



APPRENTICESHIP AND THE GROWTH OF SMALL-SCALE INDUSTRIES IN SOUTH EASTERN NIGERIA

BY

Aham Ikwumezie¹ Emerenini, Fabian M² Ogu, Callistus³ and Nwakaego, Chidiebere Stephen⁴

^{123&4} Department of Economics, Imo State University, Owerri,



Article History

Received: 19/08/2026

Accepted: 06/09/2026

Published: 09/09/2026

Vol – 2 Issue – 9

PP: -28-41

Abstract

This study assessed the cause-effect relationship between apprenticeship and the growth of small-scale industries in South Eastern Nigeria. The specific objectives were to determine the extent to which traditional, modern, and vocational-based apprenticeship models (systems) have enhanced the growth of small-scale enterprises in selected markets in the region. The population of the study comprised of business owners, apprentices, and mentors operating in Ariria International Market in Aba, Abia State; Main Market, Onitsha, Anambra State; and Spare Parts market in Nnewi, Anambra State. The population of the study was purposively put at 250 while the sample size was 152. Questionnaire was the major research instrument used and data so collected were transformed and analyzed using percentage, descriptive, and Ordinary Least Square (OLS) regression analyses. Basically, results revealed that traditional, modern, and vocational-based apprenticeship models have positive and significant effects on the growth of small-scale enterprises in the region. The study therefore concluded that there is a positive and significant cause-effect relationship between apprenticeship and the growth of small-scale industries in South Eastern Nigeria. On this backdrop, the study recommended that state governments in the region and SMEDAN (Small and Medium Enterprises Development Agency of Nigeria) should partner with trade associations to formalize the traditional apprenticeship model (system) by setting minimum training standards, duration, and simple certification for graduates; and there is need for a national policy that will encourage partnerships between small-scale industries, polytechnics, and companies like Innoson, Cutix, and Dangote to run paid apprenticeship programs, and the government can support this with tax incentives for firms that train apprentices and with equivalent grants to training centers.

(Keywords: Apprenticeship, Traditional Apprenticeship, Modern Apprenticeship, Vocational Apprenticeship, Small-Scale Industries, Small-Scale Enterprises, South Eastern Nigeria.)

1.0 INTRODUCTION

1.1 Background to the Study

South Eastern Nigeria refers to one of the six geopolitical zones in Nigeria. It is the smallest geopolitical zone by land mass and consists of five states, viz.: Abia, Anambra, Ebonyi, Enugu and Imo. The zone is known for trade, apprenticeship systems, and small scale enterprises in cities like Aba of Abia State; and Onitsha and Nnewi of Anambra State (Obi, 2020). The zone thrives in commerce and entrepreneurship and this makes it the hub of Nigeria's informal and small scale enterprises culture. Thus, cities like Aba are known for shoes, leather and textiles production; Onitsha for wholesale trading;

and Nnewi for auto parts. As such, there are so many small scale enterprises and industries in the region.

Fundamentally, small scale industries are widely acknowledged as critical drivers of employment generation, poverty alleviation, and economic diversification, particularly in developing economies. In Nigeria, small and medium scale enterprises constitute over 80% of all registered businesses and contribute significantly to GDP (Gross Domestic Product) and non-oil exports (Nwoga, Ononuju, Chime-Nganya, Ogbin, Ngwu & Nwakpu, 2024). Within this context, the South Eastern region of Nigeria is notable for its high density of small scale industries, especially in sectors such as manufacturing, trading, and artisan services. The growth of these industries in the zone has been largely influenced by



informal human capital development systems, with apprenticeship serving as a primary mechanism for skill acquisition and knowledge transfer.

Apprenticeship, seen as a structured on-the-job training process under the supervision of a skilled practitioner, provides trainees with technical skills, business management practices, and entrepreneurial competences without the high cost associated with formal vocational education (Bala & Nyaga, 2024). This system has facilitated the expansion of industrial clusters in cities such as Aba, Onitsha, and Nnewi, where the continuous intake and graduation of apprentices directly correlates with the establishment of new enterprises. By lowering entry barriers to entrepreneurship and ensuring a steady supply of skilled labour, apprenticeship contributes to both the formation and sustainability of small scale industries (Onu, Anoruo, Ukonu & Agu (2023).

Three apprenticeship models are popular in the South Eastern part of Nigeria and they are: Imu-Oruaka', 'Imu-Ahia', and 'Igba-Boi' or 'Igba-Odibo' (Obunike, 2016; Ifechukwu-Jacobs, 2022). The 'Igba-Boi' or 'Igba-Odibo' apprenticeship model involves the master-servant relationships, which involve the master living with the apprentice in their home and feeding them. The boys that go for this apprenticeship scheme are always sent out because most families keep their girls to nurture, train, and prepare them to be mothers in the future. The 'Imu-Ahia' (Business Coaching) apprenticeship systems involve grown adults (male or female) who learn a skill or trade from a master; in this case, the apprentices or trainees come from their home to the masters' shop daily. Most of the time, the apprentices in this system negotiate the training themselves and even pay the master to learn from him as they take care of their daily transportation and feed themselves. 'Imu-Oruaka' (Acquiring Skill) is a practice that entails gaining an in-depth knowledge of a certain profession or craft (Ifechukwu-Jacobs, 2022). However, Onu, Anoruo, Ukonu and Agu (2023) pointed out that the effectiveness of these apprenticeship models are constrained by several factors, including the absence of standardized certification, limited adoption of modern production techniques, and the perception of entrepreneurship as exploitative labour. These challenges raise concerns about the long-term competitiveness and scalability of small scale industries in the region.

Accordingly, there are concerted efforts from the government to cut out these limitations by way of promoting other apprenticeship models and schemes like the Basic National Open Apprenticeship Scheme (B-NUAS) (Okeyika, Uzoechina, Jegbefumwen, Ozulumba & Ekwow, 2025). In this line, apprenticeship schemes are classified into traditional, modern and vocational apprenticeship. Traditional apprenticeship involves one-on-one training with a master craftsman; modern apprenticeship is a structured programme that combines work and training; while vocational apprenticeship focuses on specific trades or industries (Okpokwasili & Onwuatuogwu, 2024).

1.2 Statement of the Problem

The place of small scale enterprises in the growth and development strides of economies cannot be overemphasized as existing studies have attributed the growth and development of economies to the existence of small scale enterprises (Omede & Chukwu, 2024). However, in spite of the significant contribution of small scale industries to employment creation, income generation, and economic growth in South Eastern Nigeria, many of these enterprises face challenges related to skill shortages, low productivity, and high failure rates within the first five years of operation (Obi, 2020).

On the up-side, apprenticeship has long served as the primary means of skills acquisition and workforce development for these industries. But the system remains largely informal, unregulated, and lacking standardized certification, which limit graduates' access to formal financial support and reduces the credibility of the skills acquired. Additionally, some apprenticeship practices have not kept pace with modern production techniques and business management standards, resulting in outdated skills that constrain innovation and competitiveness. Furthermore, there is a growing disinterest among youths toward apprenticeship due to the prolonged duration, low remuneration during training, and the perception that it offers limited social mobility compared to formal education and white-collar employment. This trend threatens the sustainability of the labour pipeline for small scale industries in the region.

Nevertheless, existing studies have reported contrasting effects of the apprenticeship practice on the growth of small-scale industries in the South Eastern part of Nigeria (Anyalor, Arisi-Nwugballa & Ugwa, 2023; Anzor, Okoro, Ugorji, 2025; Obuseh, Agu, Unegbu & Nnawuchi, 2024). These studies have differently reported positive, negative, significant, and insignificant effects of different apprenticeship models on the growth of small scale industries in the region. Given the above identified challenges apprenticeship in the region and the contrasting outcome of existing studies, there was a need to investigate how apprenticeship, in its current form, affects the growth and sustainability of small scale industries in South Eastern Nigeria. Thus, understanding these dynamics will help identify gaps and inform policies that can strengthen the link between apprenticeship training and industrial development.

1.3 Objectives of the Study

The primary objective of this study is to assess the cause-effect relationship between apprenticeship and the growth of small-scale industries in South Eastern Nigeria. The secondary objectives are to:

1. to ascertain the extent to which traditional apprenticeship model influences the growth of small scale enterprises in South Eastern Nigeria;
2. to determine the effect of modern apprenticeship model on the growth of small scale enterprises in South Eastern Nigeria; and

3. to evaluate the impact of vocational-based apprenticeship model on the growth of small scale enterprises in South Eastern Nigeria.

1.4 Research Questions

1. To what extent does traditional apprenticeship model influences the growth of small scale enterprises in South Eastern Nigeria?
2. What is the effect of modern apprenticeship model on the growth of small scale enterprises in South Eastern Nigeria?
3. What is the impact of vocational-based apprenticeship model on the growth of small scale enterprises in South Eastern Nigeria?

1.5 Research Hypotheses

- H₀₁:** Traditional apprenticeship model has not significantly influenced the growth of small scale enterprises in South Eastern Nigeria.
- H₀₂:** Modern apprenticeship model has an insignificant effect on the growth of small scale enterprises in South Eastern Nigeria.
- H₀₃:** Vocational-based apprenticeship model has no significant impact on the growth of small scale enterprises in South Eastern Nigeria.

1.6 Scope of the Study

This study focused on the cause-effect relationship between apprenticeship models and the growth of small-scale industries in South Eastern Nigeria with special focus on traders (entrepreneurs) in 'Ariaria' market Aba, Abia State; and 'Main' market Onitsha, and Nnewi industrial market in Anambra State. The choice of traders in these markets in Aba, Onitsha and Nnewi is mainly because these are major business hubs in South Eastern Nigeria with major industrial clusters. The experience of these traders was considered invaluable. However, apprenticeship was disaggregated into traditional, modern and modern apprenticeship models while the growth of small scale enterprises stood as a proxy for the growth of small-scale industries in the region.

1.7 Significance of the Study

At the end of the day, this work will be useful to a wide spectrum of people ranging from students to researchers, entrepreneurs, policy makers, the government and others. Specifically, the work will be a good reading material to students in the areas of apprenticeship and the growth of small scale enterprises and industries. Thus, the work will be useful to students from different fields of study. The study will be also useful to prospective researchers as it will serve as a premise for further studies in related areas. Findings from the study and recommendations will serve as policy templates that will guide policy makers in their future policy formulation and execution. Federal and State governments on their part are not left out as findings from the study will provide further insights into the extent to which apprenticeship systems have contributed to the growth of small-scale industries in the region. Finally, the work will be good for public consumption.

2.0 LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Apprenticeship

Apprenticeship is a contractual relationship between an employer and an employee in which the apprentice learns the skills needed for a particular occupation or trade (Adeyeye, Falola, Waribo & Akinbode 2015). It involves master/servant relationship. In the world of work, apprenticeship has been a smooth means of inculcating requisite skills and trades to intending employees/employers of labour and as well gain a license to practice in a regulated profession. Gessler (2019) posits that the distinctive feature of the concept of apprenticeship is that this form of learning is embedded in the real work context and situated in the workplace.

Historically, apprenticeships are regarded as the oldest forms of training in the world of work and business (Nonyelu & Onyeizugbe 2020). It is a source of livelihood, means or a way of being employed and engaged in economically worthwhile ventures. Agbionu, Emeka & Ogbemudia (2018) assert that apprenticeship scheme contributes significantly to youth empowerment, reduces unemployment by providing better employment opportunities and increased productivity for firms. Therefore, an apprentice is a person who elects, or is persuaded to undertake or acquire practical, and in some cases, theoretical knowledge in a specialised area of interest, or occupation he/she would want to go into in future, or earn a living from. In other words, apprentices build their careers from apprenticeships while working for an employer who assists in learning the trade or profession in return for labor at an agreed period within which they should have acquired measurable competencies. The requirements for a successful apprenticeship programme for individuals include initiative, perseverance, resilience and ambition (Ezenwakwelu et al 2019).

2.1.2 Traditional Apprenticeship Model/System

The traditional apprenticeship model is an informal, time-honored method of skill acquisition where an apprentice learns a craft, trade, or business by working directly under an experienced master for several years (Okpokwasili & Onwuatuwegwu, 2024). Put differently, it is a non-formal, long-established method of skills transmission where a learner (apprentice) acquires practical knowledge and trade expertise by working directly under an experienced mentor (master). It focuses on hands-on training, moral upbringing, and mentorship, often culminating in the apprentice being "settled" with tools or capital to start their own business. Unlike formal modern apprenticeships, this system is primarily governed by social norms, family ties, and community trust rather than legal contracts or standardized curricula. According to Kendra (2021), the key attributes of the traditional apprenticeship system are:

1. Informal Learning: Training is hands-on and occurs on-the-job through observation, imitation, and trial-and-error.
2. Holistic Upbringing: Beyond technical skills, it often includes "moral upbringing," teaching the

apprentice ethical business practices and social values.

3. Duration: It typically requires a long-term commitment, often lasting between 3 to 7 years depending on the complexity of the trade.
4. Unwritten Agreements: Arrangements are often private and based on a "gentleman's agreement" between the master and the apprentice's family.
5. Settlement or Graduation: Upon completion, many systems involve a "graduation" or "blessing ceremony." In some cultures, like the Igbo Apprenticeship System (Igba-Boi), the master provides startup capital or equipment to help the apprentice launch their own business

Traditional systems are vital to informal economies worldwide, particularly in West Africa. Examples include: artisanal crafts (carpentry, blacksmithing, leatherwork, weaving, and tailoring); technical services (auto mechanics, plumbing, electrical work, and welding); and commerce (wholesale and retail trading) (Okafor, 2021).

2.1.3 Modern Apprenticeship Model/System

The modern apprenticeship model is otherwise known as formal apprenticeship. It is a structured training program that combines paid on-the-job experience with formal classroom instruction (Ohazuruike & Ekechi, 2023). Thus, it combines on-the-job training with formal learning, offering a structured program that leads to a recognized qualification. Unlike traditional models based on informal "gentleman's agreements," modern systems are regulated by law and lead to nationally recognized qualifications. Modern apprenticeships cater for various sectors, including tech, healthcare, and trades, providing a pathway to employment and career progression. The key attributes of this apprenticeship system, according to (Eze, 2023), are:

1. Dual Learning: It alternates between practical work at a company and theoretical study at a vocational school or college.
2. Legal Framework: Apprentices sign a formal employment contract or training agreement that outlines their rights, including a guaranteed wage, paid holidays, and social protection.
3. Standardized Curriculum: The training follows an established industry "framework" or "standard" to ensure the skills learned are consistent across the sector.
4. Formal Certification: Upon completion, apprentices receive an accredited credential, such as an NVQ or a degree-level qualification, which is recognized by other employers.
5. Broad Industry Reach: While traditional systems focus on manual crafts, modern systems extend to high-tech and service sectors like cyber security, financial services, healthcare, and engineering.

The modern apprenticeship system is associated with some benefits for all parties involved. According to Eze (2023), for individuals, it allows people to start their career, gain skills,

and earn a qualification without accumulating debt, with 92% staying in work after qualifying; for employers, it helps develop a skilled and loyal workforce, and fills skill gaps; and for the economy, it reduces youth unemployment and improves productivity. In Nigeria, recognized qualifications associated with modern apprenticeship include:

1. National Technical Certificate (NTC): Awarded after completing formal apprenticeships in Technical and Vocational Education and Training (TVET) programs.
2. National Skills Qualification (NSQ): A framework that recognizes vocational and technical qualifications, with six levels corresponding to employment levels in the Nigerian labor market.
3. Trade Test Certificate of Competence: Issued to successful apprentices after undergoing oral, written, and practical tests, often at a subsidized fee.

These qualifications are offered in various fields, including: Creative Fields: Fashion design, tailoring, graphic design; Artisan Trades: carpentry, masonry, welding, automotive mechanics, electrical installation; and Professional Fields: Accounting, law, engineering (Adewuyi & Adeniran, 2019).

2.1.4 Vocational-Based Apprenticeship Model/System

Umogbai, Adudu and Agwa (2018) defined vocational apprenticeship as a type of apprenticeship that focuses on providing young people with specialized skills and training in a specific trade or industry, like automotive repair, construction, or hospitality. Chineze (2022) sees vocational apprenticeship as a structured training model that combines on-the-job experience with classroom instruction, allowing individuals to learn a skilled trade while earning wages. Apprentices work under expert supervision to gain practical skills, often leading to industry certification and employment. It is designed to equip apprentices with practical, hands-on experience and industry-recognized certifications, making them job-ready. In Nigeria, vocational apprenticeships can be particularly valuable in sectors like agriculture, manufacturing, and construction, where there's a high demand for skilled workers. By combining theoretical knowledge with practical training, vocational apprenticeships can significantly enhance a young person's employability and career prospects. The benefits of this type of apprenticeship include:

1. Practical Skills: Hands-on training in a specific trade or industry;
2. Industry Connections: Opportunities to network and build relationships with potential employers;
3. Job Readiness: Apprentices are often job-ready upon completion;
4. Certification: Industry-recognized certifications can boost employability; and
5. Earning Potential: Apprentices can earn while they learn and increase their earning potential post-apprenticeship (Umogbai, Adudu & Agwa, 2018).

2.1.5 Small Scale Industries/Businesses

To start with, an industry is a group of businesses or organizations that produce similar goods or provide similar

services (Obuseh, Agu, Unegbu & Nnawuchi, 2024). The common types of industries are primary, secondary, tertiary/service, and quaternary. The primary industry houses businesses that basically extract raw materials and covers areas like agriculture, mining and fishing. The secondary industry manufacture goods like textiles, steel, food processing and construction. Tertiary/service industry provides services and it covers banking, telecoms, education, and transport. Quaternary is a knowledge based industry with specialty in information technology (IT), research and development (R&D), and consulting (Abor & Quartey, 2010). This classification is based on the nature of business undertaken by firms in an industry.

Industries are also classified based on size. On this note, we have micro, small and medium scale industries which houses micro, small, and medium scale businesses respectively (Akingunola, 2021). In Nigeria, small-scale businesses can be defined as any enterprise employing between five and one hundred workers with an annual turnover of about ₦400,000 (four hundred thousand Naira) (Akingunola, 2021). It is also defined as entities with asset base of ₦5 million with not more than ₦500 million (excluding land and buildings), and labour force (employees) of between 11 and 200. Such enterprises contribute to employment, providing around 70% of jobs in most economics (World Bank, 2020). They are crucial in the areas of driving economic growth, and contributing significantly to GDP. In addition, they are the backbone of economics worldwide, contributing significantly to economic growth, job creation, and innovation. In Nigeria, they play a crucial role in economic development, serving as a driving force for employment and poverty reduction. In advanced economies, MSMEs are nurtured through structured policy frameworks, access to finance, mentorship, and research linkages that enhance their competitiveness and sustainability (OECD, 2019).

In the South Eastern part of Nigeria, small-scale enterprises are highly concentrated in trade, agriculture, services, and small-scale manufacturing. Many entrepreneurs in these sectors rely on the Igbo Apprenticeship System (IAS), an indigenous model of entrepreneurial training and business incubation that emphasizes informal mentorship and indigenous knowledge transmission (Okwuowulu, 2022). The IAS provides apprentices with technical skills, risk management strategies, and market exposure that are directly relevant to business innovation and cost reduction. Consequently, small-scale businesses in the region often blend indigenous practices with modern entrepreneurial approaches to sustain growth, making the IAS a crucial foundation for understanding their operations and long-term economic sustainability (Kendra, 2021).

2.2 Theoretical Review

2.2.1 The Social Learning Theory

The social learning theory was initiated by Bandura (1977) in Alberta, Canada. The theory presents a comprehensive framework for understanding how individuals acquire knowledge and skills through observation, imitation, and modelling (Bergh & Theron, 2016). The theory believes that

direct reinforcement could not account for all types of learning. While the behavioral theories of learning suggested that all learning was the result of associations formed by conditioning, reinforcement, and punishment; Bandura's social learning theory proposed that learning can also occur simply by observing the actions of others (Fryling, Johnston & Hayes, 2021). Thus, the theory added a social element, arguing that people can learn new information and behaviors by watching other people. Known as observational learning, this type of learning can be used to explain a wide variety of behaviors, including those that often cannot be accounted for by other learning theories (Kendra, 2021).

2.2.2 Human Capital Theory

The human capital theory is often attributed to Gary Becker who introduced the concept in his book "Human Capital" in 1964 with special reference to education (Ohazuruike & Elechi, 2023). He emphasized that an individual invests in education with an expectation that the investment will provide a benefit in the form of higher earnings. More generally, human capital theory assumes that individuals take actions that will likely increase their future earnings and overall well-being. Such investments are costly; they might involve direct costs such as tuition and fees for school, and indirect costs such as foregone earnings during the period spent in school. These investments result in some expected future benefits (Udu, 2015). According to Eze (2023), the benefits might include a higher wage, but can also be anything that the individual values, for example, better working conditions or a longer life. Human capital theory typically models investment decisions such as those resulting from an optimization process; an individual will invest in such activities in order to maximize well-being over the course of a lifetime. Observed outcomes in the marketplace will be the result of an equilibrium process where the demand for specific skills and abilities is balanced with its supply. Human capital theory offers numerous useful insights and testable hypotheses about human behavior. One of the first to be explored is that observed differentials in earnings can be explained in part by differences in training costs. Adam Smith noted that professions that require years of training tend to have annual higher earnings than professions with no such restrictions (Ezeajughu, 2021).

2.2.3 Cognitive Apprenticeship Theory

According to Hisrich, Peters and Sherpherd (2008), the cognitive apprenticeship theory was developed by Collins, Brown and Newman in 1987 at the University of Illinois, United States of America. It emphasizes the importance of the apprentice learning a skill from the master of the skill as a constructive approach to human learning (Hisrich, Peters & Sherpherd, 2008). Thus, the theory pointed that teaching and learning were accomplished through apprenticeship (Neuwirth, 2017). This theory emphasizes the importance of the process in which a master of a skill teaches that skill to an apprentice. Cognitive apprenticeship theory emphasizes two issues: the teaching process to handle complex tasks and the cognitive processes involved in learning. A cognitive apprenticeship focuses on bringing internal thought processes

into the open so they can be observed and learned by students (Neuwirth, 2017).

Theoretical Framework

This study adopted the human capital theory because theory suggests that investments in education and training, like apprenticeships, increase an individual's productivity and employability, leading to better job prospects and earnings. In other words, the theory suggests that skills are built through education and training. In South Eastern Nigeria, apprenticeship under a master craftsman is the main way trades like mechanics, tailoring, carpentry, welding, and electronics are passed on. Thus, apprenticeship is the investment activity undertaken while skills acquired, tacit knowledge and work habits are the human capital created. It then follows that apprenticeship serves as a critical investment in human capital that enhances the productivity and growth of small-scale industries in the region.

2.3 Empirical Review

Anzor, Okoro, Ugorji (2025) investigated the effect of the Igbo Apprenticeship System on the sustainability of micro, small and medium-sized enterprises (MSMEs) in Enugu State. The study adopted a descriptive survey design and collected data from 250 respondents, including business owners, apprentices, and mentors operating across major commercial hubs in Enugu State. Out of the distributed instruments, 230 valid responses were retrieved and analyzed using descriptive and inferential statistical tools, particularly multiple regression analysis. Findings revealed that the duration of apprenticeship significantly affects business performance as longer training periods enable mastery of trade skills, financial discipline, and market understanding. Likewise, informal mentorship showed a strong positive effect on entrepreneurial capability, indicating that mentees exposed to practical business ethics and value-based mentorship demonstrates greater innovation and managerial competence.

Chukwuemeka, Enudu and Orga (2025) evaluated the indigenous apprenticeship system and the growth of entrepreneurship in Enugu Metropolis, Enugu State, Nigeria. The study adopted a descriptive survey design approach and the primary source of data was staff members of the organizations studied. The total population of 930 comprised artisans and traders who were once apprentices, trainees, or mentees. A sample size of 272 was determined using the Freund and Williams formula at a 5% margin of error. Two hundred and sixty-four (264) respondents returned the questionnaire, which was accurately completed. Data were presented and analyzed using the Likert Scale, while the hypotheses were tested using the Z-test. The findings indicated that Imu Oruaka (learning a craft) has a significant positive relationship with the self-employment rate of entrepreneurship. Likewise, Igba Boi (becoming an apprentice) has a significant positive relationship with the number of SMEs in Enugu Metropolis.

Agbele (2024) examined informal learning and mentorship as predictors of product innovation in SMEs in Lagos. The objective was to test the extent to which practical, experience-

based mentorship enhances creative product development. Employing a mixed-method design that combined structured questionnaires with in-depth interviews of 120 SME owners, the study found that mentorship improved market driven creativity, customer-focused product adaptation, and incremental innovations. The conclusion emphasized that mentorship facilitates experimentation and entrepreneurial confidence, which are crucial for sustaining competitive advantage.

Obuseh, Agu, Unegbu and Nnawuchi (2024) examined the role of the Igbo Apprenticeship System in small and medium-sized enterprise (SME) development in Imo State, Nigeria, with a focus on its cultural and economic contributions. A descriptive survey research design was employed, involving 150 purposively selected participants from Owerri, including apprentices, master craftsmen, and business owners. Data collection was conducted using a validated structured questionnaire, and analysis utilized descriptive and inferential statistics, including the Pearson Product-Moment correlation coefficient. The findings revealed that the Igbo Apprenticeship System significantly contributes to preserving Igbo traditions, fostering community cohesion, and promoting local economic development. It also demonstrated a strong relationship between integrating traditional practices and modern economic initiatives, suggesting opportunities for technological advancement and policy support.

Irechukwu, Nnawuchi, Anyiam, Agu & Ajoku (2023) conducted a study on the role of entrepreneurship in transforming South East's economy. The purpose was to assess the impact of entrepreneurial activities on employment generation for the workforce; the degree to which entrepreneurship has contributed to the improvement of per capita income for the citizens; and the influence of entrepreneurship on the equitable distribution of income in South East Nigeria. The study utilized survey research design with a structured questionnaire. The sample size of one hundred and sixty (160) was used. The finding showed that entrepreneurship had a significant impact on employment levels, leading to an increase in per capita income and fairer wealth distribution.

Omede and Nte (2023) explored the role of indigenous knowledge systems in business sustainability in South-East Nigeria. Their objective was to analyze how oral traditions, observation, and imitation reduce operational costs in SMEs. Using focus group discussions and surveys with 150 SME owners, the study found that indigenous practices such as bulk purchasing, communal sharing of business experiences, and resource re-use significantly reduced overhead costs. The researchers concluded that indigenous knowledge transmission remains a cost-effective approach for small enterprises struggling with high expenses.

Mbah and Ugwu (2022) conducted a study on the economic impact of the Igbo Apprenticeship System on SMEs in Enugu State, focusing on cost management strategies. Using a descriptive survey of 200 SME owners, they found that traditional knowledge-sharing practices, such as negotiation

skills, sourcing from local markets, and waste minimization, were strongly associated with reduced operational costs. The study concluded that indigenous mechanisms help SMEs remain resilient in challenging economic environments.

Olisaemeka (2022) conducted a study on the impact of Igbo Apprenticeship System on the development of auto spare parts market in Eastern Nigeria. The study sought to examine the impact of the Igbo apprenticeship system on the development of the Nnewi Auto Spare Parts Market in Anambra State of Nigeria. The study adopted the quantitative approach. A sample size of two hundred and forty six (246) was used. Data generated were analyzed using Ordinary Least Square (OLS) analytical technique. The findings showed that the Igbo Apprenticeship System has positive and significant impact on the development of the market.

Okoro and Nwankwo (2021) investigated indigenous learning and its influence on resource optimization among agro-based SMEs in Enugu and Ebonyi States. The objective was to examine how cultural knowledge transfer assists enterprises in reducing cost burdens. Through semi-structured interviews and analysis of financial records, they discovered that indigenous knowledge-sharing helped farmers and agribusinesses cut down input costs, avoid wastage, and sustain profits. The study concluded that indigenous knowledge is an essential tool for promoting MSME sustainability through cost efficiency.

Eze and Okafor (2021) investigated the role of informal mentorship in driving innovation among micro and small businesses in Anambra State, Nigeria. The study aimed to determine how mentorship under the Igbo Apprenticeship System influences creativity and product innovation. Using a survey design, data were collected from 250 SME operators who had completed apprenticeship training. Findings revealed that apprentices who received close mentorship from business masters were more likely to introduce new product lines and adapt products to suit consumer preferences. The study concluded that informal mentorship serves as a catalyst for product innovation by equipping entrepreneurs with real-life problem solving skills.

Iwueke, Halima and Oparaku (2020) investigated the relationship between apprenticeship training system and business sustainability in Anambra state using a population of 1000 respondents from different trades/crafts/ business. Questionnaire was the main instrument of data collection while Chi-Square analytical technique was used for hypotheses testing. Findings reveal that the level of education of the apprentices determines the acquisition of the trade knowledge and also the masters' willingness to mentor the apprentices who must be ready and have the capacity to learn.

Finally, Obi and Chukwu (2020) assessed the link between apprenticeship mentorship and entrepreneurial innovativeness in South-East Nigeria. Using a qualitative case study of selected retail and manufacturing enterprises, the researchers found that apprentices who had undergone long-term mentorship developed stronger innovation skills, especially in the areas of packaging, product differentiation, and service

delivery. The study concluded that informal mentorship under IAS equips entrepreneurs with market-relevant innovation strategies.

2.4 Gap in Literature

The first identified gap is the dearth of specific empirical studies on apprenticeship and the growth of small-scale industries in South Eastern Nigeria as most of the existing studies focused on one or two of the South Eastern States. Secondly, the study stands out as it considers apprenticeship from the prism of traditional, modern, and vocational-based apprenticeship models. The fact that this study was conducted in 2026 underscores the currency of the work.

3.0 METHODOLOGY

3.1 Research Design

The study adopted the survey research design. This is because the survey research design is cost effective, useful in describing the characteristics of a large population, flexible, dependable, and individuals were the unit of analysis in this study (Wakazik & Stallion, 2021).

3.2 Sources of Data

The study used primary data. These data were sourced using structured research questionnaire that were distributed by hand and the assistance of others.

3.3 Sampling Unit

The study used business owners, apprentices, and mentors operating in Ariria Market in Aba, Abia State; Main Market Onitsha, Anambra State; and Nnewi Spare Parts market, Anambra State.

3.4 Population of the Study

The primary population of the study consist of business owners, apprentices, and mentors in all the business outlets in all the States in South Eastern Nigeria. However, the secondary population is narrowed down to 250 purposively selected business owners, apprentices, and mentors in three markets stated earlier.

3.5 Sample Size

The Krejcie-Morgan sample size determination technique was used for sample size determination. Thus, with a population size of 250, a Chi-Square for 1 degree of freedom at the desired confidence Level, the sample size is 152 (See Appendix). This represents 61 percent of the population size, which is justified. This is because according to Maddala (2022) and Nkonyeasua (2021), the minimum percentage of samples that can be selected out of any given population that is less than a thousand (1000) is 20 percent.

3.6 Sampling Procedure: The stratified random sampling technique was used in selecting the staff that were used for the study. Here, the population was first divided into three homogeneous groups (the three markets) called strata, and then random selection was made within each stratum. Accordingly, about 51 respondents were picked from the first two markets respectively while 50 were picked from the third market.

3.7 Validity and Reliability of Research Instrument

On one hand, validity is the degree to which a measure accurately represents what it is supposed to represent (Hair, Black, Babin, Anderson & Tatham, 2017). To this end, the researcher constructed the questionnaire in such a way that it adequately covered the scope of the study by asking relevant questions in order to make the questionnaire capable of eliciting the required responses from the respondents.

On the other hand, reliability measures the extent to which a research instrument is consistent. It shows the dependability of a research instrument. According to Chakrabarty (2023), reliability measures consistency, precision, repeatability, and trustworthiness of a research instrument. Hence, internal consistency of the questionnaire was measured using Cronbach's Alpha. Cronbach's Alpha reliability coefficient normally ranges between 0 and 1 with higher values indicating higher reliability among the indicators (Hair, Black, Babin, Anderson & Tatham, 2017). This is to say that the closer Cronbach Alpha's coefficient is to 1.0, the greater the internal consistency of the items in the scale. A value of 0.7 was obtained and this confirmed the reliability of the research instrument.

3.8 Method of Data Analysis

Simple percentage, descriptive, and Ordinary Least Square (OLS) multiple regression analyses were used to analyze the data generated for the study. The said data in the first place was quantified via coding in line with a 5-point Likert scale of 1 to 5 that indicated Strongly Disagreed (1), Disagreed (2), Undecided (3), Agreed (4), and Strongly Agreed (5).

3.9 Model Specification

$$GSSI = F(APP) \dots\dots\dots (1)$$

$$GSSE = F(TRAM, MOAM, VBAM) \dots\dots\dots (2)$$

$$GSSE = a_0 + a_1TRAM + a_2MOAM + a_3VBAM + \mu \dots\dots (3)$$

Where:

GSSI = Growth of Small-Scale Industries

APP = Apprenticeship

TRAM = Traditional Apprenticeship Model

MOAM = Modern Apprenticeship Model

VBAM = Vocational-Based Apprenticeship Model

GSSE = Growth of Small-Scale Enterprises

a_0 = Intercept of the model

a_1 = Regression slopes of TRAM, MOAM, VBAM

e = Error term of the model

3.10 A priori Expectations

a_1 , a_2 and $a_3 > 0$; this implies that the study expected traditional, modern and vocational apprenticeship models to have positive effects on the growth of small-scale enterprises in South Eastern Nigeria.

4.0 DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Presentation and Analysis of Data

4.1.1 Regression Analysis

Table 1: Distribution of Distributed, Returned and Not- Returned Questionnaires

Questionnaire	Markets			Total	Percent (%)
	Aba	Onitsha	Nnewi		
Returned	49	46	39	134	88
Not-returned	2	5	11	18	12
Distributed	51	51	50	152	100

Source: Field Survey (2026)

The above table captures questionnaires returned by business owners, apprentices, and mentors of the three markets used for the study. The table revealed that out of the total 152 distributed questionnaires, 134 were well filled and returned

by these business owners, apprentices, and mentors. In other words, about 88% of the distributed questionnaires were returned while 18 (representing 12%) were either not returned or not well-filled.

4.1.2 Simple Percentage Analysis

Table 2: Demographics Distribution of Respondents

Variables	Options	Frequency	Percentage (%)	Cum. Percent (%)
Gender	Male	82	61	61
	Female	52	39	100
	Total	134	100	-

Age	21 – 40	32	24	24
	41 – 50	64	48	72
	51 – 60	24	18	90
	Over 60	14	10	100
	Total	134	100	-
Highest Level of Qualification	SSCE/GCE	62	46	46
	OND/NCE	23	17	63
	B.Sc./HND	13	10	73
	Post Graduate	15	11	84
	Others	21	16	100
	Total	134	100	-
Years of Experience	0 - 5 years	19	14	14
	6 - 10 years	28	21	35
	11 - 20 years	40	30	65
	More than 20 years	47	35	100
	Total	134	100	-

Source: Survey Research (2026)

The above table shows that out of the 134 respondents, 82 (61%) of them were male while 52 (39%) of them were female. This implies that the gender distribution of the respondents is skewed towards male. For age distribution, the same table revealed that 32(24%) of the respondents were between the ages of 21 and 40; 64(48%) of them were between 41 and 50 years; 24(18%) of the staff fell into the age bracket of 51 and 60; while 14(10%) of them were over sixty years. Hence, 90 percent of the respondents were at most 60 years of age. The table equally shows that 62(46%) of the respondents had SSCE/GCE as their highest level of education; 23(17%) had OND/NCE as their highest educational qualification; 13(10%) posted B.Sc./HND as their highest level of educational qualification; while 15(11%) had post graduate qualifications. However, 21(16%) of the staff had other qualifications like M-Phil. As such, majority of the respondents had SSCE/GCE as their highest educational qualification. Finally, the table shows that 19(14%) of the respondents have been in the business for between 0 and 5 years; 28(21%) of them have between 6 and 10 years' experience; 40(30%) of the respondents have between 11-20 years cognate experience; while 47(35%) have been into related businesses for over 20 years. Thus, 65% of the respondents have less than 21 years' experience in trading business.

4.1.3 Descriptive Analysis

Table 4: Linear Regression model Predicting Apprenticeship and Youth Unemployment

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.690	.223		7.578	.000		
TRAM	.326	.064	.002	5.094	.048	.851	1.352

Table 3: Descriptive Statistics of Variables

Variables	Mean	Std. Deviation	Respondents (n)
GSSE	4.61	0.622	134
TRAM	4.21	0.613	134
MOAM	3.98	0.592	134
VOAM	4.47	0.736	134

Source: SPSS Output (2026)

As contained in the above table, out of a maximum score of 5, the mean score of growth of small-scale enterprises (GSSE) is 4.61 and its standard deviation is 0.622. Traditional Apprenticeship Model (TRAM), Modern Apprenticeship Model (MOAM), and Vocational Apprenticeship Model (VOAM), which are the components of apprenticeship system, have mean scores of 4.21, 3.98 and 4.47 with standard deviations of 0.613, 0.592, and 0.736 respectively. It then follows that amongst the explanatory variables, VOAM has the highest standard deviation of 0.736 while MOAM has the least standard deviation of 0.592. Thus, vocational-based apprenticeship model has the highest variation, followed by traditional apprenticeship model and modern apprenticeship model.

4.1.4 Regression Analysis

MOAM	.198	.052	.122	3.808	.006	.913	1.551
VBAM	.234	.080	.011	2.925	.031	.891	2.109

a. Dependent Variable: GSSE

Source: SPSS Output (2026)

The regression output in table 4 above shows the relationship between dimensions of apprenticeship and growth of small-scale industries in Nigeria. Firstly, the result puts the intercept of the model at 1.690, which implies that keeping traditional apprenticeship, modern apprenticeship, and vocational apprenticeship models constant (or equating them to zero), the score of growth of small-scale industries will be about 33.8% (1.690 of 5, the maximum score). However, the regression

coefficients of TRAM, MOAM and VOAM are 0.326, 0.198 and 0.234 respectively. This implies that traditional, modern and vocational apprenticeship models have positive effects on growth of small-scale industries in Nigeria. In essence, an improvement in any of these apprenticeship models will enhance the growth of small-scale industries youth in the country. However, traditional apprenticeship model is a better predictor of the growth of small-scale industries in Nigeria as it has the best regression coefficient of 0.326.

4.2 Test of Hypotheses

4.2.1 Joint Test of Hypotheses

Table 5: Result of Joint Test

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5.212	3	1.737	3.567	.001 ^b
Residual	63.298	130	.487		
Total	68.510	133			

a. Dependent Variable: GSSE

b. Predictors: (Constant), TRAM, MOAM, VOAM

Source: SPSS Output (2026)

With the p-value of F-statistic (0.001) being less than 0.05 (5%) level of significance, it can be deduced that traditional apprenticeship, modern apprenticeship, and vocational apprenticeship models have a combined significant effect on the growth of small-scale industries in South Eastern Nigeria.

4.2.2 Individual Test of Hypotheses

Table 6: Individual Test Result 1

Variables	t-statistic	P-value	Remark
Constant	7.578	.000	Significant
TRAS	5.094	.048	Significant
MOAS	3.808	.006	Significant
VOAS	2.925	.031	Significant

Source: Extract from SPSS Output (2026)

Given that the p-values of each of the explanatory variables (TRAM, MOAM and VOAM) are less than 0.05, the null hypotheses in all cases will be rejected. Hence, we can conclude that:

1. Traditional apprenticeship model has significantly influenced the growth of small scale enterprises in South Eastern Nigeria;
2. Modern apprenticeship model has a significant effect on the growth of small scale enterprises in South Eastern Nigeria; and

3. Vocational-based apprenticeship model has a significant impact on the growth of small scale enterprises in South Eastern Nigeria.

4.2.3 Model Fitness Test

Table 7: R-Square and Adj. R-Square Results

Model	R ²	Adj. R ²	Remark
GSSE	0.821	0.790	Significant

Source: Extract from SPSS Output (2026)

Table 7 above revealed that traditional, modern and vocational apprenticeship models have a joint effect of 82.1% on the growth of small-scale enterprises in Nigeria. However, the adjusted joint influence of these apprenticeship models on the growth of small scale enterprises in Nigeria is 79.0%. These give a good fit and suggest that the model is adequate, reliable, significant, and can be used for predictive purposes.

4.4 Diagnostics Tests

Table 8: Summary of Diagnostic Tests Results

Test	Criterion	Test statistic Value	Remark
Autocorrelation	Durbin Watson	2.001	No autocorrelation
Multicollinearity	VIF	1.352, 1.551, 2.109	No Multicollinearity

Source: Extract from SPSS Output (2026)

Table 8 revealed absence of autocorrelation and multicollinearity. This is because the value of Durbin Watson statistic (2.001) falls between 1.5 and 2.5. Secondly, the VIF (Variance Inflation Factor) values of the explanatory variables (1.352, 1.551 and 2.109) are less than 5. Hence, there is no correlation among successive values of the error term (e); and there is no correlation among the explanatory variables of the model. This validates the OLS estimates obtained.

4.5 Discussion of Findings

First, the study demonstrated that traditional apprenticeship model has positive and significant influence on the growth of small-scale enterprises in South Eastern Nigeria. This outcome aligns with the position expressed by Irechukwu, Nnawuchi, Anyiam, Agu and Ajoku (2023) and it also agrees with the study's a priori expectation because the traditional apprenticeship system comes enhances skills, increases productivity, creates jobs, and addresses skill gap challenges. These translate to having seasonal and good entrepreneurs who drive the growth of small-scale businesses. The ultimate goal is unemployment rate will reduce as jobs will be created and poverty rate will reduce drastically (Anzor, Okoro, Ugorji, 2025).

The study also revealed that modern entrepreneurship model, positively and significantly, drives the growth of small-scale enterprises in the region. This outcome was also anticipated because and it is likely because modern apprenticeship system focuses on high demand sectors like technology and manufacturing. It offers better training quality and industry partnership that enhances outcomes. Also, expanded access to modern apprenticeship opens doors for youth by engaging these youths and giving them a means of livelihood. In essence, modern apprenticeship system enhances business ownership by equipping people from the region with in-demand skills, thereby boosting job prospect. Thus, it creates a system that addresses skill gaps, thereby making apprentices more attractive to employers (Enquire, 2023).

Finally, vocational apprenticeship model has a positive and significant effect on the growth of small-scale enterprises in South Eastern Nigeria. This outcome again aligns with the study's a priori expectations of a direct and meaningful association between vocational apprenticeship and the growth of small-scale enterprises in South Eastern Nigeria. Existing studies also corroborated this position as they variously reported similar outcomes (Agbele, 2024; Anyalor, Arisi-Nwugballa & Ugwa, 2024). Basically, this is because vocational apprenticeship equip youths with hands-on skills for specific trades/industries. It focuses also on practical training which makes apprentices job-ready, thereby increasing employability. Again, vocational systems like modern systems often have strong employer partnership, which facilitates job placements (Chineze, 2022).

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

In line with the study's objectives, below is a summary of the major findings that emanated from the study:

1. Traditional apprenticeship model has a positive and significant influence on the growth of small-scale enterprises in South Eastern Nigeria;
2. Modern apprenticeship model has a positive and significant effect on the growth of small-scale enterprises in South Eastern Nigeria; and
3. Vocational apprenticeship system has a positive and significant effect on the growth of small-scale enterprises in South Eastern Nigeria.

5.2 Conclusion

This study was majorly undertaken to investigate the cause-effect relationship between apprenticeship and the growth of small-scale industries in South Eastern Nigeria. The specific objectives were to determine the extent to which traditional, modern, and vocational-based apprenticeship models have enhanced the growth of small-scale enterprises in the region. Accordingly, the study relied on primary data collected from business owners, apprentices, and mentors operating in Ariria Market, Aba; Main Market, Onitsha; and Spare Parts market, Nnewi. The quantitative data so generated were transformed and subjected to descriptive and Ordinary Least Square (OLS) multiple regression analyses. Mainly, results revealed that these apprenticeship models have positive and significant effects on the growth of small-scale enterprises in the region. Hence, the study concluded that there is a positive and significant cause-effect relationship between apprenticeship and the growth of small-scale industries in South Eastern Nigeria.

5.3 Recommendations

1. State governments in the South Eastern region of Nigeria and SMEDAN (Small and Medium Enterprises Development Agency of Nigeria) should partner with trade associations to formalize the traditional apprenticeship model (system) by setting minimum training standards, duration, and simple certification for graduates.
2. There is need for a national policy that will encourage partnerships between small-scale industries, polytechnics, and companies like Innoson, Cutix, and Dangote to run paid apprenticeship programs. Government can support this with tax incentives for firms that train apprentices and with equivalent grants to training centers.
3. State Ministries of Education and skill acquisition centers should align vocational training curricular with the actual skill needs of small-scale enterprises in the South Eastern region. They should include a mandatory 3-6 month industry attachments so that trainees will graduate with both theory and practical experience that they can immediately use.

5.4 Suggestions for Further Studies

Given the identified dearth of particular studies on apprenticeship and the growth of small-scale industries in

South Eastern Nigeria, it is imperative that researchers focus on this area of study but with modifications in the areas of variables used to proxy apprenticeship and growth of small-scale industries. The modification should as well affect the analytical tools that will be considered as the current study relied on the Ordinary Least Square (OLS) multiple regression analytical technique.

REFERENCES

1. Abor, J., & Quartey, P. (2010). Issues in SME development in Ghana and South Africa. *International Research Journal of Finance and Economics*, 39(6), 218–228.
2. Adewuyi, T., & Adeniran, A. (2019). Impact of apprenticeship training scheme on employment. *International Journal of Scientific Research in Social Sciences and Management Studies*, 4(1), 135–149.
<http://internationalpolicybrief.org/journals/international-directorate-for-policy-research-idpr-india/intl-jrnl-of-sci-research-in-social-sciences-mgt-studies-vol4-no1-july-2019>
3. Adeyeye, J.O., Falola, H.O., Waribo, J.Y., & Akinbode, J.O. (2015). The effects of apprenticeship system on skill development of employees in the Printing industry in Lagos State, Nigeria. *British Journal of Economics, Finance and Management Sciences*, 10(2), 69–81.
4. Agbele, T. (2024). Informal learning, mentorship and product innovation in SMEs: Evidence from Lagos, Nigeria. *Journal of Entrepreneurship and Innovation Studies*, 9(1), 55–70.
5. Agbionu, U.C., Emeka, J.O., & Ogbemudia, B.I. (2018). Apprenticeship orientation and performance of Micro-Businesses in Anambra State. *World Wide Journal of Multidisciplinary Research and Development*, 4(12), 26–33.
6. Akingunola, R.O. (2021). Small and medium scale enterprises and economic growth in Nigeria: An assessment of financing options. *Pakistan Journal of Business and Economic Review*, 2(1), 78–97.
7. Anyalor, M.C., Arisi-Nwugballa, E. & Ugwa, M. (2023). Apprenticeship orientation and entrepreneurial resilience among micro businesses in Abakaliki metropolis, Ebonyi State, Nigeria. *UBS Journal of Business and Economic Policy*, 1(4), 154–167.
8. Anzor, E.C., Okoro, M.E., & Ugorji, M.C. (2025). Igbo Apprenticeship System and sustainability of micro, small and medium-sized enterprises (SMEs) in Enugu State, Nigeria. *International Journal of Advances in Engineering and Management*, 7(11), 214–224. DOI:10.35629/5252-0711214224
9. Bala, T.T., & Nyaga, N.N. (2024). Evaluation of Igbo apprenticeship practices' effect on business startup among members of Jos South building materials in Plateau State Nigeria. *FULafia International Journal of Business and Allied Studies*, 2(3), 212–230.
10. Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
11. Chakrabartty, S.N. (2013). Best split-half and maximum reliability. *IOSR Journal of Research and Method in Education*, 3(1), 133–145.
12. Chineze, J.I. (2022). Effect of Igbo trade apprenticeship system on unemployment reduction in Onitsha International Market. *Journal of Business Practices and Economics*, 13(7), 96–107. Retrieved from <https://www.arcnjournals.org>
13. Chukwuemeka, B.C., Wnudu, T.O., & Orga, J. I. (2025). Indigenous Apprenticeship System and Growth of Entrepreneurship in Enugu Metropolis, Enugu State, Nigeria. *World Journal of Entrepreneurial Development Studies*, 10(7), 121–141. DOI: 10.56201/wjeds.v10.no7.2025.pg121.141
14. Eze, C.E., & Okafor, J.O. (2021). Informal mentorship and innovation in micro and small businesses in Anambra State. *International Journal of Small Business and Entrepreneurship Research*, 9(3), 22–34.
15. Eze, R.M. (2023). Assessment of the Igbo apprenticeship system in Nigeria. *Journal of social theory and research*, 3(2), 56–71. Retrieved from <https://publications.jostar.org/ng/assessment-igbo-apprenticeship-system-nigeria>
16. Ezeajughu, M.C. (2021). The Igbo apprenticeship practices: Nigeria's gateway to world business dominance. *International Journal of Research Culture Society* 5(3), 46–55.
17. Ezenwakwelu, C.A., Egbosionu, N.A. & Okwo, H.U., (2019). Apprenticeship training effects on entrepreneurship development in Developing economies. *Academy of Entrepreneurship Journal*, 25(1), 103–113.
18. Fryling, M.J., Johnston, C., & Hayes, L.J. (2021). Understanding observational learning: An interbehavioral Approach. *Anal Verbal Behav.*, 27(1), 191–203. DOI: 10.1007/bf03393102
19. Gessler, M. (2019). Concepts of apprenticeship: Strengths, weaknesses, and pitfalls In S. McGrath et al. (eds.), *Handbook of vocational education and training*, https://doi.org/10.1007/978-3-319-94532-3_94
20. Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2017). *Multivariate data analysis (6th Ed.)*. New Jersey: Pearson Education Inc.
21. Hisrich, R.D., Peters, M.P., & Shepherd, D.A. (2008). *Entrepreneurship (6th Ed.)*. New York: McGraw-Hill/Irwin.
22. Ifechukwu-Jacobs, C.J. (2022). Effect of Igbo trade apprenticeship system on unemployment reduction in Onitsha. *International Journal of Business Systems and Economics*, 13(7), 96–107.
23. Irechukwu, V.C., Nnawuchi, C.C., Anyiam, C.H., Agu, P.C. & Ajoku, S.O. (2023). The role of

- entrepreneurship in transforming South East Nigeria's economy. *RUJMASS*, 9(1), 1-10.
24. Iwueke, O.C., Halima, S.A., & Oparaku, P. (2020). Apprenticeship training system and business sustainability in Anambra State, South East, Nigeria. *International Journal of Innovative Research in Social Sciences and Strategic Management Techniques*, 7(1), 184-193. DOI:10.48028/iiprds/ijirssmt.v7.i1.14
 25. Kendra, C. (2021). How social learning theory works. <https://www.verywellmind.com/social-learning-theory-2795074>
 26. Krejcie, R.V., & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.
 27. Maddala, G.S. (2022). *Unit roots, cointegration and structural change*. Oxford, England: Oxford University Press.
 28. Mbah, P.C., & Ugwu, F.I. (2022). An assessment of Igbo apprenticeship schemes on development of SMEs in Enugu State. *Advance Journal of Business & Entrepreneurship Development*, 6(4), 22-34.
 29. Neuwirth, R. (2018). Igbo apprenticeship system is world's largest business incubator platform. Retrieved from <https://www.informationng.com/2018/11/igbo-apprenticeship-practices-is-worlds-largest-business-incuba-tor-platform-robert-neuwirth-reveals.html>
 30. Nkonyeasua, P.O. (2021). *Practical approach to research methodology*. Asaba: Pee Jen Publications.
 31. Nnonyelu, N., & Onyeizugbe, C. (2020). Reimagining Igbo apprenticeship: bringing it up to speed with contemporary realities. *EJBM, European Journal of Business and Management Research*, 5(3), 111-123.
 32. Nwoga, C.C., Ononuju, N.C., Chime-Nganya, C.R., Ogbin, O.O., Ngwu, O.L., & Nwakpu, S.E. (2024). Promotion of African indigenous business models through film: An exploration of Igbo trade apprenticeship through Netflix 2024 Afamefuna - An Nwa-Boi story. *Lakhomi Scientific Journal of Culture*, 5(3), 165-182. DOI: <https://doi.org/10.33258/lakhomi.v5i3.1203>
 33. Obi, P.O. (2020). Imu Ahia- The Igbo apprenticeship model as inspiration for youth entrepreneurship development. <https://www.orcid.org/0000-0002-0603-5816>.
 34. Obunike, C.C. (2016). Induction strategies of Igbo entrepreneurs and micro business success: A study of household equipment line, Main Market, Onitsha. *Nigeria Economics and Business Review*, 3(1), 43-65.
 35. Obuseh, R., Agu, P.C., Unegbu, N.G., & Nnawuchi, C. (2024). Igbo apprenticeship system and SME development in Imo State Nigeria. *International Journal of Business and Management Research*, 5(3), 216-238.
 36. Ohazuruike, K., & Elechi, F.A. (2023). The Igbo apprenticeship system, governance and entrepreneurial development in Southeast Nigeria. *South East Journal of Political Science*, 9(2), 130-147.
 37. Okafor, E.E. (2021). Youth unemployment and implication for stability of democracy in Nigeria. *Journal of Sustainable Development in Africa*, 13(1), 358-373.
 38. Okeyika, O.K., Uzoechina, B.I., Jegbefumwen, K., Ozulumba, J.I., & Ekwoh, G.A. (2025) Driving youth employability through Federal Government Apprenticeship Schemes: The case of South Southern Nigeria. *Multidisciplinary Journal of Management and Social Sciences*, 2(2), 105-116.
 39. Okoro, I.K., & Nwankwo, B.C. (2021). Indigenous learning and resource optimization among agro-based SMEs in South-East Nigeria. *Journal of Rural Development and Entrepreneurship*, 5(2), 76-89.
 40. Okpokwasili, O.A., & Onwuatuogwu, I.N. (2024). Gender dynamics in the Igbo apprenticeship system: Exploring women's participation in South East Nigeria. *Aquino Journal of Philosophy*, 4(1), 122-138.
 41. Okwuowulu, O. (2022). Impact of Igbo apprenticeship system on the development of small and medium scale enterprises. *IIARD International Journal of Economics and Business Management*, 8(2), 45-57.
 42. Olisaemeka O. (2022). Impact of Igbo apprenticeship system on the development of auto spare parts market in eastern Nigeria. *IIARD International Journal of Economics and Business Management*, 8(2), 1-10.
 43. Omede, K.N., & Nte, N.D. (2023). Towards an indigenous social inclusion paradigm: Igbo apprenticeship system, poverty alleviation and wealth creation in South-East Nigeria. *Economics World*, 10(3), 97-115.
 44. Omede, N. K., & Chukwu, E. U. (2024). Igbo trade apprenticeship system and wealth creation in South East, Nigeria. *International Journal of Socio-Cultural Research*, 2(4), 53-85. DOI:10.5281/zenodo.14673992
 45. Onu, L.O., Anoruoah, P.U., Ukonu, C.C., & Agu, P.C. (2023). Igbo apprenticeship system and sustainability of South-East Nigeria. *RUJMASS*, 9(1), 195-206.
 46. Organisation for Economic Co-operation and Development (OECD) (2019). *OECD SME and entrepreneurship outlook 2019*. OECD Publishing. <https://doi.org/10.1787/34907e9c-en>
 47. Udu, A.A. (2015). Apprenticeship orientation and performance of microbusinesses in Ebonyi State, Nigeria. *European Journal of Biology and Medical Science Research*, 3(6), 1-11.
 48. Umogbai, M.E., Adudu, C.A., & Agwa, T.R. (2018). Entrepreneurship education and unemployment

- reduction in Benue State, Nigeria. *Journal of Education and Practice*, 9(33), 231-247.
49. Wakazik, C.S., & Stallion, K.A. (2021). *Essentials of advance empirical research in business and management sciences*. Lagos: Apex Publishers.
50. World Bank. (2020). Small and medium enterprises (SMEs) finance: Improving SMEs' access to finance and finding innovative solutions. *World Bank Group*.
<https://www.worldbank.org/en/topic/sme/finance>