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Perceptions of Service Quality: An Empirical Assessment of Modified SERVQUAL Model among Domestic Airline Carriers in Nigeria

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Abstract. Literature is replete with a large number of theories related to service quality measurement and dimensions in an airline context. To date, there is no consensus of opinion on the generic model and of the number of dimensions most appropriate to evaluate service quality in airline industry. This study investigates service quality dimensions in the Nigerian airline industry. The cross-sectional survey research design was adopted. Convenience sampling was used to select 800 respondents among departing air travellers in Lagos State. A structured questionnaire containing 28 items was developed to evaluate the perceived service quality of domestic airlines. The data collected were analysed using descriptive statistics, Pearson's correlation analysis, and one-sample t-test. The dimensionality of perceived service quality in Nigeria's airline industry was explored using exploratory factor analysis. From the analysis carried out, it was established that the modified SERVQUAL model provided a satisfactory level of overall reliability in Nigeria's airline context, which implies that all the items were cohesive in forming the SERVQUAL dimensions. According to the findings of this study, all service quality dimensions are positively and significantly interrelated. The perceived service quality of domestic airlines across these dimensions was found to be poor. The most dissatisfied dimensions in order of ranking were: flight pattern, reliability, facilities, assurance, responsiveness, employee, and customization. On the basis of the aforementioned findings, this study concludes that airline operators should redefine their service standards to one that is customer-focused by identifying the dimension of service quality most preferred by the passengers and continuously strive to improve service delivery. The study recommends that airline operators should recognize the changing needs and expectations of air travellers and customize their range of services by identifying unique service requirements of the individual customers.

Keywords: service quality, SERVQUAL, gaps, consumer perceptions, service encounters, airlines

JEL Classifications: M30, L93

1. Introduction

Globally, air transportation business has experienced considerable developments in the recent past and the industry has evolved to provide one of the most common means of travelling. Airline industry is absolutely vital to world economy; for instance, estimates published by International Aviation Transport Association (IATA) revealed that by 2050 the aviation sector will have flown 16 billion passengers and 400 million tons of cargo (IATA, 2014). In line with the aforementioned trend, Nigeria's airline industry has equally witnessed some substantial growths; one such development is the increase in the number of operators and participants in the industry (Ogwude, 1986). Nigeria had a single airline prior to 1983, three airlines between 1983 and 1988, nine from 1989 to 1995, and fifteen from 1995 to 2010. As of October 2015, there are ten functional commercial airline flights for passengers (Arik, Dana, Overland, Aero Contractors, First Nations, Medview, Discovery, Arik, Airpeace, and Azman Air Services Limited) operating in Nigeria. As a result, air passengers have more choices in the selection of airline carriers than previously had some decades ago. Another key component of the changes in the Nigerian airline industry is the trend of airport commercialization and aviation service providers (ANSP) heading towards a complete gradual shift to become market-based commercial organizations (Oluwakoya & Olufemi, 2011).

Across the globe, airline business is cyclical in nature and the demand for its product is related to other activities such as holidays or business. Hence, competition for customers in airline industry is intense. As a result, considerable attention has been devoted both in the academia and business world as to how to acquire and retain air passengers for a profitable business growth. The fundamental issue is that customers will most likely patronize a service provider if they consider its services to be of high quality (Jin-Woo, Rodger, Chen-Lung, 2005; Gilbert & Veloutsou, 2006; Anderson, Jolly, Fairhurst, 2007). Likewise, scholars have reached a consensus that one of the major issues business organizations should confront with all seriousness is how a firm and its products or services are perceived; as a result, a firm's economic prosperity and competitiveness is contingent on its capability to establish a strong perception of high-quality service in the minds of its customers (Brady & Cronin, 2001; Vander-Walt, 2003; Nor & Wan, 2013).

Service quality is linked to customer perceptions and expectations of service. This implies that if the perception is higher than the expectations the service will be viewed as outstanding. In literature, perception is viewed as the degree of customers' beliefs concerning the service received (Parasuraman, Zeithaml, Berry, 1985). Expectations, on the other hand, are conceptualized as consumers' desires or wants regarding the level of the anticipated service. According to Lewis

(2010), one common approach in defining service quality is the degree to which a service meets the customers' needs. Zeithaml and Bitner (2003) observe that service quality comprises attributes or dimensions that are critical to customers' evaluation of service quality. Therefore, a valuable method for measuring and improving service quality is to recognize what was considered vital when customers were appraising service attributes (Chelladurai & Chang, 2000) or the dimensions of service quality (Brady & Cronin, 2001). According to Jun, Yang, and Kim (2004), airline service quality development and measurement should begin with identifying customers' needs and preferences through service quality attributes. Anderson et al. (2007) observe that a firm's thorough understanding of customer needs and wants has been proved to enhance customer satisfaction and, by extension, loyalty formation (Van-Pham & Simpson, 2006).

A model named SERVQUAL was suggested by Parasuraman, Zeithaml, and Berry (1988) to measure service quality. According to these scholars, SERVQUAL model assesses service quality by matching expectations with perceptions on five dimensions, namely: reliability, responsiveness, assurance, tangibles, and empathy to evaluate service quality in diverse businesses. Correspondingly, many scholars have raised concern that SERVQUAL is not a generic instrument to evaluate service quality, and they advocate that it should be modified to enhance its comprehensiveness and application in a varied industry (Gilbert & Wong, 2003). According to Gilbert and Wong (2003), the seven dimensions consisting of reliability, responsiveness, assurance, customization, employee, facilities, and flight pattern are more comprehensive in evaluating service quality.

Reliability addresses the competence of an airline to perform the promised services in a reliable and accurate manner. Responsiveness relates to the eagerness and punctuality of employees to help customers by providing prompt and timely services. Assurance is the proficiency of employees to build trust and confidence in customers. Customization is driven by the desire of airline operators to redefine its relationship with customers, thus enabling customers to find, choose, and use the services as they wish. In an airline context, employees play a vibrant role in service delivery as they simplify the interface between the organization and the air travellers. Facilities encompass service components that can be physically perceived and assessed. Facilities include appearance of the airline's ground facilities, aircraft, personnel, communications gadgets, etc. Flight pattern includes routes that are served by the airline, the frequency of flights, etc.

1.1. Statement of the problem

In general, the provision of services involves human expectations and perceptions; hence, the definition and measurement of service quality has been perceived as complex and difficult to grasp (Hutton & Richardson, 1995; Brady

& Cronin, 2001; Gilbert & Veloutsou, 2006). Likewise, service recipients have a low tolerance for certain service quality dimensions that are absolutely vital to customer satisfaction; as such, what is not known will be difficult to measure and, by extension, it cannot be improved. Correspondingly, service failure arises when customer perceptions fall short of expectations, which may result in a damaged relationship between the customer and the firm (Ha & Jang, 2009). Although a number of researchers have examined the perception of service quality in Nigerian airline context (Ckiwendu, Ejem, Ezenwa, 2012; Geraldine & Chikwendu, 2013; Olaniyi, Onwuka, Agu, 2014), most of these scholars paid scant attention to the call for the modification of the SERVQUAL five-dimensional structure, which has been established to be insufficient in an airline context (Gilbert & Wong, 2003; Jin-Woo et al., 2005; Pakdil & Aydin, 2007).

The search for competitive advantage through superior service quality offered to air travellers and the quest for airline competitiveness constitute a great concern to all stakeholders in the Nigerian airline industry. In particular, consumers are increasingly demanding service quality standards that may be difficult to offer in view of operational and infrastructural challenges the airline industry in Nigeria is confronting (Olalerin, 2009). Over the years, Nigeria's airline industry has come under serious criticism. In particular, the quality of services offered by domestic airlines has shown significant drop and rapid deterioration (Sulaiman, 2012). Although the intangible nature of airline operations has made it impossible to maintain an error-free service, which manifested itself in flight cancellations, diversions or delays, an increased number of customers complaints, reservation problems and overbooking of flights, delay in baggage claims, or mishandled, lost, or damaged baggage among others (Mostert, De-Meyer & van-Rensburg, 2009).

In contrast to tangible products, a displeased air passenger can neither demand a refund nor change a flight once accomplished; consequently, the only choice an unsatisfied customer has is to switch over to alternative airlines (Nadia, 2013). However, foreign airlines have demonstrated resilience and positive outlook and have dependably attained a long-term customer relationship management through their service quality and system improvement, as evidenced by the volume of their entrance into and hub of international air travel in Nigeria airline industry (Accenture, 2013; National Bureau of Statistics-NBS, 2014). Comparatively, Nigeria's domestic airlines have been described by scholars and practitioners as lacking the capability to operate effectively due to a precarious infrastructure, operational and financial deficiencies resulting in frequent occurrences of service failure along service attributes that are not only important to air passengers but also violate the terms of engagement with the airline (Sulaiman, 2012).

Describing the state of Nigeria's aviation sector as being sick is not debatable, going by the frequent tragic air crashes most of which are preventable. A review of the aviation accident and incident reports by the Federal Ministry

of Aviation from 1936, when commercial aviation commenced in Nigeria, revealed that the country had recorded 47 air crashes, out of which 18 were attributed to commercial airlines (Federal Ministry of Aviation, 2013). These are indeed very alarming, disturbing and call for urgent attention on the part of all the stakeholders in the aviation sector. Thus, this study offers a prospect for solving a social problem: the need to recognize service quality as a critical issue that must be measured and evaluated in Nigeria with a view to correct the inaptness that affects the airline operators in delivering superior service quality that is in line with international best practices. Specific objectives of the study are: (1) to examine how air travellers ranked the dimensions of service quality of domestic airline carriers in Nigeria, (2) to study the interrelationships among the service quality dimensions in Nigerian airline industry, and (3) to investigate how the service quality offered by domestic airline carriers is perceived by air travellers in Nigeria.

1.2. Research Questions

The following research questions were examined:

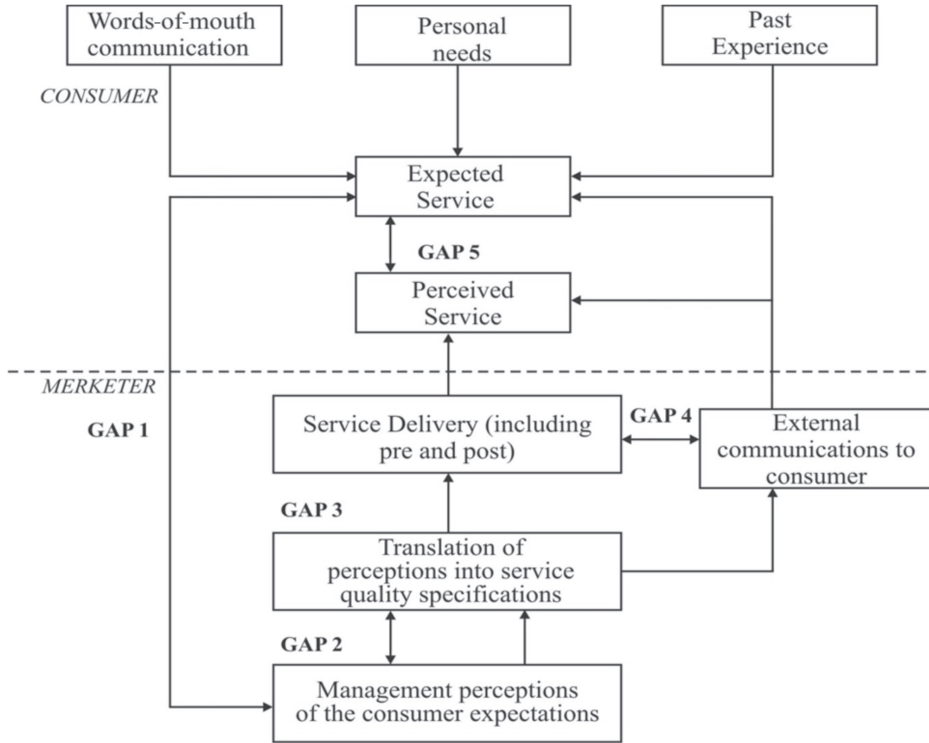
1. How do air travellers rank the service quality dimensions of domestic airline carriers in Nigeria?
2. What is the relationship between service quality dimensions in the Nigerian airline industry?
3. What is the perception of service quality offered by domestic airline carriers in Nigeria?

2. Theoretical and Literature Review

2.1. The Evolution and Development of the SERVQUAL Model

The construct of “service quality” is very rich in theory. The most popular among these theories was promoted as and named the SERVQUAL model by Parasuraman et al. (1985, 1988). These scholars discovered 97 attributes which were found to have an influence on service quality. These 97 elements serve as benchmarks in evaluating customer expectations and perceptions of the quality of service provided (Kumar, Kee, Manshor, 2009). Subsequently, these attributes were later regrouped into two phases by Parasuraman et al. (1985, 1988). The first phase categorized the attributes into ten dimensions (tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding and knowing customers, and access), while the second refinement phase condensed the ten dimensions into five, which were; reliability,

responsiveness, tangibles, assurance, and empathy. The SERVQUAL model is based on gap analysis (depicted in *Figure 1*).



Source: Parasuraman et al. (1988)

Figure 1. *SERVQUAL - GAP Model*

Gap 1 (Positioning gap): discusses the difference between consumer expectations and management perception of those expectations, i.e.: the customers’ expectations are not known (Zeithaml, Parasuraman, and Berry, 1990).

Gap 2 (Specification gap): Appraises the variance between the management perception of customer expectations and service quality specifications, i.e.: wrong service quality strategies and criterions (Zeithaml et al., 1990).

Gap 3 (Delivery gap): Evaluates the dissimilarity between service quality specifications and services delivered to customers, i.e.: service performance gap, which transforms to inability to deliver the right service standards (Zeithaml et al., 1990).

Gap 4 (Communication gap): Highlights the difference between service delivery and the quality of services communicated to consumers, i.e.: when service assurance is at variance with service delivery (Zeithaml et al., 1990).

Gap 5 (Perception gap): Examines the dissimilarity between consumer expectations and perceived service, i.e.: when the customer does not receive the expected service (Zeithaml et al., 1990).

The SERVQUAL model outlined in *Figure 1* above is a unified view of the customer–firm relationship which hinges on the premise that service quality is reliant on the extent and direction of the five gaps that exist in the service delivery process (Chang, 2008). In this regard, service quality evaluations as perceived by customers emanate from a comparison of customers' expectations of service and their perceptions of the performance of the firm offering the service (Aldridge & Rowley, 1998). However, the SERVQUAL model is applied most often to measure the existence and degree of *Gap 5*, which examines the difference between customer expectations and perceptions of the quality of service provided (Sheth & Desmukh, 2004).

Notwithstanding its popularity, admiration, and application, the SERVQUAL model has been subjected to a number of criticisms (Cronin & Taylor, 1992; Abdulahi, 2006; Pakdil & Aydin, 2007; Ladhari, 2008). One of the foremost criticisms of the SERVQUAL model is the dimensionality and use of different scores with respect to the dependence or independence of the service quality dimensions (Carman, 1990). Another drawback of the SERVQUAL model is that it focuses on the service delivery process and does not take cognizance of service delivery outcomes (Grönroos, 1990). A different concern highlighted by Cronin and Taylor (1994) is that the methodological stance of the SERVQUAL model proposed by Parasuraman et al. (1985, 1988) is based on the disconfirmation theory rather than an attitudinal view, which ignores the scientific principle of continuity and deduction, and thereby portends the SERVQUAL model as an inductive framework of service quality. Buttlet (1994) argues that the measurement of expectations and perceptions using the SERVQUAL model makes the questionnaire relatively cumbersome and time-consuming.

Iacobucci, Grayson, and Ostrom (1994) criticized the SERVQUAL model on the basis of expectation measures. They claimed that expectation is multidimensional and might not exist or is clearly moulded to serve as a standard benchmark for the appraisal of service experience or it may be formed simultaneously during service consumption. Buttlet (1994) further criticizes the SERVQUAL model for its failure to capture the dynamics of customer expectations, which by nature is not static. In view of the aforementioned drawback of the SERVQUAL model, a large number of researchers suggest that a degree of caution should be exercised when using the SERVQUAL model, as each service industry may exhibit different and unique service quality attributes or dimensions (Cronin & Taylor, 1992; Pakdil & Aydin, 2007; Ladhari, 2008). Notwithstanding the criticisms labelled against SERVQUAL, the model provides a suitable and logical reference point for scholars and practitioners seeking to monitor and evaluate service quality. It also offers

a proficient structure which service organizations can rely upon to generate a comprehensive interpretation of service quality. In line with the aforementioned, this study adopted Gilbert and Wong's (2003) modified SERVQUAL seven-dimensional framework to accommodate the contextual nature of service quality in Nigerian airline industry.

2.2. Conceptualizing and Measuring Service Quality

Owing to its elusive nature, no agreement subsists on how to best conceptualize service quality in service marketing literature. As a result, researchers have conceptualized service quality from different perspectives. According to Schneider and White (2004), service quality originated from a similar root as product quality though perceived differently. Parasuraman et al. (1988) contend that service quality stems from the assessment of consumers' overall expectations together with their actual perceptions of a firm's performance in terms of service delivery. Hence, service quality is the fit between the current service level and customer expectations. Park, Robertson, and Wu (2004) conceptualize service quality as consumers' general impression of the competence of an organization and its services. Lovelock and Wirtz (2004) note that the level of service quality can be evaluated by the degree to which a service delivered to customers exceeds their expectations. Service quality, according to Zeithaml et al. (1990), is the degree of inconsistency between customers' expectations or desires and their perceptions of the service offered.

Rossiter (2002) and Parasuraman, Zeithaml and Malhotra (2005) suggest that service quality should be viewed as a formative construct rather than a reflective construct because more often than not service quality dimensions influence service quality perceptions. As regards the formative measurement, Dagger, Sweeney, and Johnson (2007) and Diamantopoulos (2008) state that variations in the dimensions cause discrepancy in the service quality construct, and not the other way round. In a simple description, Dagger et al. (2007) observe that service quality dimensions shape or mould service quality perception.

Generally, the measurement of service quality is founded on two divergent schools of thought pioneered by Parasuram et al. (1985, 1988) and Grönroos (1982, 1990). The North American School has advanced the service quality model named SERVQUAL gap model from the outcome of a research conducted by Parasuraman et al. (1985, 1988) on four service industries in the United States of America, including retail banking, credit cards, securities brokerage, and product repair and maintenance. The school initially proposed ten dimensions of service quality (access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles, understanding and knowing clients) in their original research. These dimensions were later collapsed by Parasuraman et al.

(1988) into five dimensions (reliability, responsiveness, assurance, tangibles, and empathy). Grönroos (1982, 1984) is the pioneer contributor to the Nordic School. He conducted a study among Scandinavian nations, in particular with Swedish company managers, and developed a service quality model named the *Technical-Functional Quality Model*. Fundamentally, the Nordic School highlights the interactive nature of service quality, which is founded on two premises: what customers obtain as the outcome of interaction with a service organization and how customers get services (Grönroos, 1984). Grönroos's model is often viewed as a three- or two-dimensional model (Grönroos, 2007) depending on whether image is included or excluded as a dimension.

2.3. Service Quality Attributes and Customer Expectations

The tribute for heralding service quality attributes in airline industry goes to Gourdin in 1998. He categorizes service quality attributes into three elements: price, safety, and timelines. Since then, many other indices have been proposed to evaluate service quality in airline industry. Mersha and Adlakha (1992) recommend readiness to correct errors, task aptitude, courteousness, responsiveness, and tolerance. Ostrowski, O'Brien, and Gordon (1993) deliberate on timeliness, food and beverage quality, and seat comfort. Elliot and Roach (1993) advocate price, safety, timeliness, baggage movement, food quality, seat comfort, check-in process and on-board services as a measure of service quality. Truitt and Haynes (1994) suggest aircraft type to examine service quality. Boetsch, Bieger, and Wittmer (2011) recommend airline brand, price, and sleep comfort as a measure of airline service quality. Tiernan, Rhoades, and Waguespack (2008) accentuate airline service quality consisting of on-time performance, overbooking, mishandled baggage, and customer complaints.

In order to analyse service quality in airline industry, the starting point is to recognize and classify the key attributes, or features that make up service quality in airline operations (Faheed, 1998). According to Phillip and Hazlett (1997), service quality components overlap between attributes, which are classified and defined as pivotal (outputs), core, and peripheral (jointly representing inputs and processes). The core attributes integrate people, processes, and the service framework through which customers interact with to accomplish the pivotal attributes. Third-level attributes focus on the peripheral attributes which represent the structures designed to add value to the service encounter and to enhance customer experience (Nitin, Deshmukh, and Prem, 2004). According to Chase (1978), airline operations exhibit mixed service features (with high contact and low contact at their terminals), pure service features (inflight), and quasi-manufacturing system (moderate contact) features in the area of operations. In the airline industry, Chen and Chang (2005) categorized service

processes into ground (process) and in-flight services (sub-processes). They reiterated further that the process and each sub-process contribute towards the delivery of the service.

Indices that make up ground services in an airline are check-in services for passengers, airline lounges, and moving passengers' baggage to the claim area. According to the Airport Cooperative Research Program (2013), ground experience can be categorized into four distinct segments: (1) getting to the airport, (2) waiting in the terminal before security, (3) passing through security checkpoints, and (4) finding the gate. Flight services, on the other hand, include: in-flight entertainment, food and beverages, seat comfort, etc. On the basis of the aforementioned attributes, customers form expectations which relate to what they anticipate from service experience. Therefore, the extent to which customers identify and are ready to accept variations between expectations and perceived performance is referred to as the zone of tolerance (Zeithaml et al., 1990). Consequently, if the service level drops below adequacy, customers will be frustrated and dissatisfaction will set in. If, on the other hand, service performance exceeds the desired level (i.e. higher than the zone of tolerance), customers will be very pleased and probably delighted (Zeithaml et al., 1990).

According to Mostert et al. (2009), the errors arising from the service delivery process or the inability to perform credibly on some important service attributes result in customer dissatisfaction and complaining behaviour. Customer complaint, according to Phau and Baird (2008), can be expressed through four typical outcomes: negative word-of-mouth communication, expressing complaint, discontinuing business, and third-party complaint (such as consumer advocacy group or consumer protection agency). Bamford and Xystouri (2005) posit that susceptibility to service failure in airlines operations is due to the intangible nature of airline operations and human involvement in the service delivery process. In order to enhance service delivery process (ground and in-flight services) and ensure that air travellers get value for their money, civil aviation authorities – in both developed and developing countries – introduced the “Passengers’ Bill of Rights”. It is worth mentioning that after a prolonged public outcry, the Nigeria National Assembly passed into law the “Passengers’ Bill of Rights” in July 2013 to compensate passengers for delayed flights, cancellations, and other related anomalies. Details of the violations and recommended sanctions proposed by the bills are outlined in *Table 1*.

Table 1. *Violations and sanctions proposed by the Nigeria Civil Aviation Authority*

| S/No | Violations | Recommended sanctions for violations |
|-------------|---|---|
| 1 | Failure to provide assistance in case of denied boarding. | Minimum to moderate penalty plus payment of the value of compensation prescribed in the regulation. |
| 2 | Failure to submit boarding priority rules to authority. | Minimum penalty. |
| 3 | Failure to comply with boarding priority rules when denied boarding. | Minimum to moderate penalty plus compensation prescribed in the regulation. |
| 4 | Failure to render assistance in case of flight cancellation. | Minimum to moderate penalty. |
| 5 | Failure to give priority to persons with reduced mobility during boarding. | Minimum to moderate penalty. |
| 6 | Failure to provide care for persons with reduced mobility, persons accompanying them, or unaccompanied minors in case of denied boarding, flight cancellations, and delays. | Moderate to maximum penalty plus monetary value of the prescribed care to be given to complainant. |
| 7 | Failure to display at check-in counter passenger right statement. | Minimum penalty. |
| 8 | Failure to provide to passenger on request passenger rights leaflet. | Minimum to moderate penalty. |
| 9 | Misleading advertising. | Moderate to maximum penalty plus seizure of all inappropriate/excess gains/profit from the advert or promotional scheme. Possible criminal referrals. |
| 10 | Obstruction of investigation/failure to provide information. | Moderate to maximum penalty plus possible criminal referral. |
| 11 | Other violations of these regulations not specifically listed above. | Minimum to maximum penalty. |

Source: Williams and Praise, 2013

3. Methodology

3.1. Research Design

A cross-sectional survey research design was adopted in this study. This research approach requires the collection of quantitative or measurable data on many cases simultaneously and at a particular point in time for the purpose of making inferences and detecting forms of association between two or more variables of interest (Bryman & Bell, 2011). This study is deductive in nature because the researchers deduce (a problem) on the basis of what is known about a particular phenomenon or theory, underpinning it and subjecting the data to empirical analysis. The survey was carried out between September and October 2014 at the two domestic airports (Murtala Muhammed Airport One and Murtala Muhammed Terminal One) in Lagos State.

3.2. Subjects and Sampling Procedure

The target population of this study is the domestic air travellers at the departure lounge of eight domestic airline carriers (Arik, Dana, Aero Contractors, Medview, Overland, First Nations, Discovery, and Azman Air Services Limited), waiting to board flights to any destination in Nigeria. The selected airlines are considered the functional airline operators in the Nigerian airline industry. The sample size consisted of 800 respondents. The respondents were selected based on convenience sampling technique. Therefore, the unit of analysis for this study was an individual about to embark on a journey using one of the selected airlines to any destination in Nigeria.

3.3. Data Collection Instrument

Primary data was collected through self-administered questionnaire. The researcher conducted the survey with the aid of questionnaires because the population was relatively literate and a reasonable length of time is required for collecting the data. Sarantakos (2005) maintains that questionnaire is the leading method of data collection in survey research. A self-administered questionnaire was distributed by trained research assistants to air travellers. This study adopted questionnaire items from previous related validated studies and the questionnaire items were consolidated into a three-page questionnaire divided into three sections. The questionnaire was based on service quality perceptions, travel behaviour, and demographic characteristics of air passengers.

There were 28 items in all for measuring service quality perceptions: four items each for all the service quality dimensions. The second part of the questionnaire

seeks to measure travel behaviour, while the third and last part the gathered data on demographic variables. All the questionnaire items are multiple-choice and close-ended questions, with few open-ended, questions which are typically easier for respondents to handle and relatively less complicated to analyse. The options are based on a 7-point Likert scale, anchored as: 1-strongly disagree, 2-disagree, 3-slightly disagree, 4-neutral, 5-slightly agree, 6-agree, and 7-strongly agree. A total of 639 copies of questionnaires were distributed to respondents, 620 were retrieved, out of which 503 usable questionnaires were returned as valid for analysis, representing a response rate of 78.72%.

3.4. Test of Validity and Reliability of the Data

The validity of the questionnaire was first obtained by presenting it to airline practitioners and marketing experts, including the researcher's supervisor. According to Amin (2005), content and construct validity is best determined by expert judgment. Their comments led to modifications of the questionnaire items. Cronbach's Alpha was used to evaluate internal consistency of items for service quality dimensions and its value ranged from 0.646 to 0.875. The pilot test results of the instrument provided Cronbach's Alpha values within the acceptable level of reliable statistics (Zikmund, 2003). Based on the results, the survey instrument is considered satisfactory for the intended purposes of this study.

To conduct a validity test, an exploratory factor analysis was conducted on 28 items of service quality dimensions consisting of positively and a few negatively worded questions. Preliminary data screening reveals that the data set was suitable for common factor analysis and meets all the basic assumptions. Consequently, to assess the dimensionality of the SERVQUAL scale, factor analysis was performed using the principal component analysis with Varimax rotation. *Table 2* shows the results of the factor analysis test for SERVQUAL's dimensions. The overall value of KMO, which is a measure of sampling adequacy (MSA), is .886, suggesting that the factor analysis proceeded appropriately and that the sample was sufficient. The individual MSA values of each dimension were all above 0.6, slightly higher than the benchmark value of 0.5.

The results of the Bartlett's Test of Sphericity were also significant, indicating its suitability for testing multidimensionality. All the items loaded more than .50, which meets the requirement of a factor loading of 0.30 (Hair, Black, Babin, and Anderson, 2010). The scree plot showed a clear break after the seven components; hence, it was decided to retain seven components given the fact that the items were designed to index seven factors in line with Gilbert and Wong's (2003) SERVQUAL dimensions. A name representing the character of the twenty-eight items was then assigned to each of the service quality dimensions. The factors were labelled as Reliability (Factor 1), Responsiveness (Factor 2), Assurance

(Factor 3), Customization (Factor 4), Employees (Factor 5), Facilities (Factor 6), and Flight pattern (Factor 7). All the constructs have Eigen values exceeding 1, explaining 53.04%, 60.53%, 58.42%, 61.11%, 58.51%, 53.10%, and 49.65% respectively. The results of this analysis support the modified SERVQUAL seven-dimensional framework as suggested by Gilbert and Wong (2003).

Table 2. *Validation of the seven-dimensional SERVQUAL model*

| Item description | Factor loadings | | | | | | | Communality |
|--------------------|-----------------|--------|--------|--------|--------|--------|--------|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| REL 1 | 0.782 | | | | | | | 0.611 |
| REL 2 | 0.768 | | | | | | | 0.554 |
| REL 3 | 0.744 | | | | | | | 0.589 |
| REL 4 | 0.606 | | | | | | | 0.367 |
| RES 1 | | 0.896 | | | | | | 0.779 |
| RES 2 | | 0.882 | | | | | | 0.355 |
| RES 3 | | 0.697 | | | | | | 0.802 |
| RES 4 | | 0.596 | | | | | | 0.486 |
| ASS 1 | | | 0.907 | | | | | 0.803 |
| ASS 2 | | | 0.896 | | | | | 0.280 |
| ASS 3 | | | 0.671 | | | | | 0.823 |
| ASS 4 | | | 0.510 | | | | | 0.450 |
| CUM 1 | | | | 0.846 | | | | 0.681 |
| CUM 2 | | | | 0.839 | | | | 0.344 |
| CUM 3 | | | | 0.825 | | | | 0.716 |
| CUM 4 | | | | 0.587 | | | | 0.704 |
| EMP 1 | | | | | 0.829 | | | 0.636 |
| EMP 2 | | | | | 0.813 | | | 0.357 |
| EMP 3 | | | | | 0.797 | | | 0.661 |
| EMP 4 | | | | | 0.598 | | | 0.687 |
| FAC 1 | | | | | | 0.779 | | 0.588 |
| FAC 2 | | | | | | 0.767 | | 0.523 |
| FAC 3 | | | | | | 0.723 | | 0.606 |
| FAC 4 | | | | | | 0.638 | | 0.407 |
| FLP 1 | | | | | | | 0.789 | 0.461 |
| FLP 2 | | | | | | | 0.695 | 0.483 |
| FLP 3 | | | | | | | 0.679 | 0.623 |
| FLP 4 | | | | | | | 0.647 | 0.418 |
| Eigen value | 2.122 | 2.421 | 2.377 | 2.444 | 2.340 | 2.124 | 1.986 | - |
| Variance explained | 53.04% | 60.53% | 58.42% | 61.11% | 58.51% | 53.10% | 49.65% | - |

Notes:

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 25 iterations.

Source: Field Survey, 2014

Coding of SERVQUAL Dimensions/Items

Below is the coding of the dimensions and items used for factor analysis:

Reliability (REL)

REL 1: This airline performs its services right at the first time.

REL 2: The service of this airline is very consistent.

REL 3: The check-in process of this airline is efficient.

REL 4: The reservation and ticketing of this airline are prompt.

Responsiveness (RES)

RES 1: This airline has capacity to respond to emergency situations (i.e. cancelled or delayed flights).

RES 2: This airline provides information about when services will be performed.

RES 3: This airline responds promptly to customer complaints.

RES 4: Employees of the airline display a thorough understanding of the specific needs of passengers.

Assurance (ASS)

ASS 1: Safety performance of the airline is very impressive.

ASS 2: Employees' attitude to passenger complaints instil confidence.

ASS 3: Employees are sympathetic and re-assuring when there is a problem.

ASS 4: I feel safe in my interactions with the airline.

Customization (CUM)

CUM 1: Employees of this airline display concern for my needs.

CUM 2: Employees of this airline have the passengers' best interests at heart.

CUM 3: The flight schedule of the airline is very convenient for me.

CUM 4: The attitude of the employees of this airline demonstrates their willingness to help when needed.

Employees (EMP)

EMP 1: Employees of the airline can speak in local and foreign languages.

EMP 2: Employees of the airline are well-dressed and appear neat.

EMP 3: Employees of the airline are courteous.

EMP 4: Employees of the airline have professional knowledge to meet my needs.

Facilities (FAC)

FAC 1: The services of this airline are based on superior technology (air conditioners, lighting, music, etc.).

FAC 2: The airline has visually appealing facilities.

FAC 3: This airline offers a variety of in-flight entertainment facilities (i.e. refreshments, books, magazines, newspapers, etc.).

FAC 4: The airline has comfortable facilities (e.g. seating comfort, spacious bulkhead for luggage, leg room, etc.).

Flight Pattern (FLP)

FLP 1: The airline operates many flight schedules (e.g. morning, afternoon, and evening).

FLP 2: The airline operates non-stop flights.

FLP 3: The airline covers many routes to the delight of passengers.

FLP 4: The airline often adjusts flight frequency during peak periods to accommodate increased patronage.

3.5. Data Analysis Techniques

The statistical analyses used were descriptive statistics (mean, standard deviation, coefficient of variation, and ranking). In particular, demographic information was reported by using frequencies and percentages. Similarly, one-sample t-test and Pearson's correlation analysis through cross-tabulating service quality and its dimensions were used to determine the direction and nature of relationship between them. Statistical Package for Social Sciences – SPSS Version 21 – was used to analyse the data and for the purpose of this study a p-value of ≤ 0.05 will be regarded as indicative of statistical significance.

4. Results and Discussion

4.1. Demographic Characteristics of Respondents (n = 503)

Table. 3.

| Variables | Frequency | Percentage (%) |
|----------------------------------|------------------|-----------------------|
| Gender | | |
| Male | 308 | 61.2 |
| Female | 195 | 38.8 |
| Age-group | | |
| 18 – 25 years | 28 | 5.6 |
| 26 – 35 years | 58 | 11.5 |
| 36 – 45 years | 187 | 37.2 |
| 46 – 55 years | 138 | 27.4 |
| 56 – 65 years | 74 | 14.7 |
| 66 years and above | 18 | 3.6 |
| Marital status | | |
| Single | 149 | 29.6 |
| Married | 309 | 61.4 |
| Divorced/Separated | 33 | 6.6 |
| Widowed | 12 | 2.4 |
| Educational qualification | | |
| Secondary school or below | 16 | 3.2 |
| Diploma or equivalent | 112 | 22.3 |

| Variables | Frequency | Percentage (%) |
|-------------------------------|------------------|-----------------------|
| Bachelor Degree or equivalent | 235 | 46.7 |
| M.Sc./MBA or equivalent | 134 | 26.6 |
| Doctorate Degree | 6 | 1.2 |
| Occupation | | |
| College student | 19 | 3.8 |
| Self-employed | 121 | 24.1 |
| Government employee | 47 | 9.3 |
| Employee of a private company | 142 | 28.2 |
| Professional/Related | 124 | 24.7 |
| Retired | 42 | 8.3 |
| Other | 8 | 1.6 |
| Monthly Income | | |
| Less than N 500,000 | 199 | 39.6 |
| N 501,000 – N 1,000,000 | 143 | 28.4 |
| N 1,001,000 – N 2,000,000 | 129 | 25.6 |
| N 2,001,000 and above | 32 | 6.4 |

Source: Field Survey, 2014

Frequency analysis was conducted to examine the demographic characteristics of the respondents. Results of the demographic characteristics of the respondents are presented in *Table 3*. The sample of 503 air passengers comprised 308 male respondents (61.2%) and 195 females (38.8%). Respondents aged between 18 to 25 years accounted for 5.6% of the sample, 58 (11.5%) were between the ages of 26 and 35 years, 187 (37.2%) were between the ages of 36 and 45 years, 138 (27.4%) were between 46 and 55 years, 74 (14.7%) were between 56 and 65 years, and 18 (3.6%) were 66 years and above. In terms of marital status, married respondents were the largest group (61.4%), followed by single respondents (29.6%), divorced or separated (6.6%), and widowed (2.4%). In terms of level of education, *Table 3* above shows that 16 (3.2%) have secondary education (SSCE/NECO) or below, 112 (22.3%) are diploma holders or equivalent, 235 (46.7%) are holders of bachelor degree or equivalent, 134 (26.6%) are MSc/MBA holders or equivalent, while 6 (1.2%) of the respondents have doctoral degree.

As for occupation, employees of a private company were the highest group (28.2%), followed by those that were in professional/related and self-employed, representing 24.7% and 24.1% respectively, those working in the public sector were 9.3%, college students were 3.8%, and retirees were 8.3%. The content analysis of those that indicate “other” (1.6%) reveals that those respondents were working as a missionary. As regards the level of income, most respondents’ average monthly income is below N500,000 (39.6%), followed by those that earn between N501,000 and N1,000,000 monthly (28.4%), 129(25.6%) earn between

N1,001,000 and N2,000,000, while a few of the respondents (6.4%) earn N2,001,000 and above. The above accounts in respect to demographic characteristics clearly demonstrated diversity across respondents. Of the data gathered, it can be said, therefore, to be balanced and useful for the purpose of this study.

4.2. Research Question One

How do air travellers rank service quality dimensions of domestic airline carriers in Nigeria?

Table 4. *Descriptive statistics of service quality/dimensions*

| Variables | Mean (M) | Standard Deviation (SD) | Ranking |
|--------------------------------|-----------------|--------------------------------|-----------------|
| Reliability | 3.18 | .380 | 6 th |
| Responsiveness | 3.21 | .391 | 3 rd |
| Assurance | 3.20 | .379 | 4 th |
| Customization | 3.35 | .423 | 1 st |
| Employees | 3.32 | .413 | 2 nd |
| Facilities | 3.19 | .387 | 5 th |
| Flight Pattern | 3.16 | .347 | 7 th |
| Overall Service Quality | 3.23 | .342 | |

Source: Field Survey, 2014 (Note: a 7-point scale was used)

As indicated in *Table 4*, the mean scores for all service quality dimensions ranged from 3.16 to 3.35 and standard deviations ranged from .347 to .423. The mean and standard deviation of overall service quality is 3.23 and .342 respectively. As displayed in *Table 4*, the dimensions of service quality are: reliability, responsiveness, assurance, customization, employee, facilities, and flight pattern. According to the subsequent analysis on the order of ranking of the service quality dimensions: customization was ranked 1st, employee 2nd, responsiveness 3rd, assurance 4th, facilities 5th, reliability 6th, and flight pattern 7th. This finding confirms the seven-dimensional structure of service quality promoted by Gilbert and Wong (2003), and subsequently validated in Nigerian airline context by Rahim (2015). It is evident from *Table 4* that the mean value of service quality and its dimensions is low.

4.3. Research Question Two

What is the relationship between service quality dimensions in the Nigerian airline industry?

Table 5. *Correlations analysis of service quality and its dimensions*

| Dimensions | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------------|--------|--------|--------|--------|--------|--------|--------|---|
| Reliability | 1 | | | | | | | |
| Responsiveness | .792** | 1 | | | | | | |
| Assurance | .736** | .982** | 1 | | | | | |
| Customization | .625** | .579** | .536** | 1 | | | | |
| Employee | .653** | .580** | .534** | .968** | 1 | | | |
| Facilities | .988** | .821** | .764** | .665** | .678** | 1 | | |
| Flight pattern | .957** | .775** | .741** | .627** | .627** | .956** | 1 | |
| Service quality | .926** | .892** | .853** | .820** | .827** | .946** | .914** | 1 |

*p<0.05 Correlation is significant at 0.01 levels (2-tailed) and N = 503

Source: Field Survey, 2014

Pearson correlation analysis in *Table 5* was conducted to study the relationship between service quality and its dimensions. As shown in *Table 5*, inter-correlations among the service quality dimensions reveal high positive and statistically significant correlations (the correlation ranged from .534 to .982 and $p < 0.01$). Similarly, there exists a statistically high positive significant correlation between service quality and all of its dimensions: reliability and service quality ($r = .926$, $p < 0.01$), responsiveness and service quality ($r = .892$, $p < 0.01$), assurance and service quality ($r = .853$, $p < 0.01$), customization and service quality ($r = .820$, $p < 0.01$), employee and service quality ($r = .827$, $p < 0.01$), facilities and service quality ($r = .946$, $p < 0.01$), and flight pattern and service quality ($r = .914$, $p < 0.01$). The patterns of the correlations between service quality and its dimensions further reveal that the seven-dimensional structure of the service quality construct proposed by Gilbert and Wong (2003) is reliable and valid.

4.4. Research Question Three

What is the perception of service quality offered by domestic airline carriers in Nigeria?

Table 6. *Coefficient of variation of service quality and its dimensions*

| Variables | Coefficient of Variation (CV) |
|--------------------------------|-------------------------------|
| Reliability | 11.95% |
| Responsiveness | 12.18% |
| Assurance | 11.84% |
| Customization | 12.63% |
| Employees | 12.44% |
| Facilities | 12.13% |
| Flight Pattern | 10.98% |
| Overall Service Quality | 10.59% |

Source: Field Survey, 2014 (Note: a 7-point scale was used)

As shown in *Table 4* in the preceding section, all service quality dimensions recorded average mean scores, which indicates poor performance as revealed by the findings of this study. However, due to the descriptive nature of the analysis (mean and standard deviation), which may not be sufficient to support the hypothesis testing (Lucey, 2000), the coefficient of variation (which is the standardized measure of variability and stability of the data set) was computed. As revealed in *Table 6*, the coefficient of variation ranged from 10.59% to 12.63% for the overall perceived service quality and its dimension, which implies that the data is normal since the coefficient of variation is less than 30% (Mojekwu, 2012). Notwithstanding the normality of the distribution of the data set, mean and standard deviation, as earlier noted, may not satisfactorily support the acceptance or rejection of a research statement (either in the form of a hypothesis or research question). Hence, to avoid Type 1 or Type II error, one-sample t-test was used to answer research question three.

Table 7. *One-sample test service quality*

| | T | Df | Sig. (2-tailed) | Mean difference | 95% Confidence Interval of the Difference | |
|--------------------|--------|------|--------------------|--------------------|---|-------|
| | | | | | Lower | Upper |
| Service Quality | 18.536 | .502 | .000 | 0.283 | 0.25 | 0.31 |

Source: Field Survey, 2014

As indicated in *Table 7*, $t = 18.536$, $p < 0.05$ and the 95% confidence interval estimate for the difference between the lower and upper limits is 0.25 to 0.31. The above analysis further confirms that the perceived service quality offered by domestic airlines in Nigeria is poor. From the above analysis, we conclude that domestic airline carriers in Nigeria performed below average across all the seven dimensions of service quality as perceived by air passengers (note that a 7-point Likert scale was used). The finding of this study is similar to the one conducted by Ckikwendu et al. (2012), who discovered an overall negative mean dimension of service quality of euro contractors' airline. Likewise, the finding corroborates the sentiments expressed by aviation practitioners, such as Okechukwu (2012), Bayo (2012), and Nkem (2013) over the deteriorating standards of service quality offered by domestic airlines in Nigeria.

5. Conclusion and Implications

This study was conducted to investigate the dimensions of service quality in the context of Nigerian airline industry. From the analysis carried out, it was found that the modified SERVQUAL model, consisting of reliability, assurance, responsiveness, customization, employee, facilities, and flight pattern proposed by Gilbert and Wong (2003) and adapted in this study, provided a satisfactory level of overall reliability, which implies that all the items were cohesive in forming the SERVQUAL dimensions. As revealed by the factor analysis results, all the items fall under seven different dimensions and the factors were labelled in line with the adapted model. From the above findings, it is clear that the modified SERVQUAL model is a good instrument to evaluate perceived service quality of air travellers in the Nigerian airline industry. The results of the analyses also show that the perceived service quality offered by domestic airline operators recorded relatively low mean scores, which implies that airlines' performance along these dimensions fall below passenger expectations. This also portends that their service experiences did not match their needs.

Accordingly, air passengers' dissatisfaction with airline service quality will most likely weaken or break the existing relationship, along with a tendency that such customers would fly less frequently or patronize alternative airlines in the future (Mostert et al., 2009). Therefore, contemporary service organizations, such as airline operators, are compelled by the nature of their operations to offer exceptional services in order to thrive in a progressively competitive marketplace. In general, airline passengers' needs and wants are dynamic; hence, poor customer perception of the service quality offered by domestic airlines will result in declining interest in air travel and high defection if not proactively addressed. In such situation, airline operators need to be aware of the shift and trend in airline market to be able to curtail the effect of perceived poor service quality. Consequently, it is important for airline operators to measure service quality regularly because it enables a deeper understanding of customers' view of the performance of the service provider, assists in identifying hiccups in the service process, and, by extension, supports firms' capabilities in developing and implementing service standards in line with service promises. In particular, the nature of human interaction and servicescape, as noted by Folkes and Patrick (2003), presents tendencies for both negative and positive service experiences. Therefore, a firm's capability of understanding and meeting customers' expectations in a distinct and proactive approach is absolutely vital to airline success and competitiveness. Hence, it is imperative that airline operators measure and monitor regularly how their service quality is being perceived with a view to influence passenger satisfaction, behavioural intentions, and their reputation among other benefits associated with perceived high service quality.

6. Recommendations

From the evidence of this study, airline operators should develop strategies to improve service quality across all the service quality dimensions in a way and manner that suit the preferences of those market segments they choose to serve. Another essential corollary to the above recommendation is the need to recognize the changing needs and expectations of air travellers; hence, passenger surveys should be periodically conducted to generate three types of service performance reports: monthly update, quarterly performance review, and an annual performance report – the information obtained can be used to continuously evaluate passengers' needs. Owing to the heterogeneous nature of service quality, poor perception of service quality could lead to a sense of uncertainty and insecurity on the part of air passengers. Therefore, airline operators should customize their services offered by identifying unique service requirements of individual customers.

No doubt, developing the required level of understanding customers' needs will enable better investment decisions and commitment of resources to areas most significant to customers. In meeting the expectations of passengers, who have a tendency to be more demanding and less loyal, airline managers should deliver services as promised and occasionally, when the services delivered fall short of expectations, effort should be made to immediately restore any service failure and sincere apologies should be offered to the customer with a genuine commitment to prevent the reoccurrence of such service hiccups. This implies that service attributes must be well-defined by the airline operators in terms of their features in order to comprehend how service quality is perceived by consumers.

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Non-Linearity and Non-Stationarity of Exchange Rate Time Series in Three Central-Eastern European Countries Regarding the CHF Currency in 2014 and 2015

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Abstract: Our paper deals with the consequences of the Swiss National Bank's decision in January 2015 related to the CHF/EUR exchange rate regarding the non-linearity of the RON/CHF, HUF/CHF, and PLN/CHF exchange rate time series. The analysis focuses on the 2014 and 2015 years, respectively, using the daily data of the three national banks. Starting out from the conventional unit root tests (ADF, PP, and KPSS), we complete our analysis with the usage of the Threshold Autoregression model (TAR) recommended by Caner and Hansen (2001), testing the non-stationarity and nonlinearity.

Keywords: time series model, unit root tests, threshold unit root test, exchange rates

JEL Classifications: C22 Time-Series Models, F31 Foreign Exchange

Introduction

Our paper analyses the effects of the CHF/EUR exchange rate shock changes on a few Central-Eastern European state currencies such as RON, HUF, and PLN. Our research focuses on the study of the exchange rates' nature, using a series of unit root tests and a threshold autoregressive (TAR) model for the years 2014 and 2015. We start from the presumption that the consequences of the Swiss National Bank's decision made in January 2015 are reflected properly by the traditional and TAR tests in comparison with the 2014 time series in the case of the analysed currencies.

Literature review

The non-stationarity and non-linearity of financial and economic time series is a basic question in literature. The most commonly used unit root tests, ADF (Augmented Dickey–Fuller) and PP (Phillips–Perron), are testing the null hypothesis of non-stationarity. In contrast, the KPSS Lagrange Multiplier test evaluates the null of stationarity (Tsay 2005).

The Threshold Autoregressive model (TAR), a non-linear time series model, was introduced by Tong (1978). A time series Y_t is a Self-Exciting Threshold Autoregressive (SETAR) process if it follows the model.

$Y_t = \phi_0^{(j)} + \sum_{i=1}^{(p)} \phi_i^{(j)} Y_{t-i} + a_t^{(j)}, \quad r_{j-1} \leq Y_{t-d} < r_j$, where $j=1, \dots, k$ and d is a positive integer. The thresholds are $-\infty = r_0 < r_1 < \dots < r_k = \infty$ for each $j, \{a_t^{(j)}\}$ is a sequence of martingale differences satisfying $E(a_t^{(j)} | F_{t-1}) = 0$, $\sup E(a_t^{(j)} | F_{t-1}) < \infty$ a.s for some $\delta > 2$ with F_{t-1} the σ field generated by $\{a_{t-1}^{(j)} | i = 1, 2, \dots; j = 1, \dots, k\}$. Such a process partitions the one-dimensional Euclidean space into k regimes and follows a linear AR model in each regime. The overall process Y_t is non-linear when there are at least two regimes with different linear models (Tsay 1989).

In our calculations, the threshold variable identification in a two-regime TAR model estimation is based on the unit root test proposed by Canner and Hansen (2001), where the null hypothesis of the threshold effect is tested using the Wald statistic.

The model was widely used in the case of economic time series, studying the unemployment rate, the interest rates, the price evaluation, stock indices, and foreign exchange rates for non-stationary and non-linearity identification (Hansen 2011).

In the two-regime TAR model proposed by Canner and Hansen (2001), the parameters ρ_1 and ρ_2 control the stationarity and the null hypothesis of the non-stationary threshold autoregression $H_0: \rho_1 = \rho_2$ (a unit root in both regimes and no threshold effect) is tested using the Wald statistic, with two alternatives:

H_1 : the first one, as a stationary and ergodic time series based on the one-sided Wald statistic,

H_2 : the second, as a non-stationary process (a unit root process in one regime, but it will behave like a stationary process in the other regime), with two-sided Wald statistic (Canner Hansen 2001).

In our calculations, we have used a MATLAB code, with a 10,000 bootstrap approximation.

Panos et al. (1997) analysed the equilibrium models of real exchange rate determination in the presence of transaction costs, considering that they imply

a non-linear adjustment process toward purchasing power parity (PPP). Their results, based on monthly data for the interwar period and annual data spanning two centuries, for GBP, USD, French franc and German mark, reject the linear framework in favour of an exponential smooth transition autoregressive process. They evaluate the linear autoregressive model against the ESTAR alternative. For every exchange rate considered, they find that linearity is clearly rejected.

Taylor et al. (2001), based on Monte Carlo simulations, indicate that when the real exchange rate is non-linearly mean-reverting, standard univariate unit root tests have low power, while multivariate tests have much higher power to reject a false null hypothesis.

In their paper, Imbs et al. (2003) examine the sources of persistent international sectoral price differentials using non-linear modelling; they estimate Threshold Autoregressive (TAR) models at the sectoral level. They confirm the presence of substantial non-linearities in real exchange rate dynamics at the sectoral level.

Kapetanios et al. (2003) propose the ESTAR testing procedure to detect the presence of non-stationarity against non-linear but globally stationary exponential smooth transition autoregressive processes, indicating that this test has better power than the standard Dickey–Fuller test. Their results provide an application to ex post real interest rates and bilateral real exchange rates with the US Dollar from the 11 major OECD countries, and their test proved to be able to reject a unit root in many cases, whereas the linear DF tests fail, providing evidence of non-linear mean-reversion in both real interest and exchange rates.

Brooks (2001) combines and generalizes a number of recent time series models of daily exchange rate series by using a SETAR model application of the model based on data regarding the daily French franc/Deutschmark exchange rate. He observed that the behaviour of the conditional variance is quite different between the regimes and that models which allow for different regimes can provide superior volatility forecasts compared to those which do not.

Rapach and Wohar (2006) evaluated the out-of-sample forecasting performance of a number of non-linear models of real exchange rate behaviour from the extant literature. They found fairly limited evidence that favours the OT Band-TAR and TPS ESTAR model specifications over simple linear AR benchmark models.

Zhang (2003) extended the tools of time series analysing and forecasting with the usage of the hybrid ARIMA and neural network model.

Data Used

Our database has been built up in order to contain the official daily exchange rate published by the national banks, separated on the two analysed periods: 03.01.2014 – 31.12.2014 and 05.01.2015 – 24.09.2015 (*Figure 1 and 2*).

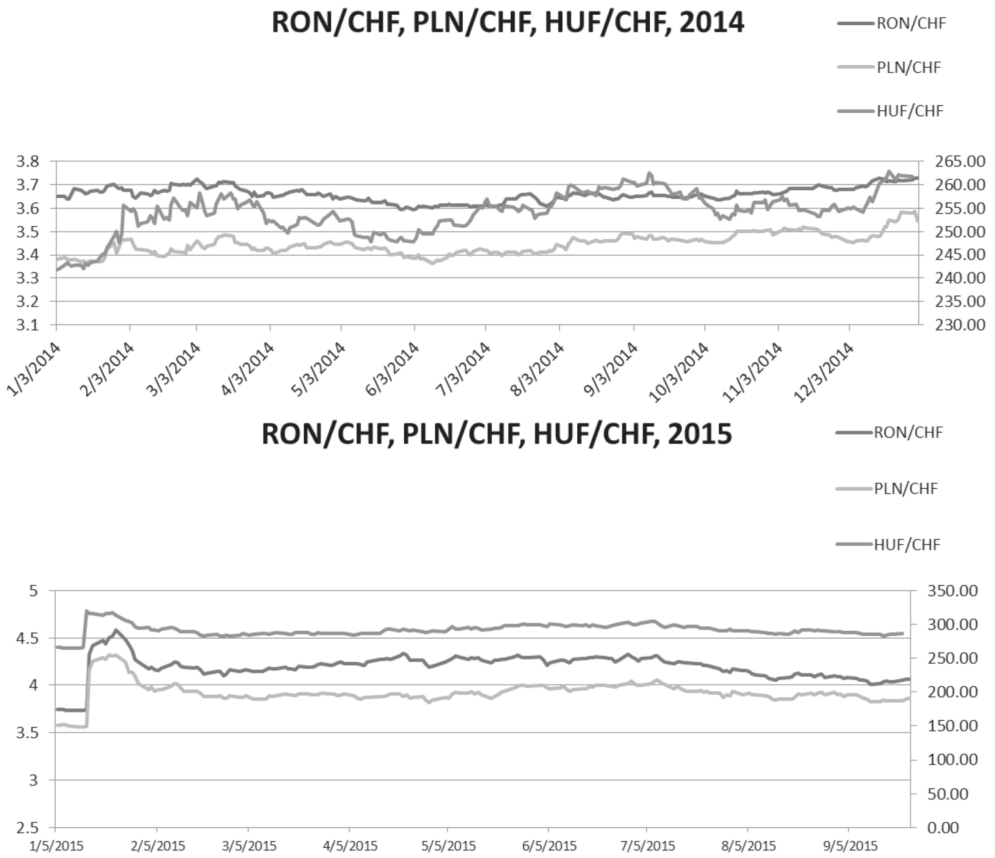


Figure 1 and 2. *The RON/CHF, HUF/CHF and PLN/CHF exchange rates in 2014 and 2015*

Table 1 contains the descriptive statistics of the analysed exchange rates, which clearly indicates the differences between 2014 and 2015, with higher mean and median values and higher standard deviation for 2015. In 2015, the maximum value for CHF/RON and CHF/PLN rate was registered on 23.01.2015, and for the CHF/HUF on 15.01.2015.

Table 1. The summary statistics of RON/CHF, HUF/CHF, and PLN/CHF exchange rates in 2014 and 2015

| | Exchange rates, Years | | | | | |
|-----------|-----------------------|------------------|------------------|------------------|------------------|------------------|
| | RON/CHF, 2014 | RON/CHF, 2015 | HUF/CHF, 2014 | HUF/CHF, 2015 | PLN/CHF, 2014 | PLN/CHF, 2015 |
| Mean | 3.658735 | 4.191451 | 254.1028 | 291.5105 | 3.445254 | 3.921244 |
| Median | 3.658250 | 4.212100 | 254.5450 | 290.5000 | 3.446300 | 3.906450 |
| Max. | 3.728600 | 4.581700 | 262.8900 | 319.2700 | 3.585900 | 4.322300 |
| Min. | 3.595600 | 3.734600 | 241.9000 | 264.4400 | 3.361400 | 3.562300 |
| Std. Dev. | 0.030877 | 0.137207 | 4.375234 | 9.273040 | 0.042760 | 0.117555 |
| Obs. | 252 | 185 | 250 | 184 | 252 | 186 |

(Source: Own calculation, www.bnr.ro, www.mnb.hu, www.nbp.pl)

Empirical Results

In January 15, 2015, the Swiss National Bank (SNB) unexpectedly abandoned its EUR/CHF unofficial floor at €1.20 (*Figure 3*). Then, there appeared an increasing volatility in all exchange rates (*forbes.com*).



Source: forbes.com

Figure 3. The EUR/CHF exchange rates on 14th and 15th January 2015

First, for the two periods, in order to analyse the nature of the time series, we analysed on the basis of the ADF, P-P, and KPSS tests the null of a unit root, for the three exchange rates. Our results indicate that the ADF test fails to reject the null of non-stationarity for the exchange rate of RON/CHF, HUF/CHF, and PLN/CHF in 2014, results emphasized also by the PP test in these cases. The results of

the KPSS test show that only for the HUF/CHF and the PLN/CHF rate and only for the 2014 period can be rejected the null hypothesis at 1% significance level. In contradiction with these, in 2015, for all three currencies, the ADF and PP tests proved the null of non-stationarity. The results of the KPSS test are similar to the previously mentioned two tests, in 2015. At the same time, as it was expected, the first differenced series were stationary in all three cases, for both analysed periods (*Table 2*).

Table 2. *Univariate unit root tests*

| Exchange rates, Years | Levels | | | First Differences | | |
|-----------------------|---------------|---------------|---------------|-------------------|----------------|-----------|
| | ADF | PP | KPSS | ADF | PP | KPSS |
| RON/CHF, 2014 | -1.5612(0) | -1.5479(3) | 0.3969(12)* | -16.2796(0)*** | -16.2931(5)*** | 0.1475(6) |
| RON/CHF, 2015 | -4.0756(0)*** | -3.8844(5)*** | 0.2441(10) | -10.4951(9)*** | -11.3499(4)*** | 0.1723(5) |
| HUF/CHF, 2014 | -2.6859(1)* | -2.5736(5)* | 0.9686(11)*** | -17.3864(0)*** | -17.5062(7)*** | 0.1057(9) |
| HUF/CHF, 2015 | -3.8841(0)*** | -3.9562(3)*** | 0.1483(10) | -13.6237(0)*** | -13.6237(1)*** | 0.1069(1) |
| PLN/CHF, 2014 | -1.7393(0) | -2.8304(3) | 1.3707(11)*** | -16.4905(0)*** | -16.4905(1)*** | 0.0536(4) |
| PLN/CHF, 2015 | -3.6764(0)*** | -4.0965(5)*** | 0.0756(9) | -11.5171(0)*** | -11.5626(4)*** | 0.1010(4) |

(Source: Own calculation, www.bnr.ro, www.mnb.hu, www.nbp.pl)

In the following, based on Caner and Hansen (2001)'s TAR test, we analysed the three exchange rates, for the two periods, indicating where the results are assessable according to the Wald test (*Table 3*).

Table 3. *Threshold test for the exchange rates of RON/CHF, HUF/CHF, and PLN/CHF in 2014 and 2015*

| Exchange rates, Years | Wald Statistic | Bootstrap p-value | Optimal delay parameter m | Threshold parameter | Number of observations in Regime 1 and its percentage |
|-----------------------|----------------|-------------------|---------------------------|---------------------|---|
| RON/CHF, 2014 | 44.132661 | 0.094400 | 2 | 0.078508 | 198(82.84%) |
| RON/CHF, 2015 | 66.364303 | 0.000000 | 6 | 0.033498 | 98(56.97%) |
| HUF/CHF, 2014 | 37.851095 | 0.536100 | 6 | -0.040369 | 202(85.23%) |
| HUF/CHF, 2015 | 13.945723 | 0.098800 | 9 | -0.031454 | 145(84.79%) |
| PLN/CHF, 2014 | 57.362127 | 0.534700 | 9 | -0.020663 | 204(85.35%) |
| PLN/CHF, 2015 | 38.355001 | 0.914800 | 9 | 0.052968 | 32(18.49%) |

(Source: Own calculation, www.bnr.ro, www.mnb.hu, www.nbp.pl)

The optimal delay parameter m value is generally unknown; it was estimated using a 10,000 bootstrap approximation. The results indicate against the null

hypothesis of the stationary threshold autoregression at least at 10% in the case of RON/CHF in 2014 and HUF/CHF in 2015, and at least at 1% in the case of RON/CHF, 2015 (Table 3).

Caner and Hansen suggested that the one-sided unit root tests are more powerful in the case of the TAR model, and this indicates that the time series are not stationary and ergodic, except for the PLN/CHF in 2015 (Table 4).

Table 4. One-sided unit root tests

| | R1T | | Bootstrap critical values | | | Bootstrap p-value |
|---------------|---------------------------|---------------|---------------------------|-----------|-----------|-------------------|
| | Optimal delay parameter m | R1T statistic | 10% | 5% | 1% | |
| RON/CHF, 2014 | 2 | 0.568140 | 9.151486 | 11.283610 | 16.151963 | 0.898700 |
| RON/CHF, 2015 | 6 | 0.716252 | 9.656781 | 11.925852 | 16.262466 | 0.898800 |
| HUF/CHF, 2014 | 6 | 9.408584 | 9.528393 | 11.783826 | 17.856412 | 0.102900 |
| HUF/CHF, 2015 | 9 | 2.570681 | 9.847288 | 11.890980 | 17.001813 | 0.663100 |
| PLN/CHF, 2014 | 9 | 3.631527 | 9.674590 | 11.755744 | 17.407133 | 0.507800 |
| PLN/CHF, 2015 | 9 | 14.626278 | 9.498772 | 11.704289 | 16.613295 | 0.018800 |

(Source: Own calculation, www.bnr.ro, www.mnb.hu, www.nbp.pl)

A more detailed analysis of the two-regime stationarity could be performed using the partial unit root test proposed by Caner and Hansen (2001).

Table 5a and 5b. The partial unit root results, the t_1^2 statistic (a) and the t_2^2 statistic (b)

| | Optimal delay parameter m | t_1^2 | Bootstrap critical values | | | Bootstrap p-value |
|---------------|---------------------------|-----------|---------------------------|----------|----------|-------------------|
| | | | 10% | 5% | 1% | |
| RON/CHF, 2014 | 2 | 0.753751 | 2.424266 | 2.822523 | 3.527715 | 0.593000 |
| RON/CHF, 2015 | 6 | -0.227093 | 2.472208 | 2.862139 | 3.552573 | 0.836900 |
| HUF/CHF, 2014 | 6 | 0.779241 | 2.527003 | 2.893029 | 3.690830 | 0.594000 |
| HUF/CHF, 2015 | 9 | 1.603334 | 2.523655 | 2.921060 | 3.627544 | 0.320400 |
| PLN/CHF, 2014 | 9 | 1.905657 | 2.514161 | 2.883672 | 3.654924 | 0.234300 |
| PLN/CHF, 2015 | 9 | 3.496749 | 2.493994 | 2.894364 | 3.612950 | 0.013400 |

| | Optimal delay parameter m | t_2^2 | Bootstrap critical values | | | Bootstrap p-value |
|---------------|---------------------------|-----------|---------------------------|----------|----------|-------------------|
| | | | 10% | 5% | 1% | |
| RON/CHF, 2014 | 2 | -0.147282 | 2.467514 | 2.841455 | 3.600820 | 0.846900 |
| RON/CHF, 2015 | 6 | 0.846317 | 2.543103 | 2.973314 | 3.656886 | 0.594100 |
| HUF/CHF, 2014 | 6 | 2.966710 | 2.482669 | 2.896458 | 3.674446 | 0.043400 |
| HUF/CHF, 2015 | 9 | -1.289602 | 2.571305 | 2.934210 | 3.599491 | 0.970800 |
| PLN/CHF, 2014 | 9 | -0.236497 | 2.507206 | 2.909873 | 3.686026 | 0.855000 |
| PLN/CHF, 2015 | 9 | 1.548879 | 2.532245 | 2.903882 | 3.561912 | 0.368100 |

(Source: Own calculation, www.bnr.ro, www.mnb.hu, www.nbp.pl)

The results presented above indicate the non-stationarity of the time series in two regimes, with two exceptions: the HUF/CHF in 2014 (*Table 5a*) and the PLN/CHF (*Table 5b*) in 2015, where there is a unit root process in one regime.

Conclusions

In this paper, we examined the CHF exchange rates' non-linearity and non-stationarity in two periods of times, in 2014 and in 2015, for the currencies of three Central-Eastern European countries. In order to analyse these characteristics of the time series, we used Caner and Hansen (2001)'s TAR test, which is an alternative non-linear model, in comparison with the most commonly used unit root tests.

The ADF and PP unit root tests fail to reject the null of non-stationarity for the exchange rate of RON/CHF, HUF/CHF, and PLN/CHF in 2014. In contrast with that, in 2015, for all three currencies, the ADF and PP tests indicated the null of non-stationarity. The results of the KPSS test are similar to the previously mentioned two tests at 1% significance level.

The one-sided unit root test results rejected the unit root null hypothesis for RON/CHF, HUF/CHF in 2014 and 2015 and for PLN/CHF in 2014. The results of the partial unit root test suggest a unit root process in one regime in the case of HUF/CHF, 2014 and PLN/CHF, 2015. Taken altogether, our results provide strong support for the RON/CHF in 2014 and 2015 and for the HUF/CHF in 2015 to be characterized as non-linear stationary processes.

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Induction Strategy of Igbo Entrepreneurs and Micro-Business Success: A Study of Household Equipment Line, Main Market Onitsha, Nigeria

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Abstract. This work justifies the “Igba-odibo” (Traditional Business School) concept as a business strategy for achieving success in business which is measured through business/opportunity utilization, customer relationship/business networking and capital acquisition for business. It gives the in-depth symbolic interpretation and application of the dependent and independent variables used. The paper extends its discussion on the significance of these business strategies as practised among Igbo entrepreneurs and on how they equip Igbo entrepreneurs to immensely contribute their quotas in the area of developing entrepreneurship in Nigeria in particular and the globe in general. Research questions were formulated to investigate the relationship between business strategy and success. Related literature was reviewed. The study population covers the household equipment line of Main Market Onitsha in Anambra State, Nigeria, which has shop capacities of over five hundred, which were used to assume the population of the study – out of the 300 questionnaires administered to the directors of the business or the Masters/Mistresses, who were the business owners during the study, 180 were returned, 73 were invalid, so the researcher was left with 107 valid questionnaires to work with. The data collected were tested using frequency tables, percentages, Pearson Product-Moment correlation analysis, and regression analysis. The result shows that there is a strong positive relationship between the two variables. The researcher recommends that the government should encourage and strongly support these entrepreneurs by providing loans and adequate infrastructure that aids business.

Keywords: “Igba-Odibo”, induction-strategy, Igbo-entrepreneurs, business-success, business opportunity/expansions, business/customers networking

JEL Classifications: M10

Introduction

Igbo people live at the south-eastern part of Nigeria, having a population of approximately 40 million, which amounts to 23.5% of the total Nigerian population estimated at 170 million. Igbo is the third major tribe out of the more than 250 ethnic groups in Nigeria. The after-effects of the Biafra war severely damaged most of the infrastructure in the eastern part of the country and rendered this ethnic group the poorest among the three major ethnic groups; hence, life in this part of Nigeria was marked by poor infrastructure, lack of jobs coupled with the loss of life-time savings of the Igbo and discrimination by other ethnic groups (Falola & Afolabi, 2008). The Igbo, therefore, were seen as the “disobedient children” due to the Biafra war. The Igbo entrepreneurs were left with no better choice than to migrate to other places within and outside Nigeria; hence, there is hardly any part in the countries of the world where the Igbo cannot be found engaged in commercial activities. Olanrewaju (1999) praises the courage with which the Igbo carry on with their lives despite these bad experiences. Agozino & Anyanike (2007) note the universal belief that Igbo people are too money-centred, but this is a misconception of the highly ambitious and competitive spirit of the Igbo man, who finds confidence in the spiritual understanding that “Onye ruo, O rie” (He who labours for wealth, should enjoy his wealth).

Ogundele (2000) explicitly explains who an entrepreneur is by defining entrepreneur as an innovative individual who initiates and nurtures the growth of a new business that has not existed before. An entrepreneur is defined as one who undertakes a commercial enterprise and who is an organizational creator and innovator (Mordi, Simpson, Singh & Okafor, 2010). Entrepreneurs are ambitious, achievement-minded, reliable, responsible, hardworking, competent, optimistic, innovative, aggressive, honest, creative, and they enjoy social recognition and growth (Kotey & Meredith, 1997). Entrepreneurship involves discovery, evaluation, and exploitation of opportunities. This relates the entrepreneur with his environment, studying the needs and attending to them – hence, an entrepreneur is a problem solver. An entrepreneur starts and makes his living out of the business he has started. An entrepreneur plans, organizes, staffs, and coordinates a new business, thereby, enriching himself and others through the business.

Indigenous people see themselves as a collective group who work together on the basis of their common ancestry, history, language, and, at times, religion. Indigenous entrepreneurship has strong overlaps with ethnic, social, and domestic entrepreneurship. Dana (1995) broadly defines indigenous entrepreneurship as self-employment based on indigenous knowledge. Indigenous Igbo entrepreneurs are communal and possess almost similar characteristics and motivation in terms of business.

Statement of the Problem

Many entrepreneurs devote much time to customer acquisition, only to lose them to competitors in a very short period because they do not acquire the business induction strategy of Igba-odibo (Traditional Business School), which would give them the opportunity to be trained and exposed on building customer relationship and business networking as ways of attracting customers, gaining their trust, and hence encouraging loyalty that directly relates to profitability through increased sales and market shares. Studies have shown that the lack of enough customers contributes to 80% of business failure (Analoui, Moghimi & Khanifar, 2009). Rosenberg and Czepiel (1983) are of the view that the costs of attracting a new customer have been found to be up to seven times higher than the costs of retaining old ones and a study by Oboreh, Umukoro, & Ayozie (2013) show that many Igbo entrepreneurs are yet to fully understand and properly use customer relationship and networking as a business strategy to achieve profitability and success in their businesses.

Profitability is central to success in today's fast-moving competitive business environment and it is related to business expansion. Many newly established small and medium enterprises could not last long due to lack of business profitability (ILO, 2006). Despite the amount of the capital invested in a business, if there is no previous solid knowledge of the business, it may be difficult to yield the expected profit. And one cannot think of expansion if the already established business does not yield a profit that could be used in expansion. Gaining previous knowledge of a business through "Igba-odibo" (Traditional Business School) helps an entrepreneur to understand every aspect of the business, which will enable him to start his own business not as a learner as it gives him insight on who the customers are, the competition involved in the business, where to buy goods, even on credit, and how to network in the business. All these will result profitability in the long run, which will be helpful in business expansion.

Raising capital for a business is arguably the most pressing policy objective in the developing countries of the world and supporting the self-employed is critical in an environment where banks and venture capitalists are not favourable to a beginner who has almost nothing to deposit as collateral. Despite the effort of the government to ensure that its citizenry is engaged, many have remained unemployed due to the single reason of the lack of capital to embark on the businesses of their choice. The Igbo entrepreneurs hardly wait for government funds to venture into the business of their choice – "Igba-odibo" (Traditional Business School) has remained a source of livelihood and a means of being employed that aids incubate entrepreneurs to stand on their own, raise capital for business, and actively engage in economically worthwhile ventures.

The following research questions were considered:

1) Does the “Igba-odibo” practice (Traditional Business School) affect the customer relationship marketing and business networking of the business under study?

2) Is there any relationship between the “Igba-odibo” practice (Traditional Business School) profitability and the business under study?

3) Does the “Igba-odibo” (Traditional Business School) practice aid in raising capital for the business under study?

This study is particularly significant as it is perhaps among the first studies that focused exclusively on the business apprenticeship, strategy, and success of Igbo businesses. It would assist the following:

Entrepreneurs: This research would serve as a useful one to encourage both the existing and potential entrepreneurs. The results would identify some lapses of the indigenous Igbo entrepreneurs and also provide solutions that would alleviate problems and help them to sustain business growth and success.

Academia: The study would also contribute immensely to the existing body of knowledge and literature in management sciences with focus on the area of entrepreneurship studies. This study has ultimately enhanced further academic and non-academic research in the field of entrepreneurship. It could as well be used as a secondary research source for further studies on indigenous Igbo entrepreneurship since there is very little research in this area.

Government/policy makers: Furthermore, results would educate the government and its relevant agencies to make policies to encourage the indigenous entrepreneurs to advance their businesses in order to benefit the country.

Review of the Related Literature

The Igbo are the Nigerian industrialists; are believed to be the backbone of businesses in Nigeria and Africa; as a result, today they are referred to as the Japanese and Chinese of Africa. The practice of the right business strategy is the secret of business successfulness among Igbo entrepreneurs. These practices are embedded in the communal culture of Igbo. Their entrepreneurial activities have facilitated an improved standard of living among the people in both rural and urban settings. Maliga (2013) and Udegbe (2013) revealed in their separate studies that the assets of the Igbo in Lagos state of Nigeria alone is about 74% of the total investments in Lagos, which is nothing less than N300 trillion, and twice as much is to be found in the Federal Capital territory of Abuja: about N600 trillion, while in Kano and Kaduna, in the northern part of Nigeria, Igbo investments run up to N10 trillion, respectively. Hence, Agazie (2012) comments on the developmental capabilities of the Igbo entrepreneurs, and adds that “Governor Gabriel Suswan

of Benue State of Nigeria notes, therefore, that any State government that ignores the Igbo does so at the risk of its economy". In support of this, Olanrewaju (1999) argues that one of the reasons for the lack of development – which he called "development hiccups" – in African countries and in Nigeria in particular "is that the Igbo entrepreneurs have not been given enough chance to participate in the development process".

In this research work, business is viewed as activities involving buying and selling of goods or services. Business strategies are those systematic decision processes or plans of resource allocations aimed at giving the indigenous Igbo entrepreneurs competitive advantage through the realization of major business objectives and goals. Strategy has been defined as the broad programme for defining and achieving an organization objective. Entrepreneurs respond to environmental changes over time through the utilization of different strategies, as all entrepreneurial activities are goal driven.

Igbo Entrepreneurs' Business Induction Strategy

The Igbo entrepreneurs adopt a technique and many business strategies, such as "Igba-odibo" (Traditional Business School), as well as create personalized strategies to manage their entrepreneurial businesses in order to achieve their objectives, and therefore attain greater success, since this is a measurable variable.

Definition of Indigenous Igbo Strategy using the Mintzberg Model (1978)

Mintzberg (1978) explained strategy as five "P-s", namely: strategy as a plan, ploy, pattern, position, and perspective.

1) Strategy as a Plan: This means that strategy is a continuously intended course of action. An entrepreneur intending to venture into business studies the best method which will suit his/her motive. Business decisions require planning based on the resources at hand. The Igbo entrepreneurs study the business environment of their choice thoroughly before venturing into it.

2) Strategy as a Ploy: It means that strategy is a specific manoeuvre intended to adopt to defeat competitors. This is why it seems as if Igbo entrepreneurs were secretive in their businesses. An entrepreneur needs to plot, scheme, and organize ideas in order to take advantage of an opportunity in their business since there is high competition in the business environment. The ability to take advantage of opportunity places an entrepreneur above others.

3) Strategy as a Pattern: This means that strategy is also consistent in behaviour whether intended or not. Igbo entrepreneurs do not practise business; business is part of their life and part of culture inculcated upon their upbringing. Business is an embedded subset of the Igbo culture, they understand very well the language of money and business, and they are consistent with business, which is part of their behaviour.

4) Strategy as a Position: Strategy is a means of placing indigenous Igbo in the Nigeria business environment. Business has remained a career associated with Igbo entrepreneurs both in Nigeria and the Diasporas.

5) Strategy as a Perspective: This means that strategy is usually in line with indigenous Igbo culture or in line with the way they see things.

These strategies include: Igba-odibo, “Imu-ahia”, “Imu-oru”, and “Igba-oso-ahia”.

Although this study concentrates on Igba-odibo, the differences between these strategies are discussed briefly:

“**Igba-odibo**” (Traditional Business School), deals mainly with buying, selling, promoting, and distributing goods as business strategy. Here, the apprentice is exposed to the concepts of marketing.

“**Imu-ahia**” (business coaching): this is used for a learner who is not under the direct supervision of a master/coach in marketing business, but who is just there to learn the business. It is mainly for those who have some capital to invest in a business but lack the knowledge thereof. Many traders use this also to diversify their businesses.

“**Imu-oru**” (craft/vocational apprenticeship): this involves working with different tools and equipment. It means learning the expert knowledge of a particular vocation. It is also a means of diversification.

“**Igba-oso-ahia**” (a form of business trick): this is used by traders to raise capital for business. It involves selling another person’s goods at a higher price.

This research work deals with Igba-odibo (Traditional Business School) as a business induction strategy towards the success of indigenous Igbo entrepreneurs in microbusiness.

“**Igba-odibo**” (Traditional Business School): once a ward is under the care of his master/mistress, he becomes a servant “Odibo” (servant). The “Igba-odibo” (Traditional Business School) in this context refers to someone who is being trained in the act of buying and selling or marketing concepts. It is a process whereby a family gives out their children to live and serve the wealthy ones in the society. The terms and conditions of “Igba-odibo” are mostly oral, yet they are embedded in the Igbo customs, norms, and traditions, and there is no charge for “Igba-odibo” unlike in the case of some apprenticeship trainings.

The final apprenticeship contract between the master and the apprentice’s family is normally preceded by a trial or test period of about three months,

a period during which the apprentice's suitability for the job or other role is being tested. Once an apprentice is under the care of his/her master/mistress, he becomes a servant. The master and/or mistress cares and caters for the servant's/maid's well-being for an agreed period of time, while, in turn, the servant/maid assists his/her master and/or mistress in business and other domestic works while living with them. The apprentice is expected to be faithful to his/her master/mistress. During this period, the master/mistress as the mentor exposes the strategies of the business to him/her. If the apprentice is intelligent enough to master the business, the master/mistress may start another business outlet for the servant to manage. This helps them to master all the strategies and techniques of the particular business. The apprentice is expected to serve his master without reservation. The Igbo believe that "onye fee eze, eze e-ruo ya aka" (You will be measured in the same way you measure others.). The implication of this is that when a servant/maid serves his master and/or mistress faithfully, he/she will be served faithfully by another servant/maid. Mukhtar (2011) comments that this is against the practice found in the northern part of Nigeria, where one serves his "master" for as long as he lives without any plan put in place to make the "servant" independent. There is a clear difference between an entrepreneur who passes through the period of "Igba-odibo" and one that does not. Women also engage in the "Igba-odibo" as paid/unpaid house maids. They can be allowed to engage in any skill of their choice depending on the agreement while living with their master/mistress, after which their master/mistress settles them. Normally, most paid house maids are not allowed to learn any skills except if their master/mistress is the mentor, but most unpaid house maids always have a contractual agreement on learning skills and settling afterwards.

The Importance of the "Igba-odibo" Practice

Both the master and the servant have their own share of benefits from "Igba-odibo" (Traditional Business School). "Igba-odibo" (Traditional Business School) helps an entrepreneur to start his own business not as a learner. He is already familiar with the customers of the business, has their phone numbers and addresses. This is very helpful in building a good customer relationship. It helps the entrepreneur to know where to buy goods at a cheaper rate and how to sell them. Most wealthy families send their children to "Igba-odibo" (Traditional Business School) practice before providing capital for their own business. This helps them to master all the strategies and techniques of the particular business. They also use this method to change or diversify their businesses if their former businesses are not as profitable as they expected. The servant is always supposed to be grateful to his/her master and/or mistress for showing him/her the way.

The master is forever seen as the godfather of the servant. This earns a lot of respect and prestige to the master and/or mistress. Most servants always turn out to be helpers to their masters/mistresses later in life. The servant, who might have come from a very poor family, could mobilize resources for his/her business without begging or disposing of any of his/her biological father's property. The servant can always call on the master/mistress in case of any problem. At times, this relationship can result in marriage between the servant/maid and any of his/her mistress's/master's immediate family, just as Jacob in the Bible, who ended up marrying two of his master's daughters. It is very helpful in building a good customer relationship. Most of the time, the "settlement" of a servant managing an outlet depends on the profit he realizes within the given period, so that the master does not incur losses. The master may choose to use the servant to expand his business, achieve market penetration and development, both concentric and conglomerate diversification, or change to another business.

The Disadvantages of the System "Igba-odibo"

The system of "Igba-odibo" (Traditional Business School) also has its disadvantages. Apprenticeship agreements are mostly oral, yet they are embedded in the society's customs, norms, and traditions. Most servants/maids may not be as faithful as expected since some may get involved in stealing from their master/mistress instead of being patient. This might be due to peer influence, fear of the future, impatience, fear of the unknown, bad advice from their family members or friends, or greed.

Some masters, too, are greedy – they find it difficult to settle their servants/maids. Some do use their servants/maids for rituals or initiate them into cultic activities, maltreat or abuse them. Most apprentices are subjected to long working hours, unsafe working conditions, low or no allowances or wages, little or no social protection in case of illness or accident, while strong gender imbalances are also among the work-related problems often met in apprenticeships.

"Idu-odibo" (Official settlement of a servant): this is the main essence of the "Igba-odibo" strategy. Once a servant/maid has served his master and/or mistress faithfully, the master/mistress is expected to reward him. Both families see it as a great day because both the master/mistress and the servant/maid are seen as having been responsible. The master/mistress is expected to give part of his wealth to the servant/maid who had served him/her all those years. The servant/maid is expected to start his/her own business from the resources the master/mistress used to settle him/her. Usually, people wine and dine at the settlement party, which serves as a graduation, and a commencement ceremony for the ward. Once the servant/maid is settled, he/she is free from his/her master.

The Dimension of Business Success of Igbo Entrepreneurs

The Igbo entrepreneurs are known to be very successful in their lines of businesses because of their effectiveness in business operations. Among the Igbo, wealth is determined through a number of factors such as: the development projects launched in one's community – as the saying goes: “*Aku ruo ulo, o kwuo ebe o si*” (developmental projects declare one wealthy) – and how many Odibos one coaches in his community, as Igbo is aggressively communal rather than individualistic. Wealth, therefore, is only a means of acquiring social prestige among the Igbo people. That is why, business success is not hidden away among the Igbo. Igbo entrepreneurs believe that success in their businesses is not a choice but a must. Circumstances like poor background and illiteracy are not limiting factors but a reason and strength of success. Successfulness connotes effectiveness: effective entrepreneurs are successful. Business success is defined as the ability to choose an appropriate objective to achieve a given business objective. Drucker (1967) defines effectiveness as doing the right thing, thus equating it to efficiency. Feather (1988) notes that a successful business owner possesses entrepreneurial characteristics. Being effective in daily activities, goals, and objectives can be translated into overall entrepreneurial effectiveness, and hence success in the long run. Although Burnett (2000) notes that it is difficult to empirically measure the rate of entrepreneurial business successfulness because developing the tools to measure it has been problematic, Karvin (2013) outlines the variables of measuring entrepreneurs' business successfulness as: profitability, reputation, growth in number of employees, growth in number of customers, and different target audiences. Business successfulness has no universally accepted definition, but it is formulated as according to what a particular author believes to be the most relevant objectives and goals to be achieved in a particular business; therefore, the “business successfulness of the Igbo entrepreneurs” is measured hereby as: relationship marketing and business networking, business profitability and expansion, employment creation ability and capital/fund generation for businesses.

Business Expansion/Opportunity Utilization: this involves opening many outlet stores/branches for the current business and diversification into a new business. Establishing branches at different locations, cities, and even abroad is very common among Igbo entrepreneurs as a means of business expansion and utilizations of opportunities. Adams (2013) argues that some entrepreneurial traits and skills acquired through apprenticeship are strongly related to business expansion and success. These entrepreneurs identify and utilize the opportunities identified in their surroundings to establish businesses in different locations and cities since opportunities are not known to all parties at the same time, and some individuals are more sensitive than others and can either exploit or think up

particular opportunities that others have not yet realized (Shane & Venkataraman, 2000). The “Igba-odibo” concept has been used by some of these entrepreneurs who established business for their “Odibo” in different places. This also enables them to settle their “Odibo” from the proceeds of such outlet store.

Business/Customer Networking: Access to networks is essential to develop business ideas, meet potential clients, suppliers, and business partners, understand the market together with its changes, opportunities, and weaknesses, and obtain strategic information, cooperation, and support. Researchers found that social networks provide links between the entrepreneur, resources, and opportunities and that several personality dimensions of perceiving opportunities affect entrepreneurship (Timmon, 1978; Wesh & White, 1981). Studies have accordingly shown that network relations can be a source of business success (Aldrich & Zimmer, 1986b; Burt, 2000). They must collaborate with other firms to gain access to information, skills, expertise, assets, and technologies, and thus leverage their internal resources. It helps to increase the number of customers (within and outside the city), the volume of sales per day and the market shares of the entrepreneurs. Networking and meaningful networks are an opportunity hallway for the entrepreneur as they develop broad social and professional networks, which can promote opportunity detection (Wiklund & Shepherd, 2005b; Granovetter, 1973). Igbo entrepreneurs are excellent networkers: networking spirit is one of the major reasons of the existence of Igba-Odibo. During this period, one is exposed to almost all the importers regardless of their location: Aba, Onitsha, Lagos, Kano, and even outside the country like China, Cotonou, Ghana, etc. They know where to buy their goods at all time and their major customers. They hardly stay at one place; they move from Onitsha to Lagos, from Lagos to Aba or even outside the country in search of goods to either import or export. Networking skills confer Igbo entrepreneurs’ advantages over their competitors as they can order goods both locally and internationally on credit.

The Significance of Igbo Entrepreneurs’ Business Induction Strategy

Due to the Igbo belief in extended family and induction of/introducing family members into their line of businesses, “Igba-odibo” and “Imu-ahia” techniques have made it possible for business strategies to run through families, across towns and communities from one generation to another.

Today, different communities in Igbo dominate particular lines of product or business. For instance, the Akokwa indigenous entrepreneurs dominate the line of kitchen utensils and household equipment, Nando indigenous traders dominate the pharmaceutical drugs business. Egwu, Ogbu, Ogunji, Oselebe &

Udu (2011) mention that Nnewi indigenous entrepreneurs dominate the motor parts and transportation business. Egwu et al. (2011) traced this back to Sir Luis Odemegwu Ojukwu, whom the British and the allied forces used to transport soldiers and ammunitions across Africa during the Second World War. In the spirit of communalism, he employed most of his kinsmen as drivers out of which Ekene dili Chukwu Nigeria Ltd, a famous transport company of our days emerged. Alor indigenous entrepreneurs dominate “ogbo abada” (wrappers), Abiriba indigenous traders deal with “Okirika” (second-hand materials), Agulu indigenous traders are known for bread making, Ebonyi indigenous traders are known for petty businesses and they are also very good at farming, Awka-Etiti people dominate the cosmetics line of business, Uke people is known for tobacco stuff and articles, Nsukka entrepreneurs have the best palm wine up to the present day, Awka indigenous traders are known for blacksmithing, etc. This is a result of indoctrinations in business lines found in those places and being handed down from one generation to another.

Igbo entrepreneurs make use of entrepreneurial skills in expanding and creating new markets through opportunity utilization. The eastern metropolitan cities are all surrounded by markets, even the interior villages, as business and money are inseparable terms among the Igbo. For instance, a city in Anambra State of Nigeria, in the eastern part of the country called Onitsha, has a well-organized market that can be found all over the city, with Onitsha Main Market as the biggest one. There is Ogbo Efere Market for mainly household equipment, Relief Market for provisions and condiments, Electronic Market for household electronics, Construction Material Market for construction materials, as the name implies, Madueke Street Market for polyester, Ogbo Abada for African textile materials, Bridge-Head Market known for drugs, Ngbuka Market for old motor spare parts, Ose Market for food ingredients, Ochanja Market for shoes, Plastic Market at Amaobi, Electrical Parts Market at Upper Iweka, etc. Nnewi Market is known for automobiles and motor transport business. As for Aba Market in Abia State, the Aba products have earned the Igbo entrepreneurs the name Japanese and Chinese of Africa (Olanrewaju, 1999). While other Igbo entrepreneurs, especially from Anambra State of Nigeria, travel all over the world in search of goods to import or export, the Aba people of Abia State, Nigeria, benchmark and produce foreign products together with their labels and trademarks. Hardly can one distinguish their products from those of foreign manufacturers like China, Japan, the USA, or Turkey. Other neighbouring countries patronize them knowingly or unknowingly, thinking that they were imported goods.

Brief Overview of the Household Equipment Line, Main Market Onitsha

The main market is rated as one of the largest markets in West Africa, and Yangy (2011) calls it Main Market Onitsha, Nigeria, which is located in the south-eastern part of the country as the world's biggest market. The market is actually heavily populated and covers a wide geographical area with many divisions known as "lines". Some lines bear names of some important or prominent personalities, some are known by the street where they are situated, while others are known by the specific articles being sold there. Yangy (2011) notes that the streets outside are jammed with customers and salespeople and that the shops are stacked six feet high and that all kinds of goods can be found there. Household Equipment Line, Main Market Onitsha is one of the lines in Main Market. It is situated directly at the bank of River Niger. All kinds of household equipment, especially kitchen utensils, are sold there. The shops are decked and have a capacity of over five hundred smaller shops arranged parallel to one another. The majority of these entrepreneurs are importers and producers. For instance, many of them own businesses in plastics industry, aluminium industry, etc.; therefore, they have many apprentices to learn the business.

Theoretical Framework

Cognitive Apprenticeship Theory: Cognitive apprenticeship is an instructional design model that emerged from situated learning theory and was developed by Collins, Brown, and Newman (1989). Cognitive apprenticeship is a theory of the process where a master of a skill teaches that skill to an apprentice. A cognitive apprenticeship is much like a trade apprenticeship, where learning occurs as experts and novices interact socially while focusing on completing a task; the focus, as implied in the name, is on developing cognitive skills through participating in authentic learning experiences. Cognitive apprenticeship assumption indicates that learning occurs using processes such as modelling and coaching, and it also supports the three stages of skill acquisition of: the cognitive stage, the associative stage, and the autonomous stage (Anderson, 1983). In the cognitive stage, learners develop a declarative understanding of the skill. In the associative stage, mistakes and misinterpretations learned in the cognitive stage are detected and eliminated while associations between the critical elements involved in the skill are strengthened. Essentially, apprentices are learning about both the overall process of the larger task and profession and the criteria for evaluating performance through the completion of small tasks. As they

gain experience, they are offered larger, more central tasks to complete. Their understanding of how these tasks affect the end-product in a holistic manner supports their performance, as does their knowledge of the criteria that will be used to assess the end-product. The cognitive apprenticeship theory has its gap in the fact that some masters may not be the central point of learning, and the apprentice may subscribe to environmental imports.

Methodology

The preoccupation of this research work is to carry out a thorough investigation on the relationship between business induction strategies and success among indigenous Igbo entrepreneurs in Nigeria. In testing this hypothesis, success is considered the dependent variable while the aggregate measures of business strategies the independent variables.

The sample of the study covers the household equipment line of Main Market Onitsha. The total number of the population is over five hundred traders since the actual number of the people is not certain, but the number of the shops' capacity in the market was used to assume the number of business entrepreneurs in the market. The population of this study centres on the masters/mistresses, who are believed to have passed through this induction and also have "Odibos" they are mentoring. 300 questionnaires were administered to the masters/mistresses, as it is not possible to use the whole population, 180 were returned, and 73 were invalid; so, the researcher was left with 107 valid questionnaires to work with. Getting questionnaires filled by these traders was obviously a tedious work as many of them complained of the time factor and some are not educated; hence, the researcher made interviews to complete the questionnaires. In addition, it is also difficult to get secondary data on this area of research. The researcher's sound knowledge of the subject matter contributed immensely to the success of this work.

Data Presentation and Analysis

This chapter contains the result of statistical analysis conducted on the responses from the questionnaires. The data are presented in frequency tables and percentages. This analysis is used for the purposes of clarity and simplification. The data presented below is based on the returned questionnaires.

Section A

Table 1. *Analysis of Bio-Data*

| Sex | Frequencies | Percentages |
|---|--------------------|--------------------|
| Male | 75 | 70.0 |
| Female | 32 | 30.0 |
| Age | | |
| Less than 30 | 22 | 20.6 |
| 31–45 | 48 | 44.9 |
| 45–59 | 27 | 25.2 |
| 60 and above | 10 | 9.3 |
| Education qualification | | |
| No school certificate | 21 | 19.6 |
| First school-leaving certificate | 11 | 10.2 |
| Secondary school/ Primary school drop-out | 34 | 31.7 |
| WAEC/NECO/GCE | 19 | 17.7 |
| OND/NCE | 8 | 7.4 |
| BSC/HND | 7 | 6.5 |
| Others | 3 | 2.8 |
| Certificate in view | 4 | 3.7 |
| Family background of the respondents | | |
| Rich family | 30 | 28.0 |
| Poor family | 50 | 46.7 |
| Average family | 27 | 25.3 |

Source: research survey, 2015

Discussion of the Biographical Data

The above analysis shows that 70% of the respondents were male and 30% were female. That is, the distribution is more concentrated on the male respondents than the female ones.

The age-group and age segment of all the people interviewed is very significant as it shows that these entrepreneurs start business at a tender age. If approximately 21% of the <30 year-olds are already having their own businesses, could it be that they are either school drop-outs or succeeding in their family business? This also confirms the name “ono na wata buru ogaranya” (a wealthy young man). The bearing of this could be traced back to family succession. While the older ones prepare for retirement, the younger ones take over the family businesses.

A look at the education qualifications shows that the Igbo are more into business than education. The school drop-outs are leading this group with approximately

32%, with illiterates at approximately 20%. This finding is in correlation with Akeredolu-Ale (1975) and Akpor-Robaro (2012), whose respective studies conclude that more entrepreneurs had lower levels of formal education compared to civil servants. The questionnaire reveals that a higher level of education is represented in a greater percentage by the women in this group. Those striving to improve themselves were just approximately 4% because of the time factor.

Respondents’ family background is essential in finding out the type of the entry mode of the different classes in business. It is still surprising that the rich also send their children to learn business mainly through Igba-odibo and Imu-ahia. This gives us another insight that Igba-Odibo is not only for the poor among the Igbo ethnic group of Nigeria.

Section B

Table 2. Questionnaire Data

| How old were you when you started learning business? | Frequencies | Percentages |
|---|--------------------|--------------------|
| <7 | 8 | 7.4 |
| 8–10 | 46 | 42.9 |
| 11–13 | 32 | 29.9 |
| 14–16 | 13 | 12.1 |
| 16< | 8 | 7.4 |
| Have you passed through “Igba-odibo”? | | |
| Yes | 80 | 85.6 |
| No | 27 | 25.23 |
| For how many years did you serve your master/ mistress? | | |
| Less than 4 | 18 | 22.5 |
| 4–7 | 50 | 62.5 |
| 8 or more years | 12 | 15 |
| Did the training help you in your own business? | | |
| No | 66 | 82.5 |
| Yes | 14 | 17.5 |
| Are you still in the same line of business as you were trained in? | | |
| Yes | 55 | 69 |
| No | 25 | 31 |
| Do you have “Odibos”? | | |
| No | 74 | 69.2 |
| Yes | 33 | 30.8 |

| Relationship with the master/mistress | Frequencies | Percentages |
|---|--------------------|--------------------|
| The same family | 20 | 25 |
| The same town | 42 | 53 |
| From other town or state | 18 | 22 |
| Were you settled by your master/mistress? | | |
| Yes | 60 | 75 |
| No | 20 | 25 |
| What kind(s) of settlement were you given? | | |
| Cash only | 20 | 33 |
| Goods only | 10 | 17 |
| Combination | 30 | 50 |

Source: research survey, 2015

The respondents' age at the start of learning business is linked to the education qualification of the entrepreneurs. Greater percentages are represented either by school drop-outs (to do business) or those who simply could not proceed to higher levels of education; so, the age brackets of 8–10 and 11–13 are leading this table with 43% and 30%, respectively.

Obviously, the greater percentages of respondents learn business through Igbo-odibo. The table stresses the importance of "Igbo-odibo" as a practice that should be upheld and encouraged irrespective of the class.

Out of the total number of 80 people that passed through "Igbo-odibo", we can state that people served their master from 4 to 7 years before being settled to start their own business. The researcher also found out here that the older the child, the fewer the years of service. Those people that served or learned businesses in less than 3 years are mainly from rich families or are holders of higher education school diplomas.

The importance of business learning strategy cannot be overemphasized as the proof is shown in the above table that approximately 82.5% agreed to that. 17.5% percent claimed that they are no longer in the same line of business as they were trained in.

Out of 80 people that passed through "Igbo-odibo", 69% are still in that line of business, while 31% have changed to another line of business. The reason for this is not far-fetched as so many factors can contribute to this: government policies (e.g. ban on the importation of some goods like vehicle wheels, second-hand clothes (okirika)), market saturation, diversification, relocation, opportunity alertness, huge capital to pursue a better line of business, lack of capital to continue, etc.

A greater percentage sees the need of training others in their line of business probably because they were trained too, but the researcher finds out from the questionnaires that a greater percentage that were not trained also have "Odibos",

while some that were trained did not engage themselves to “Odibo”; on the contrary, the interviews reveal that they prefer sales girls and boys to ‘Odibo’. The reasons for this are yet to be unfolded, but many complained of the insincere attitudes of ‘Odibo’.

As we can see from the Table, those from the same family and within the same community (town) dominate the table with 25% and 53%, respectively. This Table is very significant as it reveals the core essence and effect of the indoctrination into business among the Igbo. It supports the communal culture of Igbo and the reason why a particular town dominates a particular line of business among the Igbo.

79% were settled, while 20% were not settled. The researcher did not actually proceed to find the reasons for this, but it is obvious that problems of different sort, bankruptcy, impatience, or even sudden death could contribute to this.

Out of the 60 respondents’ answers, who claimed to have been settled by their master/mistress, we can deduce that the normal settlement conditions involve a combination of shop and cash for the beginners. Some were actually subsidizing or monetizing the shop, hence settling the servant with a huge amount of money. Settling a servant with goods only, as we can see from the table, is not a good method.

Test of Hypotheses

H₀₁: *Correlation between “Igba Odibo”, relationship marketing and business networking*

| | “Igba-odibo” | Relationship marketing and Networking |
|---------------------------------------|--------------|---------------------------------------|
| “Igba-odibo” Pearson Correlation | 1 | .975” .000 |
| Sig. (2-tailed) | 107 | 107 |
| Pearson Correlation | .975” | 1 |
| Relationship marketing and Networking | .000 | |
| Sig. (2-tailed) | 107 | 107 |

**• Correlation is significant at the 0.01 level (2-tailed).

Source: research survey, 2015

From the above Pearson correlation table, the correlation coefficient represented by (r**) ranges between -1 and +1 and the closer the r value to +1, the stronger the relationship between the variables of the study. As evidenced from the above table, the results indicate that a significant positive relationship exists between Igba-odibo, business, and customer networking (r =0.975, p <

0.01). Hence, the null hypothesis is rejected, while the alternative hypothesis that “Igba-odibo” has a positive correlation with customer relationship and business networking is hereby accepted. This result, therefore, means that Igba-odibo has a strong or significant positive relationship with business and customer networking. By interpretation, this result is an indication that “Igba Odibo” helps an entrepreneur to start his own business not as a learner as he will be already familiar with the customers of the business, have their phone numbers and addresses. The indoctrination through Igba-odibo allows them to be well-grounded in the business even before commencing their own business. By then, they will have mastered their business to such an extent that they will be already familiar with every aspect of it, be able to do repairs, remodel their goods. They know the in-depth intricacies of the various businesses they are involved in, and this helps them in networking.

The Igbo entrepreneurs are very good at customer relationship. This helps the entrepreneur to know where to buy goods at a cheaper rate and how to sell them. The Igba-odibo exposes one to having thoroughly understood their line of business and know it like the back of their hand.

H₀₂: *“Igba-odibo” does not have a positive impact on the profitability of the business under study – Correlations*

| | “Igba-odibo” | Profitability |
|----------------------------------|--------------|---------------|
| “Igba-odibo” Pearson Correlation | 1 | .960(**) |
| Sig. (2-tailed) | | .000 |
| N | 107 | 107 |
| Pearson Correlation | | |
| profitability | .960(**) | 1 |
| Sig. (2-tailed) | .000 | |
| N | 107 | 107 |

** Correlation is significant at the 0.01 level (2-tailed).

The table above is the Pearson correlation matrix of the impact “Igba-odibo” has on business/opportunity expansions. The results of the multiple correlation matrix show that “Igba-odibo” has a positive relationship on the profitability of the business under study (r=.96). The computed correlation coefficient of the relationship between “Igba-odibo” and profitability (r=.96) is greater than the table value of r=.195 with 105 degrees of freedom (df=n-2) at alpha level for a two-tailed test (r=.96, p<.05). The decision rule is to accept the null hypothesis if the computed r is less than the table r, otherwise reject the null hypothesis.

Since the computed $r=.96$ is greater than the table value of $.195$, reject the null hypothesis. Therefore, we conclude that “Igba-odibo” has a positive impact on business profitability as exemplified ($r=.96, p<.05$).

H₀₃: “Igba-odibo” practice does not aid in the provision of capital/fund for the business under study

| Variable | Mean | SD | Df | r-cal | P-value |
|---|-------|------|----|-------|---------|
| “Igba-odibo” | 12.62 | 1.95 | | | |
| Increase sales volume and market shares | 1635. | 1.98 | 98 | 0.254 | .011 |

2015 $P<0.05$, r cal 0.0254 , p -value 0.011 , thus it is significant

Source: research survey

Interpretation

Since the r calculated of 0.254 is greater than the p -value of 0.011 at the degree of freedom of 98 and at a significance level of 0.05 , the null hypothesis is rejected, and thus it can be concluded that “Igba-odibo” aids in the provision of capital/fund for the business under study.

Recommendations

The basic aim of this study was to investigate the relationship between business strategy among Igbo entrepreneurs and business success in Nigeria. This paper tries to relate the business strategies of indigenous Igbo entrepreneurs and their success. The research is descriptive and employs mainly primary data and few secondary data with unstructured interviews with some entrepreneurs and elders of the Igbo community.

These simple Igbo business strategies are not hidden and they are the major essence of indigenous Igbo entrepreneurs’ success in business. The Igbo culture is also a bedrock for achieving these business strategies as Igbo upholds and cherishes their tradition known as “Omenoni”, or “dominant”. The spirit of kinship and brotherhood has also made it possible for these business strategies to be handed down from one generation to another besides being open to every family, irrespective of class, through the process of “Igba-odibo”. Other tribes are therefore advised to perhaps emulate this aspect of the Igbo culture in order to tackle unemployment, which is one of the greatest challenges our country is facing today.

The Igbo should encourage their children to complete their higher education before embarking on learning any of this strategy. As a matter of fact, the

biological aspect of this research is not discussed in full in order not to deviate from the main issue, but it is also worth discussing as the data collected on the age and educational background of these entrepreneurs indicates that children leave their family and education at a tender age because of “Igbo-odibo” – the questionnaires revealed that between the ages of 30 and 45 these entrepreneurs already have control of a flourishing business, without having their studies completed, while they also indicate that quite a large number of them are primary- and secondary-school drop-outs.

The issue of family successors is another area that should be encourage among the Igbo entrepreneurs. So many families interviewed have many “Odibos” who takes care of their businesses without any of their children involved in the business. Parents that engaged in entrepreneurial business should encourage their children to acquire entrepreneurial orientation as this would assist in family businesses succession.

Presently, the federal government, through its agencies like TETFUND, is seriously encouraging entrepreneurs in different levels of education to get people to embrace self-employment. The Igbo should not overlook what they have. Some of these children end up moving from one street to another in search of white collar jobs, whereas a settled “Odibo” is already employing other people for his business. In such a case, when the founder of the family business is no more, the business dies with the person.

Lack of an experienced management team: only very few Igbo entrepreneurs employ outsiders as managers in their business – they are their own manager, cashier, sales person, virtually, a utility man. Perhaps they do not realize the importance of management in their business.

The government should encourage and strongly support these entrepreneurs by providing loans and adequate infrastructure that aids business. If our government, for instance, sponsored some of this Aba-made products, there would be no need to import them because these Aba-made products would compete with some of the imported products when their prices are affordable to common Nigerians, and we could embark on exporting them too in large quantities to other countries, thereby earning exchange currency and increasing the GDP of the country.

Entrepreneurship education should be enriched in the school curricula from post-primary to tertiary institutions.

Vocational training centres should be created in rural and semi-urban areas to train villagers in entrepreneurship development. This will enable the youths and women who are not able to provide a livelihood; and this training must be at a low cost and delivered using methods based on life skills and adopting the easiest communication means. The various tiers of government should be able to fund such training.

Entrepreneurship education should be included in the education policy of many countries in Africa to serve as a link between technology, the industries, and those who want to establish a business on their own.

Conclusion

Igbo people have been known since ancient times for their inclination towards business. They are believed to be the backbone of business in Nigeria; as a result, today they are referred to as the Japanese and Chinese of Africa. The practice of the right business strategies is the secret of business successes among Igbo entrepreneurs. These practices are embedded in the communal culture of Igbo. Therefore, through the small and medium enterprises, the indigenous Igbo entrepreneurs play a major role in the Nigerian economic development, pioneering innovation, new methods, and ideals. We may conclude that quality and access in entrepreneurial education will reduce the incidence rate of unemployment, poverty, and bring the necessary development to Nigeria and other developing worlds. Also, it is concluded that with much investment in entrepreneurial education Nigeria can achieve Millennium Development Goals and promote inclusive growth.

The government should strengthen its National Youth Development Policies to focus on empowering the youths at the grassroots level by providing entrepreneurship education through vocational education training. Young people should be encouraged to take entrepreneurial development courses in tertiary institutions since this is the only education which gives its graduates the marketable skills to be self-reliant and become employers.

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Regression Analysis of Influencing Factors of Public Education in Hungary

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Abstract. The education system in Hungary has been greatly criticized in the last decades regarding the standards and quality of education and its ignorance towards labour market demands. The present study focuses on factors affecting the quality of education. The first part of the research analyses the relationship between public education and competitiveness in Hungary. In the second part of the research, with the help of the linear regression model and of other statistical and mathematical tools, we tried to identify those explanatory variables which influence and mostly determine the quality of public education.

The quality of education was chosen as the dependent variable of the model. Based on the data of competency measurements in Hungary, we were able to identify two explanatory variables that would also highly satisfy the goodness of fit of the linear regression model. The educational funding rates (GDP-proportionate educational spending rate) and the number of students learning English language turned out to be the two significant explanatory variables. Results show that increasing the GDP-proportionate educational spending rate with only one per cent increases the average value of competency measures with 10.9571 points without any other variable changes. Also increasing the number of English language learners with one person increases the average value with 0.000177253 points with other variables remaining the same.

Keywords: quality of education, PISA, educational spending, competitiveness in Hungary, regression analysis

JEL Classifications: C31, H31, H52, I21, I22, I25

1. Introduction

Studies carried out by several international institutions regarding the state and quality of education (such as the annually published *Education at a glance* by OECD, the triennial international survey *Programme for International Student Assessment* by PISA, or the results of the annual analysis of competitiveness (education indicators) carried out by the IMD, WEF, or World Bank) show that those countries which consider public education and education in general as an important investment and have spent large amounts of money on education for decades also achieve a higher level of economic output. According to this, it can be assumed that the quality and standard of education highly influence economic performance. Thus, the hypothesis of the present study derives from the analysis of this relationship.

High-quality public education prepares students with good capabilities for higher education and, on the other hand, high-quality vocational and professional schools release qualified workforce on the labour market. A well-functioning education system also tries to adjust and adapt to the changes on the labour market. However, these goals can only be achieved successfully and effectively if students become capable of adapting to new technical developments and can learn to use these new possibilities. This type of student ability or capability is called competence (Madaras, 2015). Besides having an adequate knowledge in their field, students also need to have the necessary competencies in order to be able to face and adapt to the changing demands and challenges of the labour market.

Therefore, the financing of public education is a very important area.

This area was analysed e.g. by Paola Azar Dufrechou for the upper-middle-income Latin American countries (Dufrechou, 2016). She has made a comparison between these Latin American countries and the high-income countries in the period of 1990–2010. Results of this research “show a minor role of inefficiency since 1990 and different efficiency profiles depending on the country’s education outlays” (Dufrechou, 2016, p. 188). This statement is very similar to the results of our research.

Cătălin Dragomirescu-Găină also researches this area, as his article “An empirical inquiry into the determinants of public education spending in Europe” (Dragomirescu-Găină, 2015) reads in its Introduction as follows: “I start from these considerations when empirically analysing a panel dataset that spans over the 2000–2012 time period and refers to current European Union (EU) member states. In this data environment, I intend to highlight some common determinants driving the dynamics of public education spending and to draw insights with respect to their policy importance.” His results are also similar to our results.

2. The Role of Hungary's Competitiveness in Public Education

Analysing Hungary's competitiveness, there are three surveys carried out by international organizations, which need to be taken into account: the IMD World Competitiveness Yearbook, the World Economic Forum Global Competitiveness Index, and the World Bank's Ease of Doing Business reports. Based on these surveys, we tried to find out to what extent public education affects Hungary's competitiveness.

The IMD World Competitiveness Yearbook released in 2014 (IMD, 2014) ranks 60 countries according to their competitiveness based on 327 criteria. 2/3 of the criteria are based on hard statistical data, while 1/3 is based on surveys. The complete ranking system was set up taking into account economic performance, business efficiency, infrastructure, and government efficiency. The result from 2014 shows that all neighbouring countries around Hungary are ranked higher as far as competitiveness is concerned. Finland and Austria are ahead of Hungary in all aspects: their PISA results are better, their educational spending rates are higher – both GDP proportionate and costs per capita.

Another evaluation aspect was the report of the WEF World Economic Forum's Global Competitiveness Index. This report published in 2014 analysed 144 countries based on statistical data and asking over ten thousand CEOs. The country rankings are set up according to 111 indicators. Indicators were grouped into 12 competitiveness factors out of which 5 related to macroeconomics, 5 involving factors related to economic efficiency enhancement, and 2 factors related to innovation and business. Education is present in two groups of factors in the Global Competitiveness Index:

- basic education within the factor-driven economy,
- higher education within the efficiency-driven economy.

According to the WEF survey, Hungary's results are fluctuating. This survey also places Finland and Austria way before Hungary. The Europe 2020 Competitiveness Report 2014 ranks Hungary 24th out of the 28 EU member countries. In this ranking, Hungary lacks behind especially in the fields of education, finance, and environmental protection. The report puts a special emphasis on the weakness of the education system (WEF EU, 2014).

The third major analysis on competitiveness carried out by the World Bank in 2014 ranks 189 countries and regions. Regulations of enterprises and the quality of these regulations were evaluated based on quantitative indicators. This latter survey places Hungary on the 54th place (TWB, 2015).

It is not possible to establish a clear overall ranking based on the three ranking systems; therefore, in what follows, the study will focus only on the educational indicators affecting Hungary's competitiveness.

WEF and IMD used a total of 13 indicators to analyse the efficiency of Hungarian education. Out of these, 8 were used by the IMD and 5 by the WEF. The total of 13 indicators is classified as follows: 2 strengths and 11 weaknesses. The results based on these indicators suggest that there is a need for improvement in the overall quality of public education as well as for the harmonization between labour market demands and the educational system.

Nearly half of the 13 indicators presented in *Table 1* refer to the higher education. The total education spending rate together with IT competency are presented as strengths, and they influence both public education and higher education. In the process of measuring competitiveness, those indicators that are connected to educational quality and are also sustained by statistical data are considered as factors influencing the quality of public education (Madaras, 2015).

Table 1. *Educational indicators influencing Hungary's competitiveness*

| Name of indicator | Type | Source | Strengths/ weaknesses | Importance |
|--|------------------|---------------|----------------------------------|-------------------|
| 1) Brain drain | survey | WEF | weakness | critical |
| 2) Quality of the education system | survey | WEF | weakness | important |
| 3) Quality of management schools | survey | WEF | weakness | important |
| 4) Proportion of graduates in engineering and natural sciences | statistical data | IMD | weakness | important |
| 5) Labour force training | survey | IMD | weakness | important |
| 6) Quality of language knowledge | survey | IMD | weakness | important |
| 7) Quality of basic education | survey | WEF | weakness | important |
| 8) Brain drain | survey | IMD | weakness | important |
| 9) Access to local research and training services | survey | WEF | weakness | important |
| 10) Financial knowledge | survey | IMD | weakness | important |
| 11) English language competency | statistical data | IMD | weakness | important |
| 12) IT competency | survey | IMD | strength | important |
| 13) Total educational spending rate | statistical data | IMD | strength | important |

Source: NGM, 2011. 28p.

The actors that influence the quality of education within the model are the following:

1) The quality of the education system and of the undergraduate education – outcome variable, the results of the competency measures are the dependent variables.

2) Total educational spending rate – explanatory variable; it includes the GDP-proportionate educational spending rate, the educational spending per student, and the proportion of investments from the expenditures allocated to the educational budget.

3) Quality of language knowledge and English language competency – two separate explanatory variables: the number of students learning a foreign language and English language.

4) IT competency – access to information technology and use of computers.

5) The model includes two other explanatory variables that refer to teachers.

The model involves several explanatory variables that are not normally used in competitiveness measures; however, they can affect the quality of education (Madaras, 2015).

3. Linear Regression Model That Determines the Quality of Education

Experts in education use competency measurements to best identify the quality of education. By using this model, it is possible to analyse the quality of public education as well as the factors which affect it the most. First, we analyse how education affects competitiveness. Then, a linear regression model is built upon those educational indicators which influence competitiveness (explanatory variables), and thus determine the quality of education.

The outcome variable is the quality of education which is based on data published in the 2009 National Report of the National Assessment of Basic Competencies. Values of the dependent variable were given by the average point calculated from the reading comprehension and mathematics assessment results of 6-, 8-, and 10-graders.

The set of explanatory variables used in the present analysis can be found in *Table 2* below and includes educational factors influencing Hungary's competitiveness. All data (that could be found in statistical educational yearbooks) that is related to educational indicators affecting competitiveness is considered to be an explanatory variable. Explanatory variables were labelled according to the database of the Statistical Yearbook of Education (Madaras, 2015).

Table 2. *Explanatory variables used in the model*

| Name of explanatory variable | Unit of measure | Observation |
|---|------------------------|-----------------------------|
| ECONOMIC INDICATORS | | |
| GDP-proportionate educational spending | Per cent | Of total public education |
| Proportion of investments from the expenditures allocated to the educational budget | Per cent | |
| Educational spending rate per student | HUF | Average of public education |
| ACCESS TO IT TECHNOLOGY, USE OF COMPUTERS | | |
| Number of institutions equipped with computers | PCs | Public education in total |
| Number of institutions with Internet access | | |
| Number of computers | | |
| Number of computers with Internet access | | |
| Number of students who use computers | capita | |
| DATA REFERRING TO STUDENTS | | |
| Number of students per class/group | | Average public education |
| Number of classrooms, seats | Capita | Public education in total |
| Number of students | | |
| Number of students learning English | | |
| Number of students learning a foreign language | | |
| DATA REFERRING TO TEACHERS | | |
| Number of students per teacher | | Average public education |
| Number of full-time teachers | Capita | Public education in total |
| Number of teachers using Internet as an educational resource | | |
| Number of teachers with IT knowledge, expertise | | |

Source: (Madaras, 2015)

4. The Model

Selecting Variables

The first step in building up the linear regression model was to search and identify those variables which best explain the average score of the competency assessment that reflects the quality of education. It was necessary to choose the best variables because the number of observations must exceed the number of explanatory variables by three times at least. Taking this into consideration, it is advisable to have two explanatory variables for the 6 observations (Hunyadi, Vita, 2008). As a next step, the aim was to build up a model which explains the outcome variable with logically meaningful variables, preferably with statistically significant results.

To achieve the aims mentioned above, it was necessary to identify the statistically most significant explanatory variable. The variable was selected using a partial t-test, where the null hypothesis was zero, $\beta = 0$. Accepting the null hypothesis means that the regression coefficient of the given explanatory variable is equal to zero, and thus it has no significant role in the regression equation – so, it does not explain the outcome variable. The null hypothesis can be accepted if there is a high, close to 1, p-value, but if along the usual (5, or 1%) significance levels the values are under 0.05 or 0.01 it can be rejected (Hunyadi, Vita, 2008).

Table 3 below shows the t-test results, according to which the number of foreign language learners had the lowest empirical p-value (0.0544), which means that this variable is the most significant in explaining the quality of education. According to these findings, the linear correlation coefficient value 0.803 means that the higher the number of students who learn a foreign language, the better the score students achieve on competency assessments.

Table 3. Empirical p-values (low to high) of partial t-tests in selecting explanatory variables

| Variable | p-value |
|--|---------|
| Number of students learning a foreign language | 0.0544 |
| Number of computers | 0.2028 |
| Number of computers with Internet access | 0.2772 |
| Number of students who use computers | 0.3765 |
| Number of teachers using Internet as an educational resource | 0.4075 |

1 The variables were tested one by one in a linear regression model, where the single explanatory variable was given by all the variables listed in Table 2.

| Variable | p-value |
|---|----------------|
| Educational spending rate per student | 0.4084 |
| GDP-proportionate educational spending | 0.4905 |
| Number of students | 0.4943 |
| Number of full-time teachers | 0.5279 |
| Number of students learning English | 0.5313 |
| Number of teachers with IT knowledge, expertise | 0.5389 |
| Number of institutions equipped with computers | 0.6050 |
| Proportion of investments from the expenditures allocated to the educational budget | 0.6146 |
| Number of students per class/group | 0.7812 |
| Number of students per teacher | 0.8640 |
| Number of institutions with Internet access | 0.9324 |

Source: calculations carried out in Gretl (Madaras, 2015)

Expanding the model with additional variables presented a problem because if the new variable was significant then a strong multicollinearity appeared in the model. This means that there is a high correlation among two or more explanatory variables, so they predict each other as well, not just the outcome variable. This phenomenon makes it difficult to interpret the effects of the explanatory variables and of the entire model. Therefore, it is advisable to avoid such phenomena when selecting variables (Hunyadi, Vita, 2008). If the additional variable did not cause strong multicollinearity within the model, then it was not significant on the usual levels.

To avoid such problems as presented above, to arrive at a model which has the best explanatory power, and because the R^2 indicator referring only to the number of foreign language learners was just 0.64, the selection process continued with the next variable (based on p-value): the number of computers. The 0.64 value of the R^2 indicator means that the explanatory variable reduces uncertainty regarding the outcome variable with 64% compared to the situation when we do not have any explanatory variable and we estimate from the average (Hunyadi, Vita, 2008).

The number of computers and the next four variables (number of computers with Internet access, number of students who use computers, number of teachers using Internet as an educational resource, educational spending rate per student) are all closely related to the financing of education, as it could be intuitively assumed.

Selecting the GDP-proportionate educational spending as explanatory variable in the model, the following variable – which fulfilled the requirements and improved the model’s explanatory power with a low level of multicollinearity – was the number of students learning English language (Madaras, 2015).

Testing the Model

In order to test the accuracy of the model, three information criteria were used, namely, the Schwarz, Akaike, and Hannan – Quinn. In the linear regression model, predicting the quality of education by the GDP-proportionate educational spending and by the number of students learning English language shows us that the new, additional variable improved the values of all three information criteria.

Figure 1 presents the beta parameters and regression equation resulted by the OLS estimator.

| | | | | | |
|--|--------------------|--------------------|----------------|----------------|-----|
| Null hypothesis: the regression parameter is zero for Students_learning_ | | | | | |
| English_ | | | | | |
| Test statistic: $F(1, 3) = 33,7395$, p-value 0,0101569 | | | | | |
| Adding variables improved 3 of 3 model selection statistics. | | | | | |
| Model 1: OLS, using observations 1–6 | | | | | |
| Dependent variable: <i>Kompetencia</i> | | | | | |
| | <i>Coefficient</i> | <i>Std. Error</i> | <i>t-ratio</i> | <i>p-value</i> | |
| Const | 330.066 | 27.8338 | 11.8584 | 0.00129 | *** |
| GDP_proportionate_ | 10.9571 | 1.86235 | 5.8835 | 0.00980 | *** |
| educa-tional spending | | | | | |
| Students_learning_ | 0.000177253 | 3.05157e-05 | 5.8086 | 0.01016 | ** |
| English | | | | | |
| Mean dependent var | 499.8889 | S.D. dependent var | | 2.342047 | |
| Sum squared resid | 1.957996 | S.E. of regression | | 0.807877 | |
| R-squared | 0.928608 | Adjusted R-squared | | 0.881013 | |
| F(2, 3) | 19.51071 | P-value(F) | | 0.019075 | |
| Log-likelihood | -5.154118 | Akaike criterion | | 16.30824 | |
| Schwarz criterion | 15.68351 | Hannan–Quinn | | 13.80742 | |

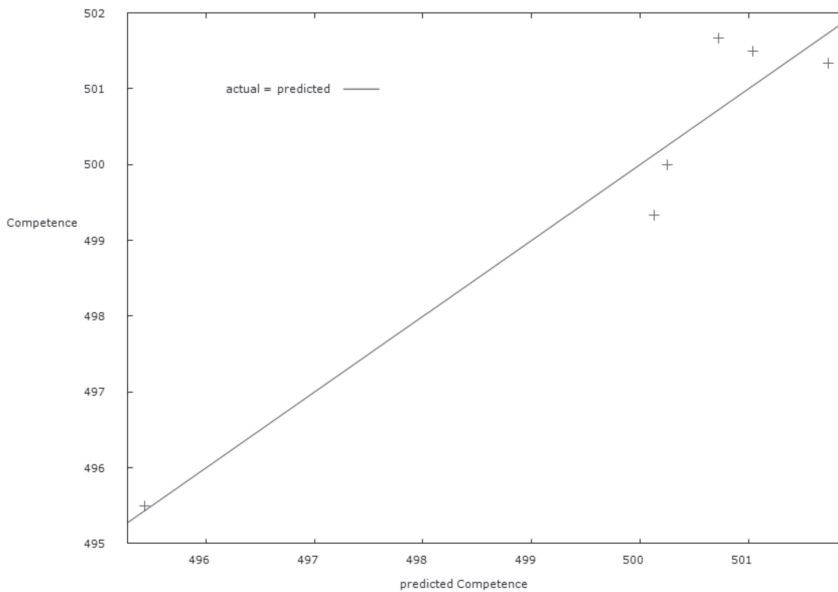
Source: calculations carried out in Gretl (Madaras, 2015)

Figure 1. *The results of adding the variable ‘the number of students learning English’ to the model including only ‘the GDP-proportionate educational spending’ variable and the main properties of the resulting linear regression model*

Based on the p-values of partial t-tests, it can be inferred that the GDP-proportionate educational spending is significant at a level of 1%, while the number of students learning English is significant at a level of 5%. This is highlighted by the stars near the p-values (below 10% – 1 star, below 5% – 2 stars, below 1% – 3 stars). The p-value of the overall F-test (P-value (F)) is 0.0191,

which means that the null hypothesis $\beta_1 = \beta_2 = 0$ can be rejected; so, the model contains at least one significant variable (Hunyadi, Vita, 2008). The value of the R^2 indicator is 0.9286, which means that explanatory variables reduce uncertainty regarding the outcome variable with 92.86% compared to the situation when we do not have any explanatory variables and we estimate from the average (Madaras, 2015).

The accuracy of the model is shown in *Figure 2*: the straight diagonal line shows the situation when the estimated and real values are equal, the dots show the estimated average scores, which are definitely close to the line representing the perfect estimates.



Source: calculations carried out in Gretl (Madaras, 2015)

Figure 2. Comparing the real and estimated values of the outcome variable

Specification Tests for the Model

The model was tested by the Ramsey Regression Equation Specification Error Test, which tests whether non-linear combinations of the fitted values help explain the outcome variable. Running the test, the p-values of the F-tests were close to 1 (0.814595, 0.815148), and thus the null hypothesis was acceptable, meaning that the model is well-specified (Madaras, 2015).

Analysing Multicollinearity

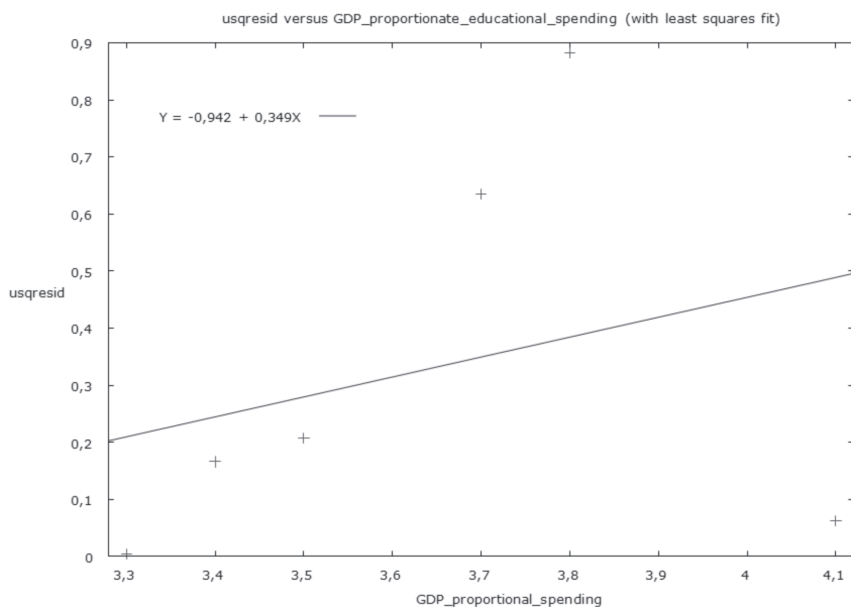
The accuracy of the model depends also on the collinearity between the explanatory variables. The severity of multicollinearity was tested by the VIF indicator. The VIF indicator provides an index that measures how much the variance of an estimated regression coefficient is increased because of collinearity. VIF values between 1 and 2 show a weak, those between 2 and 5 a strong, and those above 5 a very strong, harmful multicollinearity (Hunyadi, Vita, 2008).

Carrying out calculations in Gretl, the VIF value of both explanatory variables was 2.303, which shows a value slightly above weak multicollinearity (GDP_proportionate_educational_spending – 2.303; Students_learning_English – 2.303). Besides the new explanatory variables added to the GDP-proportionate educational spending rate, the number of students learning English was the variable which showed the lowest VIF value, which is far from the extreme 10.0 value, which would suggest a collinearity problem. Therefore, it can be said that we were able to find a relatively good pair of explanatory variables (Madaras, 2015).

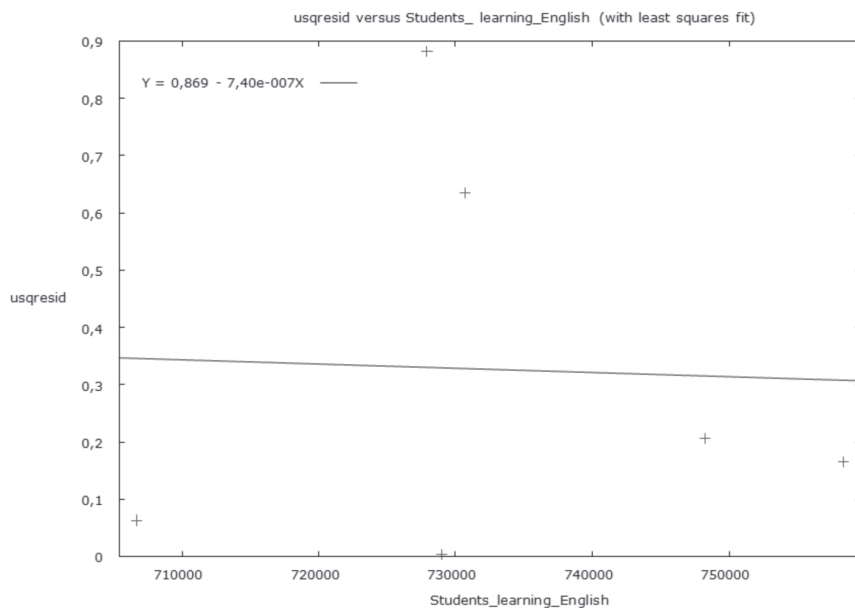
Testing Heteroscedasticity

Heteroscedasticity refers to the circumstance in which the variability of a variable is unequal across the range of values of a second variable that predicts it (Hunyadi, Vita, 2008). This worsens the standard errors of the betas; thus, t-tests and F-tests will be distorted showing that there is a better linear estimation than the OLS for the regression (Hunyadi, Vita, 2008).

To test heteroscedasticity, first, a graphic, scatter plot was used to see how the plot of residuals changes according to the observed variables. The results (*Figure 3*) indicate that due to the low number of observed variables it is difficult to decide whether the residuals have constant variance if the values of explanatory variables are changed. Therefore, it was necessary to test the hypothesis.



GDP-proportionate educational spending variable



Number of students learning English language variable

Source: calculations carried out in Gretl (Madaras, 2015)

Figure 3. Residual plot values in accordance with each explanatory variable

Homoscedasticity within the model was tested with the Breusch-Pagan test and the White-test (Hunyadi, Vita, 2008). Results of both tests indicate that the null hypothesis of homoscedasticity can be accepted.

| Breusch-Pagan test for heteroscedasticity | | | | |
|---|-------------|-------------|---------|---------|
| OLS, using observations 1–6 | | | | |
| Dependent variable: scaled uhat^2 | | | | |
| | coefficient | std. error | t-ratio | p-value |
| Const | -25.5259 | 43.8736 | -0.5818 | 0.6015 |
| GDP_proportionate_educational_spending | 2.22422 | 2.93556 | 0.7577 | 0.5037 |
| Students_learning_English | 2.51465e-05 | 4.81010e-05 | 0.5228 | 0.6373 |

Explained sum of squares = 0.939236

Test statistic: LM = 0.469618,

with p-value = P(Chi-square(2) > 0.469618) = 0.790722

| White's test for heteroscedasticity | | | | |
|--|---------------|-------------|---------|---------|
| OLS, using observations 1–6 | | | | |
| Dependent variable: uhat^2 | | | | |
| | coefficient | std. error | t-ratio | p-value |
| Const | -305.679 | 1606.72 | -0.1903 | 0.8803 |
| GDP_proportionate_educational_spending | 20.0571 | 108.107 | 0.1855 | 0.8832 |
| Students_learning_English | 0.000726960 | 0.00481308 | 0.1510 | 0.9046 |
| sq_GDP_proportionate_educational_spending_ | -2.61757 | 15.2897 | -0.1712 | 0.8921 |
| sq_students_learning_English | -4.92949e-010 | 3.22560e-09 | -0.1528 | 0.9035 |

Unadjusted R-squared = 0.855579

Test statistic: TR^2 = 5.133474,

with p-value = P(Chi-square(4) > 5.133474) = 0.273874

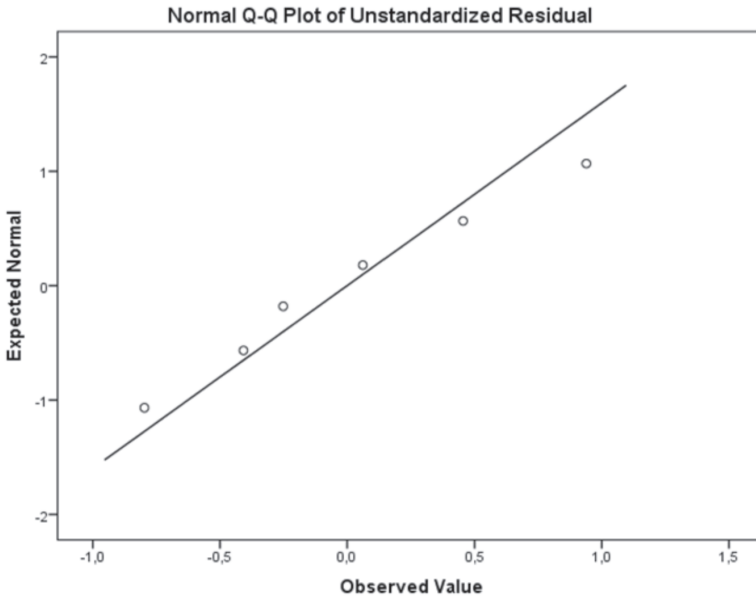
Source: calculations carried out in Gretl (Madaras, 2015)

Figure 4. Testing heteroscedasticity by Breusch-Pagan test and White test

The p-values in bold are close to 1 or are greater than the usual 0.1, which suggests that the null hypothesis can be accepted, and thus there is a constant variance of residuals in the model.

Testing Residual Normality

Residual normality is of utmost importance because otherwise the tests related to explanatory variable parameters would be distorted, so it would not be advisable to use them (Hunyadi, Vita, 2008). In order to test residual normality, the Q-Q normality plot and normality tests were used. Both methods (plot and test) confirmed residual normality. These tests were performed using SPSS because due to the small number of samples the Gretl was not suitable for these measures.



Source: calculations carried out in SPSS (Madaras, 2015)

Figure 5. Residuals and the normal Q-Q plot

Normality is confirmed if the points lie on or close to the straight diagonal line. Thus, according to *Figure 5*, it can be concluded that our data is normally distributed although there is a small number of samples. In the case of small samples, the Q-Q plot does not give appropriate results; therefore, the Shapiro-Wilk test was also performed. The null hypothesis of this test is normality (Hunyadi, Vita, 2008); thus, it can help to better identify normality.

Table 4. Shapiro-Wilk test on residual normality

| Test of normality | Shapiro-Wilk | | |
|-------------------------|--------------|----|------|
| | Statistic | df | Sig. |
| Unstandardized Residual | .982 | 6 | .959 |

Source: calculations carried out in SPSS (Madaras, 2015)

The p-value in the significance column of *Table 4* (which is close to 1) lets the null hypothesis to be accepted, which means that the Shapiro-Wilk test confirmed the Q-Q plot, according to which residuals are normally distributed.

5. Interpretation and Use of the Model

All conditions for the application of the linear regression model have been fulfilled.

| Model 1: OLS, using observations 1–6 Dependent variable: <i>Kompetencia</i> | | | | |
|--|--------------------|--------------------|----------------|----------------|
| | <i>Coefficient</i> | <i>Std. Error</i> | <i>t-ratio</i> | <i>p-value</i> |
| Const | 330.066 | 27.8338 | 11.8584 | 0.00129*** |
| GDP_proportionate educaional_spending | 10.9571 | 1.86235 | 5.8835 | 0.00980*** |
| Students_learning_English | 0.000177253 | 3.05157e-05 | 5.8086 | 0.01016** |
| Mean dependent var | 499.8889 | S.D. dependent var | 2.342047 | |
| Sum squared resid | 1.957996 | S.E. of regression | 0.807877 | |
| R-squared | 0.928608 | Adjusted R-squared | 0.881013 | |
| F(2, 3) | 19.51071 | P-value(F) | 0.019075 | |
| Log-likelihood | -5.154118 | Akaike criterion | 16.30824 | |
| Schwarz criterion | 15.68351 | Hannan–Quinn | 13.80742 | |

Source: calculations carried out in Gretl (Madaras, 2015)

Figure 6. *The linear regression model and its main properties*

According to Figure 6, the regression equation is as follows:

$$\text{Quality of education (Competency)} = 330.066 + 10.9571X_{\text{GDP_proportionate_educational_spending}} + 0.000177253X_{\text{Students_learning_English}}$$

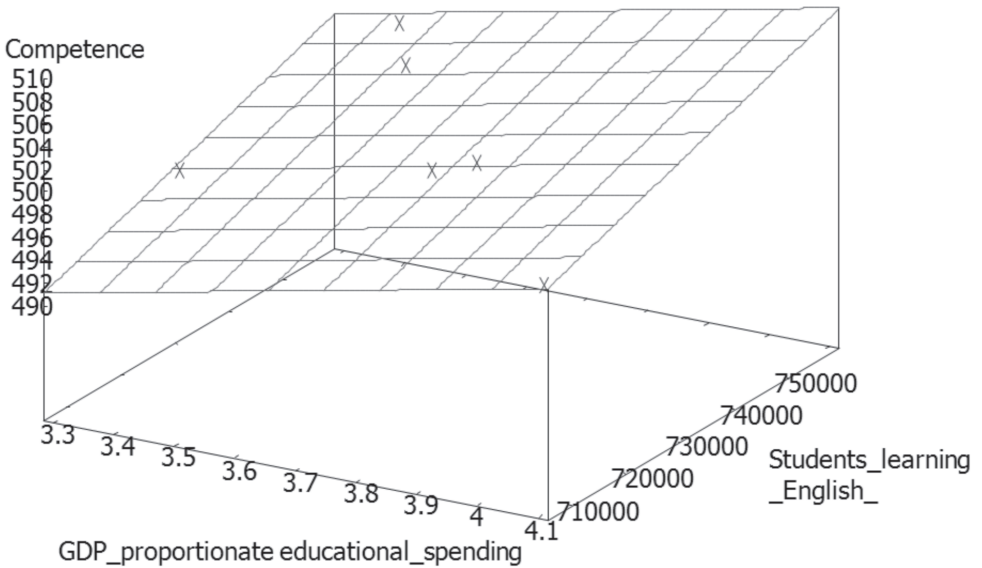
According to the interpretation of the constant in the coefficient column, if education is not financed and nobody learns English, then the average score on competency would be 330.066. The average score on competency within the examined period of time is 500. The lowest score was 480 and the highest was about 520. In case of a score of 330 the average students would not be able to understand a text or to solve simple mathematical calculations – which require minimal logic. With such a score and related competencies, students

would not be able to perform even simple vocational jobs on the labour market (Madaras, 2015).

Increasing the GDP-proportionate educational spending rate with only one per cent increases the average value of competency measures with 10.9571 points without any other variable changing. Also, increasing the number of English language learners with one person increases the average value with 0.000177253 points with other variables remaining the same. Thus, according to the model, more than 10,000 English learners can increase the average score by 1.77253.

Apart from explaining the quality of education, the model is also suitable for predictions. For example, looking at the 2011 data in Hungary, we can see that the GDP-proportionate educational spending rate was 3% and there were 746,961 English language learners; thus, the model estimates an average score of $330.066 + 10.9571 \times 3 + 0.000177253 \times 746\,961 = 495.3384$, and then, for 2010, an average score of 497.5329. Thus, in comparison to the 2009 average of 495.5, we can observe first an increase, and then a slight decrease.

With the help of the two explanatory variables, the model can be graphically visualized in 3D as a regression plane (Figure 7):



Source: calculations carried out in Gretl (Madaras, 2015)

Figure 7. Visual (graphic) representation of the linear regression model (regression plane)

6. Conclusions

In international comparison, economic success is shown by the competency assessment results and evaluations. The various competency assessments take into consideration the main factors that influence the quality of education, wherefore the study set out to identify those factors, which mostly influence or can influence quality of education. To achieve this aim, a linear regression model was built up. The outcome variable of the model is the quality of education. Based on the data and results of Hungarian national competency assessments, we were able to find two explanatory variables which highly satisfy the accuracy conditions of the linear regression model. The two significant variables identified are the GDP-proportionate educational spending rate and the number of students learning English.

The results of the present study confirm that the rate of financing education has a major effect on the quality of education. Based on the model, it can be stated that financing education affects the quality of education and the quality of education increases the state's competitiveness, and therefore there is a close relationship between a state's competitiveness and its financing policy of the education system.

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Customers' Perception regarding Assurance of Bancassurance Channel

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Abstract: Bancassurance has evolved as a strong distribution channel in India. Bancassurance means that the insurance company and the bank come together to offer insurance products from the counter of the banks to the bank's customer. The present study attempts to analyse customers' perception regarding assurance of bancassurance channel in providing insurance-related services. The study also tries to find out the impact of various demographic variables on customers' perception regarding assurance of bancassurance channel. The study finds that customers consider bancassurance channel having high assurance in providing insurance services. It is also found in the study that there is no significant association between the demographic variables considered in the study and customers' perception regarding assurance of bancassurance channel.

Keywords: bank, insurance, State Bank of India

JEL Classifications: M21, M310, M370

1. Introduction

In today's competitive marketplace, customers' perceptions are becoming important for gaining sustainable competitive advantage. Customer's perception has become an important tool for evaluating marketing strategies. People have begun to believe that the perception of customers towards the company's image and its products affects the purchasing decisions of customers.

In the case of banks, customers' perception is formed through customers' assessment of the quality of services provided by a bank and their satisfaction level with the overall service of the bank (Zeithaml and Bitner, 2003). Customers' perception with respect to the bank means the customers' overall picture of the bank, including the bank's image, expectations, external influences, service quality, etc. All interactions that occur between the customers and the bank will

ultimately affect the customers' view and image of the bank. All that customers see, hear, and experience is linked together and forms their overall perception towards the bank (Aspfors, 2010).

The banking industry has undergone rapid changes, followed by a series of fundamental developments due to liberalization and financial deregulation. These result in increasing competition among financial institutions. In this competitive scenario, banks are devising new products and formulating new business models to create and sustain competitive advantages over their competitors. One such model is 'bancassurance' (Malik, 2014).

Bancassurance is a business model that refers to the selling of insurance policies through a bank's established distribution channels (Aggrawal, 2004). It is the concept of selling insurance plans by a bank along with a complete range of banking and investment products and services (Venugopal, 2011).

In a bancassurance model, banks do not only face competition from other banks. Rather they face competition from insurance companies and individual insurance agents working with agency channels. These raise a deep concern among banks as to how they can influence their customers in order to entice and retain their customers. In such competitive marketplace, customer satisfaction is seen as a key differentiator and a key element of business strategy. Providing assurance in banking service has significant impact on customer satisfaction (Munusamy et al., 2010; Nautiyal, 2014; Selvakumar, 2015). It is well established that satisfied customers are key to long-term business success (Kristensen et al., 1992; Zeithami et al., 1996; McColl-Kennedy and Scheider, 2000).

Assurance is a means of being safe. Assurance is developed by the level of knowledge and courtesy displayed by the employees in rendering the services and their ability to instil trust and confidence in customers (Blery et al., 2009). It includes all the factors, such as communication, courtesy, and facilities, which make customers confident and sure that the service commitment is fulfilled (Nautiyal, 2014). By displaying a trustworthy behaviour on the part of the employees of financial institutions, the satisfaction level of customers can be significantly enhanced (Khan and Fasih, 2014). This also positively influences the repurchase intention of customers (Ndubisi, 2006; Ndubisi and Wah, 2005).

Reflecting on all these points, the present study attempts to investigate customers' perception regarding assurance of bancassurance channel. The influence of demographic variables on customers' perception regarding assurance is also studied.

2. Measuring Customers' Perception of Assurance regarding Bancassurance Channel

Various studies are conducted about customers' perception regarding assurance provided by banks in their services. In their study, Munusamy et al. (2010) and Nautiyal (2014) found that assurance has a positive relationship with customer satisfaction. Kaura (2013) in his study concluded that employee behaviour has a positive impact on the satisfaction of private sector bank customers in India. Siddiqui (2011), in a study conducted in Bangladesh, concluded that there was a medium to high correlation between customer satisfaction and the five dimensions of service quality: tangibility, responsiveness, reliability, assurance, and empathy.

Culiberg & Rojšek (2010) determined that assurance and empathy were the most critical factors in determining satisfaction amongst bank customers in Slovenia. Assurance has significant and positive association with customer satisfaction and customer loyalty (Khan and Fasih, 2014). Banks must consider various antecedents (tangibles, reliability, assurance, and empathy) of service quality in order to have delighted customers (Sharp & Sharp, 1997) and to enhance the bank's performance and profitability (Hackl et al., 2000; Andereson et al., 1994; Lewis, 1993). Customer loyalty is more strongly impacted by assurance than by any other dimension of service quality (Bitner, 1990). Sulieman (2013) found that assurance has an impact on the level of customer satisfaction. Among the service quality determinants, reliability, assurance, and empathy have always played a pivotal role in satisfying customers (Selvakumar, 2015). There is a significant relationship between assurance and customer loyalty (Kheng et al., 2010; Lymperopoulos et al., 2006; Ndubisi, 2006; Lymperopoulos, Chaniotakis, and Soureli, 2006; Auka et al., 2013). Assurance was found to be a significant prediction of customer satisfaction (Ndubisi, 2006). Tangibility, responsibility, reliability, and assurance were more significant in contributing to customer satisfaction, while empathy was the least significant (Lau et al., 2013). Mengi (2009) found that responsiveness and assurance are more important. Lo, Osman, Ramayah, and Rahim (2010) found that empathy and assurance had the highest influence on customer satisfaction in the Malaysian retail banking industry. Assurance is another factor emphasized by customers in Hong Kong. The degree of trust and confidence that customers feel about the banking services greatly depends on the service quality provided by the employees of banks (Lau et al., 2013). The study found assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence) to be a significant driver of customer loyalty (Koduah and Farley, 2016). Reliability, responsiveness, empathy, and assurance influence users' evaluation of service quality of banking services (Saghier and

Nathan, 2013). Studies by Choudhury and Singh (2015c) and Choudhury et al. (2016) found that customers have positive experiences of buying insurance from bancassurance channel. Dharmalingam et al. (2012) concluded that customers' highest expectations are towards the security and accessibility dimensions and their lowest expectations are towards the responsiveness dimension. Choudhury and Singh (2015a) studied the reliability and responsiveness of the bancassurance channel (Choudhury and Singh, 2015b). Javadi et al. (2012) stated that assurance and reliability seems to be the most important dimensions in private banks. Muyeed (2012) in his study aimed at evaluating the service quality in retail banking in the developing countries in general and in Bangladesh. The results indicate that customers' perception were highest regarding the promptness and accuracy in transactions, followed by the safety of customers' investments and keeping the confidentiality of accounts and transactions. Heryanto (2011) concluded that assurance shows the slightest shortfall when compared with customer expectation. Assurance has a significant contribution in boosting the satisfaction level of the bank customers of Pakistan (Malik et al., 2011). Customers are satisfied with the security aspects of SBI Coimbatore (Santhiyavalli, 2011).

In the case of life insurance services, the priority areas of service instrument with assurance are the best predictor – customers perceive assurance (with a relative weight of 36%) as the most important dimension of overall expectations of service quality (Siddiqui and Sharma, 2010). Putting the customer first and exhibiting trust and integrity were found to be essential in selling insurances (Slattery, 1989). In their study, Singh and Kaur (2011) reveal that responsiveness, tangibles, services innovation, reliability and accessibility, assurance, pricing and other facilities, problem-solving capability, and convenient working hours are the main determinants of customer satisfaction in insurance industry as perceived by the customers. A complete peace of mind after getting insured from the particular company is considered to be the most important factor influencing customers' perception of the life insurance industry (Anjor et al., 2014). The four major factors which influence customer perception of service quality are responsiveness and assurance, convenience, tangibles, and empathy (Singh et al., 2014).

3. Objectives of the Study

The study has the following objectives:

- i. To find out customers' perception regarding assurance of bancassurance channel.
- ii. To study the influence of demographic variables on customers' perception of assurance of bancassurance channel.

4. Hypothesis

The hypothesis considered for the study is as follows:

There is no significant association between the demographic profile and customers' perception of assurance of bancassurance channel.

5. Research Methods

The study is conducted using the following research methodology:

5.1 Universe of the Study

The universe of the study consists of all those customers of 37 branches of the State Bank of India, Guwahati, who have received life-insurance-related services through the different branches of the State Bank of India. The total number of such customers on 11th March 2013 was 3,315.

5.2. Sampling Unit and Sample Size

Using random sampling at 95% confidence level and 5% confidence interval, a sample of 345 customers is obtained. The sampling unit is the customer of the bank who has previously bought a life insurance product from the bank.

5.3. Data Collection

The study is mainly based on primary data. The tool of "structured questionnaire" is used to collect the necessary information relevant for the study. For secondary data, official reports and records, journals, newspapers, and magazines are accessed.

5.4. Development of the Questionnaire

The questionnaire is developed for collecting primary data from the bank customers who have previously bought insurance policy from the bank. The questionnaire was designed to measure the perception of the customers regarding assurance of bancassurance channel. The variables considered to measure assurance dimension were converted into statements, and respondents were asked to give their opinion on those statements on a 5-point scale. There were five numbers of statements measuring customers' perception regarding assurance of bancassurance channel. Thus, the responses regarding these five numbers of

statements were obtained on a 5-point scale ranging from 5 to 1 for each of the selected dimension, where 5 denotes very high level of assurance and 1 indicates very low level of assurance. Some of the questions were in reverse scaling to ensure accuracy of response.

5.5. Tools for Data Analysis

To investigate the perception of customers' towards bancassurance channel, statistical tools like mean, standard deviation, value of Cronbach's alpha, Cramer V test, and multiple linear regression analysis are used.

6. Analysis and Findings

Analysis and findings of the study are given under the following paragraphs:

6.1. Reliability of the Questionnaire

The reliability of the questionnaire is tested using Cronbach's Alpha. The result of the test is given in *Table 1*.

Table 1. *Reliability Statistics*

| Cronbach's Alpha | Cronbach's Alpha based on standardized items | N of items |
|------------------|--|------------|
| .772 | .805 | 5 |

Source: Compiled from the questionnaire

The reliability of the scale was evaluated and the coefficient of Cronbach's Alpha was found to be 0.772 for 5 items (or statements) considered for the study. A high value of Cronbach's Alpha (0.772) is indicative of a high degree of reliability of the scale and it also shows that the items are highly correlated. A Cronbach's Alpha higher than 0.70 is considered to be a good measure of reliability of the scale (Nunnally, 1978).

6.2. Measuring the Perception of Customers towards Assurance of Bancassurance Channel

Table 2. *Item statistics for measuring assurance of bancassurance channel*

| Particulars | Mean | Standard deviation |
|---|------|--------------------|
| Feel free to talk about insurance problems | 3.97 | 0.496 |
| Knowledge level of sales personnel | 3.76 | 0.623 |
| Politeness of sales personnel | 3.72 | 0.642 |
| Sympathetic approach | 3.62 | 0.738 |
| Giving financial advice other than on insurance | 2.39 | 0.979 |

Source: Compiled from the questionnaire

Table 2 shows that customers perceive that assurance provided by a bancassurance channel is relatively high with respect to factors such as “feel free to talk about insurance-related problems” and is relatively low regarding factors such as “giving financial advice other than on insurance”.

Table 3. *Scale statistics for assurance of bancassurance channel*

| Mean | Variance | Standard deviation | N of items |
|-------|----------|--------------------|------------|
| 17.45 | 6.661 | 2.581 | 5 |

Source: Compiled from the questionnaire

Exhibit 1. *Interpretation table to interpret the assurance score of bancassurance channel*

| Perception score | Interpretation |
|------------------|------------------------------|
| 5–9 | Very low level of assurance |
| 9–13 | Low level of assurance |
| 13–17 | Moderate level of assurance |
| 17–21 | High level of assurance |
| 21–25 | Very high level of assurance |

Table 3 shows that the mean score is 17.45. It falls in the category of high level of assurance as presented in Exhibit 1. Thus, it can be interpreted that customers of bancassurance perceive that banks provide a high degree of assurance regarding insurance-related services. This finding is in accordance with the findings of Vikas (2011) and Rajasekar and Kumari (2014).

6.3. Impact of the Demographic Profile on Customers’ Perception regarding Assurance of Bancassurance Channel

The impact of the demographic profile of customers on their perception of assurance of bancassurance is presented under the following paragraphs.

6.3.1. Age of Customers and Customers’ Perception regarding Assurance of Bancassurance Channel

The relation between the age of customers and customers’ perception of assurance of bancassurance channel is presented in *Table 4*.

Table 4. Age of customers and customers’ perception of assurance

| | | Age | | | | | Total |
|---------------------|------------|--------------------|----------------------|----------------------|----------------------|--------------------|--------|
| | | Less than 25 years | 25 years to 35 years | 35 years to 45 years | 45 years to 55 years | More than 55 years | |
| Low assurance | Count | 0 | 1 | 1 | 2 | 0 | 4 |
| | % of total | .0% | .3% | .3% | .6% | .0% | 1.2% |
| Moderate assurance | Count | 1 | 5 | 25 | 58 | 17 | 106 |
| | % of total | .3% | 1.4% | 7.2% | 16.8% | 4.9% | 30.7% |
| High assurance | Count | 0 | 8 | 58 | 104 | 34 | 204 |
| | % of total | .0% | 2.3% | 16.8% | 30.1% | 9.9% | 59.1% |
| Very high assurance | Count | 0 | 3 | 9 | 15 | 4 | 31 |
| | % of total | .0% | .9% | 2.6% | 4.3% | 1.2% | 9.0% |
| Total | Count | 1 | 17 | 93 | 179 | 55 | 345 |
| | % of total | .3% | 4.9% | 27.0% | 51.9% | 15.9% | 100.0% |

Source: Compiled from the questionnaire

There is no significant correlation between the age of customers and their perception regarding assurance of bancassurance. This is because the Approx. Significant value of Cramer’s V test is 0.686, which is more than 0.05 (5% level of significance).

6.3.2 Gender of Customers and Their Perception regarding Assurance of Bancassurance Channel

The correlation between the gender of customers and their perception of assurance of bancassurance is outlined in *Table 5*.

Table 5: Gender of customers and their perception of assurance

| | | Gender | | Total |
|---------------------|------------|--------|--------|--------|
| | | Male | Female | |
| Low assurance | Count | 4 | 0 | 4 |
| | % of Total | 1.2% | .0% | 1.2% |
| Moderate assurance | Count | 81 | 25 | 106 |
| | % of Total | 23.5% | 7.2% | 30.7% |
| High assurance | Count | 154 | 50 | 204 |
| | % of Total | 44.6% | 14.5% | 59.1% |
| Very high assurance | Count | 21 | 10 | 31 |
| | % of Total | 6.1% | 2.9% | 9.0% |
| Total | Count | 260 | 85 | 345 |
| | % of Total | 75.4% | 24.6% | 100.0% |

Source: Compiled from the questionnaire

The relation between the gender of customers and their perception regarding assurance of bancassurance is not significant. This is because the Approx. Significant value of Cramer's V test is 0.504, which is more than 0.05 (5% level of significance).

6.3.3 Marital Status of Customers and Their Perception regarding Assurance of Bancassurance Channel

The influence of the marital status of customers on their perception of assurance of bancassurance is given in *Table 6*.

Table 6. Marital status of customers and their perception of assurance

| | | Marital status | | | | Total |
|---------------------|------------|----------------|-----------|----------|-------------------|--------|
| | | Married | Unmarried | Divorced | Widow/ widower | |
| Low assurance | Count | 3 | 1 | 0 | 0 | 4 |
| | % of Total | .9% | .3% | .0% | .0% | 1.2% |
| Moderate assurance | Count | 95 | 5 | 1 | 5 | 106 |
| | % of Total | 27.5% | 1.4% | .3% | 1.4% | 30.7% |
| High assurance | Count | 192 | 4 | 2 | 6 | 204 |
| | % of Total | 55.7% | 1.2% | .6% | 1.7% | 59.1% |
| Very high assurance | Count | 29 | 2 | 0 | 0 | 31 |
| | % of Total | 8.4% | .6% | .0% | .0% | 9.0% |
| Total | Count | 319 | 12 | 3 | 11 | 345 |
| | % of Total | 92.5% | 3.5% | .9% | 3.2% | 100.0% |

Source: Compiled from the questionnaire

There is no significant correlation between the marital status of customers and their perception regarding assurance of bancassurance. This is because the Approx. Significant value of Cramer’s V test is 0.312, which is more than 0.05 (5% level of significance).

6.3.4 Number of Family Members of Customers and Their Perception regarding Assurance of Bancassurance Channel

The relation between the number of family members of customers and customers’ perception of assurance of bancassurance is presented in *Table 7*.

Table 7. *Number of family members of customers and customers’ perception of assurance*

| | | Family members | | | | | | | | Total | |
|---------------------|------------|----------------|-----|------|-------|-------|-------|------|------|-------|--------|
| | | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 8 |
| Low assurance | Count | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 4 |
| | % of Total | .0% | .0% | .0% | .6% | .0% | .3% | .0% | .3% | .0% | 1.2% |
| Moderate assurance | Count | 0 | 0 | 7 | 23 | 50 | 18 | 5 | 2 | 1 | 106 |
| | % of Total | .0% | .0% | 2.0% | 6.7% | 14.5% | 5.2% | 1.4% | .6% | .3% | 30.7% |
| High assurance | Count | 1 | 2 | 14 | 45 | 95 | 31 | 14 | 2 | 0 | 204 |
| | % of Total | .3% | .6% | 4.1% | 13.0% | 27.5% | 9.0% | 4.1% | .6% | .0% | 59.1% |
| Very high assurance | Count | 1 | 0 | 0 | 7 | 11 | 8 | 4 | 0 | 0 | 31 |
| | % of Total | .3% | .0% | .0% | 2.0% | 3.2% | 2.3% | 1.2% | .0% | .0% | 9.0% |
| Total | Count | 2 | 2 | 21 | 77 | 156 | 58 | 23 | 5 | 1 | 345 |
| | % of Total | .6% | .6% | 6.1% | 22.3% | 45.2% | 16.8% | 6.7% | 1.4% | .3% | 100.0% |

Source: Compiled from the questionnaire

The relation between the number of family members of customers and customers’ perception regarding assurance is not significant. This is because the Approx. Significant value of Cramer’s V test is 0.064, which is more than 0.05 (5% level of significance).

6.3.5 Family Income of Customers and Their Perception regarding Assurance of Bancassurance Channel

The correlation between the family income of customers and their perception of assurance of bancassurance is outlined in *Table 8*.

Table 8. Family income of customers and their perception of assurance

| | | Family income | | | | | Total |
|------------------------|------------|----------------------|-----------------------|-----------------------|------------------------|-----------------------|--------|
| | | Less than 2 lakhs | 2 lakhs to 5 lakhs | 5 lakhs to 8 lakhs | 8 lakhs to 11 lakhs | More than 11 lakhs | |
| Low assurance | Count | 1 | 2 | 0 | 1 | 0 | 4 |
| | % of Total | .3% | .6% | .0% | .3% | .0% | 1.2% |
| Moderate assurance | Count | 11 | 69 | 18 | 5 | 3 | 106 |
| | % of Total | 3.2% | 20.0% | 5.2% | 1.4% | .9% | 30.7% |
| High assurance | Count | 21 | 128 | 30 | 15 | 10 | 204 |
| | % of Total | 6.1% | 37.1% | 8.7% | 4.3% | 2.9% | 59.1% |
| Very high assurance | Count | 5 | 11 | 7 | 7 | 1 | 31 |
| | % of Total | 1.4% | 3.2% | 2.0% | 2.0% | .3% | 9.0% |
| Total | Count | 38 | 210 | 55 | 28 | 14 | 345 |
| | % of Total | 11.0% | 60.9% | 15.9% | 8.1% | 4.1% | 100.0% |

Source: Compiled from the questionnaire

There is no significant correlation between the family income of customers and their perception regarding assurance of bancassurance channel. This is because the Approx. Significant value of Cramer's V test is 0.085, which is more than 0.05 (5% level of significance).

6.3.6. Education of Customers and Their Perception regarding Assurance of Bancassurance Channel

The relation between the education of customers and their perception of assurance of bancassurance channel is presented in *Table 9*.

Table 9. Education of customers and their perception of assurance

| | | Education | | | | | | Total |
|-----------------------|------------|----------------------------|----------------------------|--------------------|----------|-------------------|-------|-------|
| | | Less than 10 classes | Less than 12 classes | Under- graduate | Graduate | Post- graduate | Other | |
| Low assurance | Count | 1 | 1 | 1 | 0 | 0 | 1 | 4 |
| | % of Total | .3% | .3% | .3% | .0% | .0% | .3% | 1.2% |
| Moderate assurance | Count | 15 | 17 | 22 | 39 | 10 | 3 | 106 |
| | % of Total | 4.3% | 4.9% | 6.4% | 11.3% | 2.9% | .9% | 30.7% |
| High assurance | Count | 24 | 26 | 38 | 83 | 22 | 11 | 204 |
| | % of Total | 7.0% | 7.5% | 11.0% | 24.1% | 6.4% | 3.2% | 59.1% |

| | | Education | | | | | | Total |
|---------------------|------------|----------------------|----------------------|----------------|----------|---------------|-------|--------|
| | | Less than 10 classes | Less than 12 classes | Under-graduate | Graduate | Post-graduate | Other | |
| Very high assurance | Count | 7 | 1 | 3 | 13 | 6 | 1 | 31 |
| | % of Total | 2.0% | .3% | .9% | 3.8% | 1.7% | .3% | 9.0% |
| Total | Count | 47 | 45 | 64 | 135 | 38 | 16 | 345 |
| | % of Total | 13.6% | 13.0% | 18.6% | 39.1% | 11.0% | 4.6% | 100.0% |

Source: Compiled from the questionnaire

There is no significant relation between the education of customers and their perception regarding assurance of bancassurance as the Approx. Significant value of Cramer’s V test is 0.310, which is more than 0.05 (5% level of significance).

6.3.7. Occupation of Customers and Their Perception regarding Assurance of Bancassurance Channel

The correlation between the occupation of customers and their perception regarding assurance of bancassurance channel is presented in *Table 10*.

Table 10. *Occupation of customers and their perception of assurance*

| | | Occupation | | | | Total |
|---------------------|------------|--------------|------------------------|----------------------------|-------|--------|
| | | Professional | Employee officer grade | Employee non-officer grade | Other | |
| Low assurance | Count | 0 | 1 | 3 | 0 | 4 |
| | % of Total | .0% | .3% | .9% | .0% | 1.2% |
| Moderate assurance | Count | 2 | 17 | 87 | 0 | 106 |
| | % of Total | .6% | 4.9% | 25.2% | .0% | 30.7% |
| High assurance | Count | 6 | 40 | 154 | 4 | 204 |
| | % of Total | 1.7% | 11.6% | 44.6% | 1.2% | 59.1% |
| Very high assurance | Count | 3 | 3 | 24 | 1 | 31 |
| | % of Total | .9% | .9% | 7.0% | .3% | 9.0% |
| Total | Count | 11 | 61 | 268 | 5 | 345 |
| | % of Total | 3.2% | 17.7% | 77.7% | 1.4% | 100.0% |

Source: Compiled from the questionnaire

The correlation between the occupation of customers and their perception regarding assurance is not significant. This is because the Approx. Significant value of Cramer’s V test is 0.376, which is more than 0.05 (5% level of significance).

Thus, it can be concluded that there is no significant correlation between demographic variables and customers’ perception regarding assurance of bancassurance channel.

Multiple linear regression analysis is also performed to study the correlation between demographic variables and customers' perception regarding assurance of bancassurance channel. The result of the test is shown in tables 11 and 12.

Table 11. *Model summary*

| Model | R | R square | Adjusted R square | Std. error of the estimate |
|-------|---------|----------|-------------------|----------------------------|
| 1 | .257(a) | .066 | .008 | .61928 |

From *Table 11*, it can be concluded that only 6.6% of the variance in customers' perception regarding assurance of bancassurance channel is accounted for by the independent variables.

Table 12. *ANOVA (b)*

| Model | | Sum of squares | df | Mean square | F | Sig. |
|-------|------------|----------------|-----|-------------|-------|---------|
| 1 | Regression | 8.775 | 20 | .439 | 1.144 | .303(a) |
| | Residual | 124.256 | 324 | .384 | | |
| | Total | 133.032 | 344 | | | |

Source: Compiled from the questionnaire

Table 12 shows that ANOVA is not significant. This is because the value of significance for ANOVA is .303, which is more than .05.

Form tables 11 and 12, it can be concluded that since the value of R square is very low (.066) and the significant value for ANOVA is more than .05 there is no significant correlation between the demographic variables and customers' perception regarding assurance of bancassurance channel.

7. Policy Implications and Conclusion

The study found that customers perceive that the bancassurance channel has high assurance in case of procuring insurance-related services. This indicates that customers feel that the banks have provided enough safety and confidence in their insurance-related services. This finding is important because insurance represents a huge investment and customers evaluate highly those agents who are perceived to be trustworthy and make customers feel assured that they have made the correct decision. Insurance products are a very personal matter, where people desire the comfort of talking to experts who are knowledgeable on insurance (Loo, 2000). Moreover, the nature of the products is varied, making it difficult to judge the appropriateness of the products and creating a preference to talk

to someone when a claim arises. Thus, customers' perception of bancassurance channel as having high assurance stands as a positive point for banks.

However, having confidence in banks has led most customers to take it for granted that there is no safety problem in dealing with any bank. This carelessness and recklessness of customers sometimes results in security breaches in Internet and phone banking. Thus, banks should make improvements towards eliminating the security concerns of the public. Banks should conduct extensive customer relations training programmes for all employees. Employees should be trained to remain motivated to perform their duty with the utmost care and with consideration to the concerns of the customers. Apart from this, utilization of technological advancements also plays an important role in improving the security measures of banking services and promoting the principle of confidentiality of information through information security systems.

For complicated products, such as insurance, employees must provide a clear explanation of each product to customers so that customers can feel confident about the services provided by banks.

The study also aims at finding out the influence of the demographic variables on customers' perception regarding assurance of bancassurance channel. It has been found that demographic variables have no significant influence on customers' perception regarding assurance. This is supported by both the Cramer V test and the multiple linear regression analysis. Therefore, it is irrelevant for the service providers to consider the demographic profile of customers in framing policies regarding customers' perception of assurance of bancassurance channel.

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Survival Strategies and Sustainability of Small and Medium Enterprises in the Oshodi-Isolo Local Government Area of Lagos State

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Abstract. Small and medium enterprises (SMEs) play an essential role in the sustainable development of countries. They help in employment generation, industrial production increase, and export, social enrichment as well as political stability. This study investigates the survival strategies and sustainability of SMEs using selected small businesses in the Oshodi-Isolo Local Government Area, Lagos State. It examines the type of growth strategies that SMEs adopt, ascertains what influences their survival strategies as well as the challenges that hinder their growth. Fifty (50) SMEs were randomly sampled. Their owners and managers were interviewed using questionnaires. Data collected were analysed using descriptive statistics and Pearson product–moment correlation coefficient statistics. Our findings reveal that there is a statistically significant relationship between survival strategies and SMEs’ sustainability. The major implication of the findings is that maintaining small but committed and motivated employees is critical in guaranteeing the survival of the SMEs in a volatile economy. The study recommends that there be a need for orientation and educational programmes to change the mindset of business owners to enable them to graduate from sole atomistic proprietor devoid of modern scientific business practice and effective succession to corporate status with an apparatus of modern business management practices and corporate vision. Finally, the study further suggests some imperatives for policy makers concerned with promoting small businesses’ growth and sustainability in the Oshodi-Isolo Local Government Area of Lagos State.

Keywords: economic growth, poverty, government policies, sole ownership

JEL Classifications: O1

1. Introduction

SMEs have been accepted worldwide as instruments of economic growth and development. Governments, particularly in the developing countries, have made tremendous efforts and established policies towards enhancing the capacity and sustainability of SMEs. However, despite government institutional and policy support, there is a grave concern and scepticism about whether SMEs can bring about economic growth and development, particularly in developing countries. In Nigeria, there have been a series of government interventions to boost the activities of SMEs through the establishment of agencies and programmes to provide consultancy, information, and guidelines to Nigerians who establish and own businesses. Some of these programmes include: Small and Medium Enterprise Equity Investment Scheme (SMEEIS) established in 2001 and the Small and Medium Scale Enterprises Development Agency of Nigeria (SMEDAN) established in 2003. Other agencies include: the National Directorate of Employment (NDE), Skills Acquisition Centre and Industrial Development Centres. SMEs are faced with challenges which affect their ability to function and contribute optimally to the economy. Studies have shown that a significant percentage of SMEs dies before reaching five years of establishment. It is thus imperative that studies be carried out on how these SMEs survive and on the strategies they adopt for their sustainability.

The major objectives of this paper are as follows:

- Ascertain the relationship between growth strategies and the sustainability of SMEs.
- Examine the type of growth strategies adopted.
- Examine the challenges that hinder growth in the selected area.

2. An Overview of SMEs in Nigeria

SMEs can be defined in terms of sales volume, number of employees, or investment (Ajide, Hameed, and Oyetade, 2014). A business that is therefore defined as a small- or medium-scale enterprise in a developed country can be regarded as a large-scale enterprise in a developing country. Even in developing countries, this definition changes over time. The European Commission defines SME using three broad parameters: micro-entities, small companies, and medium-sized enterprises. The category of micro-, small- and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euros and/or an annual balance sheet total not exceeding 43 million euros (European Commission, 2003).

The Central Bank of Nigeria defines SMEs in Nigeria according to asset base and the number of staff employed. These criteria are: asset base between N5

Million and N500 Million (excluding land and buildings) and a staff strength of between 10 and 300 employees (CBN Guidelines, 2010). The effort to develop a blueprint for SMEs' development in Nigeria continued. This was borne out of the desire of the Federal Government of Nigeria to institute a development paradigm that would ensure Nigeria's position as one of the twenty (20) most industrialized countries of the World.

The objectives and goals to develop SMEs in Nigeria are included in the country's Vision 2020. It is believed that this vision will support SMEs as the main engines of economic growth, a driver of sustainable industrial development, and a globally competitive sector. The objectives as included in Vision 2020:

- a. To develop an SME sector that is the driver of the national economic growth and development. This is to be achieved by the following goals:
 - i. Increasing entrepreneurship and raising employment contribution to 60% by 2015 and to 80% by 2020.
 - ii. Centralized management, monitoring, coordination, planning, promotion, and development of SMEs.
 - iii. Contributing 50% of GDP in 2015 and 75% by 2020.
- b. To develop a strong, viable, and sustainable SME sector capable of competing globally in terms of quality products and services at competitive prices. This is to be achieved by the following goals:
 - i. To contribute 50% of export by 2015 and 80% by 2020.
 - ii. Increase production of capital goods by 40% annually up to 2020.
 - iii. Improve the business environment by raising the country's rating on the "Doing Business" list to at most 80 by 2015 and to at most 50 by 2020.
- c. Develop and improve entrepreneurial skills and competencies of existing and potential entrepreneurs. This is to be achieved by the following goals:
 - i. Improvement in investment on human capital by 20% annually up to 2015 and by 15% in 2020.
 - ii. Increase productivity at all micro-, small- and medium-enterprise levels by 20%.
- d. Encourage rural transformation and reduce rural–urban migration, achievable by the following goal:
 - i. Reduce the rural poverty index from 54% to 30% in 2015 and to 10% by 2020.
- e. Encourage the use of improved technology in the production of goods and services, achievable by the following goal:
 - i. To increase the skills and know-how for industrial production and management by 30% on a yearly basis until 2020.
- f. Increase access to funding and financial services, to be achieved by the following goal:

- i. To increase access to credit by 20% annually until 2015 and by 10% yearly up to 2020.
- g. Encourage forward and backward linkages with other sectors of the economy, achievable by the following goals:
 - i. To provide linkage with and be a source of raw materials to large-scale industries.
 - ii. To effectively utilize locally produced raw materials.
- h. The domestic market for SMEs achievable by the following goals:
 - i. Increase procurement of SME goods and services by 60% in 2015 and 100% by 2020.
 - ii. Increase government procurement from the SME sector by 50% annually.

2.1. Scope and Structure of the Small and Medium Enterprises (SME) Sector

The SME sector according to Vision 2020 (2009) comprises micro-, small, and medium enterprises, which are distinguished as a group separate from large organizations. The majority of SMEs in Nigeria are family-owned, they have a low capital base, are located in urban and semi-urban areas, and largely reside in the informal sector. The informal sector in Nigeria refers to economic activities in all sectors of the economy that are operated outside the purview of government regulation (Vision 2020, 2009).

As with developed economies, Nigeria, with the introduction of the National Policy on MSMEs, has addressed the issue of definition as to what constitutes micro-, small, and medium enterprises. This classification, also adopted by SMEDAN, defines the size category, number of employees, and asset holdings as shown in *Table 1*:

Table 1: *Structure of the SME subsector*

| S/N | Size category | Employment | Assets (-N-Million) (excl. land and buildings) | Estimated Number (% of MSMEs) – 2004 |
|-----|--------------------|--------------|---|---|
| 1 | Micro-enterprises | Less than 10 | Less than 5 | 6.7 million (80%) |
| 2 | Small Enterprises | 10 to 49 | 5 to less than 50 | 1.3 million (15%) |
| 3 | Medium Enterprises | 50 to 199 | 50 to less than 500 | 420,000 (5%) |

Source: National Policy on MSMEs. Chemonics International Inc. 2005 as in Report on Vision 2020 (2009)

The three categories of enterprises, as defined in the above table, play different roles in the economy and are influenced by the characteristics of operators and the strictness of entry requirements (Vision 2020, 2009).

The following explains the categories of enterprises as described by Vision 2020 (2009):

2.1.1. Micro-enterprises

The National Policy on Micro-, Small, and Medium Enterprises in Vision 2020 describes micro-enterprises in Nigeria as those dominated by wholesale and retail trade, manufacturing and vehicle repair/servicing, transport, hotels and restaurants, and building and construction. The majority of the micro-enterprises are informal, family-owned businesses with low output value and low levels of skills and technology.

Micro-enterprises are widespread throughout the nation and numerous due to the simple entry requirements. Targeted interventions in the form of funding, technology upgrade, and training will go a long way in increasing the very low number of micro-enterprises transitioning into SMEs. This will result in the multiplier effects of employment generation and reduction of poverty incidence.

2.1.2. Small Enterprises

Most small enterprises are registered businesses and they are usually more organized and efficiently run. Because they have a larger number of well-educated, technically skilled proprietors, they have easier access to bank credits and with targeted assistance and support they offer the highest potential for growth.

2.1.3. Medium Enterprises

The formal SMEs sector is dominated by medium enterprises, the majority of which are in the manufacturing, transportation, and ICT sectors. They have better access to credits and are the main recipients of most government initiatives targeted towards SMEs. Government initiatives like SMEDFUND and SMEEIS aimed to cover only enterprises with a maximum asset base of N200 million and those that regularly complied with applicable tax laws. These criteria clearly ruled out most informal businesses providing the majority of employment and constituting about 80 percent of SMEs (Vision 2020, 2009).

2.2. Contributions of Small and Medium Enterprises to the Nigerian Economy

Haruna (2010), Mohammed and Ango (2010), Oyekan (2007), Adima (2003), and many other scholars have identified SMEs as a great importance to the Nigerian economy, considering the following:

– **Employment Opportunities:** Small-scale enterprises helped to reduce unemployment considering the number of people that are engaged in their operations since most of their operations are labour intensive and they provide employment opportunities at a relatively low capital cost.

– **Equitable Distribution of the Nation's Income:** Studies have shown that between the rich and the poor the gap is the geographical distribution of income and it is a very large gap. However, small businesses have helped in the redistribution of income by creating a strong middle class.

– **Mobilization of Local Resources:** There is need to switch emphasis from import-dependent large-scale industries to small enterprises that structure their production processes to depend mostly on local sourcing with locally available resources. This inward-looking process will play a significant role in mobilizing local resources that have been neglected.

– **Raw Material Sources:** In fact, most automobile-manufacturing plants in Europe and America do not manufacture every bit of the car; rather, they make considerable use of parts most of which are supplied by small-scale industries, e.g. Guinness (Nig.) Plc, Nigeria Breweries Plc, British America Tobacco, Nigeria (BAT) – among others, rely on local farmers for their raw materials.

– **Conservation and Generation of Foreign Exchange:** A good number of imported consumer goods can be economically produced locally to save and boost foreign exchange, e.g. fruit juice, frozen foods, and beverages are now produced locally in Nigeria and even exported to generate foreign exchange.

– **Mitigation of Rural–Urban Migration:** Small-scale firms may be a veritable instrument for solving the problem of rural–urban drift. Some small businesses are in rural areas to absorb rural labour. This situation will have a positive impact on agricultural output and a rise in farmers' income, which in turn will encourage rural dwellers to remain in their locality.

– **Even Distribution of Industries:** The rapid growth in the establishment of small-scale businesses has led to a more even distribution of industries nationwide.

2.3. Challenges Confronting Small and Medium Enterprises in the Isolo local government area of Lagos State.

The following are notable problems facing small-scale owners/entrepreneurs in Isolo:

– **Difficulties in Attracting Fund for Expansion:** One of the major problems faced by Nigerian entrepreneurs is the issue of financing their operations. The collateral securities and rate of interest required most time by banks go beyond what small-scale businesses can afford, thereby denying their access to bank loans.

– **Epileptic Power Supply:** Inadequate power supply witnessed in Nigeria has a great deal of adverse effects on the operations of small-scale enterprises. Most small-scale businesses cannot afford to acquire a plant because of its huge financial commitment, and where an enterprise can acquire a plant the cost will reflect on the unit price of their products, thereby leading to higher prices, which may scare the consumers away, especially where products produced by the enterprise have close substitutes.

– **Competition/Poor Patronage:** Nigerians believe that locally made goods are inferior; so, they prefer patronizing imported goods, thereby hindering the growth and expansion of small-scale industries.

– **High Cost of Machinery Maintenance:** Nigeria is in need of expatriates whose service fee cannot be compared to that of the local experts, and many enterprises cannot pay for such expatriates' services.

– **Inconsistent Government Policies:** Inconsistent government policies sometimes create problems for small-scale operations. For instance, if an enterprise imports raw materials and there is a policy banning on such raw materials, the enterprise will find it difficult to survive if there are no available local contents to substitute such materials.

– **High Rate of Taxes/Multiple Taxation:** Various forms of taxes are imposed on small-scale operations by all tiers of government, which they often find difficult to cope with. These taxes come in the forms of business registration fee, local government fee, value added tax (VAT), excise duties, state tax/state permit, etc. When all these taxes are deducted from the profit made, the remaining amount becomes so little that the enterprise may even find it difficult to pay its workforce.

– **Other problems** include erratic infrastructural facilities such as poor road network, inadequate pipe-borne water system, frustrating security system, inefficient telecommunication services, etc.

3. Overview of Survival Strategies

The concept of strategies has been used in this research with reference to the future ability of a business to operate ethically and contribute to economic development while improving the quality of life for its workforce, the local and global community as well as future generations (Cralsand and Vereeck, 2004; Yusuf and Dansu, 2013). SMEs are considered sustainable when they can overcome the challenges that stand in their way in the internal and external business environment around. Various researches have brought to the fore of knowledge the existence of strategies considered by SMEs. There exist three basic strategies: Porter's Generic Competitive Strategy (Ansoff's Product), Market Matrix, and Miles and Snow's adaptation strategy.

This study focuses on the Porter's Generic Competitive Strategy for the purpose of analysis of the strategies adopted by the studies on SMEs in Nigeria. The Porter's Generic Competitive Strategy (PGCS) continues to remain a strategy that has been considered and practised intentionally or unintentionally by SMEs. This consideration and practising by SMEs have continued over the years.

Designed by Micheal Porter in 1979, its framework offers three major strategic options to SMEs in the context of competitive advantage and competitive scope. The three options are cost leadership, differentiation, and focus. The theory stresses that for success to be achieved SMEs need to select one of these generic strategies. Otherwise, a phenomenon of "stuck in the middle" may affect them.

Lee, Lim, and Tan (1999), Leitner and Guldenberg (2010), Radford, Addison, and Ahmed (2013), and Tanwar (2013) have all stressed that SMEs are maintaining the generic focus strategy of Porter. Focus strategy has to do with concentrating on the particular market segment(s). This strategy is common among the studied SMEs because of the challenge of resources. These SMEs face a series of difficulties, as mentioned above, that have led them to adopt the focus strategy. The focus generic strategy can be closely related to Selten's (1978) work. Selten's work, which has been taken further by literature on various small business ventures (Kao, 1981; Weinstein, 1994; Kotler, 1996; Leithner and Guldenberg, 2010), stresses on the niching strategy: filling market gaps by offering products differentiated from (but a substitute to) that of the "bigger" rivals. Various SMEs taken into consideration practised this type of strategy as it increases their income/profit.

However, a considerable amount of the SMEs studied had a mix of the three survival strategies proposed by Porter. These strategies included cost leadership and differentiation. Cost leadership has to do with having lowest per unit cost in the industry (field study, 2015). The SMEs studied were said to have reduced the costs of their "big rivals" (field study, 2015). These SMEs may be said to have a price war with the larger firms in the LGA (field study, 2015). The drive for these SMEs is that in the long run they might have higher profits than their rivals.

However, SMEs which have tried this strategy were often too small to follow up (Ebben (2005), Johnson (2005), and Leitner and Guldenberg (2009)). Despite this challenge, they still made use of it.

Another strategy observed was the differentiation generic competitive strategy. Here, SMEs created something that is perceived industry-wide as being unique.

4. Methodology

This study investigated the survival strategies and sustainability of SMEs using selected small businesses in the Oshodi-Isolo Local Government, Lagos State. Using the selected owners of small businesses in Oshodi-Isolo, Lagos State, as the population of interest, a survey research design was adopted in this study. 50 SMEs were randomly sampled and their owners and managers interviewed using a questionnaire.

The data collected were analysed using descriptive statistic and Pearson's product-moment correlation coefficient statistics was used to test the hypotheses with the aid of the Statistical Package for Social Science (SPSS) Version 21.0.

5. Analysis and Findings

Table 6 shows a summary of the demographic profiles of respondents, where 100% of the respondents had trading named as their nature of business: 16% have been in existence for 20 years, 28% for a period between 11 and 20 years, and 56% for ten years or less. 32% of them had an educational qualification of primary 6 and below, 52% had a senior school certificate, and 16% had a higher education diploma. 90% of them were first-generation, while 10% of them second-generation businesspersons. As for their ages: 24% of them were below 30 years, 54% of them were between 30 and 45 years, and 22% of them were above 45 years. 24% of these respondents were single and 76% of them were married.

Table 2. *Summary of the demographic profiles of respondents*

| Variables | Level | No of respondents % | % Total |
|--|---------------------------|----------------------------|----------------|
| <i>Nature of Business</i> | <i>Trading</i> | 50 (100%) | 100% |
| Year of Existence | 10 years and below | 28 (56.0) | 50 (100.0) |
| | 11–20 years | 14 (28.0) | |
| | Above 20 years | 8 (16.0) | |
| Educational qualification of the owner | Primary 6 and below | 16 (32.0) | 50 (100.0) |
| | Senior school certificate | 26 (52.0) | |
| | Higher education | 8 (16.0) | |
| Generation of business | 1 st | 45 (90.0) | 50 (100.0) |
| | 2 nd | 5 (10.0) | |
| | 3 rd | Nil | |
| Age of respondent | Below 30 | 12 (24.0) | 50 (100.0) |
| | 30–45 | 27 (54.0) | |
| | Above 45 | 11 (22.0) | |
| Marital status of respondent | Single | 12 (24.0) | 50 (100.0) |
| | Married | 38 (76.0) | |

Source: fieldwork (2015)

Regarding survival strategy in terms of SMEs in Oshodi-Isole LGA, 62% of the respondents agreed that the entrepreneur takes formal responsibility for the business' strategic management, 20% strongly agreed, 10% disagreed, 6% strongly disagreed, and 2% were indifferent. 60% of the respondents agreed that survival strategies are top priority activities performed on a regular basis, 22% strongly agreed, 8% disagreed, 6% were indifferent, and 4% strongly disagreed. 62% agreed that the business follows a defined set of procedures in their survival strategy process, 13% strongly disagreed, 8% disagreed, 2% strongly disagreed, and none were indifferent. 64% of the respondents strongly agreed that business provides resources earmarked specifically for the sustenance of business, 24% agreed, 8% disagreed, 4% strongly disagreed, and none of them were indifferent.

With respect to questions concerning the growth strategy adopted, 44% of the respondents disagreed that small businesses adopted integrative strategy as one of the growth strategies in recent times, 24% agreed, 14% strongly agreed, 10% strongly disagreed, and 8% were indifferent. 58% of the respondents agreed that small businesses adopt diversification strategy as one of the growth strategies in recent times, 24% strongly agreed, 10% were indifferent, 6% disagreed, and 2%

strongly disagreed. 66% agreed that small businesses pursued and implemented a corporate strategy which had resulted their sustainability, 20% strongly agreed, 6% strongly disagreed, 6% disagreed, and 2% were indifferent. 64% of the respondents agreed that small businesses pursued and implemented a generic competitive strategy which had resulted their sustainability, 26% strongly agreed, 6% disagreed, 4% strongly disagreed, while none of them were indifferent. 67% of the respondents agreed that small businesses pursued and implemented differentiation strategy which had resulted their sustainability, 16% strongly agreed, 6% disagreed, 2% strongly disagreed, and none were indifferent.

On questions regarding what can influence survival strategy, 56% strongly agreed that there had been a strategic consistency of actions of small business owners in sustaining their businesses, 26% agreed, 10% disagreed, 4% strongly disagreed, and 4% were indifferent. 62% strongly agreed that the implemented survival strategies have challenged and motivated key personnel to lend their support, 10% agreed, 8% disagreed, 6% strongly disagreed, and 4% were indifferent. 58% agreed that their businesses had recorded increase in employee performance in recent times due to the survival strategies adopted, 24% strongly disagreed, 10% were indifferent, 6% strongly disagreed, and 2% disagreed. 42% agreed that the survival strategies formulated and implemented were consistent with goals and policies, 26% disagreed, 14% strongly disagreed, 12% disagreed, and 3% were indifferent.

On questions regarding the relationship between survival strategies of SMEs and their sustainability, 60% agreed that survival strategies adopted by SMEs gave them a competitive advantage over others, 32% strongly agreed, 4% strongly disagreed, 4% disagreed, and none were indifferent. 44% of the respondents agreed that there had been an effective implementation of survival strategies by small business owners, 36% strongly agreed, 12% strongly disagreed, 4% disagreed, and 4% were indifferent. 48% of the respondents agreed that there was a significant link between survival strategy and profitability, 36% strongly agreed, 8% disagreed, 4% strongly disagreed, and 4% were indifferent.

Table 3. Analysis of responses from respondents

| How survival strategies have been carried out in SMEs in Oshodi-Isolo LGA | SD | D | IND | A | SA |
|--|-----------|------------|-----------|-------------|-------------|
| The entrepreneur takes formal responsibility for the business' strategic management. | 3 (6%) | 5 (10%) | 1 (2%) | 32 (62%) | 10 (20%) |
| Survival strategies are top priority activity performed on a regular basis. | 2 (4%) | 4 (8%) | 3 (6%) | 30 (60%) | 11 (22%) |
| Businesses follow a defined set of procedures in their survival strategy process. | 2 (4%) | 4 (8%) | – | 31 (62%) | 13 (26%) |
| Businesses provide resources earmarked specifically for sustenance of business. | 2 (4%) | 4 (8%) | – | 12 (24%) | 32 (64%) |

| How survival strategies have been carried out in SMEs in Oshodi-Isolo LGA | SD | D | IND | A | SA |
|---|------------|-------------|------------|-------------|-------------|
| Type of the growth strategy adopted | | | | | |
| Small businesses adopt integrative strategy as one of the growth strategies in recent times. | 5 (10%) | 22 (44%) | 4 (8%) | 12 (24%) | 7 (14%) |
| Small businesses adopt diversification strategy as one of the growth strategies in recent times. | 1 (2%) | 3 (6%) | 5 (10%) | 29 (58%) | 12 (24%) |
| Small businesses pursue and implement a corporate strategy which results in their sustainability. | 3 (6%) | 3 (6%) | 1 (2%) | 33 (66%) | 10 (20%) |
| Small businesses pursue and implement a generic competitive strategy which results in their sustainability. | 2 (4%) | 3 (6%) | – | 32 (64%) | 13 (26%) |
| Small businesses pursue and implement differentiation strategy which results in their sustainability. | 1 (2%) | 3 (6%) | – | 38 (76%) | 8 (16%) |
| What can influence survival strategy | | | | | |
| There has been a strategic consistency of actions of small business owners in sustaining their businesses. | 2 (4%) | 5 (10%) | 2 (4%) | 13 (26%) | 28 (56%) |
| The survival strategies implemented have challenged and motivated key personnel to lend their support. | 3 (6%) | 4 (8%) | 2 (4%) | 10 (20%) | 31 (62%) |
| This business has recorded increase in employee performance in recent times due to the survival strategies adopted. | 3 (6%) | 1 (2%) | 5 (10%) | 29 (58%) | 12 (24%) |
| The survival strategies formulated and implemented are consistent with the goals and policies. | 7 (14%) | 6 (12%) | 3 (6%) | 21 (42%) | 13 (26%) |
| Relationship between the survival strategies of SMEs and their sustainability | | | | | |
| Survival strategies adopted by SMEs give them competitive advantage over others. | 2 (4%) | 2 (4%) | – | 30 (60%) | 16 (32%) |
| There has been an effective implementation of survival strategies by small business owners. | 6 (12%) | 2 (4%) | 2 (4%) | 22 (44%) | 18 (36%) |
| There is a significant link between survival strategy and profitability. | 2 (4%) | 4 (8%) | 2 (4%) | 24 (48%) | 18 (36%) |
| Other challenges that affect the survival of SMEs in Oshodi-Isolo LGA | | | | | |
| The wrong line of business could be a challenge slowing down the growth of SMEs. | 1 (2%) | 4 (8%) | – | 33 (66%) | 12 (24%) |
| Lack of succession planning. | 1 (2%) | 4 (8%) | – | 32 (64%) | 13 (26%) |
| Inadequate setup capital. | – | 2 (4%) | 1 (2%) | 15 (30%) | 32 (64%) |
| Improper keeping of the book of accounts. | 2 (4%) | 3 (6%) | 2 (4%) | 30 (60%) | 13 (26%) |

Source: field work (2015)

The test of hypothesis indicated that there is a significant relationship between survival strategies and the small- and medium-scale firms' sustainability. The findings revealed that there is a statistically significant relationship between survival strategies and SMEs' sustainability.

According to the findings, this is as a result of survival strategies adopted by small firms which give them a competitive advantage over others, effective implementation of survival strategies by the small business owners, and the link between survival strategies and profitability.

Another finding of the study identifies the survival strategies that sustain small and medium enterprises in the Oshodi-Isolo Local Government as the entrepreneur's formal responsibility for the organization's strategic business management. Survival strategies are top priority activity, performed on a regular basis by small businesses. Small businesses provide resources (managers' time, money, staff support, among others) earmarked specifically to sustain their businesses. They also follow a defined set of procedures in their strategic survival process.

The finding also indicated the type of survival growth strategies adopted by small and medium enterprises' management. Among them, there are: integrative strategy, diversification strategy, differentiation strategy, generic competitive strategy, and corporate strategy, which resulted their sustainability within a particular period.

Those factors were also found effective that can influence survival strategies in small and medium enterprises in the Oshodi-Isolo Local Government. Among these are the strategic consistency of small business owners in sustaining their businesses, the survival strategies implemented, identification of purposes, plans, and actions to achieve the objective, and coherence of the survival strategies formulated and applied in accordance with the goals and policies.

However, the study found that there are challenges that slow down the growth of SMEs in the Oshodi-Isolo Local Government, which are: the wrong line of business, lack of a succession plan, small setup capital, and improper keeping of the book of accounts. This is in agreement with the work of Ifekwem, Oghojafor, and Kuye (2011), who examined the growth, sustainability, and inhibiting factors of the family-owned businesses in the south-east of Nigeria. The researchers found that businesses suffered many management and attitudinal problems ranging from lack of succession plan, small setup capital, wrong line of business, poor bookkeeping, individualistic spirit, lack of planning and basic information, and lack of political awareness among others. The conclusion is that businesses start and fail, with the owners rarely succeeding.

Table 4. *Descriptive statistics*

| | Mean | Std. Deviation | N |
|--|-------|----------------|----|
| Survival strategies adopted by SMEs give them competitive advantage over others. | 4.120 | .9179 | 50 |
| An effective implementation of survival strategies by small business owners | 3.880 | 1.2879 | 50 |
| Significant link between survival strategy and profitability | 4.040 | 1.0490 | 50 |

Table 5. *Correlations*

| | | Survival strategies adopted by SMEs give them competitive advantage over others. | An effective implementation of survival strategies by small business owners | Significant link between survival strategy and profitability |
|--|-----------------------|--|---|--|
| Survival strategies adopted by SMEs give them competitive advantage over others. | Pearson's correlation | 1 | .807** | .885** |
| | Sig. (2-tailed) | | .000 | .000 |
| | N | 50 | 50 | 50 |
| An effective implementation of survival strategies by small business owners | Pearson's correlation | .807** | 1 | .970** |
| | Sig. (2-tailed) | .000 | | .000 |
| | N | 50 | 50 | 50 |
| Significant link between survival strategy and profitability | Pearson's correlation | .885** | .970** | 1 |
| | Sig. (2-tailed) | .000 | .000 | |
| | N | 50 | 50 | 50 |

** . Correlation is significant at the 0.01 level (2-tailed).

6. Recommendations

The study, therefore, recommends that there be a need for orientation and educational programmes to change the mindset of business owners to enable them to graduate from sole atomistic proprietors devoid of modern scientific business practice and an effective succession to corporate status with an apparatus of modern business management practices and corporate vision.

It is strongly recommended that business owners should invest heavily in training and courses locally and abroad to sensitize, orientate, and change their

mindset as well as adequately develop their management skills and abilities. It is also imperative for business owners to properly scan the Nigerian business environment so as to identify the opportunities and threats therein, and develop the various techniques that will help them to adapt to the changing environments as they emerge.

The government should get more involved in the growth, development, and sustainability of SMEs within the country.

The government will need to institute the right kind of programmes and policies that aim at driving a respectable percentage of the large number of informal micro-enterprises into the formal sector and facilitate the transition of small and medium enterprises to medium- and large-scale enterprises respectively.

Finally, the study further suggests some imperatives for policy makers concerned with promoting small businesses' growth and sustainability in the Isole Local Government Area of Lagos State.

7. Conclusions

From the ongoing discussion wherein there is a broad availability of literature on challenges SMEs are facing in the business environment within the dynamic nature of the Nigerian economy, SMEs still constitute a vital importance to economy. Confronted with a stream of numerous challenges, they still strategize on various methods of survival that eventually sustain them.

Survival strategies have been developed, which this research has synchronized with Porter's Generic Strategies (1980). These generic strategies have immensely contributed to the growth and sustainability of the studied SMEs.

They serve as the running engine through which the economy survives. They contribute immensely to the development of entrepreneurial growth as these SMEs try to overcome the overworked challenges.

Suggestion for further studies:

Although this study sought to synchronize Porter's Generic Competitive Strategy with the survival strategies adopted by the studied SMEs, it failed to analyse other survival strategy frameworks developed by other scholars.

The study's focus is only on the Oshodi-Isole Local Government Area. There are also other LGAs within the State which the results from this study can be applied to. Finally, can the study of the survival strategy employed by SMEs in the Oshodi-Isole L.G.A. be applied to other LGAs in Lagos?

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