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REGULATION, COMPETITION AND PARTNERSHIP
IN THE FINANCIAL SECTOR

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Abstract
This article analyses current regulatory tendencies, provoked by the entry of the BigTechs in the financial services segment. Against that background, new forms of cooperation between financial institutions and the possibilities for their partnership with the financial regulators are reviewed.

Key words:
Financial regulation, Banks, BigTechs, FinTech, RegTech

1. Introduction

The entry of new technologies in the financial sector impacts the approaches for its regulation. The presence of the FinTech industry and the BigTechs increases the competition with the traditional players on the financial services market, but at the same time traces the road to new forms of partnership. The previously conservative bank industry changes fast and starts offering innovative products, services and hybrid solutions, produced and distributed within multiplatform ecosystems. All this is supported by the blockchain, cloud technologies and AI, quickly entering our everyday life.

Against that background, more often than not, the regulatory bodies resort to smart-technology-based expert opinion. The subject of the study in this article

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are the challenges before the regulation of the FinTechs and the BigTechs. Special consideration is given to the strategic partnerships between financial intermediaries and the regulators.

1. Regulatory focus on the new competitors

It is known that the economic and business role of the banks may be fully realized only with a stable regulation. When it receives a license, the credit institution has signed the rules for consumer protection, which protect my money, if it goes into bankruptcy. In other words, a bank is a guaranteed value vault, licensed by the government and the insured person. This is the reason why the newly founded companies cannot be called banks, since the use of the word “bank” in a trademark is legal only if the company holds a state license. Yes, this creates a symbiotic relationship with the regulators, but they also recognize the actions of the banks. That is why they sanction them. Does this mean that they protect them from the competition? Not exactly. But it protects them from the competitors, who are trying to do exactly the same, but without balance sheets and audits (Skinner, 2018).

Let us first mark “the regulatory considerations” regarding the FinTechs, also called “the young and crazy in the financial industry” (Burgmaier, Hüthig, 2015, S. 102). These HighTechs use the advantages of IT and unlike the banks, they offer financial products and services in a completely new form, clearly customer-oriented, with much more tangible benefit for the customers. Although they very often do not have the required regulatory permits (instructions), these companies report significant growth at the expense of a forced placement and/or due to their entry on larger market sections in the regulated zone. But will regulation help them replace the traditional operators?

First. The results of the bank sector are measured in real return (of income for shareholders, equity, investments etc.) and the market presence of the FinTechs - in hope, because behind it is only “a world of promises”.

Second. The regulators and the shareholders regard the banks as depositories (...), which deal with capital and risk and use technology to manage these issues. This has nothing to do with innovations, vision, interruption, change. It is all about stability, sustainability, reliability and security. If this leads to change and risk, then the investors and regulators will go bankrupt (Skinner, 2019). Then it is logical for the customers to welcome any regulation, which guarantees them more security.

Third. The regulations and instructions for compliance are a domain, where not only do the banks have the most benefit and can employ competitive advantages, but also use them as a weapon against Tech startups to maintain control over the customers.
and keep the market share (Zaheer, 2015). For this purpose, however, the credit institutions must be fast, decisive and taking a stand with the clear support of the top management, to form the market and not wait for newer and more strict regulations for the FinTechs (Beier u.a., 2016, S. 10).

Fourth. While the banks are subject to a single and complex regulation, the FinTechs are subject to regulation by various supervision bodies according to the respective business. This creates significant discrepancies between the regulatory parameters and the costs for compliance, which impact negatively the competitiveness of the vaults due to the more detailed requirements for them and their high regulatory costs.

Fifth. In recent years more and more large FinTechs receive a banking license, place themselves on “the right side of the regulation” and achieve a number of benefits (Goel, 2019): cheaper access to capital; quick customer penetration; growing revenues at the expense of increasing the variety of products/services sold (including other FinTechs); increased trust by customers and investors; bigger attractiveness of the company brand etc.

Sixth. The “compression” of the regulation would impact negatively the cost base for many FinTechs, which would stimulate consolidation processes in that sector. The concentration of the business in less, but stronger market participants will increase the competition concerns of the traditional banks. At the same time, following the regulatory requirements may create obstacles before the FinTechs for sales, for example due to the obligation for customer identification when applying the measures against money laundering.

Seventh. The long-term chances of success may attest to an innovative product only when the FinTechs business model is not forced to remain unregulated. This almost always excludes the possibilities for development of product offers and further growth.

But when will the regulators start to take these innovative competitors more seriously? At least until now the governments of the USA and some Member States of the European Union are cautious, trying to put the FinTechs in the existing regulatory structures and offering a one-time settlement of companies, which would like to follow the rule. Initially, other countries embrace a more open approach and restrict themselves only after seeing that there were problems with consumer protection, cyber risks or frauds, as it happened in China in 2016 and again in 2019, when many partner lenders appear in the country and are recognized as predatory (Mayor, 2021).

Since the constant product innovations make the intervention of the regulation on each new activity/product meaningless, it is justified only if the innovations “promise” losses for the consumers and/or breaches in management. The FinTechs, whose offers cover the market expectations quickly and effectively, are hardly worried by
such situations. It must also be considered that the innovation provokes regulatory interventions only when it “develops” enough cases and consumers.

Similar observations can be made regarding the market aggression of the BigTechs—“the new dynamic power in the financial ecosystem” and the more serious threat to the traditional banks (Srivastav, 2019). They do not follow the strict requirements (for equity, risk models, customer protection, privacy, fight against money laundering etc.), they are not subject to supervision by state institutions, they provide key technologies to the banks (cloud services, AI etc.) and they offer products similar to banking. All this presents the regulatory institution with a number of questions.

First. The widening presence of the BigTechs stimulates financial innovations, but can lead to forming oligopolistic markets with all arising circumstances: restriction of the competition, decrease of the efficiency of the financial industry and appearance of new system risks (Frost et al., 2019, p. 21). In other words, in the future, a small number of BigTechs may dominate and not diversify the provision of specific financial services in some jurisdictions. If this happens, the failure of these companies may lead to widespread interruption. In particular, this may present a risk, if the BigTechs’ activities in the financial services are not accompanied by a suitable risk management and regulatory supervision or if the customers of the BigTechs are not able to easily pass to other providers of financial services (Skinner, 2020a).

Second. The fact that the BigTechs do not have enough experience in risk management will force them to demonstrate herd behavior when facing market shocks and increasing the procyclicality. Also, there is a larger possibility for the BigTechs to engage in universal banking. Some of them are already becoming financial holdings, which increases the possibility to infect risk markets and sectors (Jun, 2018, p. 5). It is possible for part of the traditional bank services to remain outside the technological titans’ business, but others - with lower barriers for entry (e.g. transactions) - may be exposed to the risk of long-term “interruption”. If all other conditions are equal, their negative attitude towards risk management in all its forms (due to the stricter regulatory intervention, the exponentially growing costs and the decreasing attractiveness of the transactions) is in favor of the banks.

Third. It is not clear how the regulators will evaluate the potential impact of the BigTechs’ expansion on the financial industry and its customers. For example, whether and to what extent to account for the uniqueness of their business models, which are the result of the winning combination “big data analysis - access to external networks - interlinked activities”. Underestimating it increases the suspicions of a “regulatory gap”, creating unequal conditions on the financial markets, disruptions in banking and negative consequences for the customers.

Fourth. This status quo is maintained also due to the regulatory steps taken on
the various markets in order to increase the transparency and competition, but keeping the lower barriers to entry. Among the most radical are the initiatives for providing open access to financial data to customers (with the consent) of service providers, who are not banks. They were a significant catalyst for new competition by the technically oriented participants (Barua et al., 2019, p. 11). This is a reason for the banks to fear the BigTechs, because these companies can quickly reach significant scale in the financial services through their digital platforms, using their rich knowledge on potential customers (Godsall et al., 2019, p. 6).

Fifth. The regulatory institutions also fear the large volume of data, to which the BigTechs can have access, respectively the way, in which they intend to use it. It is enough to recall how in 2018 Facebook was drawn into the line of fire due to processing of sensitive user data and the attack against its computer network disclosed information on almost 50 million users. Or the case with the disclosed personal information of 500 000 users of the Google+ social network, which Google tries to hide from the public. If the large technological platforms provide better access to their huge arrays of customer data, will the banks be able to acquire more data, which to use when evaluating the loan applications? (Wack, 2021).

Sixth. The regulation restricts the scope of the BigTechs regarding customer deposits and directs them to “niche” products/services - payments, credits for natural persons or SMEs for provision of working capital etc.

The bold innovative solutions of leading BigTechs (Apple, Amazon, Square, Uber, Google, Facebook etc.) are a serious reason for the legislators to restrict their strive for wide scale placement in the financial services sector. The stricter regulations may be estimated not only as a threat, but as a chance to neutralize the BigTech competitors and “the sophisticated FinTechs”. They must not be allowed to provide services, which are competitive to the banks, without following the same rules. In this sense “the feeling that the stricter regulation - if applied universally - can ensure the advantage of the established financial institution before the new competitors, goes outside the technology frame” (Armstrong et al., 2021).

Therefore, the regulators must seek opportunities to provide equality between them and the banks with the clear understanding that the “fitting” of the BigTechs in the contemporary social and economic landscape requires new and complex compromises between the financial stability, the competition and the data protection. They could be achieved through active coordination between the competent bodies on the national and cross-border level.

It is also understandable that in the foreseeable perspective the regulatory bodies will be divided between their desire to encourage competition and innovations and to ensure reasonable supervision of the occurring violations. In search of a way out of
this dilemma, they must find suitable “critical” differentiators, which personalize these “objects”. These may be: results from alternative data analyses helping to generate unique information; conclusions from comparisons of product specifications; results from identification of “painful points” in the customer “trip”; customer experiences from purchasing new products; studies of the state of customer migration etc.

2. Regulation and strategic partnerships

The headlong “march” of the innovative digital players on primeval bank “territories” forces the classic vaults to copy their market behavior. If they do not do so, they risk to fall in a set of risky, capital intensive and low revenue businesses, while the digital giants or the more aggressive traditional competitors side up with the businesses most attractive to them - deposits of natural persons and small enterprises, payments and wealth management. These are areas, in which the brands of the digital giants, the customer databases and the technological complexity give them significant advantages (Kumar et al., 2019).

Apparently, the vaults have no other alternative than to respect this time imperative. By introducing a fully open banking model and cloud-based application programming interfaces, they will be able to implement the most successful ideas for “open banking” of the newly emerging world of FinTech (Skinner, 2020b). This way, the bank industry must show that it can be trusted not only with the help of general customer information, but because it can add value by using this data to improve the financial status of its customers without requiring them to do all the work themselves (McIntyre, 2020, p. 8).

Although the regulatory barrier still impedes the breakthrough of innovative financial services suppliers, more and more bank managers see a saving alternative in partnering with them under different forms. For example, as part of the big banks’ ecosystem, the FinTechs will benefit from their regulatory expertise on existing infrastructure, processes, reporting, accountability, risk management, requirements for trade in securities, data protection, measures against money laundering etc. This way, the credit institutions will assist them in optimizing their business models, but at the same time will be able to “dictate” the parameters of the partnering “regulatory code”.

It is assumed that the integration of the FinTechs in the existing regulatory practices of banks will be easier and faster than the creation of a new regulatory framework for the FinTechs. The power of this effect depends on various factors, more specifically on the choice of a regulatory scope for the cooperation model and its underlying products and services (Beier u.a., 2016, S. 9). But before entering into partner relation, both parties must be aware of the rules for regulatory compliance. For the bank this means to learn more of the actions of the FinTech for guaranteeing that the existing regulations
would be followed and for decreasing the risk of frauds (Raspa, 2020).

It is clear that the current model many regulations for various market segments has no chance of survival in a financial mediation world “possessed” by digitalization. Then it is completely logical for the credit institutions not to be strictly regulated themselves. On the contrary, if the same transactions follow the same rules, the chances and risks between the market players may and should be distributed symmetrically.

Partners operating under the same banking standards as you, with unified processes and regulated protocol, stay in the business for a long time. They value their status of legal providers and help the small enterprises grow with priority. By helping managing the burden of compliance, the FinTechs can give to the smaller banks the chance to compete with the larger institutions through reducing the overheads (Singer, 2016).

How will the regulation bring the banks, the FinTechs and the technological players together, and who will sit on top? We know that this will depend on the data use, the engagement of user experience and exceptional risk management, but it is still unclear how the existing condition and regulatory structure of the different countries will define the development of it all (Finextra Research 2020b). Positive indications for solving these issues are not lacking. They come from the now forming mega platform environment (ecosystem), which integrates technological giants, FinTechs and traditional bank institutions. This new reality must be projected over a “mirror” regulatory platform. From regulatory point of view, such is the Payment Services Directive (PSD2). It institutionalizes the revolution in the transfers’ domain, gives green light for the development of “open banking” and outlines some basic regulations (e.g. the requirement for 3 factor identification). On the institution level the large regulatory change is embodied by two innovations - the RegTech segment and the SupTech initiative of the supervision bodies.

The following stand out among the key competitive advantages of the RegTechs: the possibility for complex analysis of large data arrays; the quickness in configuration, generation and processing of information for regulatory reporting; the flexibility of integration between various processes and platforms; the possibility for smart processing of databases via AI (Deloitte, 2016, p. 5).

In general, there is no single interpretation of the RegTechs. The reasons for this are their flexible variations and the relatively small and flexible structures, through which they operate. The analysis of their product range might bring more clarity as to their profile. It includes products ensuring the execution of basic operation in the fields of: compliance; operation supervision; customer ID verification; non-compliance risk management; regulatory disclosing and reporting; automated tracking of regulatory changes.

According to research for the Cambridge Center for Alternative Financing
(CCAF), the biggest share among the regulatory areas, “covered” by the RegTechs (over 50%) is for the customer identification activities (the “Know Your Customer” policy - KYC), followed by the provision of measures against money laundering, financing of terrorism and compliance with the imposed penalties (Schiaz et. al., 2019, p. 37). This is completely logical given the record sanctions borne by the financial sector in recent years for allowed non-compliance exactly regarding these modes of regulation.

The growing regulatory complexity also determines the need of a completely new reporting availability. It will allow generating information from dozens (and in some cases hundreds) of various information arrays - customer files, analytical reports, operational logs, logs for transactions with payment tools, data backups and many more. Since the traditional information and accounting systems of the financial intermediaries cannot always provide this whole informational variety directly, the RegTechs turn out to be the necessary external supplier of regulatory expertise facilitating the achievement of regulatory compliance of the ever more complex external environment.

A research of the Basel Committee on Banking Supervision defines the following direct benefits for the bank sector from cooperating with the RegTechs: 1) stimulating the appearance of new processes, distribution channels, products or new business organizations, cooperating for compliance with the regulatory requirements and more effective risk management, including through outsourcing or insourcing processes; 2) digital transformation of the control and maintenance functions in the banks (risk, compliance, legal regulations, finances, IT); 3) widening the scope of requirements for regulatory reporting, financial crimes, operational risk (including cyber security and uncovering frauds), consumer and data protection (BCBS, 2017, p. 23-24).

The trends described above illustrate the impossibility for unilateral financial supervision based on the traditional vertical approach. Even back in the years after the global financial crisis of 2007-2008 the supervision bodies rethink their policies looking for new forms of partnership. It was initially applied under the influence of macroprudential regulatory policies. They integrate the activity of separate financial regulators under the direction of a single prudential body, located on its own or integrated in the architecture of one of the traditional supervision agencies - a central bank for example.

The second stage of the “opening” of the regulators is the search for cooperation within their innovative initiatives. It provokes the appearance of supervision technologies (SupTechs), uniting the application of high-tech solutions for the needs of financial supervision, separately or through partnering with other providers of regulatory and technological expertise (such as the RegTechs).

The development of supervision technologies passes through four stages. First, descriptive analysis based on manual data processing and validation. Second,
digitalization and automation of specific hard copy and manual processes, allowing deeper diagnostic analysis. Third, transition to large data processing architecture, allowing to manipulate information with more detail, variety and frequency. Fourth, use of AI (ECB, 2020).

The agenda also includes the so-called Regulatory Sandboxes, whose development creates a sort of test environment for testing and subsequent integration of various high-tech solutions. For example, for data collection (modules for automated reporting, real-time supervision, reporting information consolidation, data visualization etc.) or for information analysis with the help of tools for risk assessment, market supervision, fraud prevention, money laundering, terrorism financing etc.

Outside their purely technological contribution, the Regulatory Sandboxes are a potential new area for partnership between supervision bodies, central banks, traditional financial institutions, FinTechs and RegTechs. According to a study of the Financial Stability Council, the largest share among the SupTech initiatives goes to the partnership between separate supervision bodies (regulators and central banks), followed by that between other sector regulators, government agencies, third parties - providers of technological expertise, SupTech companies, academic institutions etc. (FSB, 2020, p. 14). It also becomes clear that the supervision and regulation technologies have the potential to increase the sustainability of the financial system, to decrease the human errors and to increase the possibilities for real time supervision. Together with this, one must also consider the potential risks of creating an excessive dependency on the SupTechs and RegTechs (FSB, 2020, p. 3).

Under certain conditions, we could identify several levels of interaction within the individual SupTech ecosystems: 1) own development activity through own development and testing of various innovations by the supervision agencies; 2) attracting companies from the RegTech domain as providers of technological expertise; 3) cooperation with traditional financial institutions; 4) partnership with FinTechs. Most often these are manifested within joint test environments (sandboxes, accelerators, innovation hubs), where the participants are regulators, RegTechs, traditional and innovative providers of financial services.

It must be noted that the prerogatives of the supervisory bodies are not and should not be subject to revision. This is rather about a new concept for an integration approach. In other words, the classic relationship between regulators and regulated subjects is kept in parallel with the attraction of new “partners”, gravitating around the FinTech and RegTech sector. Even more, their participation as providers of both technological and regulatory expertise at the same time increases the efficiency of the supervisory process.
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Endnotes

1 Skinner, 2019.

2 First, it is completely clear that the FinTech startup is evaluated based on potential, not on reality. When Stripe costs more than three Commerz Banks or it is evident that Ant Financial costs more than ten Deusch Banks, then it is certain that the bank executives are a little angry (Skinner, 2019).

3 Which innovation can attract the attention of the regulators? Are these the alternative means for cross-border transfer of funds? Is it probable for those using crypto currencies to do so? Despite the popular belief that the disintermediation of banks in the process is what worries regulators, maybe this is not so; maybe it is rather the disintermination of regulation that the regulators are concerned with (Prabhu, 2017).

4 In most countries, the bank industry is also structured on an oligopolistic principle, i.e. it is dominated by a small number of large credit institutions. In this reality and due to the relatively low priority, which banks assign to innovations, the customers are faced with serious problems regarding the quality, diversity and accessibility of service.

5 Some risks are similar to those for the financial companies in a wider sense (including the FinTechs) and were subject to a previous work by the Financial Stability Fund (FSB). They include financial risks occurring from the leverage, maturity transformation and liquidity mismatches, as well as operational risks, including those that could occur from potential faults in management, risk control and processes (Skinner, 2020a).

6 These elements are viewed as the DNA of the BigTechs’ business models. The “network external effects” of the BigTechs’ platform are related to the fact that the user’s benefit from participating as a party on the platform (e.g. as a seller in an e-trade platform) increases with the number of users acting as the other party (e.g. as buyers). The external networks create more users and more value for them. They allow the BigTechs to generate more data - the key contribution to data analysis. The analysis of large data arrays improves the existing services and attracts additional users. On their part, most users provide to the critical mass of customers the possibility to offer
a broader range of activities, which bring even more data. Therefore, the external networks are stronger on platforms offering a broader range of services and represent an essential element in the BigTechs’ life cycle” (BIS, 2019, p. 62).

7 After all, the growing market power of the BigTechs provoked the first regulatory interventions. In Europe and the United States these interventions were focused on data violations by the BigTechs, which have not affected banking so far. In China the relatively fast growth of the BigTechs’ banking business already has discrete regulatory effects. The Chinese government forces the BigTechs to keep 100% of their customers’ deposits as a minimum reserve in the Chinese Central Bank. In June 2018, the government also introduced new rules for using central, state clearing houses (Sachverständigenrat, 2019, S. 226).

8 In the same sense others note that the banks and credit unions fear the BigTechs mostly due to their large access to data and their capacity to manage the customer experience. But “despite that, between the anti-monopoly regulations, the investigation of algorithms and states, focused on the privacy rules (...), it is hard to imagine to what extent the technologies will be able to use the nuts and bolts of the bank industry” (Williams, 2020).

9 If in the past the credit cards were a high margin product for the banks, today these institutions are facing a new competition in the era after the crisis (Wack, 2020). According to others, in the emerging markets and the developing economies the BigTechs provide broader range of financial services, such as credits, insurance and asset management. This change may be due to the differences in the financial development, the approaches to financial regulation and the entry of financial services in different geographic areas (Skinner, 2020a).

10 In particular, the plainly called “Keep Big Tech Out of Finance” Draft Act in the United States, which is “very unlikely to pass, at least in the present political environment, but this situation may quickly change depending on the circumstances” (American Banker, 2020).

11 It is assumed that the development of the BigTechs will impact the formulation and application of the monetary policy. The rise of the BigTechs will increase the competition in the financial industry, making the market more sensitive to changes in interests, which could improve the efficiency of the price-based tools of the monetary policy. But, with the advancement of technology, the share of intangible assets in the total assets of the companies will continue to grow, which could undermine the efficiency of the monetary policy. In addition, the BigTechs can impact the inflation when the frequency of price change increases by quickly regulating the prices of goods and technologies through algorithm technologies (Jun, 2018, p. 5).

12 They are extracted from non-traditional sources, such as the “Internet of
Things”, integrating billions of linked sensors and devices (26.66 billion in 2019 and expected 75.44 billion in 2025) in countless contexts (Crosman, 2020). Since they are anonymous i.e. they do not contain personal data, the same can be used without fear of violating regulatory requirements. Depending on the specific type, the alternative data may be collected and analyzed weekly, daily or even every minute. This makes it much more dynamic and rich than the traditional data source. With their help and in combination with other information sources, very intelligent analyses can be made in a large scope - from customer behavior to market trends.

The new Apple credit card (defined as one of the most successful innovations in the card sector in recent years) is part of the recent invasion of Goldman, aiming to direct the attention to the consumers on Main Street after more than a hundred years, in which it took care of large corporations and big investors. Its partner in the endeavor - Apple Inc. - tried to decrease to a minimum the role of the investment bank, since it offers the product on the market with a sign that says: “A new kind of credit card. Created by Apple, not by a bank.” (Natarajan and Nasiripour, 2019).

The European Bank Authority (EBA) defines a set of key challenges before the trust, which the financial institutions and regulatory bodies face due to the increasing use of large data and extended analyses (including machine learning) in the financial services sector. The set defines four main pillars for aiding the integration of extended analyses (data management, technological infrastructure, organization and management and methodology for analysis), as well a set of “trust elements”, which must be correctly and sufficiently reported. Considering that two of three credit institutions in the EU have already made such “production” decisions, this measure is completely in good time (Finextra Research, 2020a).

In particular, the application of the “Level Playing Field“ principle, according to which all market participants making the same transactions must follow the same regulatory rules. According to some, however, in so far as these startups receive more air time, the regulators will guarantee that the FinTechs play by the same rules, but maybe not under the same conditions (Jaros, 2021).


According to some authors (Barberis et al.) the appearance of RegTechs dates back to the 90s of the 20th century and the first years of the new Millennium and is associated mostly with the development of own technologies for value at risk reporting
according to the then acting capital regulations and for following the regulatory requirement to monitor unusual shifts in the markets for securities. Also, while the rise of the FinTechs is nurtured by the many appearing startups, falling in direct competition with the traditional financial institutions, the entry of the RegTechs is a response to the institutional demand for regulatory “top-to-bottom” expertise as a result of the increasing costs for regulatory compliance. See the details in: Barberis et al., 2019, pp. vi-ix.

18 For the variety of RegTechs, see the details in: Deloitte, 2018; Schizas et al., 2019.

19 The periodic reports of the CCAF data summarize information from over 2,300 platforms for alternative financing from all over the world and are often used in publications on the subject by global institutions such as the Basel Committee on Banking Supervision, the Financial Stability Council etc. All CCAF reports are accessible online at: https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications.

20 The cited research also summarizes the services most often offered by the RegTech sector. Over half of the regulatory expertise companies offer solutions related to collecting and reporting information, data analysis, risk identification and management. The regulatory information management, the fund transfers supervision and analysis, the investigation of frauds and misconduct are also popular RegTech services.

21 The significance of the RegTech is also proven by the size of investments in that segment, which according to some analysts (Juniper Research) in 2024 will be five times their volume in 2019 resp. $ 127 billion. According to the research, the main cause of this growth is the dramatic increase of separate processes, requiring high degree of automation and mostly those in the domain of customer identification (Juniper Research, 2019). These forecasts are also confirmed by the data from 2018, for which year some analysts report 2.5 times increase compared to the previous and almost 5 times growth of investments in the sector within five years, where the largest growth in the 2014-2018 period is for the investments related to covering the new regulatory requirements in the customer identification domain - KYC (+34.5%), counteracting the money laundering - AML (+28%), GDPR (+13.1%), MiFID II (+6.4%), Basel III (+2%), PSD 2 (+2%) etc. (FinTech Global, 2019).

22 See: Broeders and Prenio, 2018, pp. 5-6.

23 In this relation, we can point out platforms such as Corda, Ethereum and HyperLedger Fabric, offering basic infrastructure, including an open source one, for forming shared environments with regulators and other government bodies. Another illustration are the separate regulatory initiatives in the high tech domain. For example,
the developed under the auspices of the European Commission DLT-based decentralized portal for exchange of regulatory information for the publicly traded entities in the EU (Financial Transparency Gateway, EFTG) connects the market infrastructures of the individual EU Member States. We can also mention the projects of the monetary bodies of Singapore, Hong Kong and the Central Bank of Canada to construct a blockchain based infrastructure for exchange of financial information, and the developed in 2018, again under the auspices of the European Commission, International Association for Trusted Blockchain Applications (INATBA). On its part, the ECB regards SupTechs as a key element in its strategies for bank supervision. See the details in: Valverde & Fernández, 2019, p. 28; Compare with: FSB, 2020, p. 12.

24 Studying the SupTech initiatives of 39 financial regulators worldwide, some reach the conclusion that the SupTech helps the supervision agencies in becoming more data and technology oriented, but these innovations should also correspond to the size, complexity and development of the regulated sectors. It turns out that the many newly appearing SupTech solutions are still of experimental nature and less than one third of them are active (Di Castri et. al., 2019, p. 2).

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EMPIRICAL RESEARCH ON THE RELATIONSHIP BETWEEN CONSUMER ATTITUDES AND VALUES TOWARDS ADVERTISEMENTS BY MOBILE OPERATORS

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JEL: M37

Abstract

The purpose of this article is to present research on consumer attitudes to mobile operator advertising, as well as their relationship with components of the value of consumers of mobile products and services. The Petty and Cacioppo’s Elaboration Likelihood Model of Persuasion, which examines the variability of attitudes toward advertising, as well as the Schwartz method for changing values, are applied. The obtained results clearly show the presence of a relationship between the studied indicators, as well as behavioral changes in the individual target groups. The leading summary is that females aged 21 to 24 are more strongly influenced by advertising of mobile operators and the same target group shows higher values for establishing benevolence towards different family members and universalism as shows tolerance to the needs of representatives of individual social groups.

Key words:
persuasive influence, cognitive and affective attitudes, behavioral changes

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1. INTRODUCTION

Human attitudes and pre-attitudes play a leading role in the process of persuasions’ formation, looking for their connection with the impact on consumers, as well as the behavioral changes resulting from this impact. For the purposes of this study, some changes regarding the value system of young people are explained according to the
Schwartz methodology for changing the values of the younger generation. The aim of the study is to establish some patterns in the formation of consumer attitudes and components of the value system of young people living in the cities of Sofia, Plovdiv and Stara Zagora.

The relevance of the theoretical need of the presented research is due to the fact that one of the most contested communications is advertising due to its characteristics. In addition to the specified theoretical parameters, the concepts “attitudes”, “per-attitudes”, “cognitive correspondence”, “system of attitudes” and others should be analyzed. The considered analysis focuses on the socio-psychological, age and existential aspects of the value system of young people, but does not aim to study and establish all the main components of the value system. The conceptual apparatus of the present study also includes two bipolar deviations from the value system of the individual: self-transcendence - includes universalism and benevolence and self-affirmation – unites achievement and power. The research selection of organizations is also not accidental, because mobile companies in Bulgaria are one of the powerful advertisers which try to influence through advertising very aggressively. The main research goal is not only to prove the existence of advertising influence, but how it manages to determine changes in consumer attitudes, persuasions and behavior.

2. CONSUMER ATTITUDES

The attitudes that the communicator (in this case a mobile operator) can build are also perceived as an evaluative attitude, as it contains a positive or negative reaction to a certain stimulus. In the most general sense, attitudes are defined as the tendency to react in a certain way to certain questions or events or “a relatively stable habit, inner focus, or predisposition of a person to a certain type of reaction, which determines actions and experiences and can be interpreted as an intermediary between the stimulus and the response” (Hiebsch and Vorwerg, 1979, p.678). According to Hiebsch and Vorwerg, who study attitudes about social psychology, attitudes are „readiness to react, necessary and mandatory for certain groups in specific situations, which as a socio psychological category is the orientation of the individual determined by group norms“ (Hiebsch and Vorwerg, 1979, p.675). Therefore, the formation of attitudes takes place in a particular social environment and is a reflection of its connections with the outside world. They are activated without conscious initiation in early childhood as „striving to meet basic needs“ (Hiebsch and Vorwerg, 1979, p.675) and learning new things, and the connection with the social environment is not broken. In the interaction between information and behavior, some cognitive structures are observed first, and then emotional ones follow. In psychology, they are known as cognitive, conative and emotional attitudes, which
determine the readiness to respond to a particular situation. In psychology researchers seek the „cognitive correspondence“ (Eagly, 1890, p.34) between what people do and what they believe. Social psychologists like Eagly find that people are not so consistent in their behavior and for various reasons it (behavior) does not always correspond to their attitudes. The researchers’ explanation is that the social environment and personal characteristics have a strong influence, which can prevent people from expressing their attitudes freely.

The classic model of forming attitudes in the mind of the recipient is the relationship between the stimulus for the realization of an idea and the reaction caused by the stimulation. In the process of persuasive communication, it is established that with repeated repetitions of the presentation of an idea, service or product, associative connections are created with the organization that caused the stimulus and desires for ownership to arise. This desire, in turn, is associated with the formation of a positive emotional attitude, which would completely predispose the recipient to the object of advertising. Along with the emotion, there is also the knowledge that shapes the cognitive attitude (Anderson, R., 1990, p.45) of the advertised object, which creates different ideas - conscious and unconscious, in the mind of the recipient, who at a certain stage of external influence could react, i.e. make a purchase. In this case, we again come to the concept of „system of attitudes“.

Crespi uses the term „system of attitudes“ for what other authors call attitudes. He believes that the system of attitudes consists of four components: evaluation frameworks for comparison (values and interests); cognitive abilities (knowledge and beliefs); attachment (feelings); volitional actions (behavioral intentions) (Crespi, 1998, pp.87-89). According to the views of this researcher, the connection between attitude and value can be sought as part of the cognitive abilities of the individual. Cognitive attitudes (Anderson, R., 1990, p. 45) are based on knowledge of an object (brand, product, country of origin, service, etc.). With the help of this knowledge, consumers compare the positive and negative features of the promoted product, comparing both with analogues and in terms of their own needs and desires, and then give an objective assessment of the product. The notion that consumer attitudes, respectively a system of attitudes, determine consumer behavior, makes them extremely important for the formation of research on the persuasive influence of advertising. In this line of thought it becomes clear that the influence of the already formed attitude in the perception and processing of information is not limited to selectivity, but also covers the interpretation of already perceived information. The more complex process is related to overcoming the perceived negative attitude, which in turn can be achieved by creating the right advertising concept for proper influence. It should not be forgotten, however, that attitudes are hypothetical constructs that psychologists invented to explain phenomena.
of interest. As Gordon Allport put it seven decades ago, “How does one know that attitudes exist at all? Only by necessary inference. There must be something to account for the consistency of conduct” (Allport, 1935, p. 836)

The measurement of the attitudes of a target group, as well as components of the value system of young people, is not done only to differentiate the audience and all its characteristics, but to change the attitudes if necessary. Last but not least, ways are sought for the formation of positive values as a result of established positive conative, cognitive and affective attitudes. This creates a favorable prerequisite for stimulating the desired behavior - making a purchase. Before moving on to looking for ways to change attitudes, existing attitudes need to be identified. Three criteria are indicated here: Direction - whether the examined person approves or disapproves the specific product (positive or negative); Degree - refers to the value that the subject gives to the object, a specific scale; Importance - the importance that the researched person attaches to the respective object, towards which the attitude is formed. (Colley, 1960, p.347)

Other research questions arise such as: do all attitudes show the same tendency to change; which attitudes are more lasting and how can they be changed? Kroeber-Reil divides the attitudes into several groups, which show significant differences in the relationship with behavior. The task of changing the attitude stems from the existing relationship between attitude and behavior, so the author identifies the following types: specific and non-specific attitudes; attitudes formed through experience and formed through communication; stable and unstable. „Attitudes formed as a result of direct experience with an object have a much stronger influence on behavior than attitudes formed as a result of communication.“ (Kroebel-Riel, 1990, pp.60-69) The same author believes that the attitudes measured today show tomorrow’s behavior, but he does not take into account the fact that the stability of attitudes can only be said for a certain period of time. The preservation of the stability of the attitude depends on whether it is leading for the person or not, just like the use of a certain product or service characterizes the values of the person.

3. CONSUMER VALUE SYSTEM

For the purposes of this study, a secondary analysis is made of the individual values of the target groups - young people aged 18 to 25 years, because they are an important determinant of human behavior and consumer attitudes. In addition, researchers have found a link between attitudes and values as part of a person’s cognitive abilities. (Festinger, 1957, pp.117-140)

There are 11 value types, identified and developed according to the Schwartz model, which include several main value categories, each category and subcategory
combining values with the same motivational purpose. (Schwartz, 1990, p.878-891) There are several approaches in the experimental study of values: M. Rokeach’s structural-energy approach is based on the ranking method. (Rokeach, 1973, p.123) According to a number of psychologists, they are closely related to the self-concept and psychosocial identity of the individual. The structural-content approach is based on a content analysis of the value hierarchy both on a social and individual level - for example in Hofstede and Schwartz. In this second approach, the most common is the Schwartz method, which analyzes the values in terms of their motivational content. This makes the model appropriate for the present study, applying Schwartz’s methodology for changing values in the younger generation. The considered types form two bipolar deviations: self-transcendence - includes universalism and benevolence; self-affirmation - unites achievement and authority. The two varieties oppose the values that emphasize the acceptance of others as equals and care for their well-being, the values of personal success and dominance over others.

Another important deviation that is directly relevant to the present study is openness to change (self-direction, hedonism and stimulation) versus conservatism (tradition, security and conformity) as opposed to values emphasizing independent thought and action, as well as the desire for change, the values of self-restraint, maintaining tradition and stability. (Schwartz, 2007, pp. 648-650) Therefore, the analysis of values shows that self-direction in Bulgarian youth is an individual value that is tied to the postmodern values of the global world. The difference in the concepts: „value“ and „motive“ should be taken into account, as well as the fact that “they belong to a more general value-motivational sphere of the personality”. (Taneva, T., 2001, p. 19). Here there is a predominance of the values of personal self-expression (such as choice, independence of thought and action, not limited by external imposed boundaries) over the values of personal self-preservation. In terms of value interests, the comparative analysis of the data from M. Garvanova’s research reveals that the openness to change retains its first place, followed in second place by self-transcendence. “Hedonism is placed in the forefront by the students that are studied in 2006-2007” (Garvanova, 2013, pp.45-56). Therefore, for more modern students, the values associated with the delivery of pleasure and enjoyment of life become increasingly important as a priority. It should not be forgotten that in the value profile of various respondents, in which automaticity and activity are in leading positions, there is a more pronounced confidence among men to turn the potential into reality. (Taneva, T., 2009, p. 196). Therefore, respondents are expected to be more willing to buy mobile products and services at risk.

The considered analysis focuses on the socio-psychological, age and existential aspects of the value system of young people, but does not aim to study and establish all the main components of the value system. Young people in Bulgaria are representatives
of the modern and pro-Western value orientation in our country, but in part of the study period researchers found a lack of interest in the modern and new, which shows a crisis in the value system of the young generation.

4. PURPOSE AND TASKS OF THE RESEARCH

The lack of research on consumer attitudes and pre-attitudes, as well as the establishment of their relationship with components of the value system of young people, is the main reason for conducting such research. The main tasks of the conducted research are the following:

• To monitor the changes and the stability of the built consumer attitudes;
• To indicate some of the manifested components of the value system of young people when using mobile products and services;
• To look for the connection between attitude and value in young people aged 18 to 25.

Based on the proposed theoretical framework, the following hypotheses are made:

H₀ - Consumer attitudes of young people using mobile products and services under the influence of advertising cannot form some of the components of their value system, as well as motivate certain consumer behavior.

H₁ - The consumer attitudes of young people using mobile products and services can form some of the components of their value system, as well as stimulate certain consumer behavior.

5. DATA ANALYSIS

The analysis for this study is based on 300 respondents, on the principle of respondents aged 18 to 25 years. Among them, 57.5% (113 participants) were male respondents and 42.5% (187 participants) female respondents. The only requirement for the respondents is to have used or use products and services of mobile operators in Bulgaria. In the first stage of the research according to Petty and Cacioppo’s method a first questionnaire is applied, which takes into account the attitudes and pre-attitudes of young people, the initial reactions of the subjects, which require in-depth thinking in the perception of advertising messages. The author places a different number of items (statements), measuring the strong and weak arguments of the advertisement, which determine the end result of persuasion, as well as the manifestation of the cognitive, affective and conative attitudes of the respondents. The aim is to determine which part of the respective advertisement carries information (cognition) and which satisfaction (hedonism). The average values of the responses of each subject are used to measure
the pre-communication attitudes (Petty and Cacioppo, 1986, p.26).

The experimental design is intra-group because all subjects go through the same conditions. When determining the age, there are three groups: the first group is from 18 to 20 years - 43%, the second group from 21 to 24 years - 42.7% and the third group over 25 years - 14%. Regarding their affiliation to a mobile operator, the respondents are in the following groups: Telenor subscribers - 121 people or 40%, then A1 - 88 people or 29%, Vivacom are 75 people or 25%, and another, other than indicated we have 2 respondents or 1%. An option for data entry is also included - a subscriber of more than one mobile operator, for which there are 14 or 5%. (Spasova, 2019, p.838-846). This article presents some of the results of a larger author's study of consumer attitudes. Additional research is being done on the gender of the respondents, which as an independent variable is directly dependent on age and the final purchase decision. Interesting results on the influence of gender on risky behavior are presented by Sander and McCrmick, who compare the types of risk that men or women prefer. The authors found that, in general, representatives of both sexes identify financial and emotional risks as the least preferred, especially by men (Tanev, T., 2009, р.194). Women are significantly more likely than men to take emotional and relationship risks. At the same time, in general, in self-reports people overestimate their ability to take risks (Tanev, T., 2009p. 195).

6. LIMITATIONS OF STUDIES

The considered analysis focuses on the socio-psychological, age and existential aspects of the value system of young people, but does not aim to study and establish all the main components of the value system. The proposed study identifies the following limitations:

• Its period covers the time from 2018 to 2020 (years in which the three mobile operators are present on the market), during which the advertising activity of the organizations can be monitored and analyzed, as well as to establish the indicated dependencies between consumer attitudes and values categories that determine consumer behavior.

• The number of respondents is limited: 300 respondents were interviewed on the principle of respondents who gave their consent to be interviewed. Not all advertising methods and models are available for consideration. The aim is rather to mark those that explain the relationships between attitude and value.

• Not all communication activities of mobile operators are considered, but only advertising as part of persuasive communication that changes consumer behavior.

• The respondents are regionally limited in Bulgaria, i.e. the respondents are
students at Sofia, Plovdiv and Trakia universities, single people and students - 93%.

- No data is provided regarding the gender of the surveyed persons for establishing new dependencies with the dependent variables - attitudes, pre-attitudes and beliefs, leading to a certain extreme behavior.

7. RELIABILITY ANALYSIS

To check the reliability of factors, internal consistency coefficients (Cronbach’s Alpha) were assessed. The reliability scores in this research were: Perception of advertising (positive statements) (0.673), Advertising perception behavior, (0.746), Positive emotions under the influence of advertising (0.646), Reasons for purchase (0.770), Impact through socially significant causes (0.860). It shows all the variables have the Alpha value in the ‘acceptable’ range (George and Mallery, 2003).

The more important results of the conducted one-factor analysis (ANOV A) of variance with an independent variable - „mobile operator“ and a dependent variable - „attitudes and pre-attitudes“ are the following: which mobile operator the surveyed respondents belong to, most of them have a neutral pre-attitude towards the mobile operator with whom they establish a relationship or this is 44% of the respondents. We should not underestimate the fact that 31.7% are those who have positive attitudes towards their mobile operator, which speaks of an initial positive opinion and higher expectations from young consumers. The most important result is the increase in the percentages of negative attitudes from pre-attitudes to current attitudes from 17.3% to 26.3%, which is evidence of a decline in trust after the use of products and services of mobile operators in Bulgaria. $R^2=0.331$ which means the independent variables „mobile operator“ express the dependable variable „attitudes and pre-attitudes“ 31.1%. The reasons for the change of attitudes are examined with the question: If there is a change in your attitudes to it, state one of the following reasons for change, in which one-factor analysis shows that the main reasons for changing attitudes are the following: Offers sufficient benefits for customers, Offers innovative ideas for customers, with a Cronbach’s alpha reliability factor of 0.647.

In order to take into account the real impact of the advertisement, as well as to make a purchase after an observed advertisement of a mobile operator, the respondents are asked the question: Do you use products and services of mobile operators after observing their advertisements? Out of a total of 163 respondents who give either a positive answer or an answer to some extent, the largest percentage of Telenor subscribers made a purchase after an observed advertisement - 59 people surveyed.

In the study of the persuasive impact of advertising, it is necessary to indicate those components of advertising communication through which a real impact on young
people has been achieved. To achieve this goal, respondents are tasked to evaluate the advertisements of a mobile operator to which they were subscribers before, during and after the impact. 15 items are proposed, the first two with good reliability. The first factor - Perception of advertising (positive statements) is composed of items: They are interesting; I always liked them; They are funny, where the answers are strongly and negatively colored with the other items. The reliability of this factor increases with the presence of the item - I always liked them, from 0.578 to 0.673 according to Cronbach’s Alpha.

During this stage aimed at studying the degree of accessibility of attitudes, the Petty and Cacioppo’s model of the highest probability of persuasion was used. To identify the peripheral signals that change the temporarily unstable attitudes, the impact is both centrally and peripherally, the question arises: How do you read / listen / watch the ads of mobile operators that reach you? Five factors are formed in it, but only the fifth is with good reliability. The factor is - Advertising perception behavior, as its reliability increases when removing “I never listen to mobile advertisements“ from 0.691 to 0.746 according to Cronbach’s Alpha.

Some positive emotions under the influence of advertising have also been studied with the factor - Positive emotions under the influence of advertising, of which there is a relatively good reliability as Cronbach’s Alpha is up to 0.646. With the highest average values is the first item - „Did you feel satisfied with the advertising of a mobile operator?“ which indicates that the advertisement is fun, almost similar to the results for the last item, which seeks satisfaction with the impact of advertising. But it should not be forgotten that here the values of the positive answers are between 1 with an answer never and 2 - with an answer sometimes from 1.75 to 1.90, as they stand far from 3 with an answer always, which shows that the respondents think that the advertisement to some extent it has a positive effect, but not very strongly. Therefore, building positive emotions, and hence attitudes through advertising, is difficult for the mobile operator.

In order to establish the reasons for the purchase, the respondents answered the question: What makes you make a purchase with this mobile operator? Because of the factor: Reasons for purchase includes all statements except the item (statement): „Offering profitable products and services“, it has a value of 0.770 according to Cronbach’s Alpha, i.e. it is considered “acceptable”. This question examines consumer behavior after an impact. The question includes 8 items that guide young respondents to the respective behavior. There are some items in this question, such as: The pleasure of owning something new; The feeling of being like other young people, which aims to explore the incentives for young people’s behavior. Another important item is the following: The advantages of the advertised products and services, which takes into account the role of the impact of advertising. It will be compared with items from
other questions to establish dependencies on the impact, attitudes and behavior of young respondents. The presented diagram shows that the highest value has the item: Package services-2.87, and in second place in terms of values is the item: Professional service-2.68, (the values are close to the answer yes - 3), which is a clear indicator for motivating the active behavior of the young respondent by offering favorable conditions and good service.

Fig. 1. Average values of the reasons for making a purchase by the mobile operator

In order to study the values expressing striving for understanding, tolerance and preservation of well-being, social justice, environmental protection, summarized in the name universalism, a study is made through the following question: “Which of the specific activities of your chosen mobile operator related to advertising would you like?”. This is a component that can be verified as part of the corporate social responsibility of the mobile operator such as: providing funds for the treatment of people, for orphans, for the elderly, for sick animals, funds for environmental protection. Two factors have been formed, the first - Impact through socially significant causes includes 6 of the 8 statements: „Provision of funds for treatment of people“, „Provision of funds for orphans“, „Provision of funds for the elderly“, „Provision of funds for sick animals“ „Construction of housing for homeless people“ and „Environmental protection activities“ with a reliability indicator of 0.860, which is considered to be completely satisfactory according to Cronbach’s Alpha.

The diagram shows the average values of the items, where the largest share has the activities for environmental protection-3.34, and in second place is the provision of funds for the elderly-2.23. In the third place, the respondents put the provision of funds for orphans, the values of which are 2.00. The influence of these activities in
Lyubomira Spasova. Empirical Research on the Relationship between Consumer Attitudes and Values towards Advertisements by Mobile Operators

combination with advertising media is an important part of the study because they are accurate evidence of one of the components of the value system - universalism, which proves the understanding and tolerance that are not lost in the use of more material goods. This component is directly related to the component of benevolence, i.e. values aimed at preserving and maintaining the well-being of people with whom we often have personal contacts: responsiveness, devotion, generosity, honesty, responsibility, true friendship, devoted love. The benevolence of the individual is checked with the question: Are you willing to help your relative or friend by buying a mobile phone or paying for a mobile service in your chosen mobile operator? where respondents indicate their propensity for this act. The tendency of the targeted persons to make a purchase for their relative or friend has been established, the presence or absence of one of the values - benevolence - is examined. This value belongs to the group of values aimed at preserving and maintaining the well-being of people with whom we often have personal contacts: responsiveness, devotion, generosity, honesty, responsibility, true friendship, devoted love. The results show that only 39% of the respondents or 117 respondents are fully prepared to help a relative or friend by buying a product from a mobile operator. 45% or 136 respondents gave an answer - sometimes, which to some extent includes a positive answer. This can be explained by several reasons: either there are circumstances that sometimes deter respondents from performing this noble act, or there is a moment of distraction after the impact of advertising.

| Environmental protection activities | 3.34 |
| Construction of housing for homeless people | 1.65 |
| Providing funds for sick animals | 1.88 |
| Providing funds for the elderly | 2.23 |
| Providing funds for orphans | 2.00 |
| Providing funds for the treatment of people | 1.77 |

Fig. 2. Influence of Corporate social responsibility on mobile companies

The obtained result allows to make the following summary: the possession of a mobile product or service can, as well as the realization of accessible and successful mobile communication, suggested through advertising, can activate values contained
in the factor: Reasons for purchase. Therefore, benevolence among young people is an individual value that influences their consumer behavior. The current modern world offers many more products and services that make a connection between real values in life and material possessions. All these components present in advertising communication can affect the target groups and achieve a real effect. In order to establish the identified dependencies, some correlation analyzes will be conducted, through which the connection between perceptions, emotions and behavior is sought, which helps the manifestation of certain consumer attitudes and categories of values.

8. CORRELATION ANALYSES BETWEEN THE INFLUENCING FACTORS

To investigate the linear relationship between the formed scales, Pearson’s correlation analysis of the formed factors was performed. Pearson’s simple correlation coefficient provides a numerical estimate of both the strength of the linear relationship and the direction. The results of the first test show a moderate statistically significant positive correlation between the scales of the two formed opposite factors - Perception of advertising of a mobile operator (positive statements) and Positive emotions after influence of advertising (r = 0.457; p < 0.01). This means that high values on one scale tend to correspond to high values on the other. When comparing the statements falling on the two scales - Perception of advertising of a mobile operator (positive statements) with the following items: “They are interesting“, “They are fun“ and the reversible statement “They are annoying and monotonous“, where the values are reversed, so that consent to this statement should be subtracted from the overall score on the scale and Positive emotions after influence of advertising with the following items: “Did you feel satisfied with the ads of a mobile operator“, “Did you feel excited about the ads of a mobile operator“; “Did you feel you are enthusiastic about mobile operator advertisements“, it is easy to conclude that the positive correlation can be explained by the positive evaluation of the advertisements. Since the attitudes of the respondents are positive towards the advertisements of the mobile operators, it is quite possible that after the interaction with them the respondents experience positive, satisfying emotions. Therefore, the positive affective attitudes of the respondents can lead to the perception of their products and services.

The results of the second correlation show a moderate statistically significant positive correlation between the scales of the two formed opposite factors: Reasons for more attention and Positive feeling after helping a loved one, where (r = 0.354; p < 0.01), therefore high values on one scale correspond to high values on the other. When comparing the statements falling into the two scales - Reasons for more attention
with the following items: “When there are lower prices“, “When there are elements of attractiveness of the products“, “When the exact product / service is named“, “When product demonstrations “, “When advertising is combined with other media products (TV show, film, news, on the Internet)“ and Positive feeling after helping a loved one with the following items: “I felt happy “, “I felt satisfied “. aims to identify the reasons for greater attention on the part of the respondents, as well as their relationship with the emotional attitudes of young people providing impartial assistance to a loved one. The impact is again through advertising, therefore it is done centrally and peripherally. Therefore, with a greater commitment of attention from young people, it would lead to a change in behavior and to an increase in the level of benevolence in them, and hence to positive emotions after helping a loved one.

To establish the reasons for the manifestation of benevolence in young people, an additional correlation analysis is conducted between two formed factors. The results show a moderate statistically significant positive correlation between the scales of the two formed opposite factors: Reasons for making a purchase at a mobile operator and Positive feeling after helping a relative or friend, where (r = 0.333; p <0.01). This means that high values on one scale tend to correspond to high values on the other. When comparing the statements fall into the two scales - Reasons for making a purchase at a mobile operator with the items: „Package services“, „Professional service“, „Fast communication“, „Advantages of the advertised products and services“, „Modern offers“, „The pleasure to own something new “, and Positive feeling after helping a relative or friend with the items: “I felt happy“, “I felt satisfied “, it is established that after making a purchase with a mobile operator chosen by the respondent, as well as the provision of impartial assistance to a loved one creates a sense of satisfaction in young people. This shows that the benevolence component belonging to the value system of young people is not exhausted. High values in the act of purchase indicate higher values of positive feelings in respondents. The high degree of satisfaction among young respondents when buying a product or service for a loved one, as well as increasing the values of the one-factor analysis by Crombach’s Alpha from 0.346 to 0.412 when adding the items: I felt useful; and This aroused noble feelings in me, is proof of the presence of benevolence in them. In addition, this value is manifested in a situation of personal sales, when the mobile operator is professional in offering bundled services, professional service and fast communication. Therefore, the impact of a company’s advertising can be enhanced in the presence of triggering events (helping a loved one) and the presence of influential components of advertising in personal sales.

According to Table 1, the ratio (R) of Positive emotions after influence of advertising and Perception of advertising of a mobile operator (positive statements) is 0.457, and with Positive feeling after helping a relative or friend is 0.449. This shows
a significant positive relationship between the independent variables, finding that the perception of a mobile operator’s advertisement, as well as the positive feelings after the help of a relative or friend, can create more positive emotions in young respondents. From the obtained data it is clear that positive feelings after the help of a loved one can also increase the reasons for attention in young people - $R = 0.607$. In order to study the behavior of the respondents, additional statistical procedures were performed, which found that the increase in the engagement of the respondents, i.e. making a purchase, is directly related to the positive feelings of young people after the help of a relative.

9. RESULTS AND DISCUSSION

According to the results, it is clear that hypothesis „$H_0$ - Consumer attitudes of young people using mobile products and services under the influence of advertising cannot form some of the components of their value system, as well as motivate certain consumer behavior“ is rejected because the results show a connection between the consumer attitudes of the respondents and their value system. One-factor analysis of variance shows that despite the increase in negative attitudes after using the products of the respective companies, young people perceive the perception of their advertisements. This is most strongly reported by Telenor subscribers. The high reliability of the obtained one-factor analyzes of behavior after the perception of advertising by a mobile operator also proves that young people aged 18 to 25 feel satisfied with a purchase. This conclusion is supported by the result on the reasons for making a purchase. Correlation analyzes show that with the increase of positive emotions, their greater perception among young people grows, and this also affects their benevolence towards other members of society. The conclusion made shows that it can be said with confidence that there is a connection between the consumer attitudes of the respondents and some of the components of their value system such as benevolence and universalism. The adoption and approval of activities related to the Corporate Social Responsibility of Youth is in support of „$H_0$ - Consumer attitudes of young people using mobile products and services can form some of the components of their value system, as well as stimulate certain consumer behavior“. What makes it difficult for the researcher is the complete evidence for this connection, but the conducted primary and secondary analyzes indicate the existence of such a connection. This article presents some of the results of a larger study on consumer attitudes, beliefs and components of the value system of young people, which is to be continued in order to identify trends in the respondents. It is extremely important to prove major deviations regarding the relationship between attitude and value as part of human behavior.
10. CONCLUSION

The study of consumer attitudes, human beliefs and the values of young people under the influence of advertising is an extremely complex process and the main reason is their variability. According to leading psychological and sociological studies, some tendencies are established among the individual targeted groups, such as a change in pre-attitudes and attitudes, which is expressed in an increase in negative to positive attitudes. This is the problem that all companies have to deal with, striving to build a positive image in the minds of consumers about the company itself and its products. This is achieved by conducting some activities related to Corporate Social Responsibility, which in turn lead to the creation of understanding and tolerance by young people to other social groups. Thus is formed one of the leading values - universalism, which has not lost its value in the use of more products and services. In addition, the present study attempts to prove the relationship between the attitudes of young consumers and some of the components of their value system, finding that the presence of positive affective and cognitive attitudes in young respondents is a valid reason for buying close person. Therefore, the establishment of positive affective attitudes is directly dependent on another component of the value system of consumers - benevolence, which is contrary to the value of self-direction, i.e. values that express a desire for independence of thought and action. These components require more in-depth research to establish all the main links between attitudes, pre-attitudes, persuasions and values that would affect the overall behavior of young consumers in Bulgaria.

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IMPACT OF COVID-19
ON THE PERFORMANCE OF NIGERIA’S STOCK MARKET

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JEL: G01, G40, G41

Abstract

This study identifies the structural break date in the series of All Share Index (ASI) of the Nigeria’s capital market using innovational outlier methodology with the Augmented Dickey-Fuller unit root with structural break test. The study also examines the descriptive characteristics and model structure of ASI before and after the identified break date using ARIMA methodology. It uses daily data of ASI from November 27, 2018 to November 24, 2020. The results indicate that the break date is March 6, 2020. The mean results decreased after the break. The series before the break follows ARIMA (3,1,12), while it follows ARIMA (7,1,9) after the break. The diagnostic test revealed that the ARIMA (7,1,9) fails to capture the entire variation in the series. The modified model for post break period is AR(7), MA(8) and MA(9) process. However, the estimated volatility of the series decreased after the break. The study recommends that capital market studies and policies going forward should incorporate the impact of Covid-19 induced structural break.

Key words:
Covid-19, Stock Market, All Share Index, Structural Break, ARIMA

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1. Introduction

Covid-19 is not the first epidemic disease that affects the global economies. The previous ones include the Spanish Influenza of 1918 which resulted in about 40 million deaths. The estimated short term economic loss attributed to the Spanish Influenza between 1918 and 1919 was about $4 trillion (Fernandez, 2020). The second notable epidemic was the SARS outbreak in 2002 which also started from China and seriously affected the Asian continent. The human death and estimated economic loss from SARS were 900 people and $54 billion respectively (Fernandez, 2020). More recently, Ebola outbreak affected the West Africa sub region between 2013 and 2016. The estimated deaths and economic loss were 11,300 and $53 billion respectively (Fernandez, 2020).

The current Covid-19 started in China in December 2019 and was declared as pandemic by WHO on March 11, 2020. It has caused serious economic loss across the world (Baldvin & Mauro, 2020; Senol & Zeren, 2020). Researchers estimated that Covid-19 portends greater economic loss relative to the previous crisis. It has been estimated that, at a global spread comparable to the Spanish Influenza, Covid-19 would have more than 80 million deaths (Dhar, Ayittey & Sarkar, 2020; Ferrantino, Arvis, Constantinescu, Dairabayeva, Gillson, Lee & Muramatsu, 2020). Just in the week of February 24, 2020, the global stock market lost about 6 trillion USD in wealth (Ozili and Arun, 2020).

The economic impact of epidemics and global financial crises always include a likely fall in stock performance. By March 2020, Covid-19 had caused their greatest one-day fall in many stock market indices. For example, Brazil stock market recorded 48% fall, 47% fall in Colombia, 44% in Greece, 42% in Norway and 41 in Austria (Alber, 2020; Fernandez, 2020; Kandil-Gokera, Eren & Karaca, 2020). Surprisingly, stock prices in China remained relatively stable compared to other parts of the world (Xinhua, 2020). This study examines the impact of the Covid-19 pandemic on the Nigerian stock market. Has it caused a structural break in the trend of the Nigeria All Share Index (ASI)? If yes, at what point? What is the extent of the variations in ASI before and after the break? The answers to these questions would help future researchers in econometrics analysis involving the Nigeria ASI by taking cognizance of the structural break resulting from the pandemic.

2. Literature Review

Analysis of the impacts of crises on the stock market has been of interest to researchers over time. Impacts of SARS on the stock market have been greatly investigated by studies like Nippani & Washer (2004); Chen, Jang & Kim (2007);

There are studies that have examined the impacts of the Covid-19 outbreak. Sansa (2020), for example, analysed the impact of Covid-19 on the financial market in China and the USA using data between March 1 and March 25, 2020 and confirmed significant impacts. He, Liu, Wang and Yu (2020) examined the direct and spill-over effect of COVID-19 on stock markets using daily return data. The authors confirmed that America COVID-19 has a short-term negative impact on stock markets with bidirectional spill-over effects between European/American countries and Asian countries. Of much proximity to the current study was the work of Zeren and Hızarcı (2020). They analysed the impact of Covid-19 on the financial market in China, France, Spain, South Korea, Italy and Germany and identified the presence of structural break in many stock market indices, in March 2020, using the structural break unit root tests. They also found evidence of co-integration between daily total cases and stock market indices in China, South Korea and Spain but not for France, Italy and Germany. Similarly, Alber (2020) found significant negative impact of Covid-19 on the stock market in China, Spain, France, Italy, USA, and Germany.

3. Theoretical Framework and Methodology

Following Perron, 2006 and Kim and Pierre, 2009 formulation, the theoretical foundation for break date identification in this study is the innovation outlier which can be stated as follows:

\[ ASI_t = ASI_{t-1} + \alpha + \beta(L)(\phi D_1(T_b) + \varphi DU_1(T_b)) + \epsilon_t \]  

Where ASI is the Nigeria’s All Share Index  
\( \alpha \) is the trend parameter  
\( \beta \) is the break parameter  
\( L \) indicate lag  
\( T_b \) is the break date  
\( D_1(T_b) = 1(t = T_b) \) is an indicator variable that is equal to 1 on the break date and 0 elsewhere.  
\( DU_1(T_b) = 1(t \geq T_b) \) is an indicator variable (is) equal to 1 from the break date to the end and 0 otherwise.  
\( \epsilon_t \) is an independently and identically distributed error terms
After identifying the break date using equation 1, this study analyses the descriptive statistics before and after the break using mean, median, maximum, minimum, standard deviation, skewness, kurtosis and Jarque-Bera statistics. This study employs the techniques of Autoregressive Integrated Moving Average (ARIMA). It involves determining the values of p, q and d for the series using deduction from Autocorrelation Function (ACF) and Partial Autocorrelation Function (PACF). The ARIMA modeling is based on Box-Jenkins statistical model (Garrett, 2012).

The ARIMA modeling involves testing for the stationarity of the series before and after the break. A time series is said to be stationary if there is no systematic trend in its mean (no trend) and variance, and has no periodic variations. To test the stationarity of the series, the study plots the ACF and PACF of the series and draw out conclusions from the graphs. Also, Augmented Dickey Fuller test is used to test the stationarity of the series.

After analysing the ACF, the PACF and the the stationarity test, there may be more than one suggestive models for the series. To select the best model, the selection criteria include: model with the highest number of significant coefficients, model with the lowest volatility, model with the highest adjusted $R^2$ and model with the lowest information criterion (Akaake Information Criterion - AIC and Schwarz Bayesian Information Criterion - BIC).

Before fitting the best ARIMA model, the study also conducts diagnostic check to ensure that the obtained best model has left no significant information uncaptured. We achieve this by analysing the correlogram of the residuals and check that all the lags in the correlogram are flat (that is, falling within 95% confidence bound). If this is not the case, the best model is adjusted as suggested by the diagnostic check.

For the Autoregressive model, the current value of the All Share Index (ASI) series is modeled as a function of its past ‘p’ values, $(ASI_{t-1}, ASI_{t-2}, ..., ASI_{t-p})$; where ‘p’ is the number of steps into the past needed to forecast the current value. An autoregressive model of order p, [AR(p)] could be explicitly written as,

$$ASI_t = \varphi_1 ASI_{t-1} + \varphi_2 ASI_{t-2} + \cdots + \varphi_p ASI_{t-p} + \epsilon_t$$  
(2)

Where $ASI_t$ is a stationary series, $\varphi_1, \varphi_2, ..., \varphi_p$ are the parameters of the AR($\varphi_p \neq 0$); $\epsilon_t$ is white noise (error term).

For the Moving Average part, the current value of the series depends on its past shocks or errors. Thus, a Moving Average process of order q [MA(q)] is specified as:

$$ASI_t = \mu + \theta_1 \epsilon_{t-1} + \theta_2 \epsilon_{t-2} + \cdots + \theta_q \epsilon_{t-q} + \nu_t$$  
(3)

Where $\mu$ is the expectation of $ASI_t$, $\theta_1, ..., \theta_q$ are the parameters and $\nu_t$ is white noise (error term).

The combined ARIMA model is usually referred to as the ARIMA (p,d,q) model.
where p is the order of the autoregressive part, d is the required times of differencing required to achieve stationarity and q is the order of the moving average part. An Autoregressive Moving Average of order \((p, d, q)\) is given as

\[
\Delta_d ASI_t = \mu + \sum_{i=1}^{p} \phi_i ASI_{t-i} + \sum_{i=1}^{q} \theta_i \epsilon_{t-i} + \epsilon_t
\]

4. Results and Findings

This section contains the presentation and analysis of the results.

4.1. Identification of Structural Break in ASI Series

Figure 1 presents the visual representation of the ASI trends. The most significant drop in the values of the series is month 3 of 2020 (March).

![Figure 1: Trend of ASI Series 11/2018-11/2020](Source: Author’s Computation)

For the period between March and October 2020, the series was consistently below the average value before March 2020. The ASI recovered greatly during early part of November 2020 but started a falling trend again.

4.2. Break Date Identification

Table 1 (see Appendix) and Figure 2 contain the results of the formal test for break using the Innovation outlier method described under the methodology.

From Table 1, the probability value of 0.28 and the test critical values of -5.72, -5.18 and -4.89 for 1%, 5% and 10% respectively indicate non-stationarity of the ASI series. Based on minimum Dickey-Fuller t-test criterion, the identified break date is March 6, 2020.

The visual representation of the Dickey-Fuller t-statistics minimization for identifying break date is shown in Figure 2.
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The visual representation of the Dickey-Fuller t-statistics minimization for identifying break date is shown in Figure 2.

Figure 2: Plot of Dickey-Fuller t-statistic

Source: Author’s Computations

4.3. Descriptive Analysis of ASI (before and after the Break)

The comparative descriptive analysis, before and after the break, is summarized in Table 2 (see Appendix). It can be observed that the highest value of the index was recorded in the pre-break period and the lowest value was recorded in the post-break period. Despite the post-break period having a considerably lower number of observations than the pre-break period, the standard deviation statistic indicates that price appears to be more volatile in the post-break period.

The skewness statistic indicates that price has a positively skewed distribution in the pre-break and post-break periods, thus indicating that there is a higher tendency to obtain positive extreme price movement than negative extreme price changes on the Nigeria Stock Exchange. The Kurtosis coefficient indicates price is light-tailed before the break and has a heavy tail in the post-break period. The Jarque-Bera statistic and probability value indicate that the price series is not normally distributed in both the pre-break and post-break periods; Hence the Gaussian normal error distribution cannot be assumed for the series in the two periods.
4.4. ARIMA Analysis of ASI before the Break

4.4.1. Test of Stationarity (before break)

The plots of the autocorrelation function (ACF) and the partial autocorrelation function (PACF) are displayed in Figure 3. For the ACF the broken lines are the standard error bounds. The autocorrelation declines very slowly.

![Figure 3. Autocorrelation and Partial Autocorrelation Functions (Before Break)](source)

The PACF shows that the first lag is very significant while every other one cuts off. Therefore, the series is indicative of a non-stationary series because the decline in the ACF is gradual. To confirm that the ASI series before the break date is integrated of order 1, the stationarity test is performed on the first differenced series. The result is shown in Table 3 (see Appendix). Since the probability value (0.00) is less than α-level (0.05), the ASI before break is now stationary after the first difference.

4.4.2. ARIMA Model Parameterisation (before break)

The ACF and PACF of the differenced series are shown in Figure 4. The PACF shows significant spikes at lag 3 and lag 12 suggesting an Autoregressive Pattern of order 3 or 12. Similarly, the ACF also shows significant spikes at lag 3 and 12, then it decays suggesting a Moving Average of order 3 or 12. Thus, possible model formulations are: ARIMA(3,1,3), ARIMA(3,1,12), ARIMA(12,1,3) and ARIMA(12,1,12). The results of each model fitted are summarised in Table 4 (see Appendix).

It can be observed from Table 4 that ARIMA (3,1,12) is the most appropriate model with 2 significant coefficients, least volatility of 0.75, highest adjusted R² of...
Similarly, the ACF also shows significant spikes at lag 3 and 12, then it decays suggesting a Moving Average of order 3 or 12. Thus, possible model formulations are: ARIMA(3,1,3), ARIMA(3,1,12), ARIMA(12,1,3) and ARIMA(12,1,12). The results of each model fitted are summarised in Table 4 (see Appendix).

It can be observed from Table 4 that ARIMA (3,1,12) is the most appropriate model with 2 significant coefficients, least volatility of 0.75, highest adjusted $R^2$ of 0.02, lowest AIC of 2.58 and least BIC of 2.62. In order to be sure that the ARIMA (3,1,12) has left no information uncaptured, the diagnostic analysis involves examining the correlogram of the residuals as shown in Table 5.

Since all the lags present in the correlogram have remained flat within the 95% confidence bound, then it is concluded that ARIMA(3,1,12) is indeed the best model for this series.

4.5. ARIMA Analysis of ASI after the Break
4.5.1. Test of Stationarity (after break)

The PACF shows that the first lag is very significant while every other one cuts off. Therefore, the series is indicative of a non-stationary series because the decline in ACF is gradual. This requires running a stationarity test.

To confirm that the ASI series after the break date is integrated of order 1, the stationarity test is performed on the first differenced series. The results is shown in Table 6. Since the p-value (0.00) is less than $\alpha$-level (0.05), we concluded that first difference of ASI after break is now stationary and thus, ASI after break is integrated on order 1 (d=1).

4.5.2. ARIMA Model Parameterisation (after break)

The ACF and PACF of the differenced ASI series after the break are shown in Figure 6. The PACF shows a significant spikes at lag 2, lag 7 and lag 9. This suggests an Autoregressive Pattern of order 2, 7 or 9. Similarly, the ACF also suggests a Moving Average of order 2, 7 or 9.
The tentative models that can capture the variation in the series are thus: ARIMA(2,1,2), ARIMA(2,1,7), ARIMA(2,1,9), ARIMA(7,1,2), ARIMA(7,1,7), ARIMA(7,1,9), ARIMA(9,1,2), ARIMA(9,1,7) and ARIMA(9,1,9). The results of each of the 9 possible models are summarised in Table 7 (see Appendix).

Following the same guidelines used in identifying the best model earlier, ARIMA(7,1,9) is selected here as the best model. In order to be sure that the ARIMA (7,1,9) has left no information uncaptured, the diagnostic results are shown in Table 8 (see Appendix). Since there exists a significant spike at lag 8 beyond the 95% confidence bound for both ACF and PACF, then the model still leaves some information uncaptured and so it is adjusted by adding AR(8) and MA(8). The two additional models are compared to the initial selected model in Table 9. It would now be concluded with respect to all indications that the model with AR(7), MA(8) and MA(9) is the most appropriate model for this series.

4.6. ARIMA and Volatility Estimates (before and after break)

The parameter estimate of the ARIMA models and volatility estimates before and after the break are summarised in Table 10. The ARIMA model for the series before the structural break shows that ASI, is dependent on an AR and MA process of lags 3 and 12 respectively with parameter estimates of 0.11 and -0.13 respectively. On the other hand, the ARIMA model of the series after the structural break indicates lag 7 for the AR process and lags 8 and 9 for the MA process. Their parameter estimates are 0.19, 0.24 and 0.26 respectively.

The volatility estimates is 2.02 for the series before the break and 1.92 for after break, indicating that the series before the structural break is more volatile than the series after the break.
5. Conclusion

This study examines the presence of structural break in Nigeria’s stock market due to Covid-19. The results of the structural break indicate the presence of a structural break in the series and the break period is identified as March 6, 2020. The break date is 8 days from the date of the first confirmed case of Covid-19 in Nigeria (February 27, 2020) and 5 days before the WHO declared Covid-19 as pandemic. This suggests that the Nigerian stock market is sensitive to local materialization of Covid-19, even before it was declared a pandemic.

Further analyses were conducted on the series before and after the break and it became known that despite the post-break period having a considerably lower number of observations than the pre-break period, the standard deviation statistic indicates that ASI appears to be less volatile in the post-break period. Also, it was realized that the highest value of the index was recorded in the pre-break series and the lowest value was recorded in the post-break period.

The ARIMA model for the series before the structural (break) also shows that $ASI_t$ is dependent on an AR and MA process of lags 3 and 12 with their estimates 0.11 and -0.13 respectively, whereas the ARIMA model of the series after the structural break indicates lag 7 for the AR process and lags 8 and 9 for the MA process. Their estimates are 0.19, 0.24 and 0.26 respectively.

The volatility estimates indicate that the series before the structural break is more volatile than the series after the break following their estimates 2.02 and 1.92 for the pre-break and post-break periods respectively.

The analysis suggests that while the price indexes on the Nigeria stock market shifted downward on March 6, 2020, the risk also decreased. This might suggest that market participants give positive value to government efforts in managing the risk of Covid-19. However, further study that considers sectoral analysis and return series would add valuable contribution to this issue.

References


Macmillan, 278-352.


Appendix

<table>
<thead>
<tr>
<th>E-View Results of Break Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Break Specification: Trend and intercept</td>
</tr>
<tr>
<td>Break Type: Innovational outlier</td>
</tr>
<tr>
<td>Break Date: 3/06/2020</td>
</tr>
<tr>
<td>Break Selection: Minimize Dickey-Fuller t-statistic</td>
</tr>
<tr>
<td>Lag Length: 0 (Automatic - based on Schwarz information criterion, maxlag=18)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>t-Statistic</th>
<th>Prob.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
<td>-4.409965</td>
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<tr>
<td>Test critical values:</td>
<td>1% level</td>
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<tr>
<td></td>
<td>5% level</td>
</tr>
<tr>
<td></td>
<td>10% level</td>
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</table>

*Vogelsang asymptotic one-sided p-values.

Source: Author’s Computations
## Table 2

### Comparative Descriptive Statistics

<table>
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<tr>
<th>Statistic</th>
<th>Before break</th>
<th>After break</th>
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<tbody>
<tr>
<td>Mean</td>
<td>94.46833</td>
<td>69.29235</td>
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<tr>
<td>Median</td>
<td>95.13000</td>
<td>67.24000</td>
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<tr>
<td>Maximum</td>
<td>107.0000</td>
<td>92.84000</td>
</tr>
<tr>
<td>Minimum</td>
<td>84.38000</td>
<td>57.41000</td>
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<tr>
<td>Std. Dev.</td>
<td>6.115782</td>
<td>7.405770</td>
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<tr>
<td>Skewness</td>
<td>0.159280</td>
<td>1.308003</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.758574</td>
<td>4.757921</td>
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<tr>
<td>Jarque-Bera</td>
<td>22.92822</td>
<td>77.40063</td>
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<tr>
<td>Probability</td>
<td>0.000011</td>
<td>0.000000</td>
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<tr>
<td>Observations</td>
<td>335</td>
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*Source: Author’s Computations*

## Table 3

### Unit Root Test on First Differenced Series (Before Break)

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<th>t-Statistic</th>
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<td>1% level</td>
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<td>5% level</td>
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<td>10% level</td>
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*Source: Author’s Computations*

## Table 4

### Estimates of Alternative ARIMA Model for $ASI_{before}$

<table>
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<tr>
<th>D(ASI)</th>
<th>ARIMA (3,1,3)</th>
<th>ARIMA (3,1,12)</th>
<th>ARIMA (12,1,3)</th>
<th>ARIMA (12,1,12)</th>
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<td>2</td>
<td>1</td>
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<td>Volatility</td>
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<td>0.750698</td>
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<tr>
<td>Adjusted R$^2$</td>
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<td>AIC</td>
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*Source: Author’s Computations*
### Table 5: Model Diagnostic for ARIMA (3,1,12)

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<th>Partial Correlation</th>
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<th>PAC</th>
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Source: Author’s Computations

### Table 6: Unit Root Test on First Differenced Series (After Break)

<table>
<thead>
<tr>
<th>Augmented Dickey-Fuller test statistic</th>
<th>t-Statistic</th>
<th>Prob.*</th>
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<td></td>
<td>-14.27122</td>
<td>0.0000</td>
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Test critical values: 1% level -3.465780
5% level -2.877012
10% level -2.575097

Source: Author’s Computations

### Table 7: Estimates of Alternative ARIMA Model for ASI after

<table>
<thead>
<tr>
<th>D(1)ASI</th>
<th>ARIMA (2,1,2)</th>
<th>ARIMA (2,1,7)</th>
<th>ARIMA (2,1,9)</th>
<th>ARIMA (7,1,2)</th>
<th>ARIMA (7,1,7)</th>
<th>ARIMA (7,1,9)</th>
<th>ARIMA (9,1,2)</th>
<th>ARIMA (9,1,7)</th>
<th>ARIMA (9,1,9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant coefficients</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Volatility</td>
<td>2.0997</td>
<td>2.0640</td>
<td>2.0294</td>
<td>2.0597</td>
<td>2.0748</td>
<td>2.0157</td>
<td>2.0235</td>
<td>2.0148</td>
<td>2.0304</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.0123</td>
<td>0.0291</td>
<td>0.0454</td>
<td>0.0311</td>
<td>0.0240</td>
<td>0.0517</td>
<td>0.0481</td>
<td>0.0522</td>
<td>0.0449</td>
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</tbody>
</table>

Source: Author’s Computations
Table 8

Model Diagnostic for ARIMA (7,1,9)

<table>
<thead>
<tr>
<th>Autocorrelation</th>
<th>Partial Correlation</th>
<th>AC</th>
<th>PAC</th>
<th>Q-Stat</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.087</td>
<td>0.4208</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.126</td>
<td>0.4145</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-0.022</td>
<td>0.4510 0.034</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.037</td>
<td>0.4764 0.092</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.045</td>
<td>0.5154 0.161</td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>0.021</td>
<td>0.5239 0.264</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>-0.018</td>
<td>0.5308 0.380</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.151</td>
<td>0.5947 0.134</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0.002</td>
<td>0.5953 0.200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.025</td>
<td>0.5913 0.271</td>
<td></td>
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<tr>
<td>11</td>
<td>-0.030</td>
<td>0.5957 0.343</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>-0.015</td>
<td>0.5943 0.428</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>13</td>
<td>-0.012</td>
<td>0.5972 0.515</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0.034</td>
<td>0.5940 0.580</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>-0.026</td>
<td>0.5944 0.649</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>-0.054</td>
<td>0.5987 0.675</td>
<td></td>
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<td></td>
</tr>
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</table>

Source: Author’s Computations

Table 9

Estimates of the adjusted ARIMA model

<table>
<thead>
<tr>
<th>D(1) Price</th>
<th>ARIMA (7,1,9)</th>
<th>AR(7)</th>
<th>AR(8)</th>
<th>MA(9)</th>
<th>AR(7) MA(8) MA(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant coefficients</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volatility</td>
<td>2.01586</td>
<td>1.956705</td>
<td>1.919205</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R^2</td>
<td>0.05173</td>
<td>0.074475</td>
<td>0.092212</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIC</td>
<td>3.58472</td>
<td>3.567924</td>
<td>3.551448</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SBIC</td>
<td>3.65409</td>
<td>3.654638</td>
<td>3.638162</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s Computations

Table 10

Results of ARIMA Model and Volatility Estimate

<table>
<thead>
<tr>
<th>Period</th>
<th>ARIMA model</th>
<th>Volatility Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before break</td>
<td>( Y_t = -0.050710 + 0.110941t_{-3} - 0.127324\varepsilon_{t-12} )</td>
<td>2.01586</td>
</tr>
<tr>
<td>After break</td>
<td>( Y_t = -0.004032 + 0.190533t_{-7} + 0.240122\varepsilon_{t-8} + 0.264053\varepsilon_{t-9} )</td>
<td>1.919205</td>
</tr>
</tbody>
</table>

Source: Author’s Computations
CUSTOMER SATISFACTION AND REPURCHASE DECISION: EVIDENCE FROM FAST FOOD RESTAURANTS

Oghenenyerhovwo Rita INONI

Abstract

Service quality is a major determinant of customer satisfaction and consequently a repurchase decision in the fast food restaurants’ (FFRs) industry. Nevertheless, prompt and efficient services alone may not guarantee a restaurant a place in today’s hyper-competitive marketplace. Therefore, this study was conceived to examine the impact of food quality (FQ), service quality (SQ), perceived value (PV) and restaurant environment (RE) on customer re-purchase decision, mediated by customer satisfaction (CS). Data for the study were obtained from a sample of 320 consumers drawn from 12 FFRs in three major towns in Delta State, Nigeria. Multiple and hierarchical regressions were used to analyse the data generated. The findings indicated that FQ, SQ, PV and RE exerted positive and significant effects on CS and re-purchase decision. The results also showed that CS fully mediated the relationship between SQ and repurchase decision, but the meditational influence was only partially for FQ, PV and RE; implying that FQ, PV and RE have their own direct influence on RPD besides through SQ. Given the impact of FQ, SQ, PV and RE on CS and repurchase decision, restaurants’ managers need to continually improve on the quality of their services, environment and offerings to sustain the patronage of their clients in order to survive in today’s hyper-competitive marketplace.

Key words:
customer satisfaction, re-purchase decision, food quality, service quality, restaurant environment, Nigeria

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Introduction

The food industry is one of the fast growing sub-sectors of the hospitality industry in Nigeria. It has experienced rapid growth owing to the ever growing human population, increasing urbanization and changing lifestyle of the populace. However, with the rapid growth in the industry comes increased competition among operators to win the patronage of clients. Customer satisfaction (CS) is how much customer’s expectations are met through services performed or what the perceived quality result is based on an evaluative judgment of a transaction (Rajput and Gahfoor, 2020). Through CS, customer’s expectations can determine whether they are being satisfied or dissatisfied with the goods and services received. Sometimes, product and service performance may go beyond customers’ expectation in which case they are more than satisfied (Kotler and Armstrong, 2021). CS is essential for success in FFRs as their ability to keep customers satisfied will determine the continued operation of such outfits. This is so because when the customer is satisfied, it will not only lead to repeat patronage, but such customers would recommend the restaurant to friends and associates through positive word of mouth. However, some well known restaurants that have long been operating in Delta State are winding up, while new outfits are springing up in their places. Although the reasons for this trend are not well known, the hyper competition in the sector is a contributory factor coupled with recent government lockdown measures to contain the spread of Covid-19. Between March and the end of June, 2020, the State government shut down FFRs, bars, night clubs and hotels as a drastic measure to contain the spread of the Covid-19 pandemic which may have worsened their situation and hampered the survivability of many FFRs. Since CS is a critical fulcrum around which success of FFRs revolves, the major objective of the study is to investigate the impact of service quality (SQ), food quality (FQ), restaurant environment (RE) and perceived value (PV) on repurchase decision (RPD) in FFRs in Delta State, Nigeria. The specific objectives are to; determine the influence of SQ, FQ, RE and PV on CS; ascertain the effect of CS on repurchase decision; and investigate the meditational role of CS on the relationship between FQ, SQ, PV, RE and RPD.

Literature Review and Conceptual Model

Customer satisfaction (CS)

Given the intense competition in the FFRs industry, CS is one of the cardinal objectives of producing and marketing firms. Many companies are making strategic marketing plans to improve relationship with their customers to retain them, maximize their market share, and improve the firm’s financial performance. Oliver (1999) defined
CS as a pleasurable fulfilment; or the consumer perception that consumption fulfils some need while Ha and Jang (2010) and Raghavendra et al. (2019) viewed CS as an assessment of the overall service and affective elements evoked by the consumption experiences. Thus, CS is measured by a consumer’s estimated experience of the extent to which a provider’s services fulfil their expectations. Furthermore, attaining a high extent of CS is crucial to business success as satisfied customers make repeat purchase, are loyal and tend to use other services offered by the company (Cheng et al., 2019).

**Food quality (FQ)**

Food is the core product in FFRs and FQ plays a very significant aspect in business success (Liu and Jang, 2009). Thus, FQ is a critical success factor as it affects a firm’s long term financial performance owing to its capacity to create favourable preference for the organisation’s products in the mind of the consumers. FQ is a very subjective matter among consumers and researchers have distinguished between objective and subjective FQ. Objective quality’ is focused on product- and process-oriented quality; while product-oriented quality relates to the physical attributes of the foods such as fat content. Studies have posited that FQ significantly affect CS, behavioural intention and RPD (Hanaysha, 2016). The presentation, freshness and food taste are other factors identified as determining factors of CS that predict customer loyalty (CL) and repurchase decision.

**Service quality (SQ)**

Generally, SQ is how well a delivered service meets the client’s expectation (Kant and Jaiswal, 2017). However, in FFRs setting, Gong and Yi (2018) defined SQ as an important determinant of CS and its consequent outcomes such as positive word of mouth and repeat purchase. Sometimes, it is difficult for consumers to evaluate and differentiate a superior brand through product’s physical attributes such as size, colour and aroma. But in FFRs customers can overcome such difficulty in identifying a superior brand, by relying on external characteristics of products such as packaging, advertisement, price, trademark, company image. Several models have measured the multidimensional concept of SQ, but notable among them is the SERVQUAL model developed by Parasuraman et al. (1988) cited by Uzir et al. (2020) and applied in restaurants setting (Oh and Kim, 2017). The model identified five key dimensions of SQ; reliability, tangibility, responsiveness, assurance and empathy. Reliability; is the ability to perform the services promised accurately, in a dependable manner. Assurance; addresses how courteous the firm’s workers are, and their ability and willingness to instil trust and confidence in their relationship with customers. Frontline staffs are expected to show politeness, respect, consideration and friendliness. Tangibles; deals with the condition and presentation of physical facilities, equipment, personnel communication, material. Empathy; this entails giving individualized attention to patrons at all times. It
comprises of several components such as access, approachability and ease of contact by patrons, understanding the customer and listening to, and communicating with them in the language they understand. Responsiveness entails the willingness to assist and provide customers prompt services by staff of the organisation.

**Perceived value (PV)**

Perceived value (PV) is the consumer’s overall assessment of the utility of a product or service, based on perceptions of what is received vis-à-vis what is offered (Zeithaml, 1988). Similarly, Lai (2015) argued that value is at the heart of what consumers pursue from an exchange, thus PV is described conventionally as a trade-off between price and quality. Customers are likely to make a repeat purchase if they received ‘value for money’, thus there exists a link between PV and future purchase intention (Chen and Lin, 2015). Furthermore, it can be argued that consumers’ value results from the personal comparison of the benefits obtained and the monetary sacrifices he has made. Therefore, PV is conceived a subjective and personal concept (Zeithaml, 1988). Value can hardly be objectively determined by the seller, but it is only the consumer who is able to perceive whether a product offers value or not (Joung et al., 2016). Although the impact of PV enhancing CS and RPD have received in-depth studies, nevertheless, only limited research attention has been focused on PV in comparison to the constructs SQ, FQ and CS (Lai, 2015). A consumer may be satisfied with the service and quality of the offering, but PV might fall short of his expectation.

**Restaurant environment (RE)**

Nowadays, more people eat outside their home more often than it was some years ago. According to Ryu et al. (2012), customers are increasingly putting a premium on quick service and better eating environment. Owing to the intense competition in the FFR industry, restaurateurs are enhancing their aesthetics and design, thereby providing more comfortable environment for dining. Therefore, making the atmosphere more pleasant and innovative is essential for a firm’s success in the FFR business as the restaurant’s atmosphere is given immense consideration by consumers as a very crucial component of the establishment; and many perceived it as a significant complement to the menu served (Almohaimmeed, 2017). Although the primary function of FFRs is to provide food, many customers nowadays prefer an environment that will enhance their quality of life by eating out in comfortable dining space. Restaurants surroundings help to create an expectation of dining experience even before the customer is served, thus improvement in SQ and FQ alone will not adequately satisfy the demand of customers (Horng et al., 2013).

Furthermore, a pleasing environment has the potential to enhance consumers’ positive emotions towards the restaurant thereby increasing the intention to re-visit and ultimately repeat purchase. According to Chen and Hsieh (2011) the pleasure and arousal
environment will stimulate customers’ to spend approximately 12 percent more time on the average in the FFR. The environmental factors of interest are ambient cues, including ambient scent and cleanliness, as these attributes are mainly considered by patrons when they consider dining out. Cleanliness is a crucial factor that attracts consumers’ to FFRs, because it is an integral feature that patrons use to assess the dining area’s quality (Barber and Scarcelli, 2009). Ambient conditions are intangible factors that have subconscious impact on customers’ perceptions and responses to the environment (Hanaysha, 2016). Although, ambient factors (lighting, noise, music, scent, air quality and temperature) are not the actual service in FFRs, their absence is a cause for concern or inconvenience to customers (Ali et al., 2016). Pleasant scent will leave good experiences and pleasant memories in customers’ minds, thereby evaluating their experiences more positively (Ariffin et al., 2011). Therefore, restaurateurs need to constantly review ambient cues to earn trust, confidence and continued patronage of clients.

**Repurchase decision (RPD)**

Behavioural intention (BI) towards FFRs is a subjective judgment of how patrons will behave in future regarding their dining experiences. Different forms of BI are exhibited by customers of FFRs ranging from revisit intention (RI), repurchase decision (RPD) to recommending and disseminating positive word-of-mouth messages (Kim et al., 2013). RI as the name implies is the plan to behave in a certain manner, but RPD is the actual buying of the desired product again. Research has shown that consumers who have pleasurable and memorable experiences will form favourable BI, leading to repeat visit and re-patronage, and could subsequently become loyal customers (Abdullah et al., 2018). RI, and ultimately RPD could be driven by a customer’s desire for value and a comfortable environment to relax from the pressure of work. Besides the restaurant environmental attributes which are major motivators of RI and repeat purchase, advertisement and promotional campaigns by the service provider also influence repeat visit (Singam et al., 2014). This is so because a conducive restaurant environment has the potential to evoke positive emotional responses from customers, and the higher such affective responses, the higher repurchase decision will be (Ali et al., 2016). Generally, existing customers are more profitable for the business than newly attracted ones as studies have indicated that repeat customers generate over twice as much gross income as new customers (Chaudhry, 2007). Furthermore, it costs about six to seven times more for a restaurant to gain a new customer than to retain an existing one (Thompson, 2004). Thus, restaurateurs must identify determining factors of repurchase decision and promote customer retention strategies.

**Empirical Review**

Wiranto & Abu Husin (2016) conducted a study to examine the association between CS and RI using a convenient sample of 171 customers of McDonald’s FFR
outlets in Kuala Lumpur, Malaysia. Data generated were analyzed using SPSS and the findings showed that all attributes of CS (service qualities, product qualities, price and restaurant’s environment) positively and significantly impacted customer repurchase intention. Although the meditational role of CS was not investigated, the significant relationship found between the CS attributes and RI is a pointer to the crucial effect of CS in shaping consumers’ BI in the FFR industry.

A number of studies have tested the mediating role of CS in the relationship between revisit intention and foodservice quality attributes. Using a sample of 287 patrons of FFRs in the Klang Valley area of Malaysia, Zuratulraha, Hairunnisa, Massyittah & Gopinath (2016) examined the meditational role of CS in the relationship between RI and SQ, FQ and RE. Data were analysed by structural equation modelling with AMOS 20.0 software. The findings revealed that restaurant quality attribute exerted significant influence on CS and RI, thus CS was found to exhibit directional influence as a mediator of the relationship between foodservice quality attributes and customer RI. However, the meditational effects of CS on the association between foodservice quality attribute and revisit intention was partial; thereby implying that restaurant quality attributes could influence RI directly and indirectly. The authors suggest that restaurateurs should implement the most appropriate and effective elements in restaurant quality attribute that could have considerable influence on CS and RI.

Lamai, Thavorn, Klongthong, Ngamkroeckjoti (2020) studied the effects of perceived service quality (PSQ), FQ, price perception (PP), and the mediating influence of CS on revisit intention in restaurant chains in Rangoon, Myanmar. Data were obtained with the aid of non-probability quota sample of 400 customers in four branches of a large restaurant chains in the city of Rangoon. This study applied both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) prior to test the hypothesized factor structure of all the variables, while structural equation modelling (SEM) was applied to test the relationships among the variables and the proposed hypothesis. Data collected were analyzed with SAS software version 7 7.12 and AMOS software. The findings showed that CS perfectly mediated the relationship between PSQ, FQ, PP and RI. Furthermore, PSQ, FQ, PP have direct effects on CS and indirect effect on RI. The perceived service quality was the most significant predictor of CS while the FQ had the least influence. The authors posited that the results of the study will assist restaurant managers to better understand the significant strategic choice factors to improve quality service in their operations in order to survive in the hyper-competitive business environment in the FFR industry.

Fuzir and Rahman (2020) studied the mediating effects of CS on the relationship between SQ, relationship quality (RQ), PV and perceived price (PP) on repurchase intention in the FF industry in Malaysia with a sample of 372 students drawn from three
universities. Data gathered were subjected to both descriptive and regression analysis using SPSS 20.0 for Windows. The findings indicated that RQ is the dominant predictor of CS ($\beta=0.369, p<0.01$) while PV is the least ($\beta=-0.027$). The results further showed that CS mediates the relationship between assurance, FQ, RQ, PP and repurchase intention. Owing to the intense competition in assurance, FQ, RQ, PP and repurchase intention. Owing to the intense competition in the FFR industry in today’s business environment, there is need to deeply understand customer needs and wants with a view to satisfying them, and develop plans and strategies to ensure their survival.

In a similar study in Pakistan, Ali, Alam and Bilal (2021) examined the impact of SQ, price (P) and RE on customer loyalty (CL) via the mediating role of CS in the FF industry in Islamabad. Data for the study were obtained from a cross section of fast food customers through face-to-face self-administered questionnaire. Convenience sampling technique was used to draw a sample 385 respondents upon which statistical analysis was based. Descriptive statistical tools such as means and percentages as well as multiple regression analysis were the analytical techniques employed. The results revealed that SQ, P and RE exerted positive and significant effects on CS, while CS also had significant impact on CL. Furthermore, CS significantly mediated the association between SQ, P, RE, and CL. The authors recommended that restaurant operators need to consider good quality of service, fairness in price, and attractive and comfortable restaurant environment in order to increase customer satisfaction and win the loyalty of the customers.

**Conceptual Model**

The conceptual framework (Figure 1) is modified from existing literature (Caruana, 2002) to ascertain the predictive ability of independent variables on CS and RPD, and to examine the meditational effect of CS in the relationship between SQ, FQ, PV, RE and RPD. Based on the model, three categories of variables are identified namely, independent variables (FQ, SQ, PV, RE), dependent variable (RPD) and mediating variable (CS). In the above model, FQ, SQ, PV, RE are determinants of CS while RPD is the consequence of CS.

![Figure 1. Conceptual Model](Modified from Caruana (2002))
The study tested the following hypotheses:
H1: SQ has a significant effect on CS.
H2: FQ exhibited a significant influence on CS.
H3: Perceived value showed a significant impact on CS.
H4: Restaurant environment has a significant influence on CS.
H5: CS exerted a direct and significant effect on RPD.
H6: CS mediates the relationship between SQ, FQ, PV, RE and RPD.

Constructs for this study are operationalized based on researchers’ experience and existing literature. Table 1 provides descriptive statistics of constructs and a list of the completely worded individual items (statements) used in each construct operationalization (measurement). All statements in each construct were assessed via a 5-point Likert-type scale; strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

**Methodology and Data**

Research design is aimed at describing a detailed plan of how a researcher will go about answering stated research questions and achieving research objectives (Sekaran and Bougie, 2016). Furthermore, a research design is not only used to structure the study but also to show how all of the major parts of the research project (such as the samples or groups, measures, treatments or programmes, and methods of assignment) worked together to address the research questions and achieve the set objectives. The adoption of a suitable research design is essential because it influences the type of, and technique of data collection and the sampling method adopted (Hair et al., 2014).

**Table 1**

<table>
<thead>
<tr>
<th>Description of construct statements</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restaurant Environment</strong></td>
<td>320</td>
<td>3.5294</td>
<td>0.7068</td>
</tr>
<tr>
<td>The rubbish area is clean and tidy</td>
<td></td>
<td>3.800</td>
<td>1.0874</td>
</tr>
<tr>
<td>The dining area is thoroughly clean</td>
<td></td>
<td>3.794</td>
<td>1.1961</td>
</tr>
<tr>
<td>Flies are kept away from food</td>
<td></td>
<td>3.753</td>
<td>1.1468</td>
</tr>
<tr>
<td>Pleasant smell or odour in the restaurant</td>
<td></td>
<td>3.497</td>
<td>1.1170</td>
</tr>
<tr>
<td>Pleasant smell or odour from the surrounding of restaurant</td>
<td></td>
<td>3.672</td>
<td>1.0719</td>
</tr>
<tr>
<td>Enticing aroma of the restaurant</td>
<td></td>
<td>3.509</td>
<td>1.2419</td>
</tr>
<tr>
<td>Pleasant air creates comfortable environment of the restaurant</td>
<td></td>
<td>3.697</td>
<td>1.0706</td>
</tr>
</tbody>
</table>
Oghenenyerhovwo Rita Inoni.
Customer Satisfaction and Repurchase Decision: Evidence from Fast Food Restaurants

<table>
<thead>
<tr>
<th>Perceived Value</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>The fast food restaurant offer food with competitive price</td>
<td>3.9462</td>
<td>1.0520</td>
</tr>
<tr>
<td>The price that I paid for fast food guarantees my satisfaction</td>
<td>3.769</td>
<td>1.0061</td>
</tr>
<tr>
<td>The price of food offered in the restaurant reflects the value of the products</td>
<td>3.754</td>
<td>1.0407</td>
</tr>
<tr>
<td>The fast food restaurant offer services of good value for money</td>
<td>3.989</td>
<td>1.0990</td>
</tr>
<tr>
<td>The foods sold by the restaurant are a very good bargain at the prices</td>
<td>4.144</td>
<td>1.0743</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Satisfaction</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is a wise choice for me to dine at this restaurant.</td>
<td>3.9150</td>
<td>0.6738</td>
</tr>
<tr>
<td>I feel fulfilled with the products I get from my chosen restaurant</td>
<td>3.891</td>
<td>1.1231</td>
</tr>
<tr>
<td>I feel a good mood whenever I dine here</td>
<td>4.047</td>
<td>0.9259</td>
</tr>
<tr>
<td>I have an enjoyable experience when I dine in this fast food restaurant</td>
<td>3.909</td>
<td>1.0201</td>
</tr>
<tr>
<td>I feel totally satisfied with the products when I eat-out here.</td>
<td>3.747</td>
<td>1.0819</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Food Quality</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>The fast food restaurant offer safe and hygienic products to customers.</td>
<td>4.0392</td>
<td>0.7025</td>
</tr>
<tr>
<td>The portion of food served in the restaurant is enough to satisfy my hunger</td>
<td>3.991</td>
<td>1.1293</td>
</tr>
<tr>
<td>The foods offered by this fast food restaurant have good quality.</td>
<td>4.198</td>
<td>0.9089</td>
</tr>
<tr>
<td>The foods offered by this fast food restaurant have good taste</td>
<td>3.906</td>
<td>1.1157</td>
</tr>
<tr>
<td>This fast food restaurant offers varieties of food to customers.</td>
<td>3.974</td>
<td>1.1302</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Repurchase Decision</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>I believe I made the right choice by dining at the restaurant</td>
<td>3.995</td>
<td>1.0293</td>
</tr>
<tr>
<td>Whenever I think of visiting a restaurant, the fast food restaurant first come to my mind</td>
<td>3.899</td>
<td>1.0238</td>
</tr>
<tr>
<td>I will return to dine at this restaurant more in the future</td>
<td>4.206</td>
<td>1.0480</td>
</tr>
<tr>
<td>I continue to patronise the restaurant after my first visit</td>
<td>4.497</td>
<td>1.0348</td>
</tr>
<tr>
<td>I recommend my family and friends to eat in the restaurant</td>
<td>3.957</td>
<td>1.1156</td>
</tr>
<tr>
<td>I continue to patronise the restaurant irrespective of changes in price</td>
<td>4.336</td>
<td>1.0775</td>
</tr>
<tr>
<td>I say good things about the restaurant to my friends and acquaintances</td>
<td>3.589</td>
<td>1.1402</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Quality</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>The physical facilities of the restaurant are in consonance with the types of quality services it provides.</td>
<td>4.1147</td>
<td>0.6066</td>
</tr>
<tr>
<td>The employees have a neat appearance</td>
<td>4.331</td>
<td>0.9885</td>
</tr>
<tr>
<td>When their employees promise to do something by a certain time, they actually do so</td>
<td>3.995</td>
<td>1.0025</td>
</tr>
<tr>
<td>They provide their services at the time they promised to do so</td>
<td>4.293</td>
<td>1.2721</td>
</tr>
</tbody>
</table>

317
When customers have problems, the employees show a sincere interest in solving them | 320 | 4.297 | 1.0866
The employees provide prompt services | 320 | 3.906 | 1.1309
The employees are never too busy to respond to my request | 320 | 4.272 | 1.1517
The employees are ever willing to help me | 320 | 4.199 | 1.1590
The employees are consistently courteous with me | 320 | 4.496 | 1.1335
The employees have the knowledge to answer my questions. | 320 | 3.794 | 1.1156
The behaviour of employees in the fast food restaurant instils confidence in customers | 320 | 3.997 | 1.0009
This restaurant has my best interest at heart | 320 | 4.414 | 1.1644
The fast food restaurant has operating hours convenient to all customers | 320 | 3.806 | 1.0920
Workers in fast food restaurant pay personal attention to my request | 320 | 3.997 | 1.2346

Source: Author’s computation. Constructs statements adapted from Qin & Prybutok (2009), Ha & Jang (2009) and Liu & Jang (2009)

The sample of 384 consumers of FFRS in Asaba, Warri and Sapale, three major towns in Delta State, Nigeria, was drawn from a total population of 771,083 residents; comprised of Asaba (73,374), Sapele (161,686) and Warri (536,023) (World Population Review, 2020). The required sample size was determined by Krejcie and Morgan (1970) formula for finite population;

\[ S = \frac{X^2NP(1 - P)}{d^2(N - 1) + X^2P(1 - P)} \]

Where:
- \( S \) = Required sample Size
- \( X \) = Z value (e.g. 1.96 for 95% confidence level)
- \( N \) = Population size
- \( P \) = Population proportion (expressed as decimal) (assumed to be 0.5 (50%))
- \( d \) = Degree of accuracy (5%), expressed as a proportion (0.05) of error; its margin of error

\[ S = \frac{(1.96)^2 \times 771083 \times 0.5 \times 0.5}{(0.05)^2 \times (771082) + (1.96)^2 \times 0.5 \times 0.5} \]

\[ S = \frac{740548.1132}{1928.6654} \]

\[ S = \frac{3.8416 \times 0.25}{0.0025} \]

\[ S = 383.966 \approx 384 \]
Purposive and random sampling methods were used to draw samples from twelve (12) FFRS with proportional allocation to size of the population in each town. They are Kilimanjaro, Crunches, Macdons, Mr. Biggs (Asaba); Chicken Republic, AJ, Sizzlers, Rodinia (Warri); Food land, EJ, Efemen, Teas Treat (Sapele). Based on random sampling with Thirty seven (37), eighty one (81) and two hundred and sixty seven (267) copies of the research instrument were administered to the target populations in Asaba, Sapele and Warri, respectively. Data were collected on the demographic factors (gender, age, marital status, educational status, employment status, and monthly income) and the construct variables SQ, PV, FQ, RE, CS and RPD. But owing to missing data and non-response only 320 responses were analysed for statistical inferences. Field survey was undertaken from 1st September to 15th December, 2020.

Descriptive and inferential statistics were used to analyse the data generated. Descriptive statistics used mean, frequency table and percentages to highlight demographic profile of FFRs’ consumers, while the impact of SQ, RE, FQ, PV on the mediator variable, CS and dependent variable RPD was determined by multiple regression. Hierarchical regression helped to determine the mediating effects of CS on the relationship between SQ, RE, FQ, PV and RPD.

**Model Specification and Estimation**

Three models were postulated to determine the influence of predetermined variables on CS, RPD, while the mediating role of CS on the association between the exogenous variables and repurchase decision, was analysed by hierarchical regression according to Baron and Kenny (1986);

\[
CS = f(SQ, FQ, PV, RE, u) \quad (1)
\]

\[
RPD = f(SQ, FQ, PV, RE, u) \quad (2)
\]

\[
RPD = f(SQ, FQ, PV, RE, CS, u) \quad (3)
\]

Where, SQ, FQ, PV, RE, CS and RPD are as defined earlier, and \( u \) is error term.

To establish mediation, SQ, FQ, PV, RE, must have an effect on the mediator in equation (1); they must also exert influence on the RPD in equation (2); the mediator must affect the RPD in equation (3). Moreover, the influence of the SQ, FQ, PV, RE, on RPD must be larger in the second equation than in the third. If SQ, FQ, PV, RE, have no effects when the mediator is included in equation (3), then perfect mediation holds, otherwise there is partial mediation.
Results and Discussion

Socio-demographic Profile of FFRs Consumers

The outcome of analysis of profile of FFRs’ customers is shown in Table 2. Female constituted (59.4%) of the sample while 40.6% were male. About 50% of customers were aged 18 - 26 years, 21.9% were between 27 and 35 years of age, 14.4% were aged 36-44, while the remaining 13.7% ranged between 45 and 62 years old. The distribution reveals that about 97% of FFRs patrons are within the economically active age groups. Moreover, the majority (68.1%) of FFRs consumers are single while 31.9% are married. The results also indicate that tertiary education certificate holders constituted the highest proportion (58.6%) of consumers while secondary school leavers made up 36.3% of respondents. Mean monthly income is = 74,590.63, though income distribution is negatively skewed as the first quintile constituted 59% of the income shares of all consumers. Thus, there exists some level of income inequality among patrons; the mean monthly income of 77.8% (the first two classes) equals = 48,915.66 while that of the remaining 22.2% (last three classes) amount to = 165,140.85. FFRs patrons comprised of students, artisans, traders, teachers, civil servants, self-employed and private-sector employees, and were somewhat evenly distributed among the vocations. However, trading is the modal occupation, accounting for 17.5% of respondents.

Table 2

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percentage(%)</th>
<th>Mean/(Mode)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>130</td>
<td>40.6</td>
<td>(Female)</td>
</tr>
<tr>
<td>Female</td>
<td>190</td>
<td>59.4</td>
<td></td>
</tr>
<tr>
<td>Age Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-26</td>
<td>160</td>
<td>50.0</td>
<td>31years</td>
</tr>
<tr>
<td>27-35</td>
<td>70</td>
<td>21.9</td>
<td></td>
</tr>
<tr>
<td>36-44</td>
<td>46</td>
<td>14.4</td>
<td></td>
</tr>
<tr>
<td>45-53</td>
<td>34</td>
<td>10.6</td>
<td></td>
</tr>
<tr>
<td>54-62</td>
<td>10</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>218</td>
<td>68.1</td>
<td>(Single)</td>
</tr>
<tr>
<td>Married</td>
<td>102</td>
<td>31.9</td>
<td></td>
</tr>
</tbody>
</table>
Table 3 shows the means and standard deviation with the values for skewness and kurtosis ranging between -0.261 and -0.805, implying that the variables are normally distributed (Hair et al., 2014). The Cronbach’s coefficient alpha values are greater than or equal to 0.764 for the constructs, but 0.829 for the instrument. These indicate reliability and the internal consistency of the measuring instrument.

The Pearson correlation coefficient indicates that the mediator, CS is positively and significantly (p < 0.01) associated with the SQ, FQ, PV, RE, (Table 4). This is a basic condition for mediation; if the explanatory variables are not related to the mediator, then there can never be a meditational link between them and RPD (Caruana, 2002).
Table 3

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness Statistic</th>
<th>Kurtosis Statistic</th>
<th>Skewness Std. Error</th>
<th>Kurtosis Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPDCSION</td>
<td>320</td>
<td>2.00</td>
<td>5.00</td>
<td>4.0684</td>
<td>0.63194</td>
<td>-0.519</td>
<td>-0.261</td>
<td>0.136</td>
<td>0.272</td>
</tr>
<tr>
<td>FOODQUAL</td>
<td>320</td>
<td>2.00</td>
<td>5.00</td>
<td>4.0391</td>
<td>0.70248</td>
<td>-0.599</td>
<td>-0.330</td>
<td>0.136</td>
<td>0.272</td>
</tr>
<tr>
<td>SERVQUAL</td>
<td>320</td>
<td>1.00</td>
<td>5.00</td>
<td>4.1147</td>
<td>0.60655</td>
<td>-0.450</td>
<td>-0.601</td>
<td>0.136</td>
<td>0.272</td>
</tr>
<tr>
<td>PERVERVALUE</td>
<td>320</td>
<td>1.00</td>
<td>5.00</td>
<td>3.9461</td>
<td>1.05195</td>
<td>-0.556</td>
<td>-0.805</td>
<td>0.136</td>
<td>0.272</td>
</tr>
<tr>
<td>RESTAUNVENT</td>
<td>320</td>
<td>1.00</td>
<td>5.00</td>
<td>3.5294</td>
<td>0.70680</td>
<td>-0.397</td>
<td>-0.420</td>
<td>0.136</td>
<td>0.272</td>
</tr>
<tr>
<td>CUSTSATFY</td>
<td>320</td>
<td>2.00</td>
<td>5.00</td>
<td>3.9150</td>
<td>0.67375</td>
<td>-0.273</td>
<td>-0.514</td>
<td>0.136</td>
<td>0.272</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>320</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Computed from Survey Data, 2020

Results of Hierarchical Regression

The regression results of the models that comprised the Baron and Kenny (1986) meditational framework are presented in Table 5, 6 and 7. Model “a” showed that SQ, FQ, PV, RE, jointly explained 61% of the variance in the mediator, CS with a Durbin-Watson value of 1.94, indicating lack of serial correlation of errors. In model “b” however, regressing the same variables on RPD produced an adjusted $R^2$ of 0.57, implying that 57% of the variance in the RPD is accounted for by FQ, SQ, PV, RE. However, with the inclusion of the mediator in model “c”, the explanatory power of the model increased considerably as about 82% of the variance in RPD was explained by the explanatory variables and the mediator (Table 5). Table 6 reveals that the three models are statistically significant in explaining the causal relationship between CS and Xs ($F_{(4,315)} = 123.60, p < 0.01$); RPD and Xs ($F_{(4,315)} = 105.80, p < 0.01$); RPD and CS ($F_{(4,314)} = 287.27 p < 0.01$). The results showed that FQ, SQ, PV and RE have significant ($p < 0.01$) impact on CS, the mediating variable (model “a”). Service quality (SQ) and restaurant environment are the dominant predictors with standardised beta coefficients of 0.516 and 0.196 respectively (Table 7). Therefore, H1, H2, H3, and H4 are all supported by the results that FQ, SQ, PV and RE have significant effects on CS. The findings are in consistent with the results of Hanaysa (2016) and, Zhong and Moon (2020) in FFRs in Malaysia and China, respectively. Model “b” also found the exogenous variables exhibiting significant ($p < 0.01$) effects on RPD. SQ also has the largest beta coefficient (0.387), followed by RE (0.24), PV (0.23) and FQ (0.178). The third equation, model “c”, included CS, the mediator between the Y and the Xs,
which is highly significant. From model “b” and “c”, all the conditions necessary for mediation to hold are fulfilled. The adjusted R\(^2\) has increased from 0.57 to 0.82 (Table 5), and the influence of FQ, PV, and RE are very much less in model “c” than in model “b”. The beta coefficients of FQ reduced by 60%, PV (60%) and RE (65%) between the second and the third model to, 0.071, 0.091 and 0.084 respectively. The effects of SQ on RPD is now statistically insignificant (p >0.5). The implication is that CS perfectly mediated the relationship between SQ and RPD (model “c”), but its effect on FQ, PV and RE is partial mediation as the beta values for FQ, PV and RE are still significant, FQ (p <0.05), PV (p <0.01) and RE (p <0.01). The continued impact of FQ, PV and RE even with the inclusion of the mediator, is probably because these variables have their own direct association with RPD, and not wholly through CS. Customers who perceived that offerings of a restaurant have good value for money and want to savour the cosy environment and the good quality food served would revisit and repurchase food. Comparable results were also reported by Abdullah et al. (2018) where CS fully mediate the relationship between FQ, SQ, price fairness and re-patronage intentions in Malaysia. It should be noted that the massive decline in the beta values of FQ, PV and RE and the non-significance of SQ in model ‘c’ is a confirmation of the meditational impact of CS. Therefore, H6 is supported that CS mediated the association between FQ, SQ, PV, RE and RPD. The strong and direct impact of CS on RPD is attested to by the beta value of 0.797 in model “c” which is significant (p<0.01); thus, H5 is supported. The variance inflation factor (VIF) has shown no serious case of multicollinearity in the first and second models, but the correlation between CS and the independent variables in model “c” has raised the value of VIF of SQ and CS marginally, but no worrisome level of collinearity (Table 7).

### Table 4

<table>
<thead>
<tr>
<th>Variables</th>
<th>Customer Satisfaction</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Quality</td>
<td>0.504**</td>
<td>0.01</td>
</tr>
<tr>
<td>Service Quality</td>
<td>0.724**</td>
<td>0.01</td>
</tr>
<tr>
<td>Perceived value</td>
<td>0.523**</td>
<td>0.01</td>
</tr>
<tr>
<td>Restaurant Environment</td>
<td>0.403**</td>
<td>0.01</td>
</tr>
</tbody>
</table>

** Correlation is significant at (P < 0.01) level (2-tailed)

**Source:** Computed from Survey Data, 2020
### Table 5

**Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>M = f(X)</td>
<td>0.782</td>
<td>0.611</td>
<td>0.606</td>
<td>0.42298</td>
<td>0.611</td>
<td>123.598</td>
</tr>
<tr>
<td>Y = f(X)</td>
<td>0.757</td>
<td>0.573</td>
<td>0.568</td>
<td>0.41541</td>
<td>0.573</td>
<td>105.801</td>
</tr>
<tr>
<td>Y = f(X+M)</td>
<td>0.906</td>
<td>0.821</td>
<td>0.818</td>
<td>0.26978</td>
<td>0.247</td>
<td>432.884</td>
</tr>
</tbody>
</table>

*a. Predictors: (Constant), RESTAUENV, PERVALUE, FOODQUAL, SERVQUAL
b. Predictors: (Constant), RESTAUENV, PERVALUE, FOODQUAL, SERVQUAL
c. Predictors: (Constant), RESTAUENV, PERVALUE, FOODQUAL, SERVQUAL, CUSTSATFY
d. Dependent Variable for a: CUSTSATFY
e. Dependent Variable for b,c: RPDCSION*

### Table 6

**Analysis of Variance (ANOVA)**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>M = f(X)</td>
<td>Regression</td>
<td>4</td>
<td>22.113</td>
<td>123.598</td>
<td>0.000c</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>315</td>
<td>0.179</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>319</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y = f(X)</td>
<td>Regression</td>
<td>4</td>
<td>18.258</td>
<td>105.801</td>
<td>0.000c</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>315</td>
<td>0.173</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>319</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y = f(X+M)</td>
<td>Regression</td>
<td>5</td>
<td>20.908</td>
<td>287.266</td>
<td>0.000d</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>314</td>
<td>0.073</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>319</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a. Dependent Variable: CUSTSATFY
b. Dependent Variable: RPDCSION
c. Predictors: (Constant), RESTAUENV, PERVALUE, FOODQUAL, SERVQUAL
d. Predictors: (Constant), RESTAUENV, PERVALUE, FOODQUAL, SERVQUAL, CUSTSATFY*
Table 7

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>Tolerance</td>
<td>VIF</td>
</tr>
<tr>
<td>a</td>
<td>CS = f(fq, sq, pv, rev)</td>
<td>(Constant)</td>
<td>-0.06</td>
<td>0.189</td>
<td>-0.33</td>
</tr>
<tr>
<td></td>
<td>FOODQUAL</td>
<td>0.13</td>
<td>0.040</td>
<td>0.134</td>
<td>3.22</td>
</tr>
<tr>
<td></td>
<td>SERVQUAL</td>
<td>0.57</td>
<td>0.049</td>
<td>0.516</td>
<td>11.61</td>
</tr>
<tr>
<td></td>
<td>PERVALUE</td>
<td>0.11</td>
<td>0.026</td>
<td>0.174</td>
<td>4.21</td>
</tr>
<tr>
<td></td>
<td>RESTAURENVT</td>
<td>0.19</td>
<td>0.035</td>
<td>0.196</td>
<td>5.31</td>
</tr>
<tr>
<td>b</td>
<td>RPD = f(sq, pv, rev)</td>
<td>(Constant)</td>
<td>0.46</td>
<td>0.186</td>
<td>2.49</td>
</tr>
<tr>
<td></td>
<td>FOODQUAL</td>
<td>0.16</td>
<td>0.039</td>
<td>0.178</td>
<td>4.06</td>
</tr>
<tr>
<td></td>
<td>SERVQUAL</td>
<td>0.40</td>
<td>0.048</td>
<td>0.387</td>
<td>8.32</td>
</tr>
<tr>
<td></td>
<td>PERVALUE</td>
<td>0.14</td>
<td>0.026</td>
<td>0.230</td>
<td>5.31</td>
</tr>
<tr>
<td></td>
<td>RESTAUENVT</td>
<td>0.21</td>
<td>0.034</td>
<td>0.240</td>
<td>6.22</td>
</tr>
<tr>
<td>c</td>
<td>RPD = f(fq, sq, pv, rev, cs)</td>
<td>(Constant)</td>
<td>0.51</td>
<td>0.121</td>
<td>4.21</td>
</tr>
<tr>
<td></td>
<td>FOODQUAL</td>
<td>0.06</td>
<td>0.026</td>
<td>0.071</td>
<td>2.44</td>
</tr>
<tr>
<td></td>
<td>SERVQUAL</td>
<td>-0.03</td>
<td>0.038</td>
<td>-0.024</td>
<td>-0.67</td>
</tr>
<tr>
<td></td>
<td>PERVALUE</td>
<td>0.06</td>
<td>0.017</td>
<td>0.091</td>
<td>3.16</td>
</tr>
<tr>
<td></td>
<td>RESTAUENVT</td>
<td>0.08</td>
<td>0.023</td>
<td>0.084</td>
<td>3.21</td>
</tr>
<tr>
<td></td>
<td>CUSTSATFY</td>
<td>0.75</td>
<td>0.036</td>
<td>0.797</td>
<td>20.81</td>
</tr>
</tbody>
</table>

a. Dependent Variable: CUSTSATFY
b. Dependent Variable: RPDCSION

Conclusion

SQ has been hypothesised as the major determinant of CS and consequently a repurchase decision in the FFRs industry. Nevertheless, prompt and efficient service alone may not be able to guarantee FFRs places in today’s hyper-competitive business environment. Therefore, the study examined the influence of key constructs such as FQ, SQ, PV and RE on CS and re-purchase decision; as well as how CS mediates the relationship between the independent variables and the dependent variable. The study has found FQ, SQ, PV and RE as significant determinants of CS and repurchase decision in FFRs. Furthermore, the study also found CS as a full mediator of the
relationship between SQ and re-purchase decision, but the meditational influence of CS on FQ, PV and RE was only partial. The dominant impact of SQ as a predictor of CS may be attributed to the fact that other constructs appear to work in tandem with SQ for that excellent service the restaurant has to offer. This is so because if the quality of food is excellent in an excellent restaurant environment but service is poor, customers will be dissatisfied. Such dissatisfaction can cause negative behavioural intentions such as customers’ complaints, negative word of mouth and switching.

The practical implication of this study therefore, is that restaurateurs must adopt a marketing strategy of continuous improvements of menu quality, service offerings and restaurants environment to attract and retain customers, for business survival. However to achieve this, staff behaviour should be improved upon by providing professional and ethical training, as well as motivation by providing needed incentives to staff, to serve customers better thereby engendering customer loyalty.

The originality value of the study is hinged on the fact that while several other studies have assessed how CS has mediated the association between SQ, FQ and RI, the paper has extended the examination of the meditational effects of CS on the relationship between PV, RE and re-purchase decision which were partial, in the Nigerian context.

References


Building Approach. Chichester, UK: John Wiley and Sons, Ltd.


EFFECT OF RISK MITIGATION ON PROFITABILITY OF INSURANCE INDUSTRIES IN NIGERIA

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JEL: E59, M41

Abstract

Risk management plays a critical part in every organization’s profit maximization through risk cost minimization for wise protection, which cannot be overstated. Risk mitigation (rmt), risk monitoring (rmn), risk management environment, procedure, and policies (epp), and risk measurement (rme) in relation to the profitability of the insurance industry in Nigeria were randomly selected from a well-structured 5-point Likert scale questionnaire ranging from ‘5 strongly agree’ to ‘4 agree’, ‘3 undecided’ to ‘1 strongly disagree’. Using the StataSE 14 statistical software, one hundred and twenty (120) questionnaires were recovered from respondents, accounting for 83 percent of the total questionnaires sent using the multiple regression statistical methodology. Risk reduction and risk monitoring have a considerable impact on the profitability of insurance companies in Nigeria, according to the findings. As a result, it concluded that risk mitigation and monitoring are important factors in determining industry profitability, and those insurance regulators should work to ensure that risk identification, assessment, measurement, and control mechanisms are implemented in accordance with best global practices in order to avoid financial crises and improve insurance performance.

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1. INTRODUCTION

The quest for security is the ultimate concern of the individual, household, government, and business organizations. In today’s challenging business environment, the world is currently facing several devastating effects of the Corona virus pandemic (COVID-19) and other risks that compounded man’s living standard and well-being of some countries in Africa such as heightened costs of insecurity, political instability, growing unemployment rate, banditry, cybercrime, terrorism and stress (Epron, 2019; Yaya, Otu & Labonte, 2020). These made the Nigerian government through its agencies create greater responsibility to individual and business organizations so that they can make economic decisions and find their own economic security (Sebastian & Duru-Uremadu, 2017). As a result of insecurity the Nigerian business environment makes profits and losses become an acid test for individual and business performance and also there are other risks facing business organizations that might affect them to attain their set objectives of making a profit. Planning and carrying out business is increasingly becoming complex as businesses are faced with inherent risk which becomes the responsibility of another institution called insurance companies to manage.

Insurance companies are saddled with the responsibility of managing the risk of other businesses and are faced with their own inherent risk. They manage both internal and external risks in such a way that any failure in any of these may spell the doom of the goal which the insurance companies need to achieve. Yet, the complexity of the insurance business and its ability to manage business loss promotes the emergence of risks that must be considered in making a decision. These companies write policies that deal with specific risks, and in many cases, even underwrite exotic risks. In carrying out its core functions like pricing, underwriting, claims handling and reinsurance management, an insurer will also face a wide range of risks that are often interlinked and if not properly managed, could threaten the ability of the institution to make a profit and sustain it.

The phrase “risk” simply refers to the possibility of financial loss, which can be stated as a probability. It is a probability event that can have a good (opportunity) or negative (hazards) impact on companies (Ennouri, 2013). From an insurance standpoint, risk is multi-dimensional since they assume many sorts of business-specific risks that affect the organization’s performance and profit motivation, and could finally bring the firm to a halt if not properly managed (Joosub, 2006; Fali et al, 2020). The problems must be appropriately identified and analyzed in order to minimize their negative impact on the fiduciary’s profit maximization and financial performance.

Profitability is a critical component that keeps a company running and gives it a competitive advantage over its competitors, since it is crucial to all stakeholders
- investors, stakeholders, and the economy as a whole. So far, investors are only concerned with the returns on their investments. Profitable businesses are economically and socially responsible because they create value, employ people, innovate, and pay taxes (Odusanya, Yinusa & Ilo, 2018). An insurer faces numerous sorts of risk when carrying out these operations, which must be controlled by incorporating a robust risk management strategy into their system so that they can perform better.

Despite its obvious failure in the recent financial crisis, which originated in the United States and had a multiplier effect on the global market, risk management remains high on the agenda of insurance practitioners, academics, and corporate leaders (Huber & Scheytt, 2013; Dabari & Saidiu, 2014). Every insurable risk is covered by the insurance business, which is being superseded by the risk management concept. This coverage includes lowering the cost of pure risk, which is defined as a likelihood of occurrence that could result in financial loss (Sathyamoorthi et al, 2020; Arif & Showket, 2015).

Risk management is important not only for insurance businesses’ survival and profitability, but also for the worldwide market’s growth and development (Chipa & Womiori, 2017; Maher & Anderson, 1999). It also provides for the transfer of loss to a third party in the event of a disaster, therefore risk management must be at the heart of an organization’s operations in order to integrate risk management techniques, policies, and processes into the insurance business environment (Owolabi et al, 2017).

Business organizations and their management must adhere to policies and procedures that have been developed, agreed upon, and implemented. It indicates that an organization’s rules and procedures will serve as a foundation for determining how to go from its current condition to a desired state. Failure to adhere to the established plan and rules, on the other hand, frequently leads to a systemic problem that overshadows the relevance of risk management techniques and limits the ability of businesses to profit and perform better (Tularam & Attili, 2012; Amadei, 2016).

There is a need to assess if risk management standards are sufficient to avert difficulties, as seen by the recent crisis, which revealed that certain insurance companies suffered setbacks while others were bailed out by the government (Laeven & Perotti, 2010). The purpose of financial institution regulators developing these regulations, such as the banking sector (Basel) and the solvency directive for insurance businesses, is to protect consumers and the insurance business from insolvency (Solvency II directive, 2009). Despite the fact that numerous studies have shown that risk management can reduce the impact of losses on profit maximization and insurance industry performance (Al-Nimer et al, 2021; Zhara & Mazrek, 2014; Owojori et al, 2011; Schmit & Roth, 1990), and despite the complexity of risk management processes in Nigeria, few studies have been conducted, and those that have been conducted have failed to achieve their
objectives (Al-Nimer et al). As a result, the goal of this research is to see how risk reduction affects the insurance industry’s profitability in Nigeria.

There are five sections to this paper. The first portion introduces the topic, while the second provides a literature review. Section three discusses the research methodology used, part four discusses the research findings, and section five finishes the report with the study’s recommendation.

2. LITERATURE REVIEW

Risk management, defined as “the act of discovering, analyzing, assessing, monitoring, controlling, or minimizing risks that might lead to profit maximization and financial performance of an organization” (Abideen & Saleem, 2011), is critical to an industry’s sustainability. Risk management aids in the reduction, monitoring, and control of the likelihood of bad events, as well as the realization of opportunities arising from risk exposure resulting from an unexpected outcome and use of available resources (Wenk, 2005).

Because all of an organization, including insurance companies, involve risk, it is important to note that in the process of mitigating risk, it is necessary to communicate and consult with interested parties, monitor and analyze risk, and implement measures to ensure that additional treatment is not required (Risk Management ISO, 2009). Risk management encompasses all processes to include not just risks connected with potential and accidental losses, but also operational, reputational, financial, cyber, credit, underwriting, and market risks that could prevent a company from meeting its objectives. For better performance and profitability, these risk management components are critical in every firm (Gatzert, Schmit & Kolb, 2016; Banks, 2008).

Many firms are now realizing that risks must be managed rather than avoided because they are an unavoidable part of doing business. Risks lead to opportunity, which leads to value, which leads to money for shareholders. Effective risk management can help to create shareholder value by attracting money and increasing returns through value-based management (Thornton, 2004). As a result, insurance businesses must employ good and high-quality measures in order to properly control operational risk.

Existing research has demonstrated the importance of risk management in the survival of enterprises, which organizations cannot overlook in order to accomplish their stated goal of improved performance. In their study, Zhara and Mazreku (2014) noted that successful insurance businesses have demonstrated that risk management not only preserves and grows wealth, but also enhances reputation regardless of scope and risk – inherent circumstances, while also providing opportunities and guidance against unforeseen contingencies.
When compared to competitors who ignore risk management, Mohammed and Knapkova (2016) believe that insurance businesses with a competent risk management strategy have a higher return on equity and superior performance in key business indicators. Furthermore, according to Ebenezer and Omar (2016), financial institutions around the world have demonstrated that risk management is critical for firms that want to maintain their financial sustainability and operational service efficiency. They discovered that inadequate risk management and large redundancy frequently lead to failure and low profit margins (Ebenezer & Omar 2016).

Similarly, Olalere, Ahmed, and Omar (2015) found that including risk management into corporate planning and performance management improves strategic and operational goals. Some insurance companies have been reported to not recognize the necessity of independent risk assessment units, instead relying on internal audit units for risk assessment and underwriting, which has resulted in conflicts of interest and inadequate risk management. As a result, Akotey & Abor (2011) stressed the importance of establishing a risk management unit as a separate company in order to improve profitability and performance.

In addition, using a descriptive survey method, Owolabi et al (2017) analyze the influence of risk management on the profitability of insurance businesses in Nigeria. A total of 60 respondents were chosen using simple random sample techniques, and research analysis was conducted. The findings of the study demonstrated that financial risk management strategies have an impact on an insurance company’s profitability.

With a sample size of 19 enterprises, Fali, Nyor, and Mustapha (2020) explore the impact of insurance specific risks on profitability in Nigeria during a 10-year period (2009-2018), using secondary data obtained from an annual reports. Three independent variables: re-insurance, technical provisions and underwriting risks were utilized as a measure of insurance specific risk, while net profit margin was used as dependent variable to measure the profitability of the companies. According to the findings, an increase in technological provision and risk underwriting resulted in low profitability for Nigerian insurance businesses, while the re-insurance risk had a negative and minor influence.

Chipa and Womiori (2017) in their study analyze the effects of risk management on insurance company’s financial performance utilizing insurance firms based in Mombasa County Kenya and Directors, Managers or Head of Departments, personnel and Agents of insurance firms situated in Mombasa County. The study used a descriptive research methodology with a population of 150 respondents. Observation, questionnaires, and interviews were used to gather information. The study’s findings indicate that independent variables such as liquidity risk management, operational risk management, and enterprise risk management have a substantial impact on insurance
companies’ financial performance in Kenya.

Ahmed (2016) used secondary data from the 2012 Nigerian Stock Exchange Fact Book to investigate the impact of capital size on insurance company profitability in Nigeria. The influence of capital size on profitability was estimated using a correlation research methodology and a Panel regression model (random effect). The study’s findings revealed that capital size and gross premium have a beneficial but minor impact on the profitability of Nigerian insurance companies.

When assessing the impact of internal and external factors on life insurance business profitability in Pakistan, Rashid and Kemal (2018) look at three measures of insurer profitability: overall profit (ROA), underwriting profit (UP), and investment income (INI). The panel data regression method is used to examine data from 2006 to 2016. The outcomes of the study show that gross written premium, management costs, size, and interest rate all have a significant impact on the profitability of insurance companies. Life insurance firms’ underwriting losses, according to the data, demonstrate the need for an improved underwriting system.

Kripa and Ajasllari (2016) examine the effects of growth rate, liabilities, liquidity, fixed assets, capital volume, and business size on insurance business profitability using annual reports from seven (7) non-life and life insurance businesses from 2008 to 2013. The findings of their research suggest that growth rate, liabilities, liquidity, and fixed assets are the most important factors affecting insurer profitability, indicating that growth rate is positively correlated with profitability, whereas liabilities, liquidity, and fixed assets are negatively correlated. Insurance company profitability is favorably connected with company size and capital volume, but their impact is statistically negligible.

Alsallawi (2018) investigated the impact of institutional variables such as leverage, capital market assets, and firm size on profitability risk, as well as the considerable impact of institutional theory on profitability risk among Saudi insurance businesses listed on the Saudi Stock Exchange (Tadawul). The study found that institutional factors have a significant relationship with the return on assets of Saudi insurance companies, which increased their profitability and provided significant directions for developing a profitable strategy among the companies, using multiple regression analysis on the data obtained.

3. METHODOLOGY

3.1. Data

To improve the accuracy of the study, information from respondents’ relative perceptions on the Nigerian insurance business was gathered utilizing a survey design.
The population of the study includes all 59 insurance businesses in Nigeria (www.naicom.gov.ng), with a sample size of 60% of the total population of insurance companies in Nigeria (36 insurance firms based and operating in Lagos state, Nigeria) chosen at random. Due to the nature of this study, 144 respondents were chosen at random from four compliance unit heads, including Audit & Control, Risk Management, and Accounting & Finance Departments.

A 5-point Likert scale well-structured questionnaire ranging from ‘5 strongly agree’, ‘4 agree’, ‘3 undecided’ ‘2 disagree’ to ‘1 strongly disagree’ which provides response to variables such as risk mitigation ($rmt$), risk monitoring ($rmn$), risk management environment, procedure, and policies ($epp$) and, risk measurement ($rme$) in relation to profitability of insurance industry in Nigeria were randomly distributed to the respondents. StataSE 14 statistical package was used to analysis one hundred and twenty (120) questionnaires retrieved from the respondents which represents eighty-three (83) per cent of the total questionnaires distributed using multiple regression statistical technique.

### 3.2. Model Specification

Chipa and Womiori (2017) model was adopted but the variables modified as their study failed to take cognizance of risk specificity, which this study considered necessary, with the inclusion of risk management environment, procedure & policies (EPP). Therefore, the model specification used for the study is stated in equation (3.1) below:

$$prf = f(rmt, rmn, epp, rme)$$  \hspace{1cm} (3.1)

Transforming equation 3.1 above into linear relationship, equation 3.2 below was obtained.

$$prf = \eta_0 + \eta_1 rmt + \eta_2 rmn + \eta_3 epp + \eta_4 rme + \mu$$ \hspace{1cm} (3.2)

Where:
- $prf$ = Profitability of Insurance Firms;
- $rmt$ = Risk Mitigation;
- $rmn$ = Risk Monitoring;
- $epp$ = Risk Management Environment, Procedure & Policies; and
- $rme$ = Risk Measurement

The inclusion of all explanatory variables was informed by extant studies as potent factors influencing profitability of insurance firms in Nigeria.
4. RESULTS

The summary statistics of the variables considered in the study are shown in Table 1. According to the data, the average performance (prf) as judged by insurance experts is 18.39, with a standard deviation of 3.6, indicating the risk associated with insurance firm profitability. In addition, the leptokurtic nature of the risk is indicated by a positive kurtosis value of roughly 2.23 in the analysis of the data, while its performance measurement spans between 10 and 25 (representing 25% and 62.45%) in terms of minimum and maximum, respectively. Variances across variables range between 16.31 and 17.37, representing roughly 41% and 43% of the total, with variations across variables ranging between.

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Table 2 presents the correlations among the variables of interest. This shows that the correlation between any two explanatory variables is not very high which ruled

| Table 1
Table Showing Descriptive Statistics of Insurance Perception of Workers |
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prf</td>
<td>Rmt</td>
<td>Rmn</td>
<td>Epp</td>
<td>Rme</td>
</tr>
<tr>
<td>Mean</td>
<td>18.3917</td>
<td>16.3083</td>
<td>16.6167</td>
<td>17.3250</td>
<td>17.3663</td>
</tr>
<tr>
<td>Maximum</td>
<td>25.0000</td>
<td>24.0000</td>
<td>24.0000</td>
<td>25.0000</td>
<td>24.0000</td>
</tr>
<tr>
<td>Minimum</td>
<td>10.0000</td>
<td>8.0000</td>
<td>8.0000</td>
<td>6.0000</td>
<td>10.0000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>4.4406</td>
<td>4.0786</td>
<td>4.0526</td>
<td>4.4555</td>
<td>4.1673</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.3845</td>
<td>-0.0661</td>
<td>-0.1308</td>
<td>-0.3452</td>
<td>-0.2208</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>2.2285</td>
<td>2.1325</td>
<td>2.1862</td>
<td>2.33</td>
<td>2.2756</td>
</tr>
<tr>
<td>Observation</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
</tbody>
</table>

Source: Authors’ Computation, 2020

Table 2 presents the correlations among the variables of interest. This shows that the correlation between any two explanatory variables is not very high which ruled
out any presence of Multicollinearity. This is because the correlation figures of the variables are within the acceptable bound (Schober, Boer & Schwate, 2018).

Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prf</th>
<th>Rmt</th>
<th>Rmn</th>
<th>Epp</th>
<th>Rme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prf</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rmt</td>
<td>0.4688* (0.0000)</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rmn</td>
<td>0.5099* (0.0000)</td>
<td>0.3855* (0.0000)</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epp</td>
<td>0.4276* (0.0000)</td>
<td>0.5272* (0.0000)</td>
<td>0.3709* (0.0000)</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>Rme</td>
<td>0.3180* (0.0004)</td>
<td>0.2852* (0.0016)</td>
<td>0.3511* (0.0001)</td>
<td>0.3917* (0.0000)</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Source: Authors’ Computation, 2020

Table 3 illustrates the analyses’ regression results, indicating a positive significant association between risk mitigation (rmt) and the insurance firm’s profitability. At a 1% level of significance, this means that if risk mitigation is raised by one unit, insurance firm profitability in Nigeria will increase by 0.26 units. Similarly, risk monitoring (rmn) has a favorable and large impact on profitability, implying that the former is crucial to the profitability of insurance companies in Nigeria. Simply put, a unit increase in risk monitoring results in a 0.37 increase in insurance firm profitability in Nigeria. Risk management environment, procedure & policies (epp), and risk measurement (rme) were found to have both positive and insignificant associations with the profitability of Nigeria’s insurance sector. The economic intuition of this study is that risk mitigation (rmt) and risk monitoring (rmn) are major predictors of insurance performance in Nigeria. As a result of their insignificance, these variables have no bearing on insurance profitability in Nigeria.
Kehinde I. Olaiya, Kareem A. Arikewuyo, Ashim B. Shogunro, Lateef A. Yunusa.
Effect of Risk Mitigation on Profitability of Insurance Industries in Nigeria

Table 3

Regression Result

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>P&gt;t</th>
<th>[95% Conf.]</th>
<th>Interval</th>
</tr>
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<tbody>
<tr>
<td>Rmt</td>
<td>0.2605</td>
<td>0.0979</td>
<td>0.009</td>
<td>0.0666</td>
<td>0.4543</td>
</tr>
<tr>
<td></td>
<td>(2.66)</td>
<td>0.0924</td>
<td>0.000</td>
<td>0.1854</td>
<td>0.5514</td>
</tr>
<tr>
<td>Rmn</td>
<td>0.3684</td>
<td>0.0918</td>
<td>0.111</td>
<td>-0.0345</td>
<td>0.3292</td>
</tr>
<tr>
<td></td>
<td>(3.99)</td>
<td>0.0884</td>
<td>0.375</td>
<td>-0.0963</td>
<td>0.2538</td>
</tr>
<tr>
<td>Epp</td>
<td>0.1473</td>
<td>1.8441</td>
<td>0.027</td>
<td>0.4673</td>
<td>7.7730</td>
</tr>
<tr>
<td></td>
<td>(1.60)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rme</td>
<td>0.0787</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.89)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Constant</td>
<td>4.1201</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(2.23)</td>
<td></td>
<td></td>
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Diagnostic Tests:

<table>
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<th>Number of observations</th>
<th>120</th>
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<th>120</th>
<th>120</th>
<th>120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adj R-squared</td>
<td>0.5484</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-test</td>
<td>16.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breusch-Pagan/</td>
<td>0.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cook-Weisberg Chi²(1)</td>
<td>[0.5735]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ramsey Reset test</td>
<td>1.34</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Multicollinearity (Mean VIF)</td>
<td>1.40</td>
<td></td>
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</tr>
</tbody>
</table>

Source: Authors’ Computation, 2020

It is, however, noted from the findings of this study that risk mitigation and monitoring are essentials of insurance profitability in Nigeria and these suggest the need for placing more emphasis on these two variables if insurance companies are keen in improving their profitability in the foreseeable future. On the other hand, risk management environment, procedure & policies (epp) and risk measurement (rme) should as well be given attention, though not significant, but could assist in driving significant variables. The finding of this study is consistent with the submission of Chipa and Womiori (2017) as risk-inherent variables such as risk mitigation (rmt) and risk monitoring (rmn) significantly influence financial performance of insurance firms which aimed at reducing the financial exposure of insurance firms to risks.

The diagnostic statistic for this study revealed that the R² is 0.5484 suggests that the dependent variable measured with profitability is explained by 54.84 per
cent variations in independent variables which signify that the model is of good fit. Furthermore, the F-value of 16.91 is significant at 1 per cent while Breusch-Pagan/Cook-Weisberg test was conducted to detect the presence of serial autocorrelation and null hypothesis of no serial correlation in the residual of model was accepted. The result of VIF test further confirmed the findings of correlation matrix (see Table 2) of the absence of multicollinearity problem in the variables considered for this study.

5. CONCLUSION

Inherent hazards involved with company operations necessitate certain logical tactics for mitigating the risks and anticipating the repercussions of these risks. These tactics can be used to identify, assess, analyze, and monitor risks as well as any associated consequences to keep the project on track to accomplish the business's objectives. These techniques are counterbalanced by attempts to decrease or eliminate associated risks such as time, cost, or complexity. Only by properly evaluating the potential threats or losses can appropriate risk mitigation techniques be established. Risks may be anticipated and managed with the right methods in place. The best risk mitigation approach may lessen the likelihood of a risk, the severity of the outcome, or the organization’s exposure to risk. As a result, the findings in table 3 above confirm the preceding conclusions on the impact of risk mitigation on insurance industry profitability in Nigeria. Multiple regressions were used to determine the overall response of each of the constructs, and the study’s findings revealed that risk mitigation has a positive and significant relationship with profitability, implying that when risk mitigation increases by one unit, profitability increases by 0.26 at a one per cent level of significance, and risk monitoring also has a positive and significant relationship with profitability. This demonstrates that risk mitigation and risk monitoring are critical for the profitability of the insurance industry in Nigeria, and it suggests that if insurance companies want to improve their profitability in the near future, they should focus more on these two variables. Risk management environment, method & regulations, and risk measurement; on the other hand, should be given attention as well, as they may aid in driving crucial variables. These will boost their profitability and overall performance in the business, as well as provide them with some protection from any systemic risk that may affect other competitors in the same industry in the long run.

6. RECOMMENDATIONS

In order to fulfill their economic and social responsibilities to stakeholders while remaining relevant in the face of stifled industry rivalry, insurance companies should
incorporate risk mitigation into its policy bank and destination, according to the findings of the study. Insurance regulators should encourage risk identification, assessment, measurement, and control techniques that are compatible with best global practices in order to improve insurance performance. Corporate organizations must clearly communicate their risk appetite and have a good risk culture in order to perform better.

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INDUSTRIAL ACTORS’ PERCEPTIONS OF INDUSTRIAL DISPUTES IN PUBLIC UNIVERSITIES

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JEL: J52, J53

Abstract

There has always been serious concern about how industrial actors in public universities in Nigeria perceive industrial disputes as a means of enforcing collective agreements jointly reached and signed. A group may likely see industrial disputes as unnecessary and destructive while others may see it as a veritable tool for enforcing their labour rights. This study therefore examined the industrial actors’ (university management, academic staff and non-teaching staff) perception of industrial disputes in public universities in Southwest, Nigeria. Descriptive research survey design was adopted for the study. The population consisted of the management staff and all the staff of public universities in Southwest, Nigeria. The sample size of the study was 280 respondents (80 management staff, 100 academic staff and 100 non-teaching staff) randomly selected from four public universities across Southwest geo-political zone. Data was collected through a self-designed questionnaire. T-test analysis was used to analyze the three hypotheses raised at 0.05 level of significance. Findings revealed that there was significant difference in the way university management, academic and non-teaching staff perceive industrial dispute while there is no significant difference in the way academic and non-teaching staff perceive industrial disputes. It is therefore recommended that all the industrial actors in public universities in Southwest, Nigeria should not see industrial disputes as destructive engagement since disputes are naturally part of organizational existence. Effective management of industrial disputes through sincerity of purpose should be adopted by the industrial actors.
1. Introduction

Industrial actors refer to different groups of people involved in the production process in the workplace. In some climes, they are limited to workers (represented by their unions) and employers (represented by the management). However, in Nigeria it is generally accepted that the government (who plays dual roles as employer of labour and industrial regulatory body) is also an actor in the industrial relations system. The dual roles of government have been a major source of concern to other actors and industrial relations experts. A situation where the regulator is also an actor may be counterproductive during the process of resolving industrial disputes as government will be coming to the negotiation table as a higher, unequal partner in the negotiation and collective bargaining process.

Industrial disputes have been a major source of concern in public universities in Nigeria. These public institutions have been plagued with incessant industrial disputes resulting into prolonged strike actions which have also led to closure and halting of academic activities in these institutions. Wahab (2018) asserts that Academic Staff Union of Universities (ASUU), a major industrial actor in public universities in Nigeria has been on major strike actions fourteen times from 1999 to 2018. This situation clearly underscores the fact that these institutions have not been at peace industrially for most of these periods (Fejoh and Adesanwo, 2021).

Researchers have extensively dealt with causes and effects of industrial disputes on the effective management of public universities and other organizations in Nigeria (Offen, Anashie and Aniah, 2018; Ezeagba, 2014; Omotere, 2014; Ohiwerei and Omo-Ojugo, 2008). There seems to be a dearth of research on how industrial actors in public universities in Nigeria perceive industrial disputes. This study therefore attempted to examine this important aspect of industrial disputes in public universities in Southwest, Nigeria.

Perceptions of these industrial actors in public universities in Nigeria with regard to industrial disputes are likely to vary. Some groups may see industrial disputes as unnecessary and a waste of precious time during the production process while some other actors may see it as the only way to enforce their labour rights. This paper examined the perceptions of university management, academic staff and non-teaching staff as major industrial actors in public universities in Southwest, Nigeria. Government, as an
industrial actor does not directly engage in most of industrial disputes in these public institutions. They hide under the fact that the governing councils of various public universities are the employers of labour and these councils are deemed to have autonomy in dealing with all issues relating to industrial relations in these public institutions. It is also noteworthy to state that these governing councils are represented by various university managements. Hence, the decision of the researchers to limit the industrial actors in public universities to university management and workers (academic staff and non-teaching staff).

Conflict, by nature is unavoidable and inevitable in the world of work as long as there is interaction among workers. Industrial disputes appear to be multi-dimensional in characteristics and it seems very frequent within the Nigerian society (Kan and Manfred, 2017). Conflicts among employees and or between employees and employers have over times affected the perception of both university management and workers making them either uncompromising or ambitious in terms of their demands and aspirations especially in the Nigerian ivory-towers.

Industrial disputes have emerged as an important concept in industrial relation system as it has drawn the attention of management scientist and organizational sociologists, and it has been studied with different perspectives and prospects in the organization (Lipskey, Ronald and Ariel, 2015, Igbaji (2009). Adomi and Anie (2005) maintained that the incidence of strike cannot be totally prevented, but conflict that often results from it can be ignored, suppressed or resolved.

Kersley, Alpin, Bryson, Bewley, Dix and Oxenbridge (2006) in a study holds that the outcome of most empirical studies on industrial disputes suggest a kind of variation in terms of causes, factors and nature of conflicts across organizations, adding that industries with higher levels of industrial action at large will experience an increased form of grievance.

Researches across cultures and time have revealed that employees in the world of work especially in the university system are surrounded with diverse concerns and issues among which are issues of low pay, inadequate teaching facilities, refusal or outright inability of government to pay emolument and sundry allowances which goes a long way to create a lacuna in the employee-employer relationship (Agba, Ushie and Agba, 2009). Literature exposed that university workers and their union leaders had suffered several difficulties due to the aftermath of industrial disputes and which to a great length affected their perception toward any conflicts. Despite the availability of both national and international measures to ameliorate the incidence of industrial disputes in the world of work, these efforts remain inadequate in the process of achieving sustainable societal developments (Kolawole, 2019).

In spite of the numerous gains derived from the university based education in
nation development, the Nigerian university system had over the years witnessed series of industrial disputes which have affected its primary goals and objectives.

Contrary to the high expectations of the workers from their employers, the incidence of employees-employers conflicts frequently pave way for stress, frustration, low morale, reduced collaboration, dissatisfaction, high turnover, suicide, absenteeism and poor performance on the job, basically because of what is perceived by lecturers, unions and by different workers unions and their leaders in the system as negligence, non-challant attitude and irresponsibility of the government in meeting promised demands. Perceptions of these industrial actors in public universities in Nigeria with regard to industrial disputes are likely to vary. Some groups may see industrial disputes as unnecessary and a waste of precious time during the production process while some other actors may see it as the only way to enforce their labour rights. The relevance and importance of this research lie in the fact that proper understanding of the industrial actors’ perceptions of industrial disputes will assist all the actors whenever they are engaged in collective bargaining process. This understanding will in turn prepare all the actors to approach the resolution of industrial disputes with enough knowledge of the attitudes and perceptions of the parties involved. This paper examined the perceptions of university management, academic staff and non-teaching staff as major industrial actors in public universities in Southwest, Nigeria. Specifically, the study sought to achieve the following objectives:

1. To determine how the university management perceive industrial disputes.
2. To determine how academic staff and non-teaching staff of universities perceive industrial disputes.

1.1. Research Hypotheses

The following hypotheses were raised to guide the study:

Ho 1: There is no significant difference in the way university management and academic staff perceives industrial disputes.

Ho 2: There is no significant difference in the way university management and non-teaching staff of universities perceive industrial disputes.

Ho 3: There is no significant difference in the way academic staff and non-teaching staff of universities perceive industrial disputes.

2. Review of Literature

2.1. Theoretical Framework

Industrial disputes have become an essential part of the industrial relations system in Nigeria due to incessant industrial disputes across most public organizations in
the country. This study is based on Marxist theory and pluralist theory of industrial relations.

2.1.1. Marxist Theory
According to Abu (2007), Marxist theory regards trade unions as sources and medium of power for employees for the purpose of power balancing in work organizations. This position is anchored on the premise that most organizations exist to operate in the interest of the economically dominant class and this presupposes that there exist more considerable conflict between the owners of labour and owners of capital. The only way to resolve conflicts in such situations is through the acquisition of more power at organizational level so that the dominant force will ensure industrial harmony. For the Marxist, the only way that workers can acquire enough power is through the roles of trade unions where they are expected to use their numerical strength to improve the welfare and conditions of service of their members.

2.1.2. Pluralist Theory
The Pluralists see the approach as an analogy of the pluralism in the larger society where there exist variety of groups with diverse beliefs and interests. Each group is constrained to protect their beliefs and interests and this lead to disputes. In work organizations, the beliefs and interests of workers and employers differ and this will lead to conflict. It is therefore reasonable to understand that compromise must be reached to accommodate these varying interests and beliefs through negotiation and concession.

2.2. Conceptual Clarifications
2.2.1. Concept of Industrial Dispute
The term conflict or dispute denotes a struggle between people with opposing needs, ideas, benefits, values or goals. The notion industrial dispute has been seen to be varied in its conceptualization. Kolawole (2019) sees industrial disputes as a disorder or an unrest arising among the workers, management and federal government on any ground. That is, disputes occur among a given set of industrial actors and the outcome of any industrial disputes is always manifested in strikes, lock-out and mass refusal of the workers to perform their duties until the dispute is resolved. Similarly, the Industrial Dispute Act of 1947 identified industrial dispute as differences or disagreement that majorly happened between the employer and the employees, or between the employer and the workmen, or between workmen and workmen. The Act noted that the bane of the disagreement is majorly on the terms of employment, or the conditions of labour of any person. The personality involved in any conflictive display is manifested in terms of:

• Employer and the employees
• Employer and the workmen
• Workmen and workmen

Basically, several schools of thought varied in their views as to the term – industrial disputes. To the traditionalists, conflict is harmful and so, it must be totally avoided in the world of work. Also, the human behaviorists affirmed that conflict is natural in the work system and that it is evitable in any group or, parties or organization, but the interactionists maintained that conflict is not only a positive force but it is also an absolute necessity on the ground that a cordial relationship, peaceful and cooperating attitude can be exchanged for aggression, frustration when the demands are not met (De Dreu, Harinek and Van Vianem, 1999). These views, illustrate that conflict in the world of work can either be dysfunctional or functional depending on how it is embraced (Anku-Tsede and Adjadogo, 2016). Akinbode and Ebeloku (2017) revealed in a study that workplace conflict arises in case of disagreement over workloads problem in communication, individual differences in terms of need, wants, goals, values, opinions or behavior. Holding that conflict can manifest both as intense and unpleasant and that the issues that foster conflict can be cultural, social, political or economic and can emerge at different levels be it individual, community, national or international depending on the terrain at which it operates. In conclusion, Aminu and Marfo (2010) and Rahim (2010) were of the view that conflict in the work place does not submit itself to a single and widely accepted pattern. That is, it can occur within an organization (intra-organization) and between two or more organizations (inter-organization).

2.2.2. Concept of Perception

Langton and Robbins (2006) revealed that the term perception denotes the process by which employee and their union leaders organize and interpret their views or impressions in order to give meaning to their environment and to a great length affect their work behaviour. Galpin (1996), Badekale, Ngige and Hamma (2016) adduced that the content of individual employees or labour leaders perception about their work circumstances, terms of employment influence their attitudes, culture and behaviour affect their perceptions towards organizational productivity. The perception of both parties also was that, they will be attentive to important things, ginger interest towards work, maintain satisfaction at work, eliminate work stress, boredom and anxiety, embrace sound communication, and ignore any form of hypertension, coronary problems, peptic ulcers etc. (Omisore and Abiodun, 2014).

Studies affirm that different causes and factors generating conflicts suggested by scholars are more of substantive in their peculiarities. (Van-Tonder and Roodt, 2008). Scholars such as Dahrendorf (1976), Stroh (2002), Robbins, Odendaal and Roodt (2003) see the causes of conflict more at the organizational level. Buttressing that causes of conflict at the organizational level perceived conflict as having a multitude of potential
sources in terms of causes such as; differences in knowledge, beliefs, values, goals, competition for power, position and recognition, autonomy, differing role structure, heterogeneity of the workplace etc.

Weider-Hatfield and Hatfield (1995), Rahim (2010), Nelson and Quick (2001) in their different studies highlighted structural factors, which are the causes of conflict which developed from within the organization and those causes that originated from individual personal factors or differences. Ajewole (2014) identified that in the Nigerian spectrum, the major causes of industrial dispute manifests in terms of perceived low income, lack of conducive working conditions, National minimum wage by the Federal Government, industrial and economic policies, Federal Government/ Academic Staff Union of Universities (ASUU) 1999 signed agreement, payment of entitlements.

Similarly, Otobo (2005) posits two main sources or causes of industrial disputes; internal and external sources. He asserted that the style of management, nature of physical environment of work place, social consciousness of workers, conditions of service are some of the noted internal sources of organizational conflict and that the external causes of conflict appears as government and industrial policies, nature of labour legislation, national economic mismanagement and general distribution of wealth and power in the societal sphere. In sum, the differences in causes of conflicts as suggested in Otobo (2005), depicts a multi- dimensional approach in its resolution.

The instance of conflict wherever it takes places automatically, do have either a psychological or emotional impacts on the employees (Akinbode, 2019). The perception or morale of employee have greatly been affected and thereby leading to negative form of change on the employees’ perception at work, in terms of absenteeism, misconduct, tiredness etc.). In the employee perception of feeling, studies disclosed that disputes have the tendency to create worrisome feeling, resentment, hostility, low productivity, high rate of labour turnover etc., (Tjosvold, 2008).

2.3. Empirical Review

Chen, Chen and Chen (2018) in a study on the influence of industrial relations on the management of industrial dispute. It was discovered that there is a significant relationship between dispute management style and industrial dispute resolution. Also, a distinct correlation cannot but exist between employee – employer relations and the ameliorating of industrial conflict. Equally, Longe (2013) revealed in a study that the causal factors of conflict in the world of work are multi- dimensional and they are based on economic and incompatibility of goals in the workplace. Several empirical insights have been identified on the causative factors of industrial disputes. For instance, Hotepo, Asokere, Abdul-Azeez, and Ajemuigbolohun (2010), identified that in a study, the following factors have been the root cause of major industrial disputes such as
lack of resources, divergent expectation, work place competition, lack of cooperative communication breakdown. In addition, Obasan (2011) holds that in the banking sector the causative factors of disputes are: disapproving term of employment, poor human relations between labour and management, non-consultation with labour in making essential decisions, the anti-union posture of management etc. Studies acknowledged the fact that disputes in any organization continue to attract much controversy, depending on some certain projective instrument. It maintained that amidst the factors that can enhance the progression of any disputes are; actions of the employers and employees, the current relationships with others involved in the conflict, the extent to which they seek towards maintaining relationships into the future, both parties competency in conflict handing (Anku-Tsede and Adjadogo, 2016). They unanimously agreed that these attributes are more related to individuals rather than roles and that labour union possesses unique potential for operating as both relationship managers and preserver of employment relationships. Daria and Bahaudin (2015) confirmed in a study that several conflict structures, types and challenges are likely to occur in diverse workplace in the process of managing conflicts. Likewise, Abdul and Sehar (2015) in their study on conflict management and organizational performance confirmed that education as an instrument does not have any effect on the opinion of respondents on conflict management strategies and that no significant difference exists between the opinion of male and female respondents as regard causes of conflict, but a significant effect of conflict on organizational performance is so glaring; adding that management and government bodies must adopt strategies that will enhance performance, free flow of communication between management and employee and promotion of interpersonal relationships among same workers toward building their morale and organizational perception (Tjosvold, 2008).

Ayoko, Ashkanasy and Jehn (2014) in a study observed that the pattern of industrial conflicts are keen to tasks and relationship and that conflict in the workplace is accompanied by different factors such as emotions of frustration, anger, behavior of yelling, alienation and decline in cooperation among others. Also, in an empirical study on industrial conflict and management, the study revealed that the organizational framework for management of conflict and grievances is poor and that leadership ineffectiveness has been the cause of conflict in the organizations holding that management does not explain its reasons for taking a particular decision in conflict management (Nelson and Quick, 2001). Agba and Ushie (2013) in a study on medical and para-medical staff perception of the impact of wage differential on industrial disputes within the Nigerian hospitals it was revealed that wage differentials of basic salary, hazard and fringe benefit allowance has a significant correlation with industrial disputes in Nigerian hospitals. Also, they maintained that socio-demographic factors
like sex, age, rank of staff, educational qualification as a propensity to influence the level of industrial conflict in Nigerian hospitals.

3. Methodology

The descriptive research survey design was adopted for this study. This research design was aimed at ascertaining detailed information on university management and university workers’ perception of industrial disputes in public universities in Southwest, Nigeria. The population for this study was made up of the managements and all the workers of public universities in Southwest, Nigeria. This study was based on the sample size of two hundred and eighty (280) respondents randomly selected from four universities in Southwest, Nigeria (University of Ibadan, Ibadan; Osun State University, Osogbo; Tai-Solarin University of Education, Ijagun, Ijebu-Ode and Federal University of Agriculture, Abeokuta). From this number, each university was represented by twenty (20) management staff made up of six (6) principal officers and fourteen other high ranking management staff of these universities while 50 workers representing 25 academic staff and 25 non-teaching staff from each of the university. The researcher adopted a random sampling technique so as to give the respondents the same chance of being taken.

Primary data was used as a means for data collection and this was achieved by the adoption of a self-structured validated scale comprising of 15 items which were designed to elicit information on the perceptions of university management and workers’ perception of industrial disputes in public universities in Southwest, Nigeria. Section (A) of the questionnaire was used to collect data relating to the demographic characteristics of the respondents, which includes the gender, age bracket, marital status, educational question, rank, present designation in the university while section (B) of the questionnaire centers on information on the respondents perception of industrial disputes. The questionnaire was analyzed through the use of statistical packages for social science (SPSS). T-test analysis was used to analyze the data obtained at 0.05 level of significance.

4. Results and Findings

Hypothesis One: There is no significant difference in the way university management and academic staff perceive industrial disputes.
Table 1

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t-cal</th>
<th>t-tab</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Management</td>
<td>80</td>
<td>16.435</td>
<td>7.827</td>
<td>14.49</td>
<td>1.96</td>
<td>178</td>
<td>0.05</td>
</tr>
<tr>
<td>Academic Staff</td>
<td>100</td>
<td>15.267</td>
<td>3.004</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 showed a significant difference between university management (N = 80, X = 16.435, SD = 7.827) and academic staff (N = 100, X = 15.267, SD = 3.004) perception of industrial disputes in public university in Southwest, Nigeria. The T-test analysis also revealed that the t-cal value 14.9 is greater than the t.tab value of 1.96 at 00.5 level of significance.

Since the calculated value (14.49) is greater than the table value (1.96), the null hypothesis which states that there is no significant difference in the way university management and academic staff perceives industrial disputes is hereby rejected. This signifies that there is significant difference in the way university management and academic staff perceives industrial disputes.

Hypothesis Two: There is no significant difference in the way university management and non-teaching staff of universities perceive industrial disputes.

Table 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t-cal</th>
<th>t-tab</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Management</td>
<td>80</td>
<td>39.63</td>
<td>11.58</td>
<td>12.37</td>
<td>1.96</td>
<td>178</td>
<td>0.05</td>
</tr>
<tr>
<td>Non-Teaching Staff</td>
<td>100</td>
<td>39.56</td>
<td>5.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 showed a significant difference between university management (N = 80, X = 39.63, SD = 11.58) and non-teaching staff (N = 100, X = 39.63, SD = 5.75) perception of industrial disputes in public university in Southwest, Nigeria. The T-test analysis also revealed that the t-cal value 12.37 is greater than the t.tab value of 1.96 at 00.5 level of significance.

Since the calculated value (12.37) is greater than the table value (1.96), the null hypothesis which states that there is no significant difference in the way university management and non-teaching staff perceive industrial disputes is hereby rejected. This
signifies that there is significant difference in the way university management and non-teaching staff perceive industrial disputes.

**Hypothesis Three:** There is no significant difference in the way academic staff and non-teaching staff of public universities perceive industrial disputes.

**Table 3**

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t-cal</th>
<th>t-tab</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Staff</td>
<td>100</td>
<td>15.435</td>
<td>5.81</td>
<td>0.167</td>
<td>1.96</td>
<td>198</td>
<td>0.05</td>
</tr>
<tr>
<td>Non-Teaching Staff</td>
<td>100</td>
<td>15.267</td>
<td>5.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 3 above, analysis showed no significant difference between academic staff (N=100, X = 15.435, SD = 5.81) and non-teaching staff (N = 100, X = 15.267, SD = 5.72) perception of industrial disputes in public universities in Southwest, Nigeria. The T-test analysis also revealed that the t-cal value 0.167 is not greater than the t.tab value of 1.96 at 0.05 level of significance.

Since the calculated value (0.167) is not greater than the table value (1.96), the null hypothesis which states that there is no significant difference in the way academic staff and non-teaching staff perceive industrial disputes is hereby upheld. This signifies that there is no significant difference in the way academic staff and non-teaching staff perceive industrial disputes in public universities in Southwest, Nigeria.

The results as shown in Tables 1 and 2 indicated that there is significant difference in the way university management and academic staff, university management and non-teaching staff perceive industrial disputes. The plausible reason for such difference in their perception may lie in the fact that the University management represents the employer and most of the time, employers of labour tend to perceive industrial disputes as a distraction and a share waste of precious time in the production process. Both the academic staff and non-teaching staff are workers and their interest in the institutions may not always be congruent with that of the management. University management tend to believe that whatever the grievances the workers may have, it is always better to come to the table and have a discussion. Good as the position might be, the problem that always lead to industrial dispute is the inability of the management to implement agreement freely entered into with the workers. The management may sometimes want to use their own parameters to measure what is adequate for the workers without considering the necessary inputs that should normally come from the workers’ unions.
This has always been a major source of industrial dispute in public tertiary institutions. While the management will be interested in uninterrupted academic calendar, little attention may be paid to the demands of the workforce, especially in the areas of collective agreement freely and jointly entered into. Inadequate fund has always been the culprit as far as management is concerned and they are quick to think that the workers should understand their plight and therefore cooperate with them. These findings are in consonance with the study carried out by Longe (2015) who affirmed that the causal factors of conflict in the world of work are multi-dimensional and they are based on economic and incompatibility of goals at workplace. In addition, the findings also corroborate Hotepo et al (2010) who affirmed that several factors such as, lack of resources, divergent expectation, workplace competition and communication breakdown have been identified as the root cause of major industrial disputes in organizations.

Meanwhile, findings from Table 3 indicated that there is no significant difference in the way academic staff and non-teaching staff perceive industrial disputes. The basis for this rests on the fact that both academic staff and non-teaching staff are workers and in most, if not all the cases see themselves as being in the same boat. Their perceptions of industrial disputes may not likely vary since both have their unions that are committed to the welfare of their members as they see industrial disputes as the ultimate vehicle to drive home their points if the management fails to accede to their requests of willingly neglect implementation of collective agreement jointly reached and signed with them. This finding corroborates the work of Ajewole (2014) who asserted that the major causes of industrial disputes in public universities in Nigeria among others include the inability of Federal Government of Nigeria to honour its agreement with university based unions. In this scenario, workers will perceive industrial dispute as the only way to fight for their labour rights.

5. Conclusion

Industrial disputes remain a major problem in the management of public universities in Nigeria. Public universities have experienced more industrial disputes in recent times and these have led to closure of these institutions with all the attendant consequences such as low productivity among the workforce and the production of ill-equipped graduates. This study examined how university managements, academic staff and non-teaching staff perceive industrial disputes and it was found out that while university managements see industrial disputes as unnecessary and a waste of production time, the academic staff and non-teaching staff see industrial disputes as the last resort in the fight for their welfare.
6. Recommendations

The following recommendations were made based on the above findings and conclusion.

- Industrial disputes are not necessarily destructive if properly managed by the parties concerned. It is a manifestation of discontentment and grievances from either of the parties involved. It should be seen in the positive light for the university management to make necessary adjustment for efficient service delivery.

- All industrial actors in public universities in Southwest Nigeria should not see industrial disputes as destructive engagement since disputes are naturally part of human existence. Effective management and timely handling of industrial disputes through sincerity of purpose should be the key to sustainable industrial peace in public universities in Southwest, Nigeria.

- Management of public universities should endeavor to implement collective agreement freely and jointly entered into with the staff unions as this will reduce industrial disputes in these institutions to the barest minimum.

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