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TACIT KNOWLEDGE TRANSFER METHODS AND GROWTH OF WOODWORK MANUFACTURING FIRMS IN NORTH-CENTRAL, NIGERIA

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Keywords: Tacit Knowledge, Methods, Perceived Intuitive Knowledge, Personal Experience, Growth, Manufacturing, Woodwork.

Abstract

Firms' ability to go global is dependent on knowledge which is the light that radiates firm's growth. The study focused on tacit knowledge transfer methods and growth of woodwork manufacturing firms in North Central, Nigeria. Trainees had been the bane of quality products in the woodwork manufacturing firms which had called for the nature of knowledge acquired. The objectives of this study are to investigate the perceived intuitive knowledge and growth of woodwork manufacturing firms and to determine the extent of relationship between personal experience and growth of woodwork manufacturing firms in North Central, Nigeria. The population of the study is the total number of registered active woodwork firms in North Central as of January, 2023, which was 11960 with a selected sample size of 612 through simple random approach. Two hypotheses were tested at a 95% confidence level. A quantitative approach was employed for the study with a survey method. The study used primary data through 5point Likert scale structured questionnaire. The data generated were analyzed using both descriptive and inferential statistics. The inferential statistics employed in this study included SEM-PLS path coefficient, confirmatory factor analysis and bootstrapping. The findings revealed that perceived intuitive knowledge has significant relationship with

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growth of woodwork manufacturing firms (β<0.129, p< 0.001), Personal Experience has positive relationship with growth of woodwork manufacturing firms (β<0.076, p<0.000). The study established that perceived intuitive knowledge as the most significant element on growth of woodwork manufacturing firms. The study recommends that woodwork manufacturing firms should give prominence to trainees with perceived intuitive knowledge in getting a job done as well as encourage trainees who personal experience at the point of training.

Introduction

The world is evolving and nations think of how to add values and make it attractive for human existence. The history of the wood-work manufacturing firms can be traced back to the industrial revolution during the 19th century, where raw materials were converted into finished goods (George, 2021). The period marked the transition from human labor technology into machinery and manufacturing processes, turning artisans into wage laborers (Seid 2021). The entire world is faced with complex situations ranging from insecurity, unemployment, business failures, volatility of the environment, rivalries and unhealthy competitions among firms as well as under-utilization of natural resources, which calls for knowledge transfer methods that redefine growth of firms.

Previous researchers (such as Okwo *et. al* (2019), Uzor (2021); Awwal, (2016) Leonard (2013), Fajobi (2017), Adu, *et al.* (2013), Busch (2019), Peet (2019) studied either the impact, role or use of tacit knowledge on firms growth but none seems to have considered the Tacit Knowledge Transfer Methods and growth of woodwork manufacturing firms. The woodwork sector is very crucial to the growth of every economy. Despite the shift towards the knowledge economy, traditional accounting that focuses more on the physical assets has continued to be prevalent in the presentation of the financial statement to the exclusion of more important assets, the human capital (Armstrong, 2006). This has contributed to various crises experienced by many woodwork firms in recent times in Nigeria (Uzor, 2021). Thus, a gap exists since empirical evidence of the understanding and development of Tacit Knowledge Transfer Methods concepts in developing economies is still at its infant stage (Adeyeye, 2018). This study therefore investigates the Tacit Knowledge transfer methods and growth of woodwork manufacturing firms in NorthCentral, Nigeria based on Person Fit Environment theory. In doing this, the following research questions were addressed:

1. Is there any relationship between Perceived intuitive knowledge and growth of woodwork manufacturing firms in NorthCentral, Nigeria?
2. What is the degree of correlation between personal experience and growth of woodwork firms in NorthCentral, Nigeria.

CONCEPTUAL REVIEW

Concepts of knowledge

The Webster's New Collegiate Dictionary defines knowledge as a range of information and understanding while information in turn is said to be knowledge obtained from investigation, study or instruction; and data is defined as factual information used as a

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basis for discussion. Nonaka & Takeuchi (1995) consider knowledge as true and justified personal belief that increases an individual's capacity to take action. Fahey & Prusak (2018), knowledge is what the knower knows that does not exist out of the knower but rather shaped by one's needs as well as one's initial stock of knowledge. Similarly, Davenport & Prusak (2019) refer to knowledge as the fluid mix of framed experience, values, contextual information, and expert insights that provide a framework for evaluating amid incorporating new experiences and information. It originates and applies in the minds of the knower and in the organizations; it is not only embedded in documents or repositories but also in organizational routines, practices and norms.

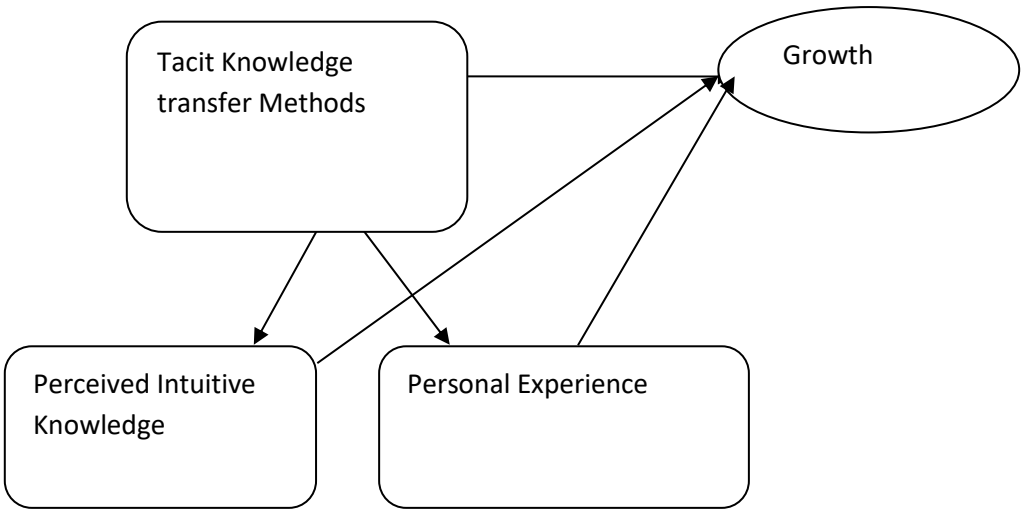
TACIT KNOWLEDGE TRANSFER METHODS

There are many methods of tacit knowledge transfer, these methods are; perceived intuitive knowledge, personal experience, observation, apprenticeship training and skills and talent. These methods are used by firms in order to determine the extent in which firms grow.

Perceived Intuitive Knowledge: Trainees have the basic wisdom and knowledge to do a work without doubt. This measures the right thing a trainee does without being told in the place of work, doing something that had not been taught correctly, ability to fix something without instruction from the trainer, inviting a trainee to do complex job because of the conception that he or she can do it, using senses to get a job done in the place of work.

Personal Experience: This entails what a trainee knows before joining a particular occupation. The experience trainees had before joining an occupation helps to know how the firm can grow, doing a specific tasks before help firms to grow, meeting customers' needs due to what one has gone through, trusting a trainee with work as result of his former knowledge about the job.

CONCEPTUAL FRAMEWORK



Source: Researcher, 2024

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Perceived Intuitive Knowledge and Woodwork firm Growth

Goldberg (2013), classification of intuition, the concepts of intuition is broken down into six categories, namely: discovery, creativity, evaluation, operation, prediction, and illumination. The common denominator of these manifestations in the case of mental intuition is knowledge. Growth is measured in relation to number of trainees the woodwork firm accepts and graduates (Seid, 2021). The ability of woodwork firms to graduate more trainees is dependent on their level of perceived intuitive knowledge. Intuition has long been vital to embodied, embroiled and distributed modes of changing and ensuring differences among trainees which exist through sensing, knowing, navigating, and transforming the world of businesses and firms. While intuition has always been more-than-human, as it develops through immanent interactions among minds, bodies, and environments (Pedwell 2022), woodwork firms need to understand how helpful trainees become when they share ideas.

Personal Experience and Woodwork Firm Growth

This is in the case where an individual/organization keep track records of its activities over time to track actions that positively impact the organization or those actions that has-negative effects on the organization so others especially new employees can lean from the mistakes and success of others (Leonard et al, 2013), the way in which trainees display experience as regards the job gives the trainers better reasons to trsut him and this brings about growth. Firms have the ability to grow as a result of the experience that will be brought into the organization. This knowledge develops as they continually carry out these business processes and tasks that is not basic knowledge taught in any training course. Personal Experience refers to conscious events in general, more specifically to perceptions, or to the practical knowledge and familiarity that is produced by these conscious processes (Peet, 2019).

METHODOLOGY

The study is carried out in North Central, Nigeria, a developing economy. North Central is also known as middle-belt of Nigeria, sharing the boundary with southern and Northern states. It is a zone at the equilibrium of the nation with a representation of all the business owners, people and sectors in the country. A self-structured questionnaire adopted from previous literature (Hadizadeh, 2013; Nawab *et al*. 2015) on five–point Likert scale was used to generate data to investigate the relationship between tacit knowledge transfer methods adopted and growth of woodwork firms in the competitive environment. To ensure the face and content validity of the research instrument, three experts in the field studied and offered appropriate suggestions which were carried out. For the reliability of the instrument, Cronbach Alpha's was used to test the items in the questionnaire. The coefficient result was 0.89 which is high enough to consider the instrument reliable for the study (Bruce and Kay, 1978). A pilot study was conducted on 60 woodwork firms with

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test–re-test result of Pearson-Moment Correlation coefficient was 80%. The sampling frame consisted of 20 producers and workers of woodwork firms, Giddens (1983) selection formulae was used to obtain the sample size. The simple random sampling method where everyone has the equal chance of being selected was employed to select the sample size of six hundred and twelve (612) producers, but only five-hundred and twenty-five (525) producers responded. Descriptive statistics, Pearson-Moment Correlations and Multiple regression analytical technique were used for analysis.

The Dependent Variable:

Growth was measured with the increase in number of trainees, that is, the number of trainees who had enrolled and registered in the past five years as obtainable in some knowledge transfer studies (like Hadizadeh, 2013; Nawab *et al.* 2015). That is, how increase in number of trainees do they take in each year in the past 5 years (2017-2022)? Therefore, the increases in number of trainees were considered a useful measure of growth.

Independent Variables:

Tacit knowledge transfer methods. The tacit knowledge transfer methods that were used are Perceived intuitive knowledge was measured with 3 items based on effectiveness of IT facilities, availability of data base for knowledge storage, the methods of documentation of expert's knowledge, means of acquisition, assimilation and storage of conference/training materials; means of conversion and storage of tacit knowledge. Respondents were at liberty to choose between the ranks of 5 to 1 with highest score 50 and least score 10. Personal experience was measured with one-on-one knowledge sharing, place worked before and experience gathered, change of seat (reshuffle), in-house training, brainstorming and sharing of tacit knowledge through interactions, use of A total of 3 items were raised and respondents are at liberty to choose between the ranks of 5 to 1.

RESULTS AND DISCUSSION OF FINDINGS

Descriptive Data Analysis

This section presented a brief profile of the sample 612 woodwork furniture firms' trainers, trainees and employees in the North-Central States, Nigeria. It explained the general features of the respondents.

The study adopted face to face survey method with a sample size of 612.

Table 4.1: Respondents by response rate

Response	Frequency	Percentage
Furniture (a) producers	311	50.8
Upholstery (b) producers	156	25.5

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Carpentry (c) workers	94	15.4
Respondents who work with all (d)	48	7.8
Total	**612**	**100**
Summation of producers of woodwork (a+b)	467	89.5
Summation of workers of Carpentry all woodwork (a+d) 48	312	65.4

Source: Authors' work, 2023

From Table 4.1, the respondents that produce furniture were 311, upholstery were 156, carpentry were 94 those that work with all were 48. This indicated that respondents used all form of woodwork. However, the more respondents used furnit9ure (50.8%) than upholstery (25.5%) and carpentry (15.4%). This supported the finding of Awwal (2017) in which four types of woodworks (cabinetry, joinery and carpentry and woodturning) were most patronized industry with 50.8% (furniture) having 25.5% in upholstery and 48% in carpentry while all who use woodwork were 7.8%.

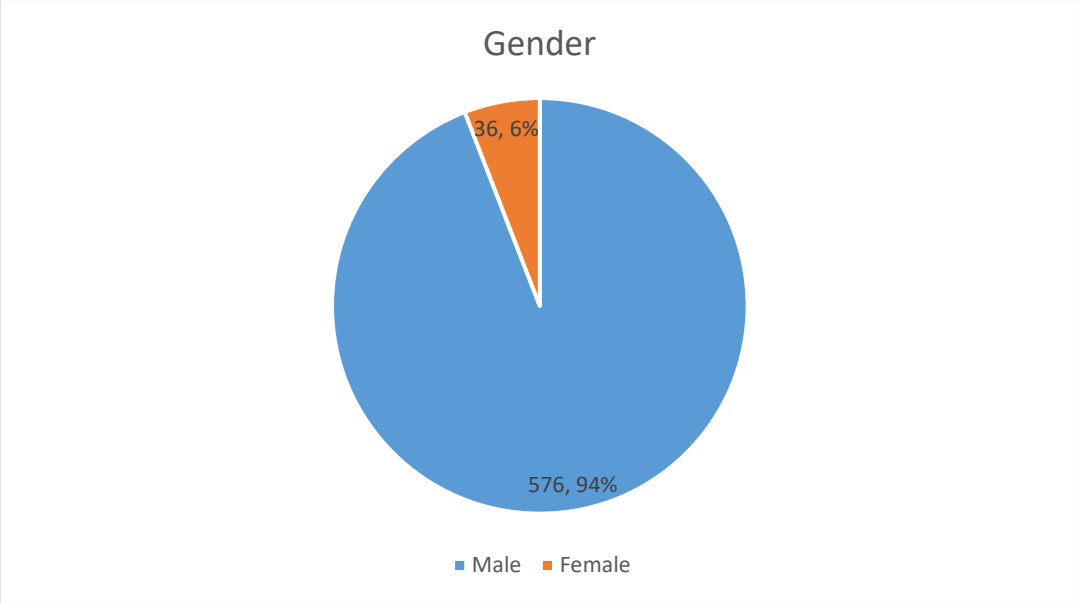


Figure 4.1 Distribution of Respondents by gender
Source: Author's work, (2023)

Figure 4.1 showed that 36 respondents of the sample size are female while 94 of the respondents are male which indicated an uneven distribution of gender in the use of tacit knowledge transfer methods in North-Central, Nigeria. Men are more predominantly involved in the learning and woodwork usage than women, this could be as a result of men physique and natural ability that is, there are more men who make use of tacit knowledge transfer methods than the female counterpart involved in woodwork. Hence,

May, et al (2019) male use natural endowment and capability to ensure works are easily done especially works that involve technical skills and capabilities like woodwork firms. Woodwork firms ensure tacit knowledge transfer methods through learning and relearning (Arowsoge and Tee, 2010).

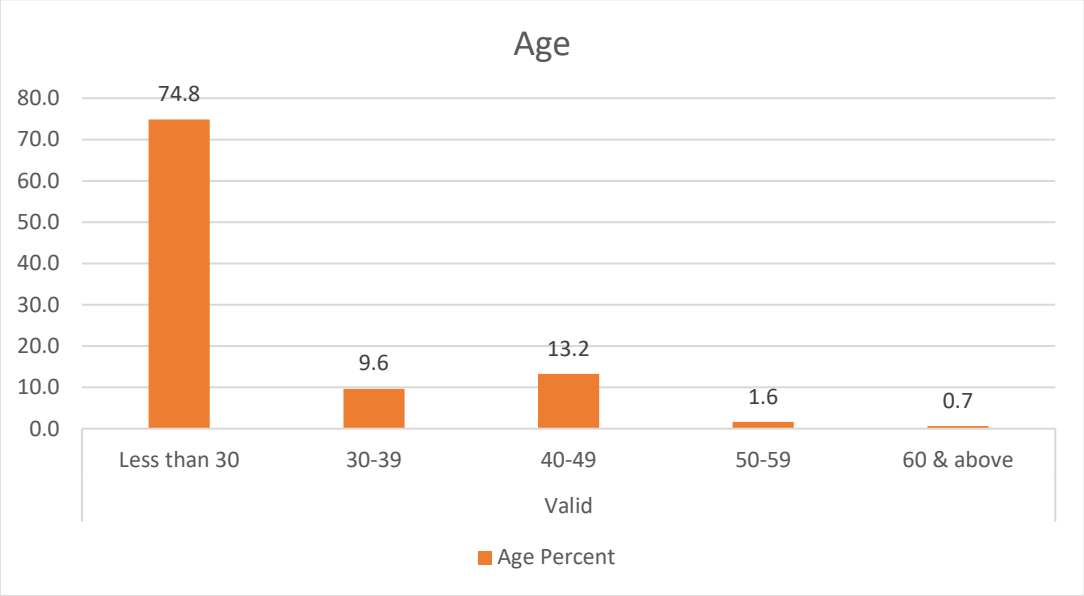


Figure 4.2: Distribution of Respondents by Age
Source: Author's work, (2023)

Figure 4.2 revealed the percentage distribution of the age distribution of respondents that the majority are less than 30 years (74%) followed by 40-49years (13.2%), followed by 50-59 years (1.6%) but the least is 60 years and above (0.7%) in the firm. This implies that most of the trainees are young and more suitable for the study. This supports Ameh (2020) assertion that young people dominate the woodwork industry and reason for more creativity seen in the industry more than others. Woodwork firms are actively in operation due to the nature of people who engage themselves in the operation of the firm (Adejoh, 2021). Trainees of various firms need to make use of knowledge acquired in making the firms known to the people in order to engage more persons at the place of learning which helps to achieve more growth in the firms. Today, across mainstream, young people hunger for success and greatness as a result of competition within the environment and therefore, the easiest way to make it is through a well demanding business (Seid, 2021).

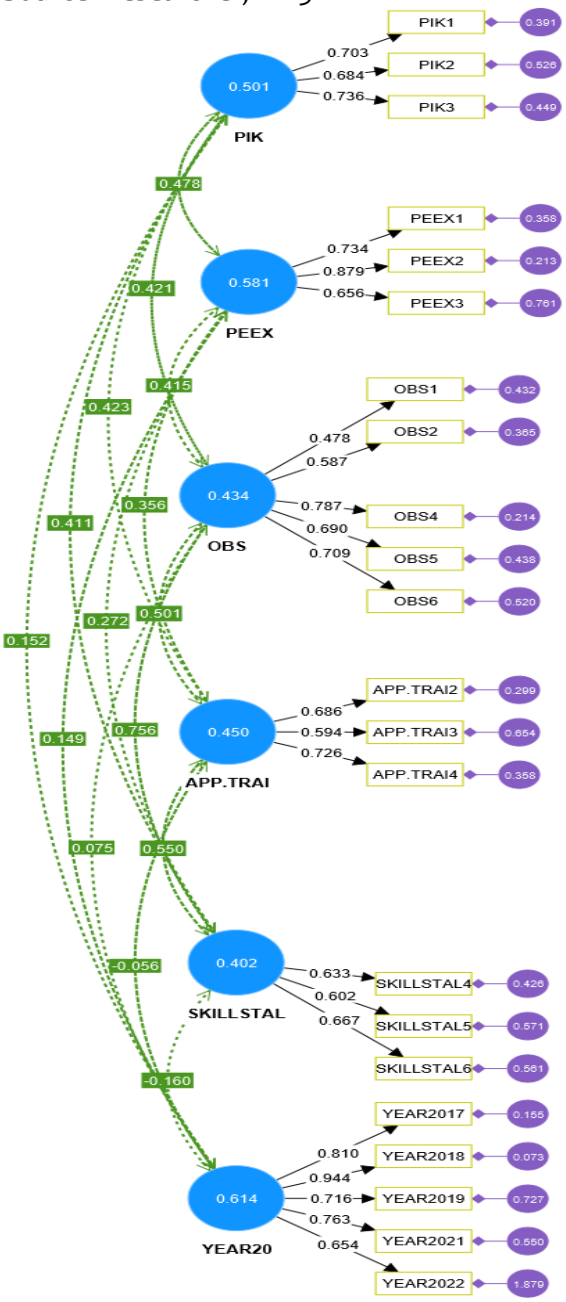
Factor loading

Presenting the factor loadings of constructs within the measurement model serves as the initial step in assessing the measurement model (Hair *et al*., 2019). This involves both the graphical and tabular presentation of factor loading values for each item within the considered constructs of the measurement model. Items with loading values below 0.5 and above 0.95 were typically deleted.

Table 4.9: Summary of Cronbach Alpha and Composite Reliability of Measurement Instrument

Constructs	Cronbach's alpha (standardized)	Cronbach's alpha (unstandardized)	Composite reliability (rho_c)
PEEX	0.790	0.780	0.793
PIK	0.751	0.748	0.751
Growth	0.889	0.847	0.843

Source: Researcher, 2023



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Table 4.9: Summary of Cronbach Alpha and Composite Reliability of Measurement Instrument

Variables	Cronbach's alpha (standardized)	Cronbach's alpha (unstandardized)	Composite reliability (rho_c)
PEEX	0.790	0.780	0.793
PIK	0.751	0.748	0.751
Growth	0.889	0.847	0.843

Source: Researcher, 2023

Table 4.10: Convergent validity

Variables	Average variance extracted (AVE)
PEEX	0.581
PIK	0.501
Growth	0.614

Source: Researcher, 2023

Table 4.10 provides insights into the constructs' Average Variance Extracted (AVE) scores, which gauge the amount of variance captured by the construct's measurement items. The constructs, namely Personal Experience (PEEX), Perceived Intuitive Knowledge (PIK), and Growth of Woodwork firms (GOWWF), each have corresponding AVE values. The AVE is a critical indicator for assessing the convergent validity of the measurement model. Analyzing the AVE values reveals varying degrees of convergent validity across the constructs. Notably, Personal Experience (PEEX) stands out with the highest AVE score, suggesting that a substantial proportion of the variance in its measurement items is accounted for by the underlying construct. On the other hand, Skills and Talents (SKILLTAL) has the lowest AVE value among the constructs. While all AVE values fall below the ideal threshold of 0.5, they are still indicative of an acceptable level of convergent validity, demonstrating that each construct captures a reasonable amount of shared variance among its items

Model

$GRTH_{(1\text{-}5)} = \beta_0 + \beta_1 PIK_{(1\text{-}5)} + \beta_2 PEEK_{(1\text{-}5)} + \beta_3 OBS_{(1\text{-}5)} + \beta_4 APP.TRAI_{(1\text{-}4)} \beta_5 SKILSTAL_{(1\text{-}3)} \mu$ ---

Hypothesis testing

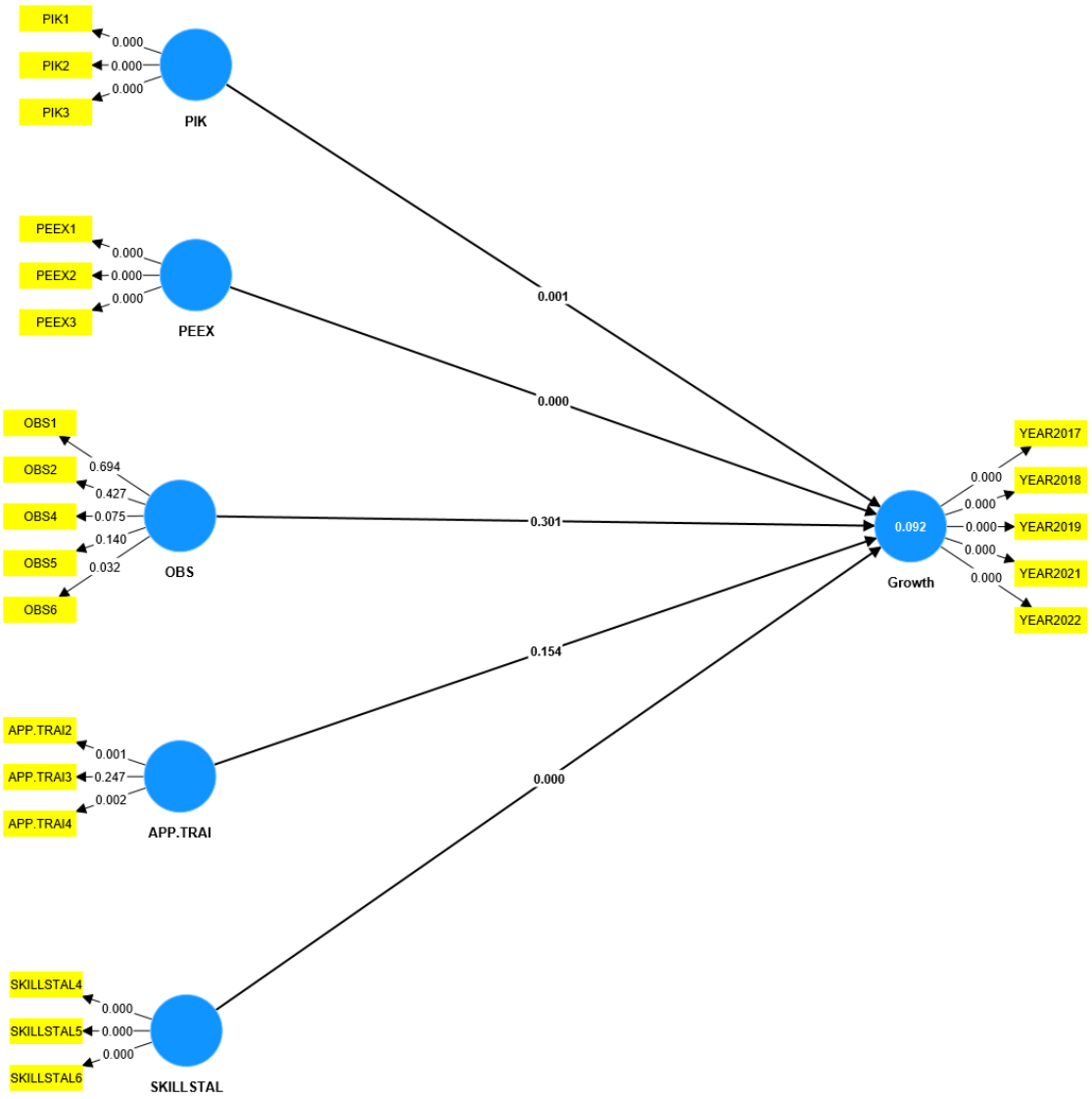
Hi: there is no positive significant relationship between perceived intuitive knowledge and growth of woodwork firms

Hii: there is positive significant relationship between perceived intuitive knowledge and growth of woodwork firms

Hi: there is no positive significant relationship between personal experience and growth of woodwork firms

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Hii: there is positive significant relationship between personal experience and growth of woodwork firms



This study investigated tacit knowledge transfer methods and growth of woodwork manufacturing firms in North-Central, Nigeria. The selected woodwork firms are in the seven states of the geo-political zones of the country.

CONCLUSION AND RECOMMENDATION

Conclusion

This study investigated tacit knowledge transfer methods and growth of woodwork manufacturing firms in North-Central, Nigeria. The selected woodwork firms are in the seven states of the geo-political zones of the country.

Recommendations

Based on the findings of this study, the following recommendations are postulated

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Woodwork firms should encourage perceived intuitive knowledge by ensuring trainees maximally know the right thing to do without told in the place of work. Trainees need to be aware of their working place by listening attentively to their trainers and apply what they hear to continuously perform better.

Woodwork firms should pay serious attention to personal experience of the trainees by ensuring such persons are given much needed attention of the experience gotten before coming to woodwork firms which allows such to learn better. Trainees who learn faster because such work had been done elsewhere needs to be integrated into the core part of the firm to enable them do better. Besides, trainees who can do better jobs than expected can also be left to do the work alone since they are experienced in the work and this enables them to gain more confidence.

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