INNOVATIVENESS AND PERFORMANCE: A MEDIATING ROLE OF CUSTOMER SATISFACTION IN SMALL AND MEDIUM PRINTING FIRMS IN ABUJA, FEDERAL CAPITAL TERRITORY, NIGERIA.

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Abstract

This study examines innovativeness and performance: a mediating role of customer satisfaction in printing firms in Abuja, Federal Capital Territory, Nigeria. The study adopted a survey research design. The population of this study consist of 741 employees of registered printing press with Corporate Affairs Commission (2020), Abuja, FCT. The study used Taro Yamane's formula to determine the sample size of 260 employees of Printing Press in Abuja, Nigeria. The method of data collection used was a questionnaire that was administered to the respondents. The statistical tool used is Partial Least Square Structural Equation Model (PLS-SEM). The findings revealed a positive effect of innovation on the performance of printing press firms in Abuja. Also, innovation has the strongest effect on customer satisfaction of small and medium printing firms in Abuja; also, innovation has the strongest effect on performance of small and medium printing press firms in Abuja and; customer satisfaction has the strongest effect on performance small and medium printing firms in Abuja. The study concluded that there is a positive effect of innovation on the performance of printing firms in Abuja, Nigeria. Also, innovation has the strongest effect on customer satisfaction of small and medium printing firms in Abuja. Customer satisfaction has significant effect on performance small and medium printing firms in Abuja and innovation has significant effect on performance of small and medium printing firms in Abuja. Based on the conclusion, it was recommended that printing firms should continue using innovation in terms of product innovation, technology innovation, process innovation, marketing and incremental innovation since it significantly contributes to performance in terms of sales increase, growth, market performance and increase in market share; and also ensure customer satisfaction in the organizations.

Keywords: Innovation, performance and customer satisfaction

1. INTRODUCTION

In today's globalized market, innovation has assumed an important facet in the way businesses are done in printing press firms. Due to the level of competition globally as well as increasing sophistications of consumers, innovation is considered to be one of the key drivers of long-term success of firms (performance) (Yusheng & Ibrahim, 2019; Mahmoud et al 2018). Firms that are able to innovate respond quickly to competition than non-innovative companies. Again, investing in the right kind of innovation in new technologies, product and strategies helps firms improve their performance and growth (Yusif, 2012; Beck et al, 2012).

Innovation plays a crucial role in the global economy in terms of economic growth, increased productivity, job creation, global competitiveness, improved quality of life, etc. Innovation is a driving force behind economic growth and prosperity at the global level, and its absence can have negative consequences for industries and economies.

Printing firms in Abuja have employed various innovative activities such as product innovation, process innovation, technology innovation, marketing innovation and incremental innovation to enhance performance, yet their performances (in terms of effectiveness, efficiency, market share and growth) have not

improved. Most studies on innovation activities (Koffi et al (2021); Nwankwo & Ezeibe (2021); Jamai et al (2021); Usup & Vivy (2021); Peng et al (2021); Yananda (2020); Umar et al (2020); Chege & Wang (2020); Thi & Khac (2020); Godfred (2020); Omoruyi & Onuoha (2020); Nasser et al (2020); Ernest & Sule (2020); Ploypailin & Pongsutti (2020); and Herlinawati & Machmud (2020) employed performance measures using different organizations. However, the study used mediating variable such customers' satisfaction and used five indictors for each variable. The study used printing press firms in Abuja.

1.2 Objective of the Study

The objective of this study is to examine innovation and performance: a mediating role of customer satisfaction in small and medium scale printing press in Abuja, FCT, Nigeria. Specific objectives include the following: to investigate the effect of innovation on customer satisfaction printing press in Abuja, FCT, Nigeria; to examine the effect of innovation on the performance of printing press in Abuja, FCT, Nigeria; and to determine the effect of customer satisfaction on the performance of printing press in Abuja, FCT, Nigeria.

The Hypotheses are stated below

H$_{o1}$:   Innovation does not significantly affect customer satisfaction in small and medium scale printing press in Abuja, FCT, Nigeria.

H$_{o2}$:   There is no significant effect of innovation on the performance of small and medium   scale printing press in Abuja, FCT, Nigeria.

H$_{o3}$:   There is no significant effect of customer satisfaction on the performance of small and medium scale printing press in Abuja, FCT, Nigeria.

Concept of Innovativeness

Innovation entails firms' commitment to the introduction of new products, process and market (Eze, 2017). It is essential for firms which seek to accelerate business performance to innovate to offer value to customers and to stand out from competitors (Yanadori & Cui, 2013). Meanwhile, Van de Ven (2017) defined innovation as the development and implementation of new ideas by people, who, overtime, engage in transactions with others within an institutional order. The process perspective on corporate entrepreneurship opens up a multi-level angle. Entrepreneurial efforts are not activities independent of other internal and external company operations; they affect individuals, organizations and inter organizational system settings.

Kuratko *et al.,* (2014) stated that innovation is determining the way business is conducted at every level, thus producing an entrepreneurial imperative for the 21st century. Kim, *et al.,* (2012) posited that innovation is generally described as the development or application of new ideas, knowledge, methods and skills that can generate unique capabilities and leverage the organisation's competitiveness. There are many types of innovation, which are product, process, service, organizational, open, radical and incremental innovations and technological innovation but this study focused on product innovation, technology and marketing innovation.

Product innovation is the introduction of new product or service which is a significantly improved with respect to features, performance and quality. Product innovation is the input process adopted to improve the production of a standardized product (Alexe & Alexe, 2016) and it is defined as the one used in different sectors (Aksoy, 2017). Despite the fact that innovation importance is recognized, not all organizations are capable to develop or apply it considering that the average percentage of companies that have implemented any innovation from 2008 to 2010 was 53% (Ganzer, et. al., 2017; OECD, 2017a)

Technology innovation is the replacement of a major part or the whole of an existing technology with more advanced and more efficient technology. Technology innovation aims to increase the productivity, quality and efficiency of the production process or create a new product or service to serve the market (Chege & Wang, 2020).

Marketing innovation is based on lateral thinking, of which the principle is playfulness, boundlessness, and provocativeness. The areas of marketing innovation have a progressive development, including personal marketing, ambient marketing, environmental marketing, guerilla marketing, ambush marketing, buzz marketing, viral marketing, product placement, mobile marketing, even marketing, word of mouth marketing, neuromarketing, geomarketing, behavioural marketing and more. These new areas are rapidly emerging, and their definitions and breakdowns are often uneven. (Chuwiruch et al, 2015).

Concept of Performance

Performance is categorized into two forms, namely, financial and non-financial performance (Akyuz & Opusunju, 2019). It can also be viewed as a general structure that refers to the operations of the enterprise (Opusunju et. al., 2019). Opusunju et. al., (2017) noted that performance is a reflection of the productivity of members of an enterprise measured in terms of revenue, profit, growth, development, and expansion of the organisation. It is defined as how an enterprise is doing in terms of an increase in profit, market share, product quality, and expansion into other enterprises in the same industry (Akyuz & Opusunju, 2019). Performance is measured using diverse parameters by different organizations. Some firms measure it through expansion, survival, number of employees, and capital employed (Akyuz & Opusunju, 2020). Hence, whenever the key performance indicators are in favourable states, it indicates efficiency (Lyndon & Timi, 2019).

Growth is a positive increase in the size of a firm as evidenced in increase in sales or turnover, employees, quality of products and quality of customer relationship that may lead to increase in assets and profit of the firm (Onyenma, 2019). Growth is often measured in terms of turnover and profit, but can also occur in knowledge, in human experience, and in efficiency and quality (Elumeh, et al., 2016). The choice of the method of growth depends on the type of business, resources available, time, money, and equity sweat the owner is ready to spend (Akyuz & Opusunju, 2020).

Organizational effectiveness is the notion of how effectual an organization is in accomplishing the results the organization aims to generate. It plays an important role in accelerating organizational development (Bulent, 2019). It is the net satisfaction of all constituents in the process of gathering and transforming inputs into output in an efficient manner. Organizational effectiveness is defined as the extent to which an organization, by the use of certain resources, fulfills its objectives without depleting its resources and without placing undue strain on its members and/ or society (May, 2016).

The efficiency refers to the success of allocating resources in the production to optimize the outcomes (Cheruiyot, 2017). To him also, the term efficiency can be defined as the ability to achieve an end goal with little to no waste, effort, or energy.

Market performance refers to the end results of these policies – the relationship of selling price to costs, the size of output, the efficiency of production, progressiveness in techniques and products, and so forth (Cheruiyot, 2017).

Market share represents the percentage of an industry, or a market's total sales, that is earned by a particular company over a specified time. It is also referred to as the portion or percentage of a market earned by a company or an organization. In other words, a company's market share is its total sales (Rauch & Rijshik, 2013).

Customers Satisfaction

Mahmoud et al., (2017) defined customer satisfaction as a response to an evaluation of perceived product or service performance, based on the customer's judgments of the value that has been created for them. To Tsai and Hsu (2014), customer satisfaction is caused by the comparison between customers' pre-expectation of products or services through past purchase experiences and the current purchase experience. It is a future indicator of the success of the company's business, which measures how well the customer's response to the future of the company business.

2.   Empirical Review

Ploypailin and Pongsutti (2020) examines the moderating effect of firm size on the relationship between innovation and firm performance of small and medium enterprises in 29 countries in Eastern European and Central Asia. The study also investigates whether the impact of innovation in products and processes on firm performance is affected by financial capital. The method applied is partial least square structural equation modelling. The findings indicated that firm size and the financial capital both moderate and mediate the impact of innovation on firm performance, positively or negatively.

Ernest and Sule (2020) investigate the influence of innovation on the performance of Small and Medium-Scale Enterprises in Kogi State, Nigeria. The study examined the significant effects of the dimensions of innovation on the sales growth of SMEs in Kogi State. The study used survey research design. The sample size of 384 was drawn. All data collected were analyzed using descriptive statistics and Multiple Regression Model. Finding shows that market and process innovations have weak linear effects on the sales growth of SMEs in Kogi State. Only product innovation has strong effect on the sales growth of SMEs in Kogi State.

Omoruyi and Onuoha (2020) investigated innovation strategies and organizational performance of water packaging firms in Lagos State, Nigeria due to the seeming dearth of studies on the topic. Cross-sectional research design methodology was used in collecting data from 118 water packaging firms in Lagos State. The hypotheses were analyzed with Kendall's Tau-b correlation coefficient (denoted τ) by means of Statistical Package for Social Sciences (SPSS) Version 27. Results suggest that higher levels of innovation strategies (aggressiveness-τ = 0.658, p = .003; defensiveness-τ = 0.535, p = .001; futurity-τ = 0.736, p = .003; proactiveness-τ = 0.877, p =.000) amplify organizational performance.

Nasser et al (2020) studied the impact of innovation on the business performance of SMEs in Oman. The research employed a quantitative approach in gathering and analyzing data, using a self- administered questionnaire. The findings of the study concluded that innovation is positively and significantly related to business performance of SMEs in Oman.

Koffi et al (2021) conducted a study on the effect of innovation on SMEs' competitiveness and performance in Cote d'Ivoire. Data for the study was obtained from 250 SMEs operating in Cote d'Ivoire through a structured questionnaire. The PLS-SEM was the main analytical tool used to analyse the research findings via Smart PLS 3 and SPSS 22. Findings from the study revealed that marketing innovation, product innovation, organizational and process innovations are the innovation dimensions that contribute to SMEs' performance and competitiveness in Cote d'Ivoire. Marketing innovation contributes more significantly to SMEs' performance; followed by product innovation; organizational innovation; and process innovation. Additionally, the study found a significant and positive relationship between competitive advantage and SMEs' performance.

Herlinawati and Machmud (2020) analyzed the effect of innovation on SME business performance, which is motivated by the important role of SMEs in national economic growth should be accompanied by a significant increase in business performance. But in reality SME competitiveness is still low in the global market due to low innovation. This study uses an explanatory quantitative survey method. There are 231,181 SMEs in the manufacturing industry sector in West Java, Indonesia as a population with a sample of 346 respondents. Data collection uses a Likert scale 1-5 questionnaire. Data analysis using SEM. The analysis shows that innovation has a positive and significant effect on business performance.

Nwankwo and Ezeibe (2021) evaluated the influence of innovation on financial performance of small and medium scale enterprises in Onitsha. Relevant conceptual, theoretical and empirical literatures were reviewed. Product innovation, process innovation, market innovation and administrative innovation were employed as the independent variable while financial performance was employed as the dependent variable. Survey research design was employed and structured questionnaire was employed as the instrument of data collection. The data generated were analyzed using descriptive statistics and correlation analysis. The study found that product innovation, process innovation, market innovation and administrative innovation have significant influence on the financial performance of small and medium scale enterprises in Anambra State. Based on the foregoing, the study concludes that innovation has significant influence on financial performance of small and medium scale enterprises in Anambra State.

Jamai et al (2021) evaluated the influence of innovation types on firm performance in SMEs. A total of 47 studies were selected to examine the correlation between innovation type and performance, and identify the key factors that strongly impact the firm growth per industry. Findings demonstrate the difference in innovation impact according to the targeted industrial sector and show which type could be more beneficial to enhance firm performance. In the most studied industries, results reveal that product innovation influences

strongly firm performance in the manufacturing sector, while marketing and product innovation are the variables that most impact the growth of agro food firms.

Usup and Vivy (2021) analyzed quantitatively using SEM-AMOS statistical tools, in 300 local product business actors in Central Kalimantan and Bali. The proactive antecedents of market orientation were obtained significantly positive encouraging mediation role of knowledge sharing by 51% and innovation by 63% on business performance. Activities that are managed so that superior products become management activities with significant positive Planning, Organizing, Actuating and Controlling (POAC) carried out by mediating positive impacts to maintain local product business. The novelty of this research is a conceptual model based on Knowledge Based View (KBV) to increase local product business in two provinces affected by Covid-19.

Godfred (2020) examined the effect of product innovation as a strategy on sales performance. Purposive sampling and stratified random sampling methods were used to select 250 staff members of Guinness Ghana Limited (GGL). Questionnaire was key instrument for the primary data used in the study and was analysed with the aid of SPSS version 20. The study found that Guinness Ghana Limited has implemented two strategies; new products and packaging innovation that have increased customers level of satisfaction and retention. Adopted strategies of product innovation is viewed to be very effective and that, the right amount of resources is employed. There was a strong positive and significant correlation between successful product innovation and sales performance.

Thi and Khac (2020) examined the impact of innovation on the performance of manufacturing enterprises in Vietnam. Innovation is measured by product innovation (3 observed variables), technology innovation (8 observed variables), and organization innovation (6 observed variables) while firm performance is measured by revenue and profit. The OLS regression model was used with data collected from 806 enterprises in four industrial sectors. The results show that innovation has a positive effect on firm performance

Chege and Wang (2020) evaluated the association between technology innovation, environmental sustainability and its impact on small business performance. Samples of 204 small businesses and hierarchical regression models were used in the analysis. The results of the survey show that technological innovation affects environmentally friendly owners who have a positive impact on the performance of the company.

Umar et al (2020). Investigated the relationship between innovative products, pricing, promotion and distribution strategies with efficiency of small businesses. 203 small and medium enterprises from the furniture business were designated as a sample for the research. 198 usable questionnaires were analyzed. Multiple regressions were employed as tools of analysis in determining the link between the innovative marketing strategies and firm efficiency. Outcomes indicate that Marketing innovation strategies positively impact on small medium enterprises efficiency.

Peng et al (2021) analyze the dimensions of marketing innovations, their effects on firm performance, and how market environmental factors moderate those effects. Based on an analysis of the literature, this study discovered two types of marketing innovations and established a model to explain the dynamics of marketing innovation and firm performance under different market environments. Empirical data were collected and used to validate the model. Results show that both market-driven and market-driving innovations significantly contribute to a firm's performance. Moreover, their effects are significantly moderated by competition intensity and technological turbulence but not demand uncertainty.

Yananda (2020) examined marketing innovation which directly impacts on business performance of an organization. According to the current study, product design and packaging, product placement, product promotion, and pricing are the factors of marketing innovation that directly impacts market penetration and business performance, particularly of community enterprises for the herbal city, particularly in the North of Thailand. Market penetration also directly impacts business performance; furthermore, it mediates between the relationship of market innovation and business performance. A survey-based on 359 salespersons as a respondent of the current study was conducted for the collection of primary data. Then the primary data was passed through a Partial Least Square (PLS) to analyze the primary data to obtain final results. It is found that

the increased value of marketing innovation also increases the market penetration that increases the business performance of an organization

Theoretical Framework

This study discusses Technology Acceptance Model (TAM), which underpins the study.

Technology Acceptance Model (TAM)

Davis presented in 1989 the Technology Acceptance Model (TAM) to explain the determinants of user acceptance of a wide range of end-user computing technologies. The model is based on the theory of reasoned action by Ajzen and Fishbein (1980). TAM points out that perceived ease of use and perceived usefulness affect the intention to use. Perceived ease of use also affects the perceived usefulness. The intention to use affects the real usage behavior. TAM has been tested and extended by many researchers, including Davis himself.

TAM has proven to be a theoretical model in helping to explain and predict user behaviour of information technology (Legris, Ingham, & Collerette, 2003). TAM is considered an influential extension of theory of reasoned action (TRA), according to Ajzen and Fishbein (1980). Davis (1989) and Davis, Bagozzi, and Warshaw (1989) proposed TAM to explain why a user accepts or rejects information technology by adapting TRA. TAM provides a basis with which one traces how external variables influence belief, attitude, and intention to use. Two cognitive beliefs are posited by TAM: perceived usefulness and perceived ease of use. According to TAM, one's actual use of a technology system is influenced directly or indirectly by the user's behavioral intentions, attitude, perceived usefulness of the system, and perceived ease of the system. TAM also proposes that external factors affect intention and actual use through mediated effects on perceived usefulness and perceived ease of use.

The Technology Acceptance Model (TAM) by Davis in 1986 is one of the models that attempted to address the process of acceptance of the technology and the uses by consumers. This model includes five factors: perceived ease of use, perceived usefulness, behavioral intention, attitudes and actual usage. The adaptation of the TAM model will be made by the addition of two factors: the quality factors, which includes three type of quality: the quality of information, the quality of services and the quality of the system; the other factor that has been added is the experience (Legris, Ingham, & Collerette, 2003).

3.   **METHODOLOGY**

The study adopts a survey research design. The population of this study comprises of all registered printing press in FCT, Abuja, Nigeria. According to Corporate Affairs Commission (CAC), the population of the registered printing press is 247. This study used 3 top management staff of each printing press as the study population. This mean 247*3 which is 741 as the population. For the purpose of this study, the Taro Yamane formula is used to determine the statistically reliable sample size for the population.

The sample size for this study is therefore 260. The researcher added 78 (which is 30% of the sample size) to ensure successful return of the questionnaire (Israel, 2013). Therefore, sample size of this study is 338. The study employed primary data. The data is collected using a structured questionnaire accompanied with a cover letter and the approach to data analysis is qualitative. The questionnaire is close-ended designed using an ordinal measurement scale via-a-via the 5-point Likert scale ranging from 1(strongly disagree) to 5(strongly agree).

The researcher also engaged the services of research assistant who assisted in the administration of the questions to the employees of the registered printing press in FCT, Abuja, Nigeria. The research assistants were educated on how to administer the questionnaire and the researcher ensured that she called on some management staff to ascertain if the research assistants carried out the assigned task effectively. The research assistants returned the copies of questionnaire after two weeks. The internal consistency or reliability of the instrument for this research is determined by means of Cronbach's Alpha, using the Partial Least Square

Structural Equation Model (PLS-SEM). Any instrument with a coefficient of 0.70 and above is seen as valid and reliable.

The Partial Least Square Structural Equation Model (PLS-SEM) is used to model the regression analysis that is used to test the hypotheses to determine if there is an effect of independent variables on dependent variable. The PLS path modelling method was developed by Wold (1982). The PLS algorithm is a sequence of regressions in terms of weight vectors. The weight vectors that will be obtained at convergence satisfy fixed point equations. PLS-SEM is a non-parametric method that does not require that the data meet certain distributional assumptions. However, the parametric significant tests (e.g. as used in regression analyses) cannot be applied to test whether coefficients such as outer weights, outer loadings and path coefficients are significant. Instead, PLS-SEM relies on a non-parametric boot stap procedure (Davison & Hinkley, 1997; Efron & Tibshirani, 1986) to test the significance of various results such path coefficients, Cronbach's alpha, HTMT, and R^2 values and Q^2. The Structural Equation Model that will be adopted for this study is as follows:
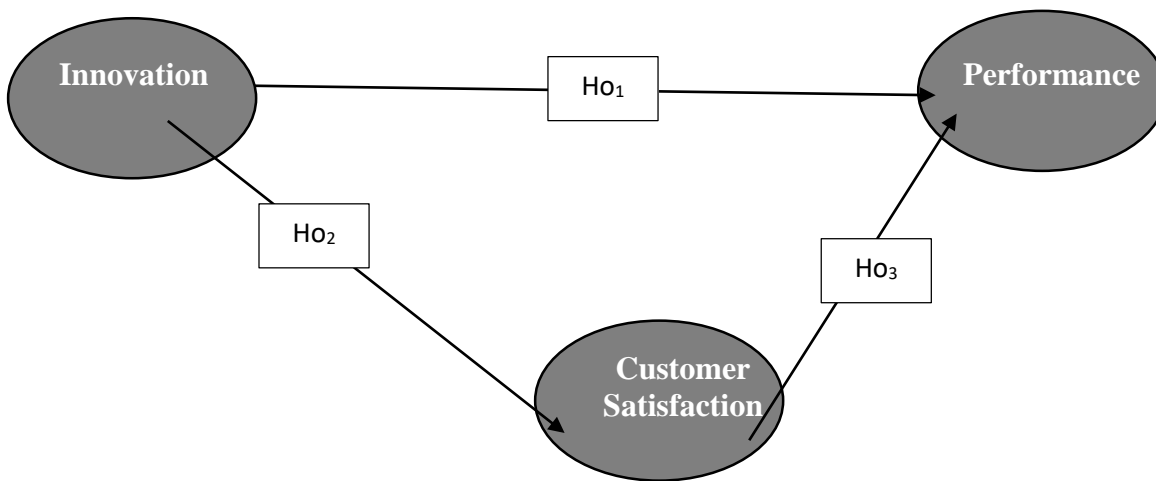

Figure 1: Researcher's Innovation Model, 2023

The model depicts the effect of measurement variables of innovation on Printing Press performance. It also shows indirect effect on customers satisfaction, which serves as mediating variable.

Data Analysis

The study tests the reliability and validity of constructs to ensure the outer (measurement) model is robust (Fornell & Larcker, 1981; Hair et al, 2010).

1. Construct and Indicator Reliability

The indicator's reliability is evaluated through factor loading, internal consistency and average variance extracted (AVA). Factor loading should be higher than 0.70 Hair et al. (2016) and internal reliability and composite reliability should be higher than 0.70 (Fornell & Larcker, 1981). The result (table 1) shows that all the items loading are higher than the recommended value which suggested that there is an acceptable indicator reliability. Also, the composite reliability which is represented as CR varies between 0.988 and 0.981 showing that the constructs used have acceptable levels of internal consistency reliability.

Table 1: Factor Loading

Latent Variable	Indicators	Factor loading	AVE	CR	CBA
Performance	P1(Growth)	0.835			
	P2(Effectiveness)	0.714			
	P3(Efficiency)	0.836	0.689	0.781	0.881
	P4(market performance)	0.888			
	P5(Market share)	0.779			

Innovation	IN1(product Innovation)	0.824			
	IN2(Technology Innovation)	0.813			
	IN3(Marketing Innovation)	0.702	0.875	0.701	0.875
	IN4(Process Innovation)	0.899			
	IN5(Incremental Innovation)	0.887			
Customer Satisfaction	CS1(Customer patronage)	0.741			
	CS2 (Customer Loyalty)	0.788			
	CS3(Customer Preference)	0.825	0.645	0.862	0.867
	CS4(Customer purchase frequency)	0.827			
	CS5(Customer Interest)	0.831			

Notes: Factor weighting scheme; mean 0, var.1, max. iterations = 300

Also, convergent validity is also evaluated whether indicators of each latent variable theoretically explained the constructs, the researcher tested convergent validity of the reflective measured constructs (Carmines & Zeller, 1979). The convergent validity is evaluated by average variance extracted (AVE) and it should be higher than 0.50 as this indicates that on average, the construct explained over 50 percent of the variance of its items (Sarstedt et al. 2014). Composite reliabilities for three reflectively measured constructs ranged from 0.862 to 0.701, exceeding the minimum requirement of 0.70.

2. Discriminant Validity

Discriminant validity demonstrates the extent to which a construct is categorized from other constructs because of either similarity or difference values (Sarstedt et al. 2014). Fornell and Larcker (1981) and Hair et al. (2010) suggest that the square root of AVE should be higher than the inter-construct correlations and maximum shared variance (MSV) should be lower than AVE. Table 2 indicate the Fornell and Larcker test of discriminant validity. This is correspondingly confirmed by cross loadings which are less than all indicator loadings.

Table 2: Fornell-Larcker Test of Discriminant Validity

	Performance	Innovation	Customer Satisfaction
Performance	0.779		
Innovation	0.772	0.771	
Customer Satisfaction	0.761	0.762	0.740

3. Structural Model and Hypotheses Testing

Regarding the inner (structural) model, innovation has the strongest effect on customer satisfaction of small and medium printing press firms in Abuja (Path coefficient of 0.895, t-statistics of 61.675) and also followed by innovation has the strongest effect on performance of small and medium printing press firms in Abuja (Path coefficient of 0.628, t-statistics of 5.185) and followed by customer satisfaction has the strongest effect on performance small and medium printing press firms in Abuja (Path coefficient of 0.202, t-statistics of 1.606).

4. Structural Model Assessment

The criteria facilitate the structural model assessment including coefficient of determination (R-square), cross validity of redundancy (Q square) and path coefficients. The empirical finding shows that the R-square of 0.663 which mean that innovation and performance of small and medium scale printing press firms in Abuja of 66.3 percent. Also R-square of 0.800 which mean that customer satisfaction and performance of 80.0%. We can also assess the model's predictive relevance by evaluating the Q-square. The smaller the difference between the predicted and originated values, the greater the Q square, after running blindfolding,

the Q square is above zero for a particular endogenous construct demonstrating the accuracy in the path model's prediction (performance :0.661 and Customer satisfaction :0.866) (Sarstedt, et al. 2014). The strength and significance of the path coefficient are evaluated for relationships hypothesized between the constructs. After running bootstrapping, we found our path coefficient values to be significant. This is presented by t-statistics which range from -1 to 1. The finding indicates that innovation has the strongest effect on customer satisfaction of small and medium printing press firms in Abuja (Path coefficient of 0.895, t-statistics of 61.675) and also followed by innovation has the strongest effect on performance of small and medium printing press firms in Abuja (Path coefficient of 0.628, t-statistics of 5.185) and followed by customer satisfaction has the strongest effect on performance small and medium printing press firms in Abuja (Path coefficient of 0.202, t-statistics of 1.606). This shows that innovation has a stronger direct effect on customer satisfaction than performance.

Additionally, the study focuses on both direct effects and total effects that is the sum of direct effects and indirect effects between an exogenous and an endogenous construct in the structural model. We further explore whether there is an indirect effect of innovation on performance of small and medium scale printing press via mediator of customer satisfaction.

5. Mediating Effect of Customer Satisfaction

To examine the mediating effect of customer satisfaction on the relationship between innovation and performance of small and medium scale printing press firms in Abuja, the direct effect between latent variables and endogenous latent variables should be significant as this effect be seen clearly when correlations between constructs are strong (Zhao et al, 2010). We excluded customer satisfaction from the path model, then ran bootstrap. The result shows standardized path coefficients of indirect effect as 0.018, t-statistics of 5.185 and co-efficient of total effect as 0.04, t-statistics of 61.675. The table 4 shows that the total effect is statistically significantly stronger than indirect effects indicating that customer satisfaction is a mediator affecting the relationship between innovation and performance of small and medium scale printing press firms in Abuja. This shows the hypothesis 3 is supported

Table 3: Path Coefficient

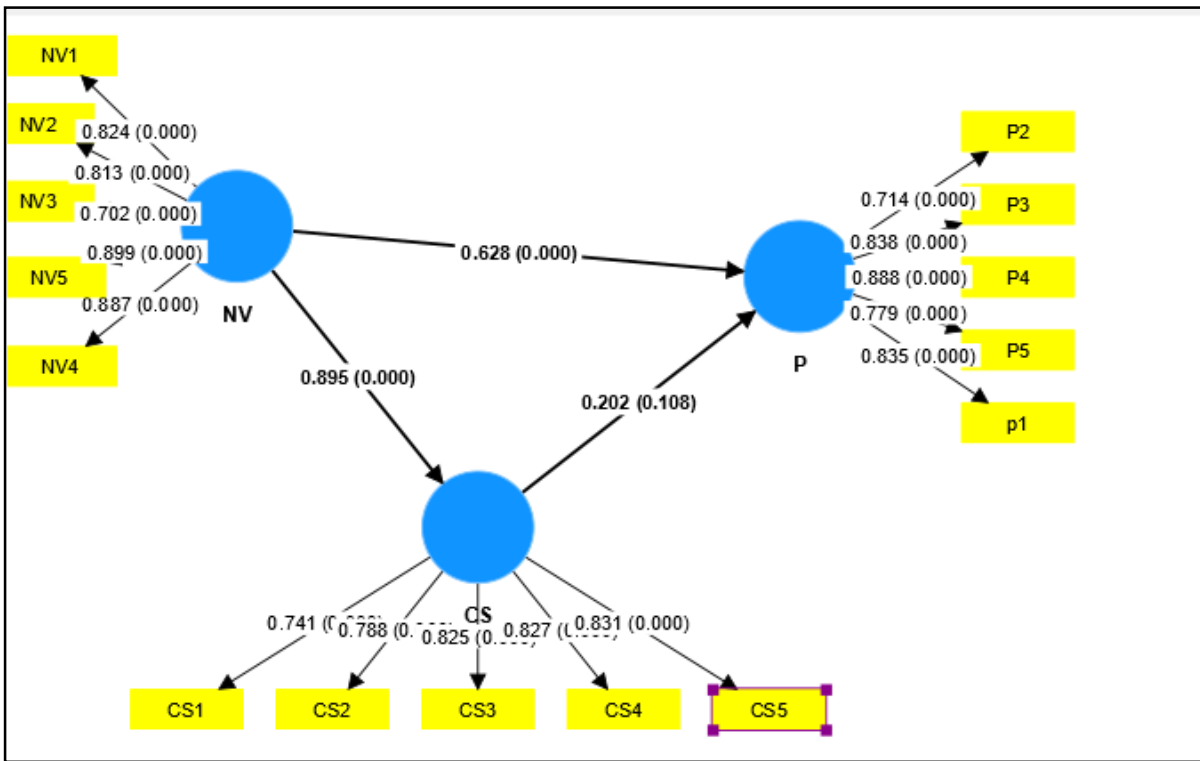| Relationship	Total Effect (Beta	Indirect effect (Beta)
Innovation-> performance	0.000***	0.018***
Customer Satisfaction –> Performance	0.108***	
Innovation -> customer satisfaction	0.000***	

***p- value < 0.05

Figure 2: Structural Model

4. DISCUSSION OF FINDINGS

This study demonstrated the positive effect of innovation on the performance of small and medium printing press firms in Abuja. Also, innovation has the strongest effect on customer satisfaction of small and medium printing press firms in Abuja (Path coefficient of 0.895, t-statistics of 61.675) and also followed by innovation has the strongest effect on performance of small and medium printing press firms in Abuja (Path coefficient of 0.628, t-statistics of 5.185) and followed by customer satisfaction has the strongest effect on performance small and medium printing press firms in Abuja (Path coefficient of 0.202, t-statistics of 1.606).

The finding of this study is consistent with the study of Ploypailn and Pongsutti (2020) who indicate that firm size and the financial capital both moderate and mediate the impact of innovation on firm performance, positively or negatively. The study also in line with TAM which has proven to be a theoretical model in helping to explain and predict user behaviour of information technology (Legris, Ingham, & Collerette, 2003). TAM is considered an influential extension of theory of reasoned action (TRA), according to Ajzen and Fishbein (1980). Davis (1989) and Davis, Bagozzi, and Warshaw (1989) proposed TAM to explain why a user accepts or rejects information technology by adapting TRA (innovation). TAM provides a basis with which one traces how external variables influence belief, attitude, and intention to use. Two cognitive beliefs are posited by TAM: perceived usefulness and perceived ease of use. According to TAM, one's actual use of a technology system is influenced directly or indirectly by the user's behavioral intentions, attitude, perceived usefulness of the system, and perceived ease of the system. TAM also proposes that external factors affect intention and actual use through mediated effects on perceived usefulness and perceived ease of use.

Also, the finding indicates the capability of printing firms used innovation in terms of product innovation, process innovation, technology innovation and marketing innovation in order to realized performance. Also, customer satisfaction enhance performance while innovation ensure effective customer satisfaction in the printing press firms.

5. CONCLUSION AND RECOMMENDATION

The study concluded that there is a positive effect of innovation on the performance of small and medium printing firms in Abuja. Also, innovation has the strongest effect on customer satisfaction of small and medium printing firms in Abuja. Customer satisfaction has significant effect on performance small and medium printing firms in Abuja and innovation has significant effect on performance of small and medium printing firms in Abuja.

The study recommended that:

i)   Printing firms in Abuja should continue to use innovation in terms of product innovation, technology innovation, process innovation, marketing and incremental innovation since it significantly contributes to performance in terms of sales increase, growth, market performance and increase in market share.

iii)   Printing press firms in Abuja should continue innovate their products since it ensures customer satisfaction in the organizations.

ii)   Printing press should continue to design their products that ensure customer satisfaction by prompting customers to prefer their product, be loyal to their product and have adequate interest in purchasing the product since it enhanced performance.

Implication of the Study

By relating the study findings to firm's innovation strategies, owners/managers of small and medium printing firms in Abuja can improve the strength of the service offerings to achieve customer service by spending more on consumer research, market research and increased customers interactions.

Suggestion for Further Study

This study is on innovativeness and performance: a mediating role of customer satisfaction in small and medium printing firms in Abuja, Federal Capital Territory, Nigeria. Another study can be carried out using any other sector like communication to assess the effect of innovativeness on their performance.

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