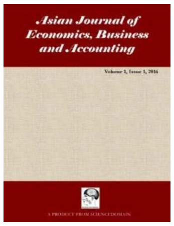

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Small Firms' Strategy Adoption and Business Outcomes in Business Games: An Empirical Investigation from Nigeria

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Authors' contributions

This work was carried out in collaboration between all authors. Author EEO designed the study, wrote the protocol and wrote the first draft of the manuscript. Author ATN performed the statistical analysis and managed the analyses of the study. Author DJA managed the literature searches and also assisted in the draft of the manuscript. All authors read and approved the final manuscript.

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ABSTRACT

The study aimed at determining the effect of adopted competitive strategy on the outcomes of SMEs in Nigeria. The sample size of the study comprised of 1231 owner-managers from selected Small and Medium scale Enterprises within four sectors in Nigeria. The instrument used was structured questionnaire. Strategies adopted by SMEs are superior design, high quality, low prices and new product introduction among others. The study measured SMEs' outcomes with product/service profitability, market share and customer satisfaction. Data obtained were analyzed using descriptive statistics and multiple regressions model. Findings showed that superior design strategy has negative effect on market share of SMEs; high quality strategy has positive effect on market share and negative effect on customer satisfaction; low prices strategy has positive effect on market share; and new product introduction strategy has positive effect on product/service profitability and customer satisfaction. The study concludes that in the pursuit of the desired SMEs' outcome, owner-managers need not to be traditional about strategy adoption. It was recommended that SME owner-managers adopt low price strategy and new product introduction strategy in the Nigerian market.

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Keywords: Competitive strategy; business game; SMEs' outcome; strategy adoption; pay-off.

1. INTRODUCTION

Continuous changes witnessed by small scale businesses affect their survival in the Nigerian business environment. These changes cause dynamism in competition, and it is observed that one best method of addressing dynamic competitive situation is by visiting the draw board, to map out a working strategy, and apply the strategy skillfully in a way that guarantees a competitive edge. Effective business competition requires vibrant competitive behaviour, competitive intelligence, business technique and the application of tactical/strategic approaches. All these are fundamentals for engaging in business related games; and they serve as goal-smoothing factors, particularly in the aspect of growth, improved profitability, larger market share, improved customer satisfaction, improvement in business standard as well as survival of any business. However, [1] contends that true competition consists of the life of constant struggle and rival against rival.

Strategy is an essential tool for the achievement of business growth and other corporate objectives. Adopting a competitive strategy is important to providing, protecting and promoting unique capabilities that distinguish a business firm (regardless of the size) from other competitors. It is observed that some Nigerian Small and Medium Enterprise (SME) owner-managers scare away from strategic thinking due to little or no knowledge and skill about strategy crafting and effective implementation process. [2] added that the level of strategic awareness of owner-managers appears to be strongly influenced by the personal competence of the owner-managers and the type, uncertainty and complexity of the business. Understanding this, [3] opined that the very survival of SMEs is under threat and there is need for them to strategize to counter environmental challenges and increased competition. It is acknowledged that strategy formulation and implementation are important in achieving both SMEs survival and growth [3].

In Nigeria, it is observed that majority of SMEs are conversant with the adoption of superior design, high quality, low prices, reliable delivery and new products introduction strategy for competitive situation in business game. Given that the majority of researches on strategic management have so far focused on large enterprises, many scholar have recently noticed that there is a need to apply these concepts in the context of small business as well [4,5,6,3,7]. Having reviewed empirical studies, [8] asserted that research into strategic management efforts within SME's was still in its infancy. Today, effort has been directed to the importance of strategy formulation and implementation, considering the level of strategy adoption by SMEs.

However [9] contends that a reasonable level of progress has been made in the field of strategic management, but the problem of strategy implementation failure persists. This problem is more pertinent to SMEs. This is because there has been noticeable existing cleavage between strategy-related-learning and SMEs' growth/expansion objective in Nigeria. It is yet to be realized that the successful achievement of a concrete objective of a business firm is very much connected with either consciously or unconsciously adopted strategic approach in business game. It may be reasonable to an extent to uphold also that the unending stagnation and decline of SMEs in Nigeria (in terms of structure/size, revenue, profitability, growth, market share, customer satisfaction, competitive edge and corporate social commitment) is a product of wrongly or poorly adopted business strategy. Factors such as avoidance of strategic thinking due to little knowledge and skill about strategy formulation and implementation, poor use and adoption of Information and Communication Technology, complexity of business, inadequate resources and non-engagement in strategy-related-learning are observed to be affecting the level of adopted business strategy in Nigeria.

The primary objective of this study is to investigate small firms' strategy adoption in business games in Nigeria. The specific objectives of this study are therefore:

i. To determine the factors affecting the adoption level of business strategy of SMEs in Nigeria.
ii. To investigate the effect of adopted individual business strategy (superior design, high quality, low price and new product introduction strategies) on the individual outcome of SMEs in Nigeria (profitability, market share and customer satisfaction).

2. REVIEW OF RELEVANT LITERATURE AND THEORETICAL CONSIDERATION

2.1 Concept of Strategy

According to [7], strategy is the direction and scope of firms in the long run that will bring benefits for the firms through combinations and allocations of resources for carrying out the firms' major goals and missions within a challenging environment. From a corporate perspective, strategy can be defined as an approach to reach corporate goals in order to be successful on a long-term basis [10]. Strategy is a long-term goal inclined action suggested on the draw board as a counteracting or reactive plan, taking into account; organization's mission, vision, strength and direction, without undermining the strength and weakness of other organizations under a fierce competitive environment. This definition is supported by [11] who opined that our response to conflict begins with the knowledge of ourselves and of our opponent.

The term *strategy* is credited to the then Chinese military General, Sun Tzu, who was famous for his teaching of strategy as a War Lord. Many ex-military chiefs who found themselves as business top executives after the First and Second World War became successful through the adoption of military strategy in business competitive situations. Probably, this earmarks the beginning of the adoption of strategy in business competitive situation. Strategy involves the use of strength against the weakness of the opponents, in order to gain a competitive advantage. The most famous distinction reflects the conflict focus of military strategy and the competition focus of business strategy. [12] argues that a firm has a wide range of business strategies to pursue in creating and sustaining internal growth. [13] is of the view that three strategic options are left with business firms (such price, differentiation and focus). Other strategies small business can adopt are:

i. Superior design;
ii. High quality;
iii. Reliable delivery;
iv. Constant adjustment of sequential decision making process; and
v. New product introduction and regular product-process/service-process reengineering.

Strategy gives pathway taking us from *where we are* to *where we intend to be*. Strategic thinking within the small firm requires the owner-managers to possess a clear sense of where they and their businesses are going, and the capacity to maintain that focus and direction in the face of external challenges and the allure of new opportunities [14]. The rationale behind the choice of outwitting strategy is to gain competitive edge. Meanwhile, effective strategy in itself can only serve as a road map and not as a guarantee for the achievement of a corporate goal. Every strategy that gives a pay-off is the best at the winning point. Where a firm's overall strategy is faulty, no amount of strength can guarantee its competitive advantage; hence, the need for combination of strategies. A fault-free strategy is completely an efficient strategy.

2.2 Business Games and Game Theory

Business competitive situation reflects a business game. This is because; a winner must eventually emerge among the players under a competitive situation. For instance, all business firms strive to gain the right payoff. This is a true reflection of a game as at least two rational players who take into account one another's actions are doing this to achieve the most desirable payoff. A game can be categorized into game of luck and game of strategy. Strategy itself gained literature attentions through game theory which was developed by Neumann and Morgenstern.

According to [15], game theory has developed its application mainly in mathematics since its inception in 1944 by [16]. Game theory describes the behavioural pattern of players in a business game (business competition). It provides an insight into game of dragging favourable outcome (game of conflict) and game of fair consideration (game of cooperation). Game theory assumes that one has opponents who are constantly reviewing their strategies based on the perception that everybody else adopts strategy. In game theory, a 'game' is a complete specification of the strategies each 'player' has, the order in which players choose strategies, the information players have, and how players value possible outcomes ('utilities') that result from strategy choices [17]. Analyzing a game requires probing into adequate knowledge of the rules binding the game itself, the strength and weaknesses of other player(s), the outcome of skillful application of strategy, and the pay-off involved. According to [18], there are different kinds of games that are studied using game theory:

i. *Zero-sum game:* Here, each player is rational, ready to take it all. This leads to strict competition; leaving one player winning to get +1 (positive payoff) and the other losing to get –1 (negative payoff). Therefore, +1-1=0.
ii. *Non-zero sum game:* Here, cooperation of the players balances their interest and competition becomes meaningless; leaving the players with equal pay off (each player benefits from the game).
iii. *Simultaneous move games:* This involves anticipating similar action from the opponent. That is, believing that the opponent is doing exactly the same thing one is doing.
iv. *Sequential move games:* This involves following a sequential line of actions to compete effectively. Here, players select course of actions in a line-up and adopt them in orderly manner.
v. *One-shot game:* Crossman expressed that the players are likely not to know much about each other and gave an example, such as tipping a waiter on your vacation.
vi. *Repeated games:* Here, the same players have to compete repeatedly with one another.

Game theory only assumes that certain rules are to be observed in a business game, and knowing these rules is not enough to achieve a desirable pay off without the adoption of the right and effective strategy. Using terminology standard in the philosophy of science, one can test a game-theoretic model of a phenomenon only in tandem with auxiliary assumptions about the phenomenon in question [19].

It is crystal clear that game theory under business games requires players to outline course of actions, evaluate each action in the light of available resources and develop an effective strategy in alignment with the game theory to get a desirable pay off. Strategies befitting phases in game description of game theory can be viewed as:

i. Game involving ‘cooperation-cooperation’ without fear of jittery shadow-behaviour (cope with situation strategy).
ii. Partial cooperation-cooperation with game monitoring (flexible strategy).
iii. Game involving conflict-conflict with rational behaviour (strategy combination).

In summary, game theory exposes players to dynamic thinking regarding strategy adoption and better method of making strategic decision. However, the aim of strategy adoption is to enhance the bagging of the most desirable pay-off presented by business game.

2.3 Strategy Adoption in Business Game among SMEs

Business environment witnesses continuous changes in technology, competition, consumer taste and buying behaviour, suppliers and so on. These changes are strategic issues, and strategic issues are business problems. Business game poses changes that have revolutionized the business world with severe threat to business entities of whatever size. Few businesses that have experienced growth are efficacious in their response to these changes and many others, particularly the Small Scale Businesses, have experienced business entropy or epileptic growth due to their inefficacy and negligence in response to change.

Business games are competition-related-situations among business entities with varying pay-offs in either win-lose or win-win; measurable in monetary terms or other forms. In a business game, strategy may be used to counteract the behaviours of other competitors. Strategy is like ‘pat of the tennis game’, smashing right-left under the control of the professional. From an entrepreneur’s perspective according to [20], three major objections that are expressed against the use of strategic processes by SME owners are:

i. Strategic instruments limit the flexibility and the ability for improvisation;
ii. It is preferable to use the limited time resources for operational, sales or R&D activities rather than for strategy development processes;
iii. Strategic management is too bureaucratic.

[21] had expressed that small and medium-sized businesses will probably have a better performance if they set up a clear strategy and if that strategy is dispersed throughout the organization. In addition, [22] argued that by lacking a clearly defined strategy, a business has no sustainable base for creating and maintaining a competitive edge in the marketplace. With a clear and defined strategy, employees can take decisions with that strategy in mind [21]. Today, strategy adoption is observed to be embraced by

SME owner-managers in Nigeria; though the momentum in the business arena has forced the appreciation of strategy formulation and implementation. Yet, strategy appears to be wrongly adopted by these SME owner-managers or ineffective. In their work, [6] recommended the followings for SME managers that:

i. SME managers should wear multiple hats rather than having a functional focus regarding roles and responsibilities
ii. SMEs should communicate with external stakeholders particularly customers, suppliers, lenders, universities and competitors. They should not take the environment as given. They should not be only internally focused.
iii. SMEs should be strategically focused rather than having a focus on short-term financial performance only.
iv. SME managers should work on making strategic plans happen via committed employees, constant investments and internal and external communication. The strategy should not stay only in the head of the entrepreneur.
v. SME managers should review their strategies so as to accommodate dynamic strategic changes and to ensure continued strategic relevance over time.
vi. SME practitioners will benefit from strategy theory implications and principles more if they can manage to close the gap between the academic language and their own language regarding strategy analysis, implementation, strategy tools and techniques.
vii. SME managers should develop a balanced view between looking at their organizations from outside-in (Market Based View) and inside-out (Resource Based View). They should ensure continued strategic fit between external opportunities and their own resources and capabilities/ competencies.

The adoption of effective strategy is therefore necessary to tackle strategic issues and avoid unwanted event in business life. We also view strategy as a plan to avoid losing out in the business game, and taking all favourable pay-off presented by the game. The adoption of effective strategy is one grand approach to business problems since conventional management approaches have created jungle of thoughts over time. [23] opined that different approaches actually led to the jungle of confusing thoughts. Strategy is the means to create value, and a good strategy is one that works; one that guides purposeful actions to deliver the required result [24].

There have been noticeable existing backdrops between SME owner/managers' strategy adoption and business outcomes. It is yet to be realized that successful achievement of business outcomes is very much connected to either consciously or unconsciously adopted strategic approach in business game. It may be reasonable to an extent to uphold also that the backdrops in the pursuit of business outcomes of SMEs in Nigeria (profitability, market share and customer satisfaction) are product of adopted business strategy.

There are so many factors which establish increasing threat for SMEs within Nigeria. These factors make business games more intensified. [25] grouped these factors and referred to them as the five forces. These forces are captured in the Fig. 1.

Porter's Five Force Model is not limited to competitive power and profitability analysis of firms; it also exposes managers to the understanding of business games and relative strategies that are adoptable. The ability of managers to establish a clear understanding of power, and how to utilize strength against weakness is the fundamentals of Porter's five force model. This enables managers to know the right strategy to adopt in a competitive situation in pursuit of the desired business outcomes. When business managers have a clear understanding of where the power lies, they can take the advantage of the situation of strength, can well improve the situation of weakness and avoid taking wrong decisions or steps [26]. From [26]'s Five Force Model, it is evident that business managers can obtain a clear understanding of where the power lies as shown below:

i. Threat of New Entry: This occurs in an industry where initial capital required for start-up is low. Small firms are victims of this form of threat due to their limitation regarding investment capacity. Stress-free investment with promising returns tends to attract new entrants. New entry threat shapes competing firm's profit potential and market share.
ii. The Bargaining Power of Buyers: Buying power is influenced by very few number of

buyers or low patronage. The buying power of buyers, when at the high side can put pressure on firms to adjust over prices of product/services. This means that buyers in their own power can control prices if it occurs to them that individual firm struggles to get them patronize a particular product/service.

iii. The Bargaining Power of Suppliers: Decision-makers (SME owner-managers) have to consider the right choice of suppliers and supplies. The bargaining power of suppliers has so much influence on average cost of product, and the quantity and quality of material supplied correlate with desired outcomes of firms such as profitability, market share and customer satisfaction. This power is derived by suppliers when it is evident that their numbers are very few. If the suppliers have heavy influence on the market, expected income may be affected, and thus there is every need to adopt strategy that can enhance adjustment of supply prices.

iv. Threat of Substitute: A firm's product encounters threat when it is replaceable by another product at the marketplace. A product has a great potential only when it commands loyalty. All products are developed to meet consumers' needs, but the one with the greatest benefit poses threat to others. In the real sense, threat of substitutes shapes the competitive structure among firms. This threat of substitution influences firms' ability to achieve desired outcomes.

v. Intensity of Rivalry: The struggle for similar payoff intensifies competition among firms in a business game. Individual competitor adopts different approaches to outwit others in the game. Rivalry among firms places barriers on desired outcomes. When rivalry is tough, the implication is that competitors become more rational, and they pursue their desired outcomes.

3. RESEARCH METHODOLOGY

Survey research design was adopted for this study (which took place within the period of 2015 and 2017). [27] posited that survey design was useful due to its ability to predict behaviour and assist researchers in collecting identical information concerning all the cases in a sample. This study adopted the sampling of [28] which surveyed 4000 SMEs across Nigeria in 13 sectors using the principles of Probability Proportion to Size (PPS) to allocate number of establishments to states according to the concentration of the establishments. This study selected its sample size logically based on the

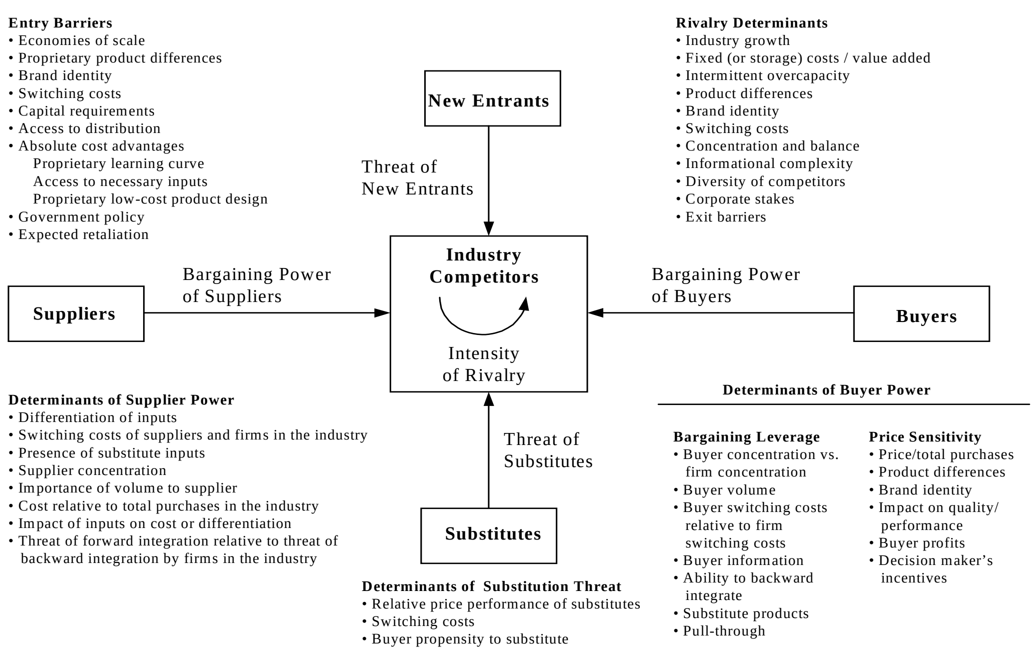

Fig. 1. Porter's Five Forces

Source: Porter, M. [26]. Competitive Advantage, New York: The Free Press fact that the sample of the study of [28] was considered large enough to give robust estimate at the state level from where states and national estimates was aggregated. The sample size of the study comprised of 1231 owner-managers from selected Small and Medium scale firms within:

i. Accommodation and Food Service Activities Sector
ii. Agriculture, Forestry, Fishing and Hunting Sector
iii. Manufacturing Sector
iv. Informal Service Sector

The choice of this adoption was backed with the fact that it is difficult to survey the colossal population of SMEs across the country. The scope of the study was limited to randomly selected SMEs (by their clusters within regions) using a well structured questionnaire to gather data. In Nigeria according to [29], SMEs are distributed by clusters within regions. The questionnaire was administered in these regions with the help of thirty seven trained research assistants. SMEs' strategies conceived for this study are superior design, high quality, low price and new product introduction. The study used 5-point Likert Scale questionnaire to rate and determine the reliability of SMEs' outcomes with product/service profitability ($\alpha = 0.78$), market share ($\alpha = 0.85$) and customers' satisfaction ($\alpha = 0.75$) using [30]'s alphas. Reliability, according to [31] and [32] reflects the consistency of a set of item in measuring the study variables/concepts. The instrument was considered reliable as the results of these construct proved to be more than the critical point of 0.70. This study analyzed data using descriptive statistics such as frequency count, percentages, mean score from Likert scale and regression model.

Three point Likert scale was used for factors affecting the level of strategy adoption by SMEs (objective one) as specified below:

Opinion	**Point**
Strongly Agree (SA)/Great Extent (GE)	3
Undecided (UD)/Average Extent (AE)	2
Strongly Disagree (SD)/Low Extent (LE)	1

The mean score of responses to each item was determined through:

$$\overline{X} = \frac{\sum FX}{N}$$

Where: $\overline{X}$ = means response, $\sum$ = summation, F = number of respondents choosing for a particular scale point, X = numerical value of the scale point and N = total number of respondents to the item.

The Cut-Off Point involves adding the Mean Point of Scale with the tolerable level of error (e= 5%). Mean Point of Scale = $\frac{\sum X}{n} = \frac{6}{3} = 2.00$

Cut-Off Point = Mean + e = 2.00 + 0.05 = 2.05.

Therefore, decision will be dependent on the comparison between the mean score and the cut-off point.

Regression model was used for the effect of adopted individual business strategy (superior design, high quality, low price and new product introduction strategies) on the individual outcome of SMEs (profitability, market share and customer satisfaction) in Nigeria. The model is specified as follows:

$$Y_1 = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + \mu \quad (1)$$

$$Y_2 = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + \mu \quad (2)$$

$$Y_3 = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + \mu \quad (3)$$

Where

Y_1= Product/service Profitability
Y_2= Market Share
Y_3= Customer Satisfaction
X_1= Superior Design Strategy
X_2= High Quality Strategy
X_3= Low Price Strategy
X_4= New Product Introduction Strategy

4. RESULTS AND DISCUSSION

Table 1 shows the demographic characteristics of SME owner-managers in Nigeria. The table shows that 116 owner-managers (9.42%) are within the age range of 15 to 25; 234 owner-managers (19.01%) are within the age range of 26 to 36; 353 owner-managers (28.68%) are within the age range of 37 to 47; 345 owner-managers (28.03%) are within the age range of 48 to 58; and 183 owner-managers (14.87%) are within the age range of 59 and above. The mean shows that majority of the owner-managers are 44 year old. This aligns with the finding of [28] that the age bracket of 24-50 dominates the ownership structure of SMEs in Nigeria.

From the table 1, 656 owner-managers (53.29%) were male; and 575 owner-managers (46.71%) were female. The mode of this gender distribution (656) implies that majority of the owner-managers are male. This aligns with the study of [33] which found that majority of SME owners are male.

The table shows that 91 owner-managers (7.39%) are holders of first school leaving certificate; 191 owner-managers (15.52%) hold Senior School Certificate; 382 owner-managers (31.03%) hold National Certificate (or its equivalent); 479 owner-managers (38.91%) hold Higher National Diploma/ Bachelor of Science Certificate; and 88 owner-managers (7.15%) hold Master of Science (or its equivalent) and above. The mode (479) shows that majority of the owner-managers have National Certificate (or its equivalent).

The table shows that 375 owner-managers (30.46%) have the business experience of 0 to 5 years; 396 owner-managers (32.17%) have the experience of 6 to 10 years; 259 owner-managers (21.04%) have the experience of 11 to 15 years; and 201 owner-managers (16.33%) have the experience of 16 to 20 years. The value of the mean (9.01) shows that majority of the owner-managers have the business experience of 9 years.

Table 2 shows the descriptive analysis of factors affecting the level of strategy adoption by SMEs in Nigeria. Three factors appear to be valid and acceptable, as having a causal effect on the level of strategy adoption by SMEs based on their mean scores. It is seen that the avoidance of strategic thinking due to little knowledge & skill about strategy formulation and implementation with the mean score of 2.148; inadequate resource with the mean score (2.249); and poor use and adoption of Information and Communication Technology with the mean score (2.374) are considerable as factors affecting the level of strategy adoption by SMEs in Nigeria. They are regarded as considerable factors based on the fact that the mean scores are greater than the cut-off point (that is, = 2.148, 2.249 & 2.374 > cut-off point = 2.050). The higher the SME owner-managers' skills and availability of adequate resources, relative to other

Table 1. Demographic characteristics of SME owner-managers

Demographic factors	**Frequency by sector**						
Age	**AFSA**	**AFFH**	**MAN**	**ISERV**	**Total**	**Percent**	**Mean/Mode**
15-25	24	26	21	45	116	9.42	
26-36	89	53	67	25	234	19.01	
37-47	103	17	201	32	353	28.68	44.19
48-58	81	100	148	16	345	28.03	
59 & above	88	55	35	5	183	14.87	
Total	**385**	**251**	**472**	**123**	**1231**	**100**	
Gender							
Male	174	195	249	38	656	53.29	656
Female	211	56	223	85	575	46.71	
Total	**385**	**251**	**472**	**123**	**1231**	100	
Education							
FSLC	42	12		37	91	7.39	
SSCE	89	25	49	28	191	15.52	
NCE/OND	112	72	152	46	382	31.03	
HND/BSc	75	125	267	12	479	38.91	479
MSc & above	67	17	4		88	7.15	
Total	**385**	**251**	**472**	**123**	**1231**	**100**	
Business Experience							
0-5	72	102	148	53	375	30.46	
6-10yrs	135	78	156	27	396	32.17	9.01
11-15yrs	98	45	96	20	259	21.04	
16-20yrs	80	26	72	23	201	16.33	
Total	**385**	**251**	**472**	**123**	**1231**	**100**	

Note: AFSA- Accommodation and Food Service Activities; AFFH- Agriculture, Forestry, Fishing & Hunting; MAN- Manufacturing; ISERV- Informal Service competitors, the higher the tendency to adopt favorable strategies. These factors including poor use of Information and Communication Technology serve as impediments to effective adoption of a particular competitive strategy in a business game.

It is observed from the table that complexity of business with the mean score (1.831); and engagement in strategy-related learning with the mean score (1.724) are not relevant factors that can affect the level of strategy adoption by SMEs in Nigeria. These results are upheld because the mean scores are less than the cut-off point (that is, $\overline{X}$ = 1.831 & 1.724 < cut-off point = 2.050).

Table 3 shows the competitive strategies adopted by SME owner-managers in business game. 169 SME owner-managers (13.7%) adopt superior design as their competitive strategy; 323 SME owner-managers (26.2%) adopt high quality strategy; 421 SME owner-managers (34.2%) adopt low price strategy; 93 SME owner-managers (7.6%) adopt reliable delivery strategy; and 225 SME owner-managers (18.3%) adopt

Table 2. Descriptive analysis of factors affecting the level of strategy adoption by SMEs

Factors	**Strategy Adoption**					
	Frequency, percentage and mean score					**Decision**
	SA/GE (%)	**UD/AE (%)**	**SD/LE (%)**	**Mean score**	**Cut-off point**	
Avoidance of strategic thinking due to little knowledge & skill about strategy formulation and implementation	644(52.32)	125(10.15)	462(37.53)	2.148	2.050	Accepted
Complexity of business	388(31.52)	247(20.06)	596(48.42)	1.831	2.050	Rejected
Engagement in strategy-related learning	340(27.62)	211(17.14)	680(55.24)	1.724	2.050	Rejected
Inadequate resources	721(58.57)	96(7.80)	414(33.63)	2.249	2.050	Accepted
Poor use and adoption of Information and Communication Technology	744(60.44)	204(16.57)	283(22.99)	2.374	2.050	Accepted

Table 3. Competitive strategies adopted by SMEs in business game

Adopted strategies	**AFSA**	**AFFH**	**MAN**	**ISERV**	**Grand total**	**Percent**
Superior design	45	28	78	18	169	13.7
High quality	103	77	108	35	323	26.2
Low price	150	98	134	39	421	34.2
Reliable delivery	23	13	42	15	93	7.6
Product introduction	64	35	110	16	225	18.3
Total	**385**	**251**	**472**	**123**	**1231**	**100**

Table 4. Multiple regression of the effect of competitive strategies on SMEs' outcomes

Covariate	**Coefficients (β)**			**Standard Error (β)**			**Value of R^2**			**Value of F-Statistics**		
	PP	**MS**	**CS**	**PP**	**MS**	**CS**	**PP**	**MS**	**CS**	**PP**	**MS**	**CS**
SD	-0.15	-1.92	-0.26	0.29	0.20	0.48	0.211	0.989*	0.226	0.27	91.17	0.29
HQ	1.98	1.49	-0.25	0.44	0.41	0.01	0.952	0.929*	0.997*	19.87	13.14	383.21
LP	1.04	0.37	-0.12	0.04	0.03	0.10	0.999	0.994*	0.618	702.61	176.62	1.62
PI	0.93	0.89	0.98	0.22	0.25	0.06	0.898*	0.861	0.993**	17.70	12.44	295.23

*Note: *Significant at the .05 level; **Significant at the .01 level; SD- Superior Design; HQ- High Quality; LP- Low Price; RD- Reliable Delivery; PI – Product Introduction; PP- Product/Service Profitability; MS- Market Share; CS- Customer Satisfaction* new product introduction strategy. These competitive strategies are considered relevant for the pursuit of broad objectives by SME owner-managers in Nigeria.

The Table 4 shows that 21.1% of the variation in product/service profitability and 22.6% of the variation in customer satisfaction is explained by the superior design strategy adopted by SME owner-managers in Nigeria. The presence of 78.9% unexplained variation in the product/service profitability and 77.4% unexplained variation in customer satisfaction suggest that there are other adoptable strategies which can enhance product/service profitability and customer satisfaction. The co-efficient (-0.15 & -0.26, $p > 0.05$) shows negative relationship between superior design strategy and product/service profitability and customer satisfaction of SMEs in Nigeria. However, the result will be declined based on its level of insignificance. Furthermore, 98.9% of the variation in SMEs' market share is explained by the superior design strategy adopted by SME owner-managers in Nigeria. The presence of 1.1% unexplained variation in the SMEs' market share suggests that there are other adoptable strategies which can enhance SMEs' larger market share in Nigeria. The co-efficient (-1.92, $p < 0.05$) shows a negative relationship between superior design strategy and SMEs' market share of SMEs in Nigeria. This appears to be against the apriori expectation of this study. The result implies that more effort towards formulating and implementing superior design strategy will lead to 19.2% decrease in market share of SMEs in Nigeria. This may have occurred due to formulation and implementation failure which may have been caused by some factors. The relatively high observed adjusted R-square shows that the model fits the data well. The high significant f-statistics value of 91.17 confirms that the high adjusted R-square did not also occur by chance. The model is a good one. The R^2 value of 0.989 is statistically significant. The model demonstrates a good fit. We therefore deduce that superior design strategy has negative effect on SMEs' market share in Nigeria.

The table also shows that 95.2% of the variation in product/service profitability is explained by the high quality focused strategy adopted by SME owner-managers in Nigeria. The presence of 48.9% unexplained variation in the product/service profitability suggests that there are other adoptable strategies which can enhance product/service profitability. The co-efficient (1.98, $p > 0.05$) shows positive relationship between high quality focused strategy and product/service profitability of SMEs in Nigeria. However, the result may be rejected based on the fact that it is statistically insignificant. Result further indicates that 92.9% and 99.7% of the variation in SMEs' market share and customer satisfaction is explained by the high quality inclined strategy adopted by SME owner-managers in Nigeria. The presence of 7.1% unexplained variation in the SMEs' market share and customer satisfaction suggest that there are other adoptable strategies which can enhance SMEs' larger market share and customer satisfaction in Nigeria. The co-efficient (1.49 & -0.25, $p < 0.05$) shows positive relationship between high quality strategy and SMEs' market share and customer satisfaction of SMEs in Nigeria. The results imply that more effort towards crafting high quality focused strategy will lead to more than proportional increase in market share; and 25% increase in customer satisfaction. The implication of this is that customers of these SMEs are quality concerned, and strategy in this direction will retain their loyalty/patronage and enhance larger market share. The relatively high observed adjusted R-square also shows that the model fits the data well. The significant f-statistics value of 383.21 (customer satisfaction) and 13.14 (market share) confirms that the high adjusted R-square did not also occur by chance. The model is a good one. The R^2 value of 0.929 (market share) and 0.997 (customer satisfaction) are statistically significant. The model demonstrates good fit. We therefore deduce that high quality inclined strategy has positive effect on SMEs' market share and customer satisfaction in Nigeria.

The table shows that 99.9% of the variation in product/service profitability and 61.8% of the variation in customer satisfaction is explained by the low prices focused strategy adopted by SME owner-managers in Nigeria. The presence of 0.1% unexplained variation in the product/service profitability and 38.2% unexplained variation in customer satisfaction suggest that there are other adoptable strategies which can enhance product/service profitability and customer satisfaction. The co-efficient (1.04 & -0.12, $p > 0.05$) shows positive relationship between low prices focused strategy and product/service profitability; and negative relationship between low prices focused strategy and customer satisfaction of SMEs in Nigeria. However, the results are statistically insignificant and are rejected. Furthermore, 99.4% of the variation in SMEs' market share is explained by the low prices focused strategy adopted by SME owner-managers in Nigeria. The presence of 0.6% unexplained variation in the SMEs' market share suggests that there are other adoptable strategies which can enhance SMEs' larger market share in Nigeria. The co-efficient (0.37, $p < 0.05$) shows a positive relationship between low prices focused strategy and SMEs' market share of SMEs in Nigeria. The result implies that more effort towards formulating and implementing low prices focused strategy will lead to 37% increase in market share of SMEs in Nigeria. The implication of this is that customers tend to go for product/service with low price, and this increases the market share of SMEs adopting the strategy in Nigeria. This may result due to the economic situation of the nation, and the fact that majority of Nigerians live below one dollar. The relatively high observed adjusted R-square, shows that the model fits the data well. The high significant f-statistics value of 176.62 confirms that the high adjusted R-square did not also occur by chance. The model is a good one. The R^2 value of 0.994 is statistically significant. The model demonstrates a good fit. We therefore deduce that low prices focused strategy has positive effect on SMEs' market share in Nigeria.

The table also shows that 86.1% of the variation in market share is explained by new product introduction strategy adopted by SME owner-managers in Nigeria. The presence of 13.9% unexplained variation in the market share suggests that there are other adoptable strategies which can enhance product profitability. The co-efficient (0.89, $p > 0.05$) shows positive relationship between new product introduction strategy and market share of SMEs in Nigeria. However, the result is statistically insignificant and is rejected. Results further indicate that 89.8% and 99.3% of the variation in SMEs' product/service profitability and customer satisfaction are explained by the new product introduction strategy adopted by SME owner-managers in Nigeria. The presence of 10.2% unexplained variation in SMEs' product/service profitability and 0.7% unexplained variation in customer satisfaction suggest that there are other adoptable strategies which can enhance SMEs' product/service profitability and customer satisfaction in Nigeria. The co-efficient (0.93 & 0.98, $p < 0.05$) shows positive relationship between new product introduction strategy and product/service profitability and customer satisfaction of SMEs in Nigeria. The results imply that more effort towards new product introduction strategy will lead to 93% increase in product/service profitability; and 98% increase in customer satisfaction. The implication of this is that customers of these SMEs have a constantly changing taste and appreciate innovation, and strategy in this direction will boost product/service profitability and enhance more customer satisfaction. The relatively high observed adjusted R-square also shows that the model fits the data well. The significant f-statistics value of 17.70 (product/service profitability) and 295.23 (customer satisfaction) confirms that the high adjusted R-square did not also occur by chance. The model is a good one. The R^2 value of 0.898 (product/service profitability) and 0.993 (customer satisfaction) are statistically significant. The model demonstrates good fit. We therefore deduce that new product introduction strategy has positive effect on SMEs' product/service profitability and customer satisfaction in Nigeria.

5. CONCLUSION AND RECOMMENDATIONS

The successful achievement of SMEs' objectives relies on the right strategy adopted in business game. SMEs are exposed to several competitive strategies in Nigeria, but some strategies appear to be ineffective due to wrong adoption. Though, factors such as SME owner-managers' avoidance of strategic thinking due to little knowledge & skill about strategy formulation and implementation, inadequate resource and poor use and adoption of Information and Communication Technology appears to be affecting the level of strategy adoption by SMEs in Nigeria. Strategies such as superior design, high quality and low price have significant effect on SMEs' market share in Nigeria. Other strategies such as high quality and new product introduction have effect on customer satisfaction; while new product introduction has effect on product/service profitability of SMEs in Nigeria.

In the pursuit of the desired SMEs' outcome, owner-managers need not to be traditional about strategy adoption. There is need for verification on the right strategy to adopt in a business game. On the contrary, some strategies which appear to be appropriate may be inversely proportional with the expected outcomes. This may be connected with strategy formulation and implementation failure. Future study is suggested to find out factors causing formulation and implementation failure of superior design strategy. But based on the findings of the study, it is recommended that SME owner-managers should particularly adopt the low price strategy and the new product introduction strategy for success in the Nigerian market. In addition, SME owner-managers should seek better knowledge and skills in strategy formulation and implementation; ensure availability of adequate resource and maximize the benefits of Information and Communication Technology in strategy adoption in Nigeria.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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