The Impact of Indigenous Apprenticeship Systems (IAS) on the Livelihoods of Graduates and Apprentices in Lagos State, Nigeria.

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DOI: https://dx.doi.org/10.47772/IJRISS.2025.910000012

Received: 29 September 2025; Accepted: 04 October 2025; Published: 01 November 2025

ABSTRACT

In Nigeria, where MSMEs dominate economic activity and formal Technical and Vocational Education remains inadequate, Indigenous Apprenticeship Systems (IAS) persist as a critical yet under-researched pathway for skill transfer, entrepreneurship, and livelihood creation. This study examines the impact of Indigenous Apprenticeship Systems (IAS) on the livelihoods of graduates and apprentices in Lagos State, with particular focus on income generation, well-being, and MSME sustainability. The study employed a mixed-methods approach, combining quantitative surveys (utilising chi-square statistics) with qualitative interviews (employing thematic analysis) to investigate the impact of Indigenous Apprenticeship Systems (IAS) on livelihoods in Lagos State. Employing convenience and snowball sampling, the research involved administering online questionnaires to 236 respondents (164 graduates and 72 apprentices) from the indigenous crafts of cane weaving and tie-dye. The study found that Indigenous Apprenticeship Systems (IAS) significantly improved livelihoods in Lagos State, with 99.0% of graduates reporting enhanced food security and 77.0% improved healthcare access. Additionally, personal income, business growth, and customer diversification in IAS-based MSMEs were strongly associated with improvements in housing, utilities, and the overall well-being of the operators. This study demonstrates that Indigenous Apprenticeship Systems (IAS) in Lagos State remain a critical livelihood pathway, uniquely linking business performance indicators (MBR, MPI, and BG) to multidimensional well-being outcomes in an urban African context where such empirical validation has been scarce**.** The study highlights IAS as a viable complement to under-resourced formal Technical and Vocational Education systems, necessitating the need for targeted support, innovation, and digital inclusion policies to sustain their relevance and maximise their impact on youth employment, sustainable livelihoods, and MSME resilience in Lagos State.

Keywords: Indigenous Apprenticeship Systems (IAS), Livelihood Outcomes, Informal Sector, Micro, Small and Medium Enterprises (MSMEs), Vocational Education and Training (VET), Skills Development, Urban Informal Economy.

INTRODUCTION

Background to the Study

In many developing economies, particularly in Sub-Saharan Africa, the informal sector serves as the backbone of economic activity, providing employment, skills development, and income for millions of people who are excluded from the formal labour market (ILO, 2025). Nigeria exemplifies this pattern, with Micro, Small and Medium Enterprises (MSMEs) representing about 97% of businesses, 87% of employment, and nearly half of the national Gross Domestic Product (PwC, 2024). Within this sector, Indigenous Apprenticeship Systems (IAS) continue to be a vital mechanism for transferring skills, encouraging entrepreneurship, and creating pathways to livelihoods for both graduates and apprentices.

The IAS is a culturally embedded, informal arrangement whereby a master tradesperson or entrepreneur undertakes the responsibility of training a young apprentice under socially sanctioned obligations of reciprocity and trust (Eze, 2024). The most notable example is the Igbo *Igba boi* system, though variants exist among the Yoruba and Hausa in Nigeria. Apprentices are trained in real business environments—markets, workshops, and craft clusters—where they acquire not only technical skills but also tacit knowledge of trade practices, customer

relations, and network building. Upon graduation, many apprentices are "settled" with financial or material support to start their own enterprises, thus reinforcing the cycle of entrepreneurship and socio-economic empowerment (Omede, 2023; Onu et.al., 2023).

Problem Statement

Indigenous Apprenticeship Systems (IAS) have long been recognised for their historical significance and resilience in Nigeria. In Lagos State—Nigeria's commercial hub marked by rapid urbanisation, high unemployment, and intense competition in labour and product markets—the role of IAS in shaping livelihoods remains underexplored. While formal Vocational Education and Training (VET) programs exist, their limited coverage and weak alignment with labour market realities constrain their effectiveness (UNDP, 2024). IAS continues to bridge this gap by providing skills and employment pathways; however, persistent concerns regarding training quality, exploitative practices, gender exclusion, and a lack of certification raise questions about its long-term effectiveness (Abasilim, 2024; Okpokwasili, 2024).

Although studies from southeastern Nigeria highlight the contributions of IAS to poverty alleviation and business sustainability, there is a lack of empirical research on its impacts in Lagos, where diverse ethnic groups, dense trade associations, and government youth-employability initiatives intersect. This gap limits policymakers' and stakeholders' ability to evaluate IAS as a sustainable livelihood pathway in urban contexts.

The problem this study addresses is the lack of systematic evidence on how IAS influences the livelihoods of graduates and apprentices in Lagos State, particularly in relation to income generation and well-being**.**

Objectives of the Study

The general objective of this study is to examine the impact of Indigenous Apprenticeship Systems on the livelihoods of graduates and apprentices in Lagos State. The specific objectives are to:

1. Examine the effects of indigenous apprenticeship systems on the livelihood of the graduates/operators of indigenous small and medium enterprises in Lagos State.
2. Analyse the effects of indigenous apprenticeship systems on the livelihood of the apprentices of indigenous small and medium enterprises in Lagos State.
3. Provide policy recommendations for strengthening IAS as a tool for youth employment and sustainable livelihoods.

Research Questions

1. Do the indigenous apprenticeship systems impact the livelihood of the graduates/operators of indigenous micro, small and medium enterprises in Lagos State?
2. Do the indigenous apprenticeship systems impact the livelihood of the apprentices of indigenous micro, small and medium enterprises in Lagos State?
3. What strategies can be adopted to strengthen IAS for inclusive and sustainable development?

LITERATURE REVIEW

Introduction

The literature review provides the theoretical and empirical foundation for examining Indigenous Apprenticeship Systems (IAS) and their role in enhancing the livelihoods of Micro, Small, and Medium Enterprises (MSMEs) in Lagos State.

This section reviews existing scholarship on Conceptual clarification, Theoretical frameworks, and Empirical literature. By synthesising both global and Nigerian studies, the review identifies gaps in knowledge, particularly the lack of systematic evidence linking IAS participation to multidimensional livelihood outcomes in Lagos

State. These gaps form the basis for the present study, which seeks to contribute new empirical insights into the intersection of apprenticeship, culture, and MSME performance in an urban African economy.

Conceptual Clarification

Indigenous Apprenticeship Systems (IAS)

Indigenous Apprenticeship Systems (IAS) are culturally embedded training mechanisms where young people acquire trade skills, entrepreneurial knowledge, and socio-cultural values under the tutelage of a master craftsperson or trader. Unlike formal Technical and Vocational Education and Training (TVET), IAS is regulated by informal norms, kinship ties, and community expectations rather than state certification (ILO, 2025). In Nigeria, the most widely documented form is the Igbo *Igba boi* system, but the Yoruba (ọmọ-ọ̀nà system) and Hausa (kayan aiki) also maintain robust apprenticeship traditions (Eze, 2024).

Livelihoods

"Livelihoods" are the capabilities, assets, and activities required for a means of living (Chambers & Conway, 1992). In the Lagos context, livelihoods extend beyond income to include employment opportunities, enterprise ownership, resilience against shocks, and social mobility. IAS therefore influences livelihoods by equipping apprentices with skills, networks, and start-up resources needed to transition into self-reliance.

THEORETICAL FRAMEWORKS

Human Capital Theory

According to Becker (1964), investments in education and training increase worker productivity and earnings. IAS embodies this by providing on-the-job training, fostering practical competencies, and shortening the learning-to-work gap (Omede, 2023).

Social Capital Theory

Putnam (1993) emphasises the role of trust, reciprocity, and networks in economic outcomes. In IAS, apprentices gain access to bonding social capital (kinship/ethnic ties) and bridging capital (supplier networks, trade associations), which support credit access, market entry, and livelihood sustainability (Eze, 2024).

Person–Environment (P–E) Fit Theory

This framework posits that individuals perform better when their values and skills align with the environment (Kristof-Brown et al., 2005). Apprenticeship thrives because it aligns with the socio-cultural norms of reciprocity and respect for elders, while producing business-ready graduates who can navigate Lagos' competitive markets.

Empirical Literature

Studies consistently show that IAS is Nigeria's largest non-formal training provider. The ILO (2025) notes that over 70% of artisans and traders in urban Nigeria acquired skills through informal apprenticeship. In Lagos, apprenticeships remain dominant in sectors such as electronics (Computer Village), textiles (Balogun Market), and carpentry (Somolu).

Empirical studies have linked IAS to high conversion rates of entrepreneurship. Onu (2023) and Omede (2023) demonstrate that graduates who receive "settlement" support are more likely to establish enterprises within two years of completing their studies. Lagos' Igbo clusters replicate this by injecting new business owners into dense trade ecosystems.

Omede (2023) reports that graduates of IAS in Nigeria earn 25–40% higher incomes than peers without vocational training. Abasilim (2024) highlights gender disparities, as female apprentices often earn less and face exclusion from lucrative trades, although inclusion is increasing in Lagos's retail and service sectors.

IAS builds resilience by embedding apprentices into supportive networks that cushion economic shocks. During the COVID-19 pandemic, apprentices and graduates with strong ties to trade associations in Lagos were able to recover more quickly by accessing supplier credit and rotating savings and credit associations (UNDP, 2024).

Historically male-dominated, IAS is slowly becoming more gender-inclusive. Okpokwasili (2024) documents the rising participation of females, although barriers such as harassment, limited access to settlement, and domestic role conflicts persist. Lagos' markets reveal higher female presence in textiles and catering, yet exclusion remains in electronics and mechanics.

Research Gaps

Most IAS studies focus on Southeast Nigeria, with fewer empirical works on Lagos despite its diverse urban context. While qualitative studies highlight positive narratives, rigorous measurement of income, employment, and resilience outcomes in Lagos IAS is still sparse

The literature indicates that IAS is a powerful instrument of skill formation, entrepreneurship, and livelihood security in Nigeria. It continues to thrive in Lagos State's multicultural economy, where formal vocational systems are insufficient. However, its performance is shaped by contextual factors: settlement capital, gender norms, association structures, and government linkages. While evidence from other regions suggests substantial livelihood impacts, Lagos' unique socio-economic landscape requires systematic research to quantify IAS outcomes and to explore how traditional apprenticeship can be modernised for inclusive development.

CONCLUSION

The literature indicates that while IAS remains a fundamental element of informal sector development, its full potential to enhance livelihood outcomes is limited by socio-cultural, institutional, and policy obstacles. This gap justifies the current study, which aims to explore how IAS practices, mechanisms, and support systems influence the livelihoods of apprentices and graduates in Lagos State.

METHODOLOGY

Introduction

This section outlines the methodological framework adopted to investigate the impact of Indigenous Apprenticeship Systems (IAS) on the livelihoods of apprentices and operators of indigenous MSMEs in Lagos State. The methodology provides the blueprint for how the study was designed, the data collected, and the analyses conducted to answer the research questions and test the hypotheses.

The methodology is organised into subsections covering Introduction to Research Framework, quantitative data, qualitative data, secondary data, Conceptual Framework, hypothesis testing, conclusions and Recommendations. This ensures transparency, replicability, and rigour in examining how IAS functions as a livelihood pathway and socio-economic driver in Lagos State.

Introduction to Research Framework

Research Design

This study adopts a mixed-methods research design, combining quantitative surveys with qualitative interviews to capture both the measurable outcomes of IAS and the lived experiences of graduates in Lagos State. A mixed-methods approach is justified because IAS is not only an economic phenomenon (involving income, employment, and enterprise creation) but also a socio-cultural institution governed by norms, values, and networks (Creswell & Plano-Clark, 2018).

The quantitative component assesses the statistical impact of IAS on key livelihood indicators, including income, employment status, enterprise ownership, and resilience. The qualitative component explores in-depth narratives

of graduates and master trainers, thereby contextualising statistical findings with rich descriptions of experiences, challenges, and cultural dynamics.

Population of the Study

The target population consists of individuals directly involved in IAS in cane weaving and tie & dye within Lagos State. These include:

1. Current apprentices undergoing training in cane weaving and tie & dye artisan associations in Lagos state
2. Graduates of IAS who have transitioned into self-employment, wage employment, or micro-enterprise ownership.
3. Master trainers/trade association leaders responsible for supervising apprentices and enforcing apprenticeship norms.

The study focuses on prominent apprenticeship hubs such as:

- Cane Weaving Association in Lagos State.
- Tie and dye association in Lagos State.

Quantitative data

Sample and Sampling Technique

Quantitative Sample: Given the diversity of trades, Convenience and snowballing sampling were employed:

1. Convenience sampling for graduates in Cane weaving
2. Snowballing sampling for graduates in Tie & Dye
3. Snowballing sampling for apprentices in both crafts

Aligning with common recommendations for achieving representativeness and efficiency as highlighted by Asenahabi and Peters (2023), 29% of the targeted population of 566 resulted in 164 Graduates/Operators of IAS, and 72 apprentices were selected from the operators that have apprentices from the two indigenous crafts enterprises, making a total of 236 respondents.

Research Instruments

Structured Questionnaire

Two sets of Questionnaires were used for the study, which were arranged in Sections A, B, C, and D. Each of the sections covered the general background data of the respondents: socioeconomic/cultural characteristics of the respondents, Background information about indigenous businesses and perceived impact of indigenous apprenticeship on respondents' household livelihood.

Methods of Data Collection

Quantitative survey: Assisted online, face-to-face administration by trained enumerators in markets, workshops and meeting locations.

Methods of Data Analysis

Data was analysed using Excel and SPSS 25. The information obtained was subjected to both descriptive and inferential statistics. The responses obtained through the questionnaires were tabulated, categorised, and descriptively analysed using frequencies and percentages to present the performance of IAS and perceptions on the livelihood of the operators and apprentices of indigenous micro, small, and medium enterprises. The inferential statistics used were the chi-square test of association. Chi-square test of association was used to test

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue X October 2025

the influence of indigenous apprenticeship systems (IAS) on the livelihood of the operators of indigenous small and medium enterprises in Lagos State

$$X^2 = \sum_{i=1}^{n}\left(\frac{(X_i - M_i)^2}{M_i}\right) \ldots\ldots 1$$

X_i = Observed variable (variables IAS Performance, e.g. Monthly Revenue from the business, business growth, operators' Income per month, Number of staff, Customer Types, etc.),

M_i = Expected variable (livelihood of IAS operators and apprentices, e.g. affordability of adequate meals, percentage of your income allocated to food, improvement in Housing type, access to portable pipe-borne water, access to quality education for my wards, etc.).

X^2 = Chi-square

Qualitative data

Structured in-depth interviews with operators were used to elicit relevant information from the graduated apprentice in the English language and were later transcribed for thematic analysis. There were questions on sociocultural influences, livelihood outcomes, training challenges, and support systems. This was necessary for triangulating findings across Qualitative and quantitative methods.

Qualitative sample:

11 operators were purposively selected for in-depth interviews based on their experience and willingness to participate. This sample size is considered adequate for statistical analysis and thematic saturation in qualitative inquiry (Guest et al., 2020)

Methods of Data Collection

Qualitative interviews: A semi-structured interview guide was used. Interviews were conducted in English or Pidgin, depending on the respondent's preference. Some Interviews were audio-recorded, while others were handwritten and transcribed verbatim. Ethical approval was obtained, and informed consent was secured from all participants.

Qualitative Analysis

Interview transcripts were analysed using thematic analysis (Braun & Clarke, 2019) to code the data into themes,. This will allow triangulation of statistical results with narrative evidence.

Conceptual Framework

The conceptual framework illustrates the relationship between Indigenous Apprenticeship Systems (IAS), the livelihood outcomes of apprenticeship graduates, and the performance of MSMEs in Lagos State. The framework proposes that IAS directly influences graduates' livelihoods, but the strength of this influence depends on sociocultural moderators.

This study is anchored on the assumption that sociocultural factors shape the functioning and effectiveness of Indigenous Apprenticeship Systems (IAS), which in turn influence graduates' livelihood outcomes.

The framework illustrates a three-tier relationship. At the first level, sociocultural factors, as moderators, are the external context or backdrop — such as Ethnicity, kinship ties, gender roles, and migration status — that form the context within which IAS operate, influencing both access to apprenticeships and livelihood outcomes. For example, kinship networks may determine who gets training, while gender norms can shape the kinds of trades women or men can enter. These sociocultural factors moderate the strength and direction of the relationship between IAS and livelihood outcomes (Akinlabi, 2024). These factors determine how apprentices are recruited, trained, and transitioned into operators of indigenous enterprises.

At the second level, the Indigenous Apprenticeship System (**The independent variable**). Indigenous Apprenticeship Systems serve as the primary channel through which technical and entrepreneurial skills are transferred to apprentices. It is the central mechanism for skill acquisition, entrepreneurial grooming, and cultural transmission. IAS encompasses traditional knowledge transfer, with an emphasis on hands-on training, mentor-apprentice relationships, character development, and the cultural norms that govern apprenticeship. This approach equips apprentices with both technical competencies and entrepreneurial acumen, as well as community-based skill development. However, its effectiveness is conditioned by the enabling or constraining sociocultural factors.

At the third level, the outcomes of IAS manifest in the livelihoods of graduates and apprentices (**Dependent variables**). Graduates'/Apprentices' Livelihood refers to the economic and social well-being of individuals who undertake indigenous apprenticeship, measured by employability, self-reliance, income generation, and the ability to transition successfully into entrepreneurship. Upon completing apprenticeships, graduates' livelihood outcomes are expected to improve through increased income, job security, enhanced employability, and better entrepreneurial readiness (Irene et al., 2024). The quality of IAS determines whether graduates achieve sustainable livelihoods or remain vulnerable in the informal economy.

This conceptual framework positions IAS as a mediating mechanism between sociocultural factors and development outcomes of livelihood security.

Validity and Reliability

Validity**:** Instruments were reviewed by scholars/practitioners with a focus on Indigenous knowledge, Economics, and sociology at the University of Ibadan, Nigeria. Pilot testing was conducted with 20 MSME operators to test clarity and relevance. Triangulation: Combining quantitative and qualitative data enhances the reliability and robustness of findings.

Ethical Considerations

Participation was voluntary, with the right to withdraw at any point. Informed consent was obtained before administering questionnaires or recording interviews. Anonymity and confidentiality will be maintained; pseudonyms will be used in reporting. Sensitive issues such as financial records or exploitative practices will be handled with cultural sensitivity.

Secondary data

Secondary data were obtained from NBS/SMEDAN MSME reports, Lagos State Artisans compendium, UNESCO/UNIDO craft studies, journal articles, and policy documents

Hypothesis testing

Based on the research objectives, the null hypotheses that were tested are as follows:

Ho_1: The Indigenous apprenticeship system has no impact on the livelihood of the graduates/operators of indigenous micro, small and medium enterprises in Lagos state.

Ho2: The Indigenous apprenticeship system has no impact on the livelihoods of apprentices in Indigenous micro, small and medium enterprises in Lagos State.

CONCLUSIONS

This study employed a qualitative research design to explore how Indigenous Apprenticeship Systems (IAS) influence the livelihoods of apprentices and graduates in Lagos State. Through in-depth interviews and thematic analysis, the research captured participants' lived experiences and the socio-cultural dynamics shaping the system. The methodological approach ensured a rich understanding of how contextual factors, apprenticeship processes, and individual capabilities interact to determine livelihood outcomes, thereby providing a strong foundation for evidence-based policy recommendations.

FINDINGS AND ANALYSIS

The findings and analysis of the study are presented and discussed below:

Socio-Demographic Profile

Socio-economic Background of the Operators of indigenous MSMEs in Lagos State

The socio-economic characteristics of the Operators/IAS graduates are presented in Table 1. Most of the operators were female (64.0%), with operator ages ranging between 30 and 50 years (49.0%) and above 50 years (46.0%). About 87.0% of the operators were not natives of Lagos state, and 91.0% of them have been residents in Lagos State for more than 15 years. Religious diversity indicated that 62.0% of the operators are Christians, while 38.0% are Muslims. Additionally, 63.0% of the operators specialise in tie and dye craft, while 37.0% specialise in cane weaving craft. Regarding marital status, 85.0% of the operators were married, while only 11.0% were single, and 4.0% were either divorced or widowed. Examining their level of Education, 68.0% of the operators have a Secondary education, 16.0% have higher education, 14.0% possess primary education, while only 2.0% have no formal education. Years in Business: 29.0% of the operators have been in business for more than 21 years, 31.0% for between 11 and 20 years and 41.0% for between 1 and 10 years. This is a good indicator of the sustainability of these indigenous businesses.

Table 1: Socio-economic Background of the Operators of indigenous MSMEs in Lagos State

	Frequency	**Percentage**	**Mode**
Sex			
Male	59	36.0	Female
Female	105	64.0	
Age (Years)			
>20 >30	9	5.5	> 50 years
> 30> 40	33	20.1	
> 40>50	46	28.0	
> 50	76	46.3	
Duration of Resident in Lagos (Years)			

>2> 5	2	1.2	> 15years
>5 >10	6	3.7	
>10 >15	6	3.7	
> 15	150	91.7	
Native of Locality?			
Yes	21	12.8	No
No	143	87.2	
Educational Status			
No formal Education	3	1.8	Secondary Education
Primary Education	23	14.0	
Secondary Education	112	68.3	
OND/NCE	13	7.9	
HND/First Degree	12	7.3	
Higher Degree	1	0.6	
Marital Status			
Single	18	11.0	Married
Married	139	84.8	
Separated/widowed	6	3.7	
Divorced	1	0.6	
Household Size			
1 - 3	41	25	4 – 6
4 - 6	99	60.5	
7 - 9	19	12.2	
10 - 12	3	1.8	
13 - 15	1	0.6	
Religion			
Christianity	102	62.2	Christianity
Islam	62	37.8	
Business Type			
Cane weaving	60	36.6	Tye and Dye
Tye and Dye	104	63.4	
Length of Experience in Business (Years)			
1- 5	27	16.5	≥ 21 Years
6 – 10	40	24.4	
11-15	38	23.2	
16 – 20	12	7.3	
≥21	47	28.7	

Source: Field Survey, 2024.

Socioeconomics of the apprentices of indigenous MSMEs in Lagos State

Examining the socioeconomic characteristics of apprentices within the Indigenous apprenticeship system (Table 2), the study found that there were more female (71.0%) than male (29.0%) apprentices. A higher proportion (35.0%) of them are between 10 and 20years of age, followed by those between 20 and 30 years (31.0%), while 15.0% are between 30 and 40 years. Additionally, 83.0% of them are from Lagos State, and 76.0% have resided in Lagos State for over 15 years. Furthermore, 79.0% of the apprentices have a secondary education, 10.0% have a primary education, and 11.0% have a higher education beyond secondary.

Regarding marital status, 58.0% of them were single, 36.0% were married, 36.0% were separated, and 6.0% were divorced. The modal household size among the apprentices (56.0%) was between 4 and 6 people, followed by 1-3 (32.0%) and 7-9 (11.0%). Religion distribution revealed 55.0% as Christians and 35.0% as Muslims, while 72.0% are in the tie & dye apprenticeship and 28.0% are learning cane weaving. Worthy of note is the apprenticeship period, which lasted between 1 and 2 years for 75.0% of the apprentices, followed by more than 5 years (14.0%).

Table 2: Socioeconomics of the apprentices of indigenous MSMEs in Lagos State

	Frequency	**Percentage**	**Mode**
Sex			
Male	21	29.2	Female
Female	51	70.8	
Age			
>10 > 20 years	25	34.7	>10 > 20 years
> 20 >30 years	22	30.6	
> 30 > 40 years	11	15.3	
> 40 > 50 years	8.2	8.3	
> 50 years	11	11.1	
Nativity to the locality			
Yes	60	83.3	Yes
No	12	16.7	
Years of residence in Lagos			
>2 >5 years;	9	12.5	> 15 years
>5 >10 years	4	5.6	
10 >15 years	4	5.6	
> 15 years	55	76.4	
Level of formal Education			
Primary Education	7	9.7	Secondary Education
Secondary Education	57	79.2	
OND/NCE	4	5.6	
HND/First Degree	4	5.6	
Marital status			
Single	42	58.3	Single

Married	26	36.1	
Separated	4	5.6	
Household Size			
1-3	23	32.0	4-6
4-6	40	55.6	
7- 9	8	11.1	
10-12	1	1.4	
Religion			
Christianity	47	65.3	Christianity
Islam	25	34.7	
Craft/Business Type			
Cane weaving	20	27.8	Tye and Dye
Tye and Dye	52	72.2	
Year of Experience as an apprentice			
1- 2yrs	54	75.0	1- 2yrs
3 - 5yrs	8	11.1	
6 - 8yrs	1	1.4	
9 - 10yrs	1	1.4	
10yrs and above	8	11.1	
Ethnic group			
Yoruba	54	75.0	Yoruba
Ibo	1	1.4	
Hausa	2	2.8	
Others	15	20.8	

Source: Field Survey, 2024.

Livelihood of Operators of Indigenous MSMEs in Lagos State

The distribution of indigenous MSME operators' responses to the indices of livelihood (Table 3) revealed that 78.0% of them spent between N1,000 and N20,000 (modal spending on health), and 17.0% spent N21,000 to N50,000 per month on family health. Additionally, 51.0% of them spent between N1,000 and N50,000, and 27.0% spent between N51,000 and N100,000 on their children's education monthly. Of the operators, 70.0% spent between ₦1,000 and N10,000, while 22.0% spent N11,000 – N20,000 on the maintenance of government infrastructures every month.

Furthermore, 59.0% of the operators consented to eating three times or more daily, while 40.0% ate at least twice a day. It is also noteworthy that 60.0% of them skip food once or twice a week, while 34.0% do not skip meals at all. Regarding skipping meals, 56.0% of respondents attributed their meal skipping to religious activities, 4.0% to health reasons, 2.0% to financial constraints, and 38.0% to other reasons.

Investigating the quality of food consumed, 97.0% of the operators consume food cooked at home. The level of consumption of staple food was observed to be low for 60.0% of the operators, moderate for 35.0%, while junk

food consumption was low for 93.0% of them. Also found by the study was that 78.0% of the operators expend 30% or more of their annual income on food procurement.

Table 3: Livelihood of Operators of Indigenous MSMEs in Lagos State

	Frequency	Percentage	Mode
MSMEs Operator's Expenditure on household health/month (₦)			
1,000 - 20,000	127	77.9	1,000 – 20,000
21,000 - 50,000	30	17	
51,000 - 100,000	5	3	
101,000 - 200,000	1	0.6	
201,000 - 300,000	1	0.6	
MSMEs Operator's Expenditure on children education/month (₦)			
None	13	9.0	1,000 – 50,000
1,000 – 50,000	74	51.1	
51,000 - 100,000	38	26.9	
101,000 - 200,000	17	10.7	
201,000 - 250,000	2	1.4	
MSMEs Operator's Expenditure on servicing government infrastructure/month (₦)			
1,000 - 10,000	115	70.1	1,000 - 10,000
11,000 - 20,000	36	21.7	
21,000 - 50,000	3	1.8	
51,000 - 100,000	10	6.1	
Number of times MSMEs Operators eat in a day?			
Once	2	1.2	Thrice
Twice	66	40.2	
Thrice	88	53.7	
More than thrice	8	4.9	
Number of times MSMEs Operators skip meals in a week?			
None	58	35.4	None
Once	49	29.9	
Twice	50	30.5	
Thrice	7	4.3	
Reason why MSMEs Operators skip meals			
Lack of financial capacity	4	2.4	Due to religious activity
Due to religious activity	91	55.5	
On health ground	7	4.3	
Others	62	37.8	

The level of consumption of cooked food by Operators of MSMEs			
Moderate	5	3.0	High
High	159	97.0	
The level of consumption of Staple foods by Operators of MSMEs			
Low	98	59.8	Low
Moderate,	58	35.4	
High	8	4.9	
The level of consumption of junk foods by Operators of MSMEs			
Low	152	92.7	
Moderate	10	6.1	Low
High	2	1.2	
Percentage of annual income allocated to food procurement by Operators of MSMEs			
> 10 ≤ 20%	13	7.9	
>20 ≤ 30%	23	14	
>30 ≤ 40%	47	28.7	>30 ≤ 40%
>40 ≤ 50%,	36	22	
>50%	45	27.4	

Source: Field Survey, 2024.

Livelihood support of the apprentices of Indigenous MSMEs in Lagos state

Indices of livelihood support enjoyed by apprentices of Indigenous MSMEs in Lagos State (Table 4) revealed that 63.0% of trainees earn no money. In comparison, the remaining 37.0% of respondents report earning between N10,000 and N100,000 per month. However, 72.0% of them receive support from parents, friends, spouses and other sources, while 46.0% and 14.0% receive support only from their parents and spouses, respectively (Table 4.12). The average monthly support received was ₦10,000, with a range of ₦4,000 to ₦60,000.

Furthermore, none of the support received was allocated to household health, as 53.0% of the apprentices indicated. Similarly, none went into offsetting children's education bills and servicing government infrastructures among 72.0% and 65% of the apprentices, respectively. 52% of an average apprentice of indigenous MSMEs (52.0%) in Lagos State ate at least thrice or more times daily, 48.0% ate twice, 39.0% do not skip meals, while 58.0% skip meals only once or twice in a week, and it's mainly for religious reasons by 54.0% (Table 4.12). Most apprentices (97.0%) eat food cooked at home, while 83.0% are low in staple food consumption, and the remaining 17.0% are moderate. Additionally, 90.0% of individuals are low in their consumption of junk food, and the remaining 10.0% are moderate in their junk food consumption. More than half (65.0%) of them spend over 50.0% of their income and financial support on food procurement annually.

Table 4 : Livelihood support of the apprentices of Indigenous MSMEs in Lagos state

	Frequency	**Percentage**	**Mode**
Income per month from Business (₦)			
Nothing	45	62.5	
10,000	3	4.2	

15,000	1	1.4	
20,000	7	9.7	
25,000	2	2.8	Nothing
30,000	5	6.9	
40,000	3	4.2	
50,000	3	4.2	
100,000	3	4.2	
Consent on Receiving Support as a Learner			
Yes	52	72.2	Yes
No	20	27.8	
Source(s) of Learner Support			
Parent	33	45.8	
Friends	4	5.6	Parent
Spouse	10	13.9	
Others	25	34.7	
Average Learner Support/Month (₦)			
None	8	11.1	
4,000	1	1.4	
5,000	6	8.3	
6,000	2	2.8	
10,000	15	20.8	10,000
12,000	4	5.6	
14,000	1	1.4	
15,000	5	6.9	
17,000	1	1.4	
20,000	13	18.1	
25,000	2	2.8	
30,000	8	11.1	
40,000	3	4.2	
50,000	2	2.8	
60,000	1	1.4	
Expenditure on Household Health/Month (₦)			
None	38	52.8	
1,000	2	2.8	
2,000	4	5.6	
3 ,000	4	5.6	None
5,000	8	11.1	

9 ,000	2	2.8	
10 ,000	6	8.3	
15,000	1	1.4	
20,000	5	6.9	
25,000	1	1.4	
30,000	1	1.4	
Expenditure on Children's Education/Month (₦)			
None	52	72.2	
3,000	1	1.4	
5,000	1	1.4	
8,000	1	1.4	
10,000	2	2.8	
15,000	4	5.6	None
20,000	2	2.8	
30,000	4	5.6	
40,000	2	2.8	
50,000	2	2.8	
70,000	1	1.4	
Expenditure on Servicing Government Infrastructure/Month (₦)			
None	47	65.3	
1,000	3	4.2	
1,500	1	1.2	
2,000	4	5.6	
2,500	1	1.4	None
3,000	7	9.7	
5,000	6	8.3	
8,000	1	1.4	
10,000	2	2.8	
Frequency of Eating/Day			
Twice,	34	47.6	
Trice	36	49.6	Trice
more than thrice	2	2.8	
Frequency of Skipping Meals/Week			
None	28	38.9	
Once	25	34.7	
Twice	17	23.6	None
Thrice	1	1.4	

more than thrice	1	1.4	
Reason for Skipping Meals			
Due to religious activity	39	54.2	Religious activity
Others	33	45.8	
Level of Consumption of Cooked Food			
Low	1	1.4	High
moderate	1	1.4	
high	70	97.2	
Level of Consumption of Staple Foods			
Low	60	83.3	Low
moderate	12	16.7	
Level of Consumption of Junk Foods			
Low	65	90.3	Low
moderate	7	9.7	
Percentage of Annual Income Allocated to Food Procurement			
> 10 ≤ 20%	7	9.7	>50%
> 20 ≤ 30%,	7	9.7	
> 30 ≤ 40%	9	12.5	
> 40 ≤ 50%,	2	2.8	
> 50%	47	65.3	

Source: Field Survey, 2024.

Quantitative Livelihood Outcomes

Frequency Distribution of MSMEs Operators' Level of Perception of the Indigenous Apprenticeship Scheme Effect on their livelihood

The study (Table 5) revealed that the livelihood of approximately 98.0% of graduates from the Indigenous Apprenticeship System (IAS) was perceived to have improved in terms of housing. They have been able to improve, upgrade and maintain their accommodation after graduation.

Also, 99% of the graduates/operators linked improvement in their ability to afford adequate meals in their household to their business. This is another significant indicator of IAS's contribution to improving the livelihoods of operators.

Regarding the health conditions of IAS graduates, the study (Table 5) revealed that 98.0% of the IAS graduates agreed that their health conditions are significantly better in their households after graduation than they were during their apprenticeship, and 77.0% agreed that they could afford to use government hospitals. However, 17.0% were of the view that they could only afford ethno-medicinal treatments.

The perception of livelihood based on the improvement in lighting systems enjoyed by IAS operators (Table 5) reveals that 98.0% of the graduates have access to a light supply from a government power source, and 83.0% affirm that the supply is both affordable and consistent. In comparison, 87.0% can afford an electricity-generating set for lighting.

Examining the perception of IAS operators regarding water sources in the study (Table 5), it was found that the sinking borehole was accessible to 85.0% of them. However, only 45.0% attributed this inaccessibility to affordability. However, 85.0% of them have access to clean piped water in their communities.

On cooking facilities (Table 5), 93.0% of the graduates prefer cooking with gas to other options because it saves time and they can afford it; however, 87.0% can only afford the use of a kerosene stove, and 86.0% did not perceive the use of charcoal as a better cooking option for their household.

Examining IAS operators' perception of electronics, the study (Table 4.5) revealed that 88.0% of them agreed on the usefulness of home and cooking appliances for their households, while 92.0% viewed electronic appliances as essential and affordable, and were procured for their families.

On the Children's Education of IAS operators, the study (Table 5) found that 87.0% of them can afford quality education for their children and wards, 84.0% of them have access to higher education in their community, and 61.0% would prefer their wards to have technical skills in addition to higher education, despite their ability to afford higher education.

Regarding transportation, the study (Table 4.5) found that 87.0% of the graduates and their family members did not have access to a functional motor vehicle or motorcycle; however, 90.0% of them affirmed that the transportation system in the study area was affordable and sufficient.

Table 5: Frequency Distribution of MSMEs Operators' Level of Perception of Indigenous Apprenticeship Scheme Effect on their livelihood

Perception of Livelihood Statements	SA	A	UN	D	SD	Mode
Housing Type						
Housing type is improving with years of graduation from an indigenous apprenticeship	55 (33.5)	106 (61.6)	1 (0.6)	2 (1.2)	-	A
The maintenance cost of accommodation is more affordable with increasing	52 (31.7)	109 (66.5)	1 (0.6)	2 (1.2)	-	A
There is not much difficulty in upgrading the accommodation after graduation	49 (29.9)	111 (67.7)	1 (0.6)	3 (1.8)	-	A
There is more improvement in accommodation after graduation.	50 (30.5)	111 (67.7)	2 (1.2)	1 (0.6)	-	A
Food Utilities						
The affordability of food has become much better after graduation	50 (30.5)	113 (68.9)	1 (0.6)	-	-	A
I can afford adequate meals in my household after graduation.	48 (29.3)	114 (69.5)	1 (0.6)	1 (0.6)	-	A
No improvement in food intake after graduation	11 (6.7)	3 (1.8)	10 (6.1)	140 (85.4)	-	D
Health Condition						
Health conditions are much better now in my household than when I was an apprentice	55 (33.5)	106 (64.6)	-	3 (1.8)	-	A
I can only afford to pay for government hospital bills for my household.	34 (20.7)	93 (56.7)	3 (1.8)	34 (20.7)		A

I can only afford ethnomedicinal treatment for my household	20 (12.2)	8 (4.9)	15 (9.1)	121 (73.8)		D
Lighting System						
Light supply from the government's power source is accessible	51 (31.1)	110 (67.1)	-	3 (1.8)	-	A
Provision of lighting in my house through a generating set is affordable	47 (28.7)	96 (58.5)	4 (2.4)	17 (10.4)	-	A
There is a constant supply of affordable power.	36 (22.0)	100 (61)	4 (2.4)	24 (13.6)	-	A
Water Sources						
The sinking of the borehole is more affordable for my household	50 (30.1)	30 (18.3)	10 (6.1)	74 (45.1)	-	D
The borehole is not accessible due to the cost of sinking it	67 (40.9)	73 (44.5)	17 (10.7)	7 (4.3)	-	A
There is access to a portable pipe-borne water supply in my community.	39 (23.8)	101 (61.6)	8 (4.9)	16 (9.8)	-	A
There is a water supply from a tanker to the community at an affordable cost	45 (27.4)	23 (14.0)	7 (4.3)	89 (54.3)	-	D
Cooking Sources						
Maintenance of a kerosene stove is not affordable.	3 (1.8)	18 (11.0)	2 (1.2)	141 (86.0)	-	D
Cooking with a charcoal pot is much better for my household	2 (1.2)	21 (12.8)	6 (3.7)	135 (82.3)	-	D
I prefer to use gas for cooking because it saves time and is affordable	100 (61.0)	54 (32.9)	4 (2.4)	6 (3.7)	-	SA
Electronic Appliances						
Essential appliances which are affordable are procured for my family	49 (29.9)	102 (62.2)	4 (2.4)	9 (5.5)		A
Home and cooking appliances are helpful in my household for preservation purposes	48 (29.3)	97 (59.1)	5 (3.0)	14 (8.5)		A
Children's Education						
I can afford quality education for my wards	41 (25.0)	102 (62.2)	19 (11.6)	2 (1.2)	-	A
I have access to higher education for my wards in my community	38 (23.2)	100 (61.0)	21 (12.8)	5 (3.0)	-	A
Though I can afford Higher education for my wards, I prefer that they have technical skills	15 (9.1)	85 (51.8)	20 (12.2)	44 (26.8)	-	A

Transportation						
My household has access to a functional motorcycle/ vehicle	6 (3.7)	10 (6.1)	5 (3.0)	143 (87.2)	-	D
A motor vehicle is germane for the conveyance of my family, and I have one	6 (3.7)	10 (6.1)	5 (3.0)	143 (87.2)	-	D
I do not have access to a personal vehicle, but public transportation is sufficient	96 (58.5)	52 (31.7)	11 (6.7)	5 (3.0)	-	A

NB* Percentages of the distributions are in parentheses

Source: Field Survey, 2024.

Apprentice's View on the Impact of IAS on their Livelihood

The perception of the IAS apprentices on their livelihood (Table 6) revealed that they are mostly undecided on the perception statements. This may be attributed to the fact that most of them are not directly responsible for providing these livelihood indicators. For example, between 72.0% and 74.0% of the apprentices are undecided about improvement in their housing type, housing maintenance, ease of upgrading their house, and improvement in accommodation over their apprenticeship years, but 25.0% submitted positive responses (Table 6).

Examining apprentices' views on food utilities (Table 6), the percentage with undecided views was 53.0%. However, 46.0% were positive regarding food affordability, and 25.0% regarding improvement in food intake. Regarding health conditions as an indicator of livelihood, 57.0% were undecided, while 65% were undecided, and 21.0% affirmed their affordability of government hospitals, and 32.0% their affordability of ethnomedicinal treatment.

Investigating apprentices' perception of lighting system as an index of livelihood (Table 6), 57.0% - 60.0% were undecided, but 31.0% expressed their inability to afford electricity through an electric generating set. In comparison, 40.0% affirmed their access to light from a government power source, and 25.0% could not afford a constant supply from such a source. The trend in water sources as an indicator of apprentice livelihood (Table 6) was not significantly different, as the results ranged from 54.0 to 69.0, with undecided responses on the parameter under review.

In terms of cooking utilities as an indicator of livelihood among indigenous MSMEs apprentices (Table 6), between 57.0% and 60.0% of the respondents met the parameters used. Notably, however, the trend of observation on children's education as an indicator of livelihood among apprentices is similar to that of housing, with 72.0 to 79.0% undecided on the parameter used.

Table 6: Apprentice View on the Impact of IAS on their Livelihood

Perception of Livelihood Statements	SA	A	UN	D	SD	Mode
Housing Type						
Housing type is improving with years of graduation from indigenous apprenticeship	3 (4.2)	15 (20.8)	52 (72.2)	2 (2.8)	-	**UN**
The maintenance cost of accommodation is more affordable with increasing	3 (4.2)	15 (20.8)	53 (72.2)	1 (1.4)	-	**UN**
There is not much difficulty in upgrading the accommodation after graduation	3 (4.2)	15 (20.8)	53 (72.2)	1 (1.4)	-	**UN**

There is more improvement in accommodation after graduation.	3 (4.2)	15 (20.8)	53 (72.2)	1 (1.4)	-	**UN**
Food Utilities-						
The affordability of food has become much better after graduation	14 (19.4)	19 (26.4)	38 (52.8)	1 (1.4)	-	**UN**
I can afford adequate meals in my household after graduation.	15 (20.8)	18 (25.0)	38 52.8)	1 (1.40	-	**UN**
No improvement in food intake after graduation	10 (13.9)	8 (11.1)	38 (52.8)	16 (22.2)	-	**UN**
Health Condition						
Health conditions are much better now in my household than as an apprentice	14 (19.4)	16 (22.2)	41 (56.9)	1 (1.4)	-	**UN**
I can only afford government hospital bills for my household]	4 (5.6)	11 (15.3)	47 (65.3)	10 (13.9)	-	**UN**
I can only afford ethno-medicinal treatment for my household	10 (13.9)	12 (16.7)	42 (58.3)	8 (11.1)	-	**UN**
Lighting System						
Light supply from governments power source is accessible	16 (22.2)	13 (18.1)	41 (56.9)	2 (2.4)	-	**UN**
Provision of lighting in my house through a generating-set is affordable	4 (5.6)	4 (5.6)	42 (58.2)	22 (30.6)	-	**UN**
There is constant supply from power source which is affordable.	5 (6.9)	6 (8.9)	43 (59.7)	18 (25.0)	-	**UN**
Water Sources						
Sinking of borehole is much affordable for my household	16 (22.2)	2 (2.8)	42 (53.8)	12 (16.4)	-	**UN**
Borehole is not accessible due to cost of sinking it	1 (1.4)	10 (13.9)	50 (69.4)	11 (15.3)	-	**UN**
There is access to portable pipe-borne water supply in my community.	16 (22.2)	11 (15.3)	42 (58.3)	3 (4.2)	-	**UN**
There is water supply from tanker to the community at a cost which is affordable	16 (22.2)	4 (5.6)	41 (56.9)	11 (15.6)	-	**UN**
Cooking Sources						
Maintenance of kerosene stove is not affordable.	-	-	43 (59.7)	29 (40.3)	-	**UN**
Cooking with charcoal pot is much better for my household	-	1 (1.4)	42 (58.3)	29 (40.3)	-	**UN**

I prefer to use gas for cooking because it saves time in cooking and its affordable	29 (40.3)	2 (2.8)	41 (56.9)	-	-	**UN**
Electronic Appliances						
Essential appliances which are affordable are procured for my family	-	9 (12.5)	51 (70.8)	12 (16.7)	-	**UN**
Home and cooking appliances are useful to my household for preservation purposes	-	4 (5.6)	51 (70.8)	17 (23.6)	-	**UN**
Children's Education						
I can afford quality education for my wards	-	14 (19.4)	52 (72.2)	6 (8.3)	-	**UN**
I have access to higher education for my wards in my community	2 (2.8)	4 (5.6)	57 (79.2)	9 (12.5)	-	**UN**

Source: Field Survey, 2024

Regression/Inferential Analysis

Chi-square Analyses of the Dependence of the livelihood of Operators on Indigenous MSMEs in Lagos State

Pearson's chi-square test results (Table 7) indicated that, affordability of food ((χ^2 = 19.69, df = 9); Adequate Number of daily meals (χ^2 = 83.89, df = 9), household access to a functional motorcycle/vehicle (χ^2 = 45.19, df = 9) and access to Public transportation (χ^2 = 17.49, df = 9) among IAS operators is significantly dependent on their business monthly revenue but improvement in their Housing type, maintenance of their accommodation, access to portable pipe-borne, education for their wards, Health conditions, access to supply of power, and their ability to acquire essential appliances were not.

Secondly, Housing type (χ^2 = 14.75, df = 4); improvement in accommodation (χ^2 = 13.65, df = 6), of IAS operators is significantly dependent on the growth of the IAS business (Table 4.6). In contrast, the affordability of food, an Adequate Number of daily meals, household access to a functional motorcycle/vehicle, access to Public transportation, access to portable pipe-borne water, education for their wards, Health conditions, access to a supply of power, and their ability to acquire essential appliances were not.

Thirdly, Food affordability (χ^2 = 197.60, df = 10); Adequate Number of daily meals (χ^2 = 94.76, df = 15); Improvement in accommodation (χ^2 = 37.45, df = 15); access to portable water (χ^2 = 30.47, df = 15); access to public transportation (χ^2 = 38.25, df = 15); better Health conditions (χ^2 = 40.39, df = 10) and ability to Afford essential appliances (χ^2 = 39.37, df = 10) among IAS operators is significantly dependent on their Customer Types (CT). However, access to a supply of power, Access to functional motorcycle/ vehicle, and education for their wards were not available (Table 4.6).

Fourthly, adequate Number of daily meals (χ^2 = 114.17, df = 75); Housing type (χ^2 = 203.69, df = 75); access to portable water (χ^2 = 30.47, df = 15); household access to a functional motorcycle/vehicle (χ^2 = 94.85, df = 75) ; better Health conditions (χ^2 = 40.39, df = 10); Affordable power supply (χ^2 = 107.06, df = 75) and ability to Afford essential appliances (χ^2 = 39.37, df = 15) among IAS operators is significantly dependent on their Personal Income (PI) from the IAS (Table 7). Still, education for their wards was not (Table 4.6).

Lastly, affordability of sinking borehole meals (χ^2 = 25.12, df = 12), among IAS operators is significantly dependent on their Staff strength (Table 7) but Food affordability, Number of daily meals, Housing type improvement in their Housing type, maintenance of their accommodation, access to portable pipe-borne, education for their wards, Health conditions, access to supply of power, and their ability to acquire essential appliances were not (Table).

Table 7: Chi-square Analyses of the Dependence of the livelihood of Operators on Indigenous MSMEs in Lagos State

Indices of Livelihood	**Indices of the indigenous apprenticeship system Performance**				
	Business Monthly Revenue (BMR)	Business Growth (BG)	Monthly Personal Income (MPI)	Staff Strength (SS)	Customer Types (CT)
Food affordability	χ^2 =19.69; df = 9; (0.020) *	χ^2 = 6.25; df = 6; (0.395) ns	χ^2 =55.65:df = 75; (0.954) ns	χ^2 =6.68; df = 8; (0.571) ns	χ^2 =196.48; df = 15; (0.000) *
No. of daily meals	χ^2 =5.39; df = 9; (0.799) ns	χ^2 =1.72; df = 6 ;(0.943) ns	χ^2 = 62.75; df = 75 ;(0.834) ns	χ^2 = 6.47; df = 12; (0.891) ns	χ^2 = 94.76; df = 15; (0.000) *
Charcoal pot is better	χ^2 =83.89; df = 9; (0.000) *	χ^2 = 0.97; df = 6; (0.986) ns	χ^2 = 114.17; df = 75; (0.002) *	χ^2 = 13.42; df = 12; (0.339) ns	χ^2 = 9.76; df = 15; (0.834) ns
Housing type improved	χ^2 = 9.714: df = 9; (0.374) ns	χ^2 =14.75; df = 6; (0.022) *	χ^2 = 203.69; df = 75; (0.002) *	χ^2 = 3.85; df = 12; (0.986) ns	χ^2 = 33.09; df = 15; (0.005) *
Affordable Housing Mtce cost	χ^2 =10.19; df = 9; (0.335) ns	χ^2 =14.29; df = 6; (0.027) *	χ^2 = 206.01; df = 75; (0.003) *	χ^2 = 4.54; df = 12; (0.971) ns	χ^2 = 37.58; df = 15; (0.001) *
Accommodation Improvement	χ^2 =10.57; df = 9; (0.306) ns	χ^2 =13.75; df = 6; (0.032) *	χ^2 = 131.73: df = 75; (0.001) *	χ^2 = 5.14; df = 12; (0.953) ns	χ^2 = 37.45; df = 15; (0.001) *
Access to portable pipe -borne water	χ^2 =15.58; df = 9; (0.076) ns	χ^2 = 6.12; df = 6; (.409) ns	χ^2 = 101.47; df = 75; (0.023) *	χ^2 = 8.07; df = 12; (0.780) ns	χ^2 = 30.47; df = 15; (0.011) *
Water supply from tanker	χ^2 =8.67; df = 9; (0.459) ns	χ^2 = 3.47; df = 6; (0.748) ns	χ^2 = 126.64; df = 75; (0.001) *	χ^2 = 25.42; df = 12; (0.013) *	χ^2 = 30.41; df = 15; (0.001) *
Affordability of sinking borehole	χ^2 =6.63: df = 9; (0.679) ns	χ^2 = 5.67; df = 6; (0.461) ns	χ^2 = 90.88; df = 75; (0.02) *	χ^2 = 19.77; df = 12; (0.071) ns	χ^2 = 48.65; df = 15; (0.004) *
Affordability of quality education for wards	χ^2 =7.34; df = 9; (0.601) ns	χ^2 = 6.23; df = 6; (0.397) ns	χ^2 = 54.65; df = 75; (0.963) ns	χ^2 = 15.69; df = 12; (0.206) ns	χ^2 = 32.07; df = 15; (0.106) ns
Access to motorcycle/ vehicle	χ^2 = 45.19; df = 9; (0.004) *	χ^2 = 2.98; df = 6; (0.911) ns	χ^2 = 94.85; df = 75; (0.061) *	χ^2 = 3.36; df = 12; (0.992) ns	χ^2 = 1.65; df = 15; (1.000) ns
Good Public transportation	χ^2 =17.49; df = 9; (0.042) *	χ^2 = 6.04; df = 6; (0.418) ns	χ^2 = 54.27; df = 75; (0.966) ns	χ^2 = 10.17; df = 12; (0.600) ns	χ^2 = 38.25; df = 15; (0.001) *

Better Health conditions	χ^2 =7.32; df = 6; (0.29) ^{ns}	χ^2 = 5.36; df = 4; (0.252) ^{ns}	χ^2 = 43.0; df = 50; (0.048) *	χ^2 = 3.81; df = 8; (0.874) ^{ns}	χ^2 = 40.39; df = 10 (0.000) *
affordable Government hospital bills	χ^2 =9.26; df = 9; (0.413) ^{ns}	χ^2 = 5.04; df = 6; (0.539) ^{ns}	χ^2 = 63.62; df = 75; (0.823) ^{ns}	χ^2 = 11.91; df = 12; (0.452) ^{ns}	χ^2 = 49.27; df = 15; (0.001) *
Constant and affordable power supply	χ^2 =1.79; df = 9; (0.994) ^{ns}	χ^2 = 5.78; df = 6; (0.448) ^{ns}	χ^2 = 107.06; df = 75; (0.009) *	χ^2 = 5.35; df = 12; (0.945) ^{ns}	χ^2 = 32.32; df = 15; (0.006) ^{ns}
Affordability of generating set	χ^2 = 6.39; df = 9; (0.700) ^{ns}	χ^2 = 12.03; df = 6; (0.061) ^{ns}	χ^2 = 102.15; df = 75; (0.020) *	χ^2 = 18.39; df = 12; (0.104) ^{ns}	χ^2 = 28.76; df = 15; (0.017) *
Affordability of Essential appliances	χ^2 =10.62; df = 9; (0.302) ^{ns}	χ^2 = 1.96; df = 6; (0.932) ^{ns}	χ^2 = 109.96; df = 75; (0.005) *	χ^2 = 4.99; df = 12; (0.958) ^{ns}	χ^2 = 39.37; df = 15; (0.001) *

NB* (p values in parentheses; ns = not significant and *= Significant at $p<0.05$; χ^2 = Chi-square value; df= Degree of freedom)

Source: Analysis of Data from Field Survey, 2024.

Chi-square Analyses of the Dependence of the livelihood of Apprentice on Indigenous MSMEs in Lagos State

Pearson's chi-square test results (Table 8) indicated that, Health expenses per month (χ^2 = 135.66, df = 80); afford government hospitals (χ^2 = 13.14, df = 9); Children expenses per month (χ^2 = 97.97, df = 53); Government expenses per month (χ^2 = 98.20, df = 24); Number of daily meals (χ^2 = 55.26, df = 16); Food Affordability (χ^2 = 61.68, df = 24) and Improvement in accommodation (χ^2 = 26.17, df = 9); Access to Governments power supply (χ^2 = 49.85, df = 24) affordable power Generating set (χ^2 = 52.21, df = 24); Affordable water (χ^2 = 55.81, df = 24) ; afford Charcoal for cooking (χ^2 = 13.94, df = 15); affordable Essential appliances (χ^2 = 23.32, df = 15); Afford Quality education (χ^2 = 30.30, df = 16) and Access to a motorcycle/ vehicle (χ^2 = 39.53, df = 16) of the apprentices of the IAS in Lagos state is significantly dependent on their Personal Income (PI) from the IAS (Table 8).

Also, Health expenses per month (χ^2 = 20.79, df = 6); Adequate Number of daily meals (χ^2 = 83.89, df = 12), and affordability of Charcoal for cooking (χ^2 = 10.16, df = 4) of the apprentices of the IAS is significantly dependent on the monthly revenue from the business but improvement in their Housing type, maintenance of their accommodation, access to portable water, education for their wards, Health conditions, access to supply of power, and their ability to acquire essential appliances were not.

The chi-square test results (Table 4.14) revealed further that all the indices of livelihood of the apprentices of IAS i.e. Health expenses per month (χ^2 = 31.98, df = 10); afford government hospitals (χ^2 = 48.88, df = 7); Children education expenses per month (χ^2 = 31.86, df = 10); Food Affordability (χ^2 = 23.52, df = 3) and Improvement in accommodation (χ^2 = 26.17, df = 3); Access to Governments power supply (χ^2 = 36.77, df = 10); affordable power Generating set (χ^2 = 51.22, df = 15); Affordable water (χ^2 = 50.77, df = 15 ; afford Charcoal for cooking (χ^2 = 28.33, df = 15); affordable Essential appliances (χ^2 = 31.38, df = 15); education for their wards (χ^2 = 49.88, df = 10) and Access to a motorcycle/ vehicle (χ^2 = 19.89, df = 3) of the apprentices of the IAS in Lagos state is significantly dependent on the support received by the apprentices of IAS and

While their Health expenses per month (χ^2 = 96.48, df = 10); Children education expenses/month (χ^2 = 94.76, df = 75); Access to Governments power supply (χ^2 = 30.47, df = 4); Afford Charcoal for cooking (χ^2 = 30.47, df = 10); affordable Essential appliances (χ^2 = 30.47, df = 10); of the apprentices of the IAS were significantly dependent on the growth of the Business (BG).

Table 8 : Chi-square Analyses of the Dependence of the livelihood of Apprentices on Indigenous MSMEs in Lagos State

Indices of Livelihood of Apprentices	Indices of indigenous apprenticeship system Performance			
	Monthly Business Revenue (BMR)	Monthly Personal Income (MPI)	Apprentices support	Business growth (BG)
Health expenses/month	χ^2 =20.79;df = 6; (0.020) *	χ^2 = 135.66;df = 80;(0.001) *	χ^2 = 31.98;df = 10;(0.004) *	χ^2 = 96.48;df = 10;(0.000) *
Can only afford govt. hospitals	χ^2 =10.57;df =12; (0.306) ns	χ^2 = 13;14:df = 9; (0.004) *	χ^2 = 48.88; df =7 (0.001) *	χ^2 = 37.45d;f = 10;(0.001) *
Children education expenses/month	χ^2 = 5.39;df = 12; (0.799) ns	χ^2 = 97.97;df = 53;(0.048) *	χ^2 = 31.96;df = 10;(0.001) *	χ^2 = 94.76;df = 75;(0.001) *
Government expenses/month	χ^2 = 1.34;df = 8 (0.137) ns	χ^2 = 98.20;df = 24;(0.004) *	39.66;df = 10; (0.002) *	22.10;df = 24; (0.335) ns
Number of daily meals	χ^2 = 83.89;df = 12;(0.001) *	χ^2 = 55.26;df = 16;(0.002) *	χ^2 = 14.74;df = 4;(0.004) *	χ^2 = 9.76;df = 10;(0.834) ns
Food Affordability improving with time	χ^2 = 10.38;df = 12;(0.582) ns	χ^2 = 61.68;df = 24;(0.012) *	χ^2 = 10.01;df = 3;(0.018) *	χ^2 = 1.51;df = 10;(1.00) ns
Improvement in accommodation	χ^2 = 59.56;df = 12;(0.003) *	χ^2 = 26.17;df = 9; (0.001) *	χ^2 = 26.17;df = 3;(0.002) *	χ^2 = 8.06;df = 10;(0.921) ns
Access to Govt. power supply	12.08;df = 12; (0.489) ns	49.85; df = 24; (0.001) *	36.77;df = 10; (0.004) *	30.47;df = 4; (0.011) *
affordable power Generating set	χ^2 = 11.86;df = 12;(0.459) ns	χ^2 = 52.21;df = 24; (0.001) *	χ^2 = 51.22; df = 15;(0.003) *	χ^2 = 30.41;df = 4;(0.001) *
Affordability of sinking borehole	χ^2 =7.34;df =12; (0.496) ns	χ^2 = 64.77; df = 24;(0.001) *	χ^2 =64.11;df = 10;(0.001) *	χ^2 =32.07;df = 10;(0.106) ns
Affordable water from tanker	χ^2 = 12.22;df =12;(0.428) ns	χ^2 = 55.81;df = 24 ;(0.000) *	χ^2 = 50.77;df = 15;(0.001) *	χ^2 = 2.41;df = 10;(0.097) ns
Afford Charcoal for cooking	χ^2 = 10.16; df = 4;(0.038) *	χ^2 = 13.94; df = 5;(0.028) *	χ^2 = 28.33;df = 15;(0.001) *	χ^2 = 38.25; df = 10;(0.001) *
Gas cooker is not accessible for cooking	χ^2 = 7.32;df = 8; (0.29) ns	χ^2 = 16.74;df = 5; (0.001) *	χ^2 = 19.92;df = 3;(0.002) *	χ^2 = 40.39;df = 10;(0.000) *
affordable Essential appliances	χ^2 = 8.47;df = 8; (0.389) ns	χ^2 = 30.53; df = 16; (0.001) *	χ^2 = 31.38; df = 15; (0.004) *	χ^2 = 49.27; df = 10; (0.001) *
Afford Quality education	χ^2 = 5.28; df = 8; (0.970) ns	χ^2 = 30.29; df = 16 ; (0.017) *	χ^2 = 49.88; df = 10; (0.002) *	χ^2 = 1.65; df = 10; (0.285) ns
Access to a motorcycle/ vehicle	χ^2 = 10.88;df = 8; (0.208) ns	χ^2 = 39.53; df = 16;(0.001) *	χ^2 = 19.89;df = 3;(0.003) *	χ^2 = 32.32;df = 10;(0.006) ns
Vehicle is useful for my family, and I have one	χ^2 = 9.49; df = 8; (0.302) ns	χ^2 = 14.09; df = 5; (0.003) *	χ^2 = 21.11;df = 4;(0.002) *	χ^2 = 28.76;df = 10;(0.017) *

NB* (p value in the bracket; ns = not significant and *= Significant at $p<0.05$)

Source: Analysis of Data from Field Survey, 2024.

Qualitative Findings

Qualitative Themes

The thematic analysis of the qualitative data revealed themes such as Heritage & Apprenticeship – Craft rooted in tradition, passed down generationally. Livelihood Security – Enabled marriage, family, housing, and rental income. Youth Participation – Still strong; includes graduates and student excursions. It showed that livelihood impact is strong across all crafts, with documented cases of asset building (housing, rentals)

From some interviews with participants:

- "I got married after I started the work. As you know, marriage involves money; yes, I did not ask anyone to borrow money for my wedding. God gave me children, whom I am feeding and training. Then, after that, I built a three-bedroom flat. Then, after that, I have another four single rooms, self-contained, to rent out to people, which I am collecting the dividends on today, and that is what God has done for me from this work today". (Graduate /operator)

- "Yes, I use WhatsApp." "When I post some design on WhatsApp on my Facebook page, most of my friends will see it and say I like this design. Where do you get it? I make it myself." "This has given me more individual customers, and I have groups, associations, and clubs as my customers. He also said, "The Ministry trains members, and after the training for eight weeks, they will empower our members with equipment. This improved the performance of members' businesses and livelihood." (Graduate /Operator)

Interpretation: IAS enhances livelihoods by increasing income, promoting entrepreneurship, and strengthening resilience through asset acquisition. Quantitative data shows Improved livelihood for graduates and apprentices; qualitative data provides evidence of this improvement.

Testing of Hypothesis

This study investigated two null hypotheses (H_{01}–H_{02}) to determine the influence of the Indigenous Apprenticeship System (IAS) on the livelihood outcomes of operators and apprentices of indigenous MSMEs in Lagos State. The hypotheses were tested using Pearson's chi-square analyses.

H_{01}: The Indigenous Apprenticeship System has no impact on the livelihood of the operators of indigenous MSMEs in Lagos State.

The results showed that IAS operators reported significant improvements in livelihood outcomes. Operators indicated enhanced access to food, health services, children's education, and utilities. Chi-square results demonstrated strong associations between business revenue, personal income, and key indicators of livelihood, including food affordability, housing, and healthcare (Onu et al., 2021; Dabo, 2022).

Decision: Reject H_{01}. The IAS has a significant positive impact on the livelihoods of operators.

H_{02}: The Indigenous Apprenticeship System has no impact on the livelihood of the apprentices of indigenous MSMEs in Lagos State.

The results showed that IAS apprentices reported significant improvements in livelihood outcomes. Apprentices' personal income significantly influenced nearly all livelihood indices, while financial support remained a decisive factor for sustaining welfare. Chi-square results demonstrated strong associations between personal income and key indicators of livelihood, including food affordability, housing, and healthcare (Onu et al., 2021; Dabo, 2022).

Decision: Reject H_{02}. The IAS has a significant positive impact on the livelihood of apprentices.

DISCUSSION

Socio-Economic Background of Indigenous MSME Operators

The socio-economic profile of Indigenous Apprenticeship System (IAS) graduates and MSME operators in Lagos State highlights important demographic and structural patterns. Female participation was notably higher, consistent with broader evidence of the rising involvement of African women in MSMEs and informal economies (UNECA, 2019; Langevang & Gough, 2012). However, with 46% of operators aged 50 years and above, there is evidence of a decline in youth engagement, as younger Nigerians increasingly prefer digital and service-based ventures over traditional crafts. This aligns with studies documenting youth transitions away from crafts and toward digital entrepreneurship in Nigeria and across Africa (McKenzie & Puerto, 2021; Osei-Assibey, 2014).

Lagos, which accounts for the highest concentration of MSMEs in Nigeria, remains the nation's hub of cultural and entrepreneurial diversity (PwC, 2020; SMEDAN/NBS, 2020). Long-term residency fosters trust and customer loyalty, strengthening MSME sustainability, reflecting wider evidence on the importance of social capital in enterprise resilience (Putnam, 2000; Fafchamps, 2004). Religion also plays a role in shaping MSME trust networks, consistent with findings that faith-based and communal affiliations structure business relations in West African contexts (Ezenwoke & Ojo, 2021).

Craft analysis shows that tie-dye remains more popular than cane weaving due to its cultural symbolism and market adaptability. Textile-related microenterprises are widely recognized as both culturally significant and economically resilient (Langevang & Gough, 2012; Hansen, 2013). In contrast, cane weaving faces declining demand due to cheaper substitutes and negative youth perceptions, necessitating design innovation and market repositioning—challenges consistent with broader studies on craft industries in Africa (Grimm et al., 2012).

Marital status and household dynamics also significantly influence MSME performance. Married operators benefit from stronger family and community networks that provide labor, credit, and market access, echoing evidence on social embeddedness in African enterprises (Meagher, 2010). Moderate household sizes also enhance sustainability by reducing financial strain, consistent with household enterprise literature (Banerjee & Duflo, 2019). Educational attainment is also pivotal: secondary education provides literacy and management skills critical for MSME operation, although limited formal education constrains digital adaptation, underscoring the need for continuous training and digital inclusion (UNESCO, 2021; Rolleston & Oketch, 2020).

Finally, business longevity reflects a tension between resilience and succession. Long-established MSMEs show persistence but face challenges with generational transfer and innovation, while younger firms are more adaptable but vulnerable. These dynamics align with African SME studies, which emphasise the need for succession planning, innovation, and tailored policy support to ensure long-term sustainability and inclusive growth (Grimm et al., 2012; Kato, 2024).

Socioeconomics of Indigenous MSME Apprentices

Recent scholarship confirms that gender distribution in Nigerian apprenticeships is powerfully shaped by trade concentration. Women disproportionately dominate caregiving, household services, and fashion-related sectors, while men are more engaged in mechanical and technical trades—an enduring pattern in African informal apprenticeship systems (ILO, 2012; Walther, 2017). This study similarly found a higher proportion of female apprentices, particularly in tie-and-dye, a craft with strong cultural and commercial appeal in Lagos, reflecting the wider feminisation of textile and garment-related microenterprises in West Africa (Langevang & Gough, 2012).

The age profile revealed a modal range of 10–20 years, consistent with evidence that Nigerian youth increasingly view apprenticeships as alternatives to scarce formal employment. Studies on the Igbo Apprenticeship System and informal vocational training confirm its role as a primary pathway to entrepreneurship for younger cohorts (Irene, 2024; McKenzie & Puerto, 2021). Many apprentices were also internal migrants, attracted to Lagos' economic and cultural diversity, aligning with regional findings that migration is a driver of vocational

participation and enterprise formation in African cities (Tacoli, 2012).

Educational attainment was notably higher than in earlier studies, with over three-quarters completing secondary education. This reflects broader improvements in literacy and numeracy among African youth entering informal training and enterprise, enhancing adaptability and competitiveness (UNESCO, 2021; Rolleston & Oketch, 2020). Finally, most apprentices came from low- to middle-income households of 4–6 members, a pattern consistent with household-based support structures in Nigeria that underpin resilience and facilitate entry into apprenticeship and MSMEs (Banerjee & Duflo, 2019).

Indigenous Apprenticeship Systems and Livelihood of Indigenous Micro, Small and Medium Enterprises Operators

The perception of IAS graduates regarding livelihood outcomes indicates significant improvements across multiple dimensions. Nearly all operators reported enhanced food security, while a majority affirmed better access to healthcare through government facilities. Most also noted improved access to electricity and ownership of household utilities and appliances, suggesting that apprenticeship participation directly contributes to improved living conditions.

Statistical analysis confirmed strong linkages between business performance and livelihood indicators. Monthly revenue significantly influenced the affordability of food, transportation, and household utilities, while business growth improved housing quality and standards of accommodation. Personal income had the broadest impact, shaping access to nutrition, healthcare, education, and household appliances. Customer base diversification also enhanced access to food security, housing, transportation, and healthcare. These findings are consistent with ILO studies showing that informal apprenticeship can reduce household vulnerability by equipping operators with employable skills and cost-offsetting capabilities (ILO, 2012; Walther, 2017).

The results further affirm that income stability underpins improved nutrition, reduced food insecurity, and better living standards, corroborating cross-country evidence in *World Development* and *Food Policy* (Headey, 2013; Herforth et al., 2020; FAO et al., 2021). Business growth similarly fosters welfare, social stability, and community development, reflecting findings from sub-Saharan Africa on the relationship between MSME expansion and household welfare (Grimm et al., 2012; Kato, 2024). Moreover, a diverse customer base strengthens resilience, consistent with SME survival and resilience literature (Msomi, 2024).

Qualitative evidence reinforces these patterns: the Chairman of the Cane Weavers Association in Lagos explained that cane weaving enabled him to finance marriage, raise children, and acquire housing and rental properties, underscoring the financial stability derived from indigenous crafts (KII, 2025). Ultimately, personal income remains the most pivotal determinant of livelihood, with income stability central to sustaining wellness and productivity among MSME operators (FAO et al., 2021; Herforth et al., 2020).

Indigenous Apprenticeship Systems and the Livelihood of Indigenous Micro, Small and Medium Enterprises Apprentices

The perceptions of IAS apprentices regarding their livelihoods reveal limited financial independence, as many remain dependent on external support. Crosstabulation and chi-square analysis revealed that personal income had the most significant influence, shaping nearly all livelihood indicators, including healthcare, education, food, and housing. Monthly business revenue had a more targeted impact on health expenses, daily meals, accommodation, and cooking fuel. At the same time, training support emerged as a critical determinant of food security, utilities, and access to healthcare. Business growth also enhanced access to healthcare, education, transportation, and household resources.

These findings suggest that apprentices' livelihoods cannot be attributed solely to their business revenues, given their continued reliance on family stipends and external assistance. Similar dynamics are documented in studies of informal apprenticeship and youth livelihoods, where external support and remittances help apprentices afford essential goods and services (ILO, 2012; Walther, 2017). Financial support is thus pivotal, enabling apprentices to meet basic needs, save, and prepare for future ventures. Stable income, whether personal or external, also

improves health behaviours and uptake of preventive care, consistent with wider evidence linking income to nutrition, healthcare, and housing (Herforth et al., 2020; FAO et al., 2021).

While business revenue provides financial stability, its variability in informal sectors may weaken long-term welfare outcomes, as apprentices often prioritise short-term consumption over investment. Evidence from *Journal of Development Economics* and *Journal of African Economies* shows that households in low-income contexts smooth consumption in response to income volatility, often at the expense of long-term asset accumulation (Deaton, 1992; Beegle et al., 2006). Nevertheless, business growth contributes to more than just income, fostering a professional identity, pride, and informal welfare benefits, including healthcare and skills upgrading, thereby enhancing both psychosocial and financial well-being (Kato, 2024; Msomi, 2024).

Summary Livelihood Outcomes of IAS Graduates and Apprentices

The socio-economic characteristics and perceptions of IAS graduates and apprentices in Lagos State demonstrate a clear relationship between apprenticeship and livelihood outcomes. Gendered trade segmentation remains strong, with women disproportionately engaged in service and fashion-related ventures, while men concentrate in technical and mechanical trades—patterns widely observed in informal apprenticeship systems across Africa (ILO, 2012; ILO, 2013). Research on the Igbo Apprenticeship System similarly shows how younger Nigerians enter apprenticeships as a pathway to entrepreneurship in the face of limited white-collar opportunities (Irene, 2024).

Lagos remains Nigeria's hub for MSMEs. Official data show that the state consistently hosts the highest number of enterprises in the country (PwC, 2024; SMEDAN/NBS, 2020). Educational attainment is improving among apprentices and operators, with most having at least secondary schooling, reflecting a broader shift in Nigerian vocational education that emphasises employability and enterprise performance (Ejikpese & Effiom, 2024). Household sizes typically ranged from four to six, providing cultural and economic support networks that cushioned entrepreneurial risks and sustained apprenticeships.

For IAS graduates, the gains in livelihood were substantial. Nearly all reported improved food security, healthcare access, and ownership of household assets. Statistical analysis confirmed that monthly revenue, business growth, personal income, and customer base were strongly associated with improvements in welfare, including food, housing, education, and utilities. These findings align with cross-country evidence in *World Development* and *Food Policy*, which consistently link income stability and agricultural/enterprise revenues to dietary diversity, health, and reduced vulnerability (Headey, 2013; Dillon et al., 2015; FAO et al., 2021; Herforth et al., 2020). Customer diversification and market resilience further enhance welfare outcomes, aligning with broader studies on SME resilience in sub-Saharan Africa (Kato, 2024; Msomi, 2024).

For apprentices, outcomes were more constrained. Although personal income significantly affected most welfare indicators, training support—including stipends, materials, and mentorship—proved crucial in shaping access to healthcare, education, food, and utilities. This resonates with ILO syntheses on upgrading informal apprenticeship systems, which stress the importance of structured support in raising productivity and welfare (ILO, 2012; ILO, 2013). Business revenue was crucial for food and accommodation, but volatility in informal sector incomes often undermined long-term investments. Evidence from the Journal of Development Economics and the Journal of African Economies confirms that households' smooth consumption in response to shocks, prioritising immediate needs over durable investments (Deaton, 1992; Beegle et al., 2006). Nevertheless, working in growing MSMEs improved apprentices' psychosocial outcomes—pride, security, and professional identity—echoing findings from SME resilience research that growth fosters both financial and non-pecuniary wellbeing (Aliu et al., 2024).

IAS graduates more directly convert business success into household welfare, while apprentices remain reliant on external support and host-firm growth trajectories. Effective policy must therefore combine income stability, financial inclusion, and training subsidies with market access strategies that promote growth and customer diversification, ensuring both material and psychosocial well-being.

The key findings are summarised by hypothesis as follows:

1. Impact of IAS on Operators' Livelihoods (H_{01})
    - Operators reported improved capacity to afford food, healthcare, education, and utilities.
    - Pearson's chi-square analysis confirmed strong relationships between monthly revenue/income and livelihood indicators.
    - Decision: H_{01} was rejected — IAS has a significant positive impact on the livelihood of operators.
2. Impact of IAS on Apprentices' Livelihoods (H_{02})
    - Apprentices' personal income and financial support significantly influenced their welfare outcomes.
    - Pearson's chi-square analysis confirmed strong relationships between monthly revenue/income and livelihood indicators.
    - Decision: H_{02} was rejected — IAS has a significant positive impact on the livelihood of apprentices.

CONCLUSION

This study aimed to investigate the impact of Indigenous Apprenticeship Systems (IAS) on the livelihoods of graduates and apprentices in Lagos State. Drawing on mixed-methods evidence, the research highlights IAS as a vital mechanism of skills transfer, entrepreneurship incubation, and livelihood enhancement in Nigeria's commercial capital. Key findings indicate that IAS has a significant impact on the economic outcomes of apprentices and graduates. Graduates reported higher incomes, greater access to enterprise ownership, and stronger resilience against economic shocks compared to non-apprentices. The study further confirmed that IAS nurtures not only technical competence but also tacit entrepreneurial knowledge and trust networks, which are central to survival in Lagos' competitive business environment. However, the study also identified that while IAS thrives on cultural legitimacy, its capacity to scale and adapt to modern economic pressures requires greater institutional support. From a theoretical standpoint, the findings reaffirm Human Capital Theory, Social Capital Theory, and Person–Environment Fit Theory as explanatory lenses: IAS increases productivity through skill development, embeds apprentices within supportive networks, and aligns with cultural norms of reciprocity. However, the evidence also suggests that these theories must account for institutional mediations to explain livelihood outcomes in Lagos fully.

IAS remains indispensable for inclusive development in Lagos State. It provides a culturally rooted, cost-effective, and socially legitimate pathway to ensuring the livelihood of youths and enterprise growth. With targeted reforms, IAS can be repositioned as a hybrid skills and entrepreneurship model that complements formal TVET and government interventions in ensuring sustainable livelihood in Lagos State.

RECOMMENDATIONS

Policy and Government Support

- Formal Recognition of IAS: The Lagos State Ministry of Wealth Creation & Employment (MWCE) should develop ICT-focused, competency-based certification frameworks of the indigenous apprenticeship systems in collaboration with trade associations and vocational boards, ensuring the youths embrace indigenous apprenticeships for employments that ensure sustainable livelihoods.
- Create and support incentives for apprentices' enrolment in indigenous crafts.

Strengthening Trade Associations and Apprenticeship Inclusion

- Inclusion of all the indigenous crafts businesses in the Lagos state trade associations
- Capacity Building for Associations: Provide training for the associations to absorb and nurture more apprentices

Digitalisation and Modernisation

- Digital Skills Integration: Introduce basic ICT training into IAS curricula, equipping apprentices to leverage e-commerce, mobile money, and digital bookkeeping.
- Digital Record Systems: Encourage masters and associations to maintain digital records of apprentices, settlements, and business outcomes—creating a database that can strengthen credit access.

Resilience and Sustainability

- Shock-Responsive Safety Nets: Partner with micro-insurance providers and cooperative societies to provide apprentices and graduates with buffers against sudden shocks (e.g., illness, fire, market disruptions).
- Green Skills Apprenticeship: Align IAS with emerging green economy opportunities (Indigenous crafts, sustainable fashion, recycling crafts) to future-proof livelihoods.

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