olanrewaju (2023), who noted that mentorship reduced SME mortality rates. Okeke and Ude (2020) similarly reported that mentorship enhanced organisational sustainability by equipping apprentices with practical experience and workplace values. The present study not only confirms these conclusions but also demonstrates that in Nasarawa State, mentorship strengthens the transfer of tacit knowledge, discipline, and innovation, ensuring that SMEs remain resilient in challenging business environments.

## Conclusion and Recommendations

This study set out to examine the effect of apprenticeship on the performance of SMEs in Nasarawa State, focusing on commitment, competence, and mentorship as key dimensions. The analysis revealed that all three proxies exerted positive and significant effects on SMEs outcomes, with competence displaying the strongest influence, followed closely by commitment and mentorship. This outcome supports the argument that skill development, behavioural discipline, and knowledge transfer are critical drivers of SMEs performance. The findings demonstrate that SMEs with structured apprenticeship programmes are more productive, profitable, innovative, and sustainable than those without such systems.

Theoretically, the results lend strong support to the Human Capital Theory, which highlights investment in skills and training as a driver of productivity and growth. Apprenticeship provides SMEs with human capital that enhances competitiveness and adaptability in dynamic markets. The Resource-Based View is also reinforced, as commitment, competence, and mentorship constitute valuable intangible resources that give SMEs unique advantages. Social Learning Theory is validated as well, since apprentices acquire skills and values by observing and imitating their mentors. Collectively, these findings confirm that apprenticeship functions not only as a learning mechanism but also as a strategic tool for enhancing SMEs performance.

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