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The current issue is the first of the eighth volume of the *Athens Journal of Business & Economics (AJBE), published by the Business & Law Division and the Economics Unit of ATINER.*

Gregory T. Papanikos
President
ATINER

Athens Institute for Education and Research
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17ᵗʰAnnual International Symposium on Economic Theory, Policy and Applications 27-30 June 2022, Athens, Greece

The Economics Unit of ATINER, will hold its **16ᵗʰAnnual International Symposium on Economic Theory, Policy and Applications, 27-30 June 2022, Athens, Greece** sponsored by the Athens Journal of Business & Economics. The aim of the conference is to bring together academics and researchers of all areas of economics and other related disciplines. You may participate as panel organizer, presenter of one paper, chair a session or observer. Please submit a proposal using the form available (https://www.atiner.gr/2022/FORM-ECO.doc).

Academic Members Responsible for the Conference

- **Dr. Gregory T. Papanikos, President, ATINER & Honorary Professor, University of Stirling, UK.**
- **Dr. Chris Sakellariou, Head, Economics Unit & Associate Professor of Economics, Nanyang Technological University, Singapore.**

Important Dates

- Abstract Submission: **29 November 2021**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **30 May 2022**

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- Greek Night Entertainment (This is the official dinner of the conference)
- Athens Sightseeing: Old and New-An Educational Urban Walk
- Social Dinner
- Mycenae Visit
- Exploration of the Aegean Islands
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Conference Fees

Conference fees vary from 400€ to 2000€
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Athens Institute for Education and Research
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9th Annual International Conference on Business, Law & Economics
2-5 May 2022, Athens, Greece

The Business, Economics and Law Division (BLRD) of ATINER is organizing its **8th Annual International Conference on Business, Law & Economics, 2-5 May 2022, Athens, Greece,** sponsored by the Athens Journal of Business & Economics and the Athens Journal of Law. In the past, the six units of BLRD have organized more than 50 annual international conferences on accounting, finance, management, marketing, law and economics. This annual international conference offers an opportunity for cross disciplinary presentations on all aspects of business, law and economics. This annual international conference offers an opportunity for cross disciplinary presentations on all aspects of business, law and economics. Please submit an abstract (email only) to: atiner@atiner.gr, using the abstract submission form (https://www.atiner.gr/2022/FORM-BLE.doc)

Important Dates
- Abstract Submission: **4 October 2021**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **4 April 2022**

Academic Member Responsible for the Conference
- **Dr. Gregory T. Papanikos**, President, ATINER.
- **Dr. Michael P. Malloy**, Director, Business, Economics and Law Division, ATINER & Distinguished Professor & Scholar, University of the Pacific, USA.
- **Dr. David A. Frenkel**, LL.D., Head, Law Research Unit, ATINER & Emeritus Professor, Law Area, Guilford Glazer Faculty of Business and Management, Ben-Gurion University of the Negev, Beer-Sheva, Israel.

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Animal Welfare and Major Food Retailers

By Peter Jones[*] and Daphne Comfort[±]

This paper offers an exploratory review of how some of the major US and European food retailers have publicly addressed animal welfare. The findings reveal that six interlinked themes, namely, strategic corporate commitment, animal welfare as good business policy, a focus on supply chains, policies on specific categories of animals and animal products, antibiotics, and auditing, illustrated the food retailers' approach to animal welfare. The authors raise a range of issues about the retailers' approach to animal welfare, including the aspirational nature of their commitments, the emphasis on regular audits, the role of external assurance in the reporting process, pressure from animal welfare campaigns, and the impact of the COVID-19 pandemic. The paper offers an accessible review how some of the major US and European food retailers have publicly addressed the issue of animal welfare.

Keywords: *animal welfare, animal welfare statements, food retailers, supply chain, audit, external assurance*

Introduction

The welfare of animals generates vociferous and passionate debate, and it has attracted increasing attention in the academic literature. Clark et al. (2016), for example, recognised that increases in productivity may have negative impacts on farm animal welfare in modern animal production systems, and provided a systematic review of public attitudes to animal welfare. Their review suggested that "*the public are concerned about farm animal welfare in modern production systems*" and that "*naturalness and humane treatment were central to what was considered good welfare*" (Clark et al. 2016). While consumer concerns about animal welfare are expressed in a variety of ways, but for many people their closest, though indirect, contact with animal welfare is through the food they buy, and then eat. That said, in some ways, animal welfare seems removed from the social practices of buying and eating animal products. Buller and Roe (2018), claimed "*we largely take farm animals' lives (and deaths) for granted when we eat them and their products*" and they suggested "*for most of us, meat, egg and dairy consumption has become so distinct – geographically, morally aesthetically - from livestock that the animal disappears*". More specifically, Buller (2016) claimed "*shopping for welfare-friendly food products becomes an act of care-at-a-distance*". However, relatively little research has been published on the food retailers' approach to animal welfare. This exploratory paper looks to add to this work by reviewing, and reflecting on, how some of the major US and European

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food retailers have publicly addressed their approach to animal welfare. The paper includes an outline of the characteristics of animal welfare, a short literature review to provide an academic context and set of reference points for the paper, a review of the selected food retailers' approaches to animal welfare, some reflections on this approach, and some suggestions for future research.

Animal Welfare

Animal welfare is concerned with the general health and wellbeing of animals and spans a wide range of issues from the care of family pets, to the exploitation and abuse of animals. The welfare of animals can rouse deep passions and can generate fiercely contested debates, and while some voices stress the vulnerability of animals, for example, in intensive factory farms and medical research, others emphasise the need to increase food supplies and to develop new and   better medicines. Essentially, the concept of animal welfare is concerned with how an animal is coping with the conditions in which it lives, and it is generally seen to include three elements, namely, an animal's normal biological functioning; its emotional state; and its ability to express (most) normal behaviours.

As such, the American Veterinary Medical Association (2020) suggested that an animal is seen to be in "*a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well-nourished, safe, able to express innate behavior, and if it is not suffering from unpleasant states such as pain, fear, and distress*". More popularly, commitments to animal welfare are often characterised by the "*Five Freedoms*", drawn up by the UK's Farm Animal Welfare Council (2009), namely freedom from hunger and thirst: freedom from discomfort; freedom from pain, injury or disease; freedom to express normal behaviour; and freedom from fear and distress.

Within Europe, the UK, where legislation on the treatment of cattle dates back to the 1820's, can be seen as a pioneer in approaches to animal welfare, with legislation following in Germany, France, Switzerland and Sweden, later that century, while in the US, the first animal welfare laws can be traced back to the mid seventeenth century. More generally, Mench (2008) also argued that general awareness of animal welfare "*occurred more slowly in the USA than in Europe*" but it "*is now gathering momentum as the agricultural industries and food retailers write guidelines and implement animal welfare audit programs in an attempt to reassure customers that farm animals are raised and slaughtered humanely*".

Literature Review

Animal welfare within the food industry has attracted some attention in the literature. Well over two decades ago, Hughes (1995) identified a number of factors, including rising incomes, increasing education levels, consumer attachment to domestic, farmed and wild animals and birds, concerns about both animal

welfare, and health and nutrition, which were shaping consumer concerns about animal welfare within the food industry at that time. Verbeke and Viane (2000) analysed consumer concerns about the ethical issues of meat safety and animal welfare from livestock production. Their analysis revealed that, meat safety emerged as an absolute, but minimum requirement, for the future success of livestock and meat production, and that animal welfare would become a critical issue, especially for consumer acceptance of pork and poultry.

Schroder and MacEachern (2004) explored ethical attitudes to meat purchases amongst both urban and rural consumers and reported that "*individuals can hold two views on animal welfare. On the one hand, they may think as citizens influencing societal standards, and on the other, as consumers at the point of purchase. As citizens, they support the notion of animals being entitled to a good life; as meat consumers, they avoid the cognitive connection with the live animal*". Much more recently Cornish et al. (2020) investigated consumers' preferences for higher welfare products with on-package animal welfare labels, and explored whether providing consumers with detailed information about the welfare conditions behind on-package animal welfare labels could have a positive influence on farm animal welfare. The authors concluded that "*providing farm animal welfare information at the point-of-purchase could boost appreciation and demand for higher than conventional welfare products*" (Cornish et al. 2020).

More generally, Buller et al. (2018) explored how animal welfare science and policy might articulate with global debates over food security and sustainability and they concluded that "*the task of a broader animal welfare community is not to provide additional mechanisms for selective market performance but rather to help feed the multispecies world in a healthy and sustainable manner that matters to humans and animals alike*". Ufer et al. (2019) explored "*the economic foundations, challenges and opportunities for consumer acceptance of biotechnology applications in animal welfare*" and argued that "*if the benefits of biotechnological applications in agriculture are both welfare- and profit-increasing, producers may be able to capitalize on profitable biotechnologies while meeting consumer demands for improved welfare*".

Limited research has been published on the leading food retailers' approaches to animal welfare. Lindgreen and Hingley (2003) examined the approach taken by Tesco to deal with consumers' concerns about animal welfare, and found that the retailer had worked with its suppliers to address such concerns, and suppliers were evaluated using a series of detailed key performance indicators. In classifying groups of themes in food retailers' corporate social responsibility reports and on own label products, Souza-Monteiro and Hooker (2017) suggested that health and safety and the environment were the most popular group, while animal welfare, along with community, biotechnology and novel foods were in the second rank of groups. Schulze et al. (2020), looked to explore how food retailers were motivated to take on the marketing of products with increased animal welfare standards, and their findings suggested that a focus on animal welfare can not only achieve more successful marketing, but can also help both consumers and farmers to change their consumption and production habits.

Frame of Reference and Method of Enquiry

In looking to undertake an exploratory review of how the major US and European food retailers have publicly addressed animal welfare, the authors chose a simple method of enquiry, which they believe to be fit for purpose. Seven of the major US and European food retailers, namely, Walmart, Kroger, Albertsons, Lidl, Rewe, Tesco and Sainsbury's were selected for study. These retailers were selected because a preliminary survey revealed that that their approach to animal welfare was readily accessible on the Internet. Walmart is a US multinational retailer, and it trades from some 11,500 stores in 27 countries. Kroger's network of over 2,700 supermarkets and hypermarkets span states across the US. Albertson is a US grocery company and trades from over 2, 200 locations under several store brands including Albertsons, Carrs, Safeway, Shaws and United Supermarkets. Lidl is a German based international discount supermarket chain and trades from over 10,000 stores in Europe and the US. REWE is a large supermarket retailer with some 3, 300 stores in Germany, and the company also trades as the supermarket chain, BILLA, and the discount retailer, Penny, in several other European countries. Tesco is a multinational food retailer with some 3,400 stores in the UK and retail outlets in Ireland, Hungary, the Czech Republic, and Slovakia. Sainsbury's trades from over 600 supermarkets and some 800 convenience stores throughout the UK.

An Internet search was conducted using the name of each of the selected retailers and animal welfare as key phrases. The search was undertaken in October 2020 using Google as the search engine and it generated details of the current animal welfare statements, guidelines, and policies for all the selected retailers plus recent animal welfare reports for Lidl and Sainsbury's. These documents provided the empirical information for the paper. This material is in the public domain on the selected retailers' corporate websites and the authors took the considered view that they did not need to seek permission to use it. The paper looks to provide an exploratory review of how the selected major US and European food retailers publicly addressed animal welfare, rather than a systematic, comprehensive, or comparative analysis of animal welfare issues. The paper draws heavily on selected quotations drawn from the food retailers' corporate websites. The aim here is to explore how the retailers publicly expressed, and evidenced, their approaches to animal welfare, and the authors took the view that this was perhaps best captured in the retailers' own words, not least in that quotations could convey corporate authenticity, and offer greater depth of understanding (Corden and Sainsbury 2006). When outlining the issues of the reliability and the validity of the information drawn from Internet sources, Saunders et al. (2009) emphasised the importance of the authority and reputation of the source, and the citation of a specific contact that could be approached for additional information. In collecting the retailer's material on animal welfare, the authors felt that these two conditions were met.

Approaches to Animal Welfare

There were variations in the ways the selected retailers' addressed animal welfare on their corporate websites, but rather than detailing each retailer's policy, the aim here is to draw out several themes that illustrate their general approach to animal welfare. More specifically, five/six interlinked themes were identified, namely, strategic corporate commitment, animal welfare as good business policy, a focus supply chains, policies on specific categories of animals and animal products, antibiotics, and auditing. Strategic commitment was expressed in a variety of ways. Tesco (2020), for example, claimed "*animal welfare is important to us and to our customers. We are committed to working responsibly in this area, and to continue to progress and influence best practice in our supply chain*". In a similar vein, Kroger (2019) emphasised "*animal welfare is an important issue to Kroger, our customers and our associates. We have a long standing commitment to responsible business practices, including the humane treatment of animals*". Rewe (2019) reported its commitment to "*increasing animal welfare standards*" and to "*actively contribute to an improvement of livestock farming*". Walmart (2020) stressed "*we believe that farm animals in our supply chain should be treated humanely throughout their lives and that the welfare of farm animals should be considered in selection of all production systems, practices and technologies. Walmart U.S. and Sam's Club U.S. are committed to continuous improvement in the welfare of farm animals in our supply chain*".

At the same time, some of the selected retailers also argued that their commitments to animal welfare were vitally important to their businesses. Sainsbury's (2019), for example, argued "*treating animals well and keeping them healthy is not just the right thing to do, it also makes good business sense*" and that "*healthy well-managed animals are more likely to deliver better-tasting, higher quality products that our customers enjoy buying and consuming*". In a similar vein, Lidl (2020) claimed "*the welfare of farmed animals forms a key part of our continued dedication to our sustainability strategy*", and "*we believe this is in the interests of both our business, ensuring integrity and sustainability, and our customers who have told us that they are increasingly interested in buying produce that has been produced and sourced with strong welfare considerations*".

The leading food retailers acknowledged the importance of their supply chains in addressing animal welfare. While Kroger (2019) explicitly recognised that the company "*is not directly involved in raising or the processing of any animals*" it claimed "*we do, however, require our suppliers to adopt industry-accepted animal welfare standards that we endorse, and we monitor our suppliers for compliance with these standards*". Walmart (2020) reported three elements in its animal welfare relationships with its suppliers. Firstly, "*we expect that our suppliers will not tolerate animal abuse of any kind*", secondly "*we support the globally recognised Five Freedoms of animal welfare as an aspiration for animal welfare in our supply chain*", and thirdly, "*we will work with our supply chain partners to implement practices consistent with the Five Freedoms of animal welfare*".

In outlining its approach to "*working in partnership with farmers and suppliers*" Sainsbury's (2019) stressed its commitment to "*working with our farmers to continuously improve the lives their animals lead*" and that all its farmers have to meet "*exacting animal health and welfare standards*". Lidl (2020) claimed that its animal welfare standards "*are continually evolving and go beyond legal requirements through all stages of the supply chain*", while Tesco (2020) claimed "*we work collaboratively with our suppliers, grower, farmers and fishermen… to identify ways in which high standards of animal welfare can be assured in a manner which is achievable for our supply base*".

Some of the selected food retailers reported policies for specific categories of animals and animal products. Sainsbury's (2019) claimed "*we adapt our animal health and welfare approach to meet each species particular needs*". In outlining its policy on lamb, for example, Sainsbury's (2019) reported "*we make sure that our lambs are reared as naturally as possible*", that "*they stay with their mothers, suckle freely, and live in family groups until they are weaned*" and that "*after that lambs stay together as a group but their diet is based entirely on grass and forage*". In a similar vein, Rewe (2019) reported pursuing "*various approaches to minimise problem areas for different types of farm animals*" and that the company "*continuously tries to develop and support alternatives for important hotspots or problems with regard to animal welfare for the respective livestock species*". More specifically, Rewe (2019) reported its policies on poultry, pigs, rabbits, and meat production. Kroger (2019) recognised that "*sows in the pork industry may experience negative and behavioural health impacts when housed in gestation stalls during* pregnancy", that "*group housing is a viable alternative*", and that the company has asked its "*suppliers to transition away from gestation stalls to group housing or free range environments*". Lidl (2020) emphasised that its certification scheme for turkey suppliers ensured that "*birds have continual access to food, water and have the ability to roam at will inside the barns in which they are raised*".

Antibiotic resistance is a major public health issue and the increased use of antibiotics in both human and veterinary medicine has enhanced naturally occurring resistance. Walmart (2020), for example, recognised that "*antibiotics are one of many critical tools used to keep animals healthy and that they should be used responsibly to preserve the effectiveness of antibiotics in human and veterinary medicine*" and asserted its belief that "*antibiotics should only be used for medical purposes (treatment, control and prevention of disease) and not for growth promotion*". Further, Walmart (2020) reported that it looked to its suppliers to "*promote transparency by providing an antibiotics management report to Walmart and publicly reporting antibiotic use on an annual basis*". Lidl (2020) argued "*the use of antibiotics should not be a replacement for good animal husbandry*", that "*we encourage our suppliers to optimise welfare, health, hygiene and the biosecurity of animals in order to reduce the need for antibiotic treatments*", and that suppliers were to use antibiotics "*as little as possible and as much as necessary, while keeping animal welfare as the primary focus*". More generally, many large food retailers also had a range of animal welfare policies,

covering cloning and growth promoters, confinement, permitted mutilations, stunning and slaughter, research, development and training, and transport.

A commitment to auditing was also a common feature in the selected food retailers' approach to animal welfare. Kroger (2019), for example, reported requiring "*all beef, pork, chicken, turkey and egg suppliers to provide evidence of annual animal welfare audit to Kroger, as part of doing business with us*". These audits "*are to align with our accepted animal welfare standards and are to be conducted by reputable independent commercial third party auditing companies*". Walmart's (2020) animal welfare policy stipulates that each fresh pork supplier "*must have on-farm video monitoring for sow farms and will be subject to unannounced animal welfare video audits by an accredited and independent third-party*" and suppliers "*must implement an internal annual animal welfare audit for all farms that includes a grading system and corrective action tracking*". Under the banner, "*making sure our standards are met*", Sainsbury's (2019) claimed "*we implement our farm animal and welfare policies by working with independent auditors, suppliers and processors, and directly with our farmers*". Further, Sainsbury's (2019) reported monitoring compliance with its various animal welfare policies "*both through factory audits, carried out by our internal teams, and via on-farm audits undertaken by our agricultural consultants and third party assessors*". Lidl (2020) emphasised that all its food producers are required to complete annual audits that cover a multitude of standards including animal welfare credentials, while Albertsons (undated) reported that "*we conduct annual humane handling audits through our internal professional animal certification organization*".

Reflections

In publicly outlining their approaches to animal welfare, the selected US and European food retailers have emphasised their commitment to animal welfare and described the ways that have looked to fulfil such commitments, but several issues merit reflection and discussion. While the selected companies were often at their most emphatic in emphasising their commitment to animal welfare, some of the claimed commitments are explicitly aspirational and expectational. Such corporate aspirations and expectations can certainly be seen to reflect public concerns about animal welfare but given that the selected food retailers have global reach and source animal products across extensive geographical areas, which may have different views on animal welfare, fulfilling their animal welfare commitments presents complex challenges.

These challenges are all the greater because the food retailers' commitments to animal welfare are at least one step removed from their own operations, which effectively reduces their direct control over welfare measures. Here, a major element in the selected food retailers' approach to animal welfare is the regular independent audits of their suppliers. However, in examining consumer concerns about food safety, the environment and animal welfare, Haggarty (2009) argued that audit-based governance is effectively shaped by the food industry itself, and

that "*grocery marketers translate consumer preferences into checklists of acceptable farming practices in negotiation with farming sector lobbies, consumer groups and other participants in agri-food systems*". More specifically, in reviewing the role of "*audit in animal welfare*", Escobar and Demeritt (2016*)* highlighted the general "*tendency for audit processes to become decoupled from the qualities they are meant to assure*". As such, there is the danger that the audit exercises which the leading food retailers claim as a major feature of their corporate commitment to animal welfare, become a routine reporting end in themselves, rather than a means to an end.

More generally, major food retailers may well look to use their annual corporate social responsibility and sustainability reports to outline their commitments to animal welfare and to evidence their achievements in meeting such commitments. Whether food retailers will look to include detailed key performance indicators, as suggested by Lindgreen and Hingley (2003) almost two decades ago, in their reporting processes remains to be seen. At the same time, if major food retailers are to build confidence and stakeholders trust in their delivery of animal welfare commitments, and to avoid accusations of greenwashing, this effectively demands independent external assurance of the corporate social responsibility and sustainability reporting process. However, work on the assurance of food retailers' corporate social responsibility and sustainability reports undertaken by Jones et al. (2014) revealed "*considerable variation in the nature and the scope of the assurance processes undertaken, at best the accent is on limited assurance and some concerns are expressed about the independence of the assessment process*". While commissioning comprehensive independent external assurance, within large, complex and geographically widespread supply chains can be a costly and time consuming process, it is one which major food retailers will need to address more wholeheartedly, if they are to establish the integrity, reliability, and credibility of their commitments to animal welfare.

The food retailers, and more generally the food industry, face strident public and pressure group criticism about animal welfare. Tescopoly (undated), for example, an alliance launched in 2006 to highlight and challenge the negative impacts of Tesco's behaviour along its supply chain, argued that "*supermarkets have enormous influence over the animal welfare standards used to produce the meat, milk and eggs that they sell*". Further Tescopoly (undated) argued that *'as a result of supermarket buying power, which drives down prices paid to suppliers, farmers are expected to work to impossibly small margins*", and that "*in many cases they have no option but to intensify production in order to try to cover their costs*". Tescopoly (undated) concluded that "*the capture and control of the whole food supply chain by the supermarkets is a major contributor to poor animal welfare*". Walmart has also faced pressure from a number of Non-Governmental Organisations, including, The Humane League and Mercy for Animals for its failure to implement measures to improve animal welfare.

At the time of writing, it is impossible to consider the major US and European food retailers' approaches to animal welfare issues without some reference to COVID-19, not least because the pandemic has disrupted global supply chains and changed consumer habits and behaviours. On the one hand, trade reports that

many abattoirs and meat packing and processing plants were COVID-19 hotspots and were closed, albeit temporarily, and restrictions on international trade have disrupted many traditional supply chains. On the other hand, public fears and concerns about the COVID-19 pandemic, about the claimed tracing of its origins to a wholesale food market in China, and about the reported incidences of high levels of the virus amongst people working in food processing and packing plants in a number of countries, have heightened consumer awareness about the safety of animal products within food supply chains.

Given the wide ranging impact of COVID-19, it remains to be seen if, the leading food retailers will continue to commit the financial resources required to address continuing animal welfare concerns, or if they will concentrate on looking to restructure their business models to better respond to new consumer demands in a changing business environment. Looking to alternative futures, Plant Based News (2020), a media outlet producing content about veganism and plant based living, suggested that "*with growing concerns about food safety in light of the COVID-19 pandemic and estimates that three out of every four new or emerging infectious diseases in people come from animals, it's about time that food companies ramped up their efforts to prevent the spread of such diseases*". Further Plant Based News (2020) claimed that "*the immune systems of animals raised on lower welfare factory farms are far weaker than any other; couple this with the immense overcrowding seen on these intensive farms - where some 90 percent of farmed animals are raised - and the risk of contracting and spreading dangerous diseases is worryingly high*".

Conclusion

This paper has outlined the ways in which a number of major US and European food retailers have publicly addressed their approaches to animal welfare. Six interlinked themes illustrate the retailers' approach to animal welfare namely, strategic corporate commitment, animal welfare as good business strategy, a focus on supply chains, policies on specific categories of animals and animal products, antibiotics, and auditing. However, some of the food retailer's future commitments to continuing improvements in animal welfare were aspirational, and at least one step removed from production. At the same time, there are concerns about auditing and the external assurance of their achievements in meeting animal welfare commitments, and about the welfare of animals in the retailers' supply chains. While published research on food retailers' approaches to animal welfare has, to date, been limited, some of the findings of the current exploratory paper are relevant to that research. The findings support Verbeke and Viane's (2000) belief that animal welfare would become an increasingly critical issue for consumers. At the same time the selected food retailers' recognition that commitments to animal welfare makes good busines sense, can be seen to be consistent with Schulze et al.'s (2020) finding that a focus on animal welfare can help to achieve more successful marketing.

The paper has its limitations, not least in that it is based on a small number of major US and European food retailers, that it draws its material exclusively from Internet sources and that does not include any empirical material collected from face to face interviews or focus group sessions with the selected food retailers, or their suppliers. However, the authors believe that as an exploratory paper it provides a platform for future research in what seems likely to become an important area for scholars interested in food retailers' approach to animal welfare. At the corporate level, for example, research may help to increase understanding not only of why, and how major food retailers develop their policies on animal welfare and how they look to elicit stakeholders' opinions, but also of how they take account of wider pressure group campaigns in formulating such policies. Research into how animal welfare concerns inform the relationships between the leading food retailers and their suppliers, and on the locus of power within such relationships, also merits attention. At the same time, research on if, and how, more explicit, and verifiable, animal welfare policies affect profit margins, stock market performance and reputation, will inform understanding of the workings of potentially new business models within food retailing.

At the operational and consumer level, many research questions arise, including, how the leading retailers have incorporated animal welfare policies into both general marketing messages as well as into marketing messages at the point of sale; if greater consumer awareness of a company's approach to animal welfare influences buying behavior and retailer patronage; and although the current paper has explored large retailers' approaches to animal welfare, an examination of small and medium sized retailers' policies on animal welfare, would broaden the scope of this genre of work. More generally, a focus on exploring alternative ways of organising food retailing, possibly more communally at a local level, for example, and making it more accountable to animal welfare considerations, might be seen to provide valuable insights into the future of food retailing.

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Attitudes of the Indian Middle Class:
A Theory of Planned Behavior Approach

By Somjit Barat[*]

The author conducts a pilot study to investigate whether the benefits of global marketing and the purported liberal policies of the Government of India have percolated to the Indian middle-class since the year 2014, when the present government came to power. The author collects data through online surveys from Indian citizens, and then conducts a qualitative analysis of the same to test six propositions based on Maslow's Hierarchy of Needs Model and the Theory of Reasoned Action. The author finds moderate to strong support for five of his propositions and sets the stage for a more robust research study that the author is planning to conduct on this highly relevant topic.

Keywords: *globalization, consumer experience, marketing strategy, political marketing*

Introduction

Summary Statement of Contribution

To the best of the author's knowledge, there does not exist any study in the marketing domain that attempts to validate the Indian government's claim to fame by polling Indian citizens. Thus, in addition to filling a void in extant literature, our research can help the government align its prerogatives to better serve the citizens and utilize its scarce resources more effectively and efficiently. Overall, the government can utilize the results to reorient its political marketing strategy. Concurrently, international bodies such as the World Bank or IMF can utilize the findings to recalibrate their measuring instruments so as to reflect a more accurate socio-political picture of comparable countries.

Background and Motivation

The Indian Government claims that its futuristic policies have yielded rich dividends by reducing red tape, improving civil laws and regulations leading to quicker decisions at the bureaucratic level, improving literacy, healthcare and education. Over the last decade, substantial changes have taken place at both the policy/planning as well as the execution levels; while power has been held by different political parties, new policies and practices have replaced older ones. Today, India is considered amongst the most formidable economies in the world not just in terms of size, but also in terms of gross domestic product growth rates that are historically among the highest, currently pegged at 5% in the first quarter

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of 2019 (The Economic Times 2019) compared to US's 2.1% growth rate during the same time period (Amadeo 2019).

Not unexpectedly, the current government claims that such growth resulted from its robust policies and their deft execution. Specifically, the government touts its long-term globalization plans as people-oriented, and responsible for fast-tracking the country's progress (AlEnezi et al. 2018). The current government also claims that in contrast to the actions of previous political parties in power since India's independence in 1947, it has introduced a strong culture of accountability and transparency in terms of how it operates (Blair 2018, Basu 2016, Mookherjee 2014, Rose-Ackerman and Palifka 2016). Another major claim by the present government is that it has reduced economic disparity by aggressively identifying, pursuing and eventually prosecuting individuals responsible for corruption and money-laundering (Yap 2017, Passas 2015, Kumar 2015).

Many of the standard indicators of progress appear to support the government's claims, such as growth rate of gross domestic product (GDP), banking infrastructure, availability of credit and ease of securing loans both by private citizens and by businesses etc. (For specifics on individual parameters, the reader may visit https://rbi.org.in/Scripts/AnnualPublications.aspx?head=Handbo ok%20of%20Statistics%20on%20Indian%20Economy).

Nonetheless, the common person's opinions about the future of the country have taken a hit in recent times (The Economic Times 2018), especially in light of their experiences with the "Aadhar" scheme (biometric identification), and demonetization measures introduced by the government (Chaudhuri and Konig 2017, Mali 2016, Singh and Singh 2016, Shirley 2017, Srinivasan et al. 2018, Nair 2017).

Consider, for example, the government's demonetization measure adopted in November 2016 in which, all 500- and 1000-rupee bills were declared null and void by the government overnight. The Government's goal for this drastic step was to eradicate black money, illegal transactions, counterfeit notes and funding of terrorist activities from across the border.

For a country of 1.2 billion people and where more than 80% of daily transactions are conducted in cash, such sudden move by the Government created considerable inconvenience for the common citizen, as well as for small businesses. Common citizens stood in lines for hours trying to withdraw cash at banks, post offices and ATM-s (Mali 2016). Jewelry stores, gas stations, merchandise vendors and other such small businesses, whose survival depends on daily cash flows, were scrambling to either sell off their wares or exchange their now-defunct 500- or 1000-rupee bills. Thus, notwithstanding the Government's prescribed goals, the true effect of the demonetization step is subject to investigation.

According to a Consumer Confidence Survey conducted by the Reserve Bank of India (India's central bank), the mood on the current state of the economy has shown marginal improvement, even though it is still in negative territory. Future expectations index, on the other hand, have shown marginal decline during the 2017–2018 time-period. More specifically, the current expectation about the economic situation and employment prospects appear to have improved compared

to a year earlier, even though the numbers are in negative territory. Perceptions about price level, however, seem to have gotten worse. Income expectation (which was in positive territory originally) in the current year has gone down marginally compared to a year ago. Spending, which also enjoyed a positive index a year ago, has marginally improved. Overall, the negative sentiment of consumers has improved from what it was a year ago (Table 1).

Citizens' future expectations one year ahead, however, paint a different picture. For example, economic situation, income, and price level all suffered declines among the respondents, which led to a marginal decline in consumer confidence index from 118.4 to 117.8 points. Spending and employment exhibit upward trend whereas economic outlook and spending exhibit a downward trend. Price level, which was originally in the red territory, showed further deterioration when respondents were asked to project their expectation one year ahead.

Table 1. *Summary Results of Indian Consumer Confidence*

Summary based on Net Response						
Main Variables	**Current Perception compared with one-year ago**			**One year ahead Expectations compared with current situation**		
	May-18	**Jun-18**	**Change**	**May-18**	**Jun-18**	**Change**
Economic Situation	-16.1	-7.4	↑ (red)	21.7	20.5	↓ (green)
Income	3.3	2.6	↓ (green)	40.6	38.4	↓ (green)
Spending	81.0	81.9	↑ (green)	82.4	84.0	↑ (green)
Employment	-12.6	-6.5	↑ (red)	24.5	24.6	↑ (green)
Price Level	-85.0	-85.8	↓ (red)	-77.3	-78.3	↓ (red)
Consumer Confidence Index	**94.1**	**96.9**	↑ (red)	**118.4**	**117.8**	↓ (green)
↑ (green) **Positive** Sentiments with sign of **improvement** compared to last round			↑ (red) **Negative** Sentiments with sign of **improvement** compared to last round			
↓ (green) **Positive** Sentiments with sign of **deterioration** compared to last round			↓ (red) **Negative** Sentiments with sign of **deterioration** compared to last round			

Source: Adapted from Reserve Bank of India 2019.

Given that the citizen sentiment conflicts with that of the current government, the author concludes that there is considerable evidence to warrant further investigation as to how reliable the current government's claims are, which provides the motivation for the current proposal. It may be noted that for the purpose of this research, individuals earning 20,000 rupees or less per month are considered at the lower spectrum of the middle-income population; those earning in the range of 20,001–40,000 rupees per month are considered the middle spectrum, whereas those earning 40,001–60,000 rupees per month are considered to be in the upper range of the middle-income population (Birdsall 2010, Javalgi and Grossman 2016, Kharas 2017, World Bank 2012) and also as recognized by World Bank standards (https://blogs.worldbank.org/opendata/new-country-classi

fications-income-level-2017-2018). At the current exchange rate (1 USD=71.62 rupees), the above income brackets translate to $279, $280-$358 and $359-$837 per month. The next few sections describe India's ascension to superpower status and how the Indian middle class played a critical role in helping India achieve the same.

India's Rise to Power

India, like China, Brazil, Russia or South Africa (BRICS conglomerate) has been on the cusp of breaking free from the shackles of poverty for almost two decades. Moreover, unlike the other countries, India has had a very strong democracy and stable governance since independence, not to mention friendly relations with other countries (Wilkinson 2015, Sharma 2016a, Suri et al. 2016, Bernstein 2014), with its respective caveats.

What has made India's case unique is its ability to hold on to and nurture its traditions, religious beliefs and roots, even as it imbibed modern culture, practices, customs and technology. Overall, even though different political parties have lost and gained power over the last two decades, the importance and long-term goal of embracing liberalization using global marketing was never lost to any of the ruling parties.

Consequently, the seeds of change sown by the Congress government in the 1990-s set India on a path to development from which the country never really looked back. More importantly, Indians began to believe in themselves, and in their ability to come out from the shackles of poverty. The lower and middle class became energized and took it upon themselves to toil their way to achieving higher standards of living, just like the West (Galanter 2015, Donner 2016, Javalgi and Grossman 2016, Ahmad and Reifeld 2017, Sinha et al. 2017) several decades earlier.

Such positive developments have made India the "poster child" of liberalization and global marketing, where it has leveraged its strengths in numbers to overcome its weaknesses in infrastructure, enhancing of transparency in government actions (Sharma 2015) and has converted its threats from neighboring countries to create opportunities with like-minded partner countries. Concurrently, India appears to struggle with a different kind of problem: how to sustain its phenomenal growth rate and how to feed the growing aspirations of its citizens, especially the burgeoning middle class (World Bank 2012). While a high growth rate is a "good" problem to have, recently the country has witnessed some unexpected fluctuations (Naser 2015, Banerjee and Roy 2014). This, however, can turn into a serious concern if the ruling government is unable to fulfill its promises of "Acche Din" i.e., *good days*, as promised by the current Prime Minister—and, in the process, belie the high expectations of its citizens.

The debate has assumed more prominence in the light of certain draconian and drastic steps that the government has initiated i.e., demonetization (Rama 2018, Soni and Soni 2017, Chanda 2016), and the goods and services tax or GST (Kumar 2014, Basak 2017, Raj 2017, Khurana and Sharma 2016).

The author, therefore, believes that conducting such research, which involves analyzing both primary and secondary data, will give the reader a more holistic picture of how realistic the present government's claims are. It can also potentially bring to the fore how effective the current government's marketing strategy is, both to its "internal stakeholders" (i.e., Indian people) and to its "external stakeholders" (i.e., international organizations such as World Bank, IMF, UN and trading partners). The next section describes how the Indian middle class is relevant and extremely important in the context of the current study.

Indian Middle Class

The relevance of the Indian "middle class" in the current research context cannot be overemphasized. As per latest census data available, in 2011–2012, close to 600 million people (about 50% of the population) belonged to the middle class.

Not only is 600 million a number to reckon with, but it exceeds the entire population of Europe as of January 1,2017 (512 million, according to Eurostat, 2017). As in many other countries (both similar to and different from India in terms of its size and structure), the middle class is the largest and most significant in terms of its contribution to the economy. What is even more important in the Indian scenario is that, its middle class has almost doubled in number between 2005–2006 and 2010–2011. Thus, there is no reason to doubt the considerable power that this social class yields in India.

The purchasing power of the middle class has increased exponentially, and continues to do so, making this segment of the population the most sought-after by both national and foreign governments. In 2015 for example, Indian middle-class consumption was about $1.9 trillion (in 2011 constant purchasing power parity or PPP) and accounted for about 5% of the global share. The subsequent numbers for 2020 and 2030 are predicted to be $3.7 trillion and 9% and $10.7 trillion and 17% respectively (Kharas 2017), all of which clearly indicate that the Indian middle class is a force to reckon with (Krishnan and Hatekar 2017). In other words, the current research makes valuable contribution both from economic as well as political marketing and planning perspectives. In the next section, we introduce the theoretical framework and present our propositions for research.

Relevance to Marketing

The present Indian government's claim to fame is that it listens to and understands the major challenges that the citizens face on a daily basis. It wants to debunk the common perception that government machinery is slow, corrupt and opaque in its operations. As such, the results of the research will prove insight into whether the government has been able to create, communicate and deliver value for its "customers" i.e., the Indian citizens (to borrow from the American Marketing Association's definition of "marketing" 2018).

Secondly, there is considerable research on the association between a country's level of global marketing (outreach efforts by a national government to

the international community) and rise in income (Kleinert 2018, Solomon et al. 2014, Dabla-Norris et al. 2015), and financial condition (Broner and Ventura 2016, Post and Byron 2015, Yeung and Coe 2015). Other researchers have shown how global marketing influences economic growth and developmental index in developing countries (Kilic 2015, Malhotra et al. 2018, Kowalski et al. 2015), corruption and citizens' perception of the government (Asongu 2014). There also exists considerable research on the impact of global marketing on the citizens' consumption behavior (Anderson and He 2015, Bartsch et al. 2016, Bhattacharya et al. 2016). Thus, there is hardly any doubt that global marketing affects the people of the country as well as international developmental indicators. In addition, the standing of the country in the international community and its ability to negotiate favorable terms of loans and trade benefits are direct effects of India's global marketing ability, which appears to play a big role in portraying India as one of the most potent countries in the world.

This research is also interesting and relevant from an environmental scanning perspective. There exists considerable research on how India has exhibited remarkable progress and achieved international exposure and status within a short period after the present government came to power (Coale and Hoover 2015, Shahbaz et al. 2016, Rakodi 2014, Shahbaz et al. 2017, Beckett and Taylor 2016). India's credit rating, developmental index, standard of living index, ease of doing business index, corruption index, loan default index, crime statistics, happiness index, ability to attract foreign investment etc. have experienced marginal to significant improvements under the current regime.

Such recognition by the international community is possible only when the government has carried out "due diligence" in the form of the traditional SWOT (strengths, weaknesses, opportunities, threats) analysis. Specifically, in the case of India, historically, the government realizes that the country's strengths lie in the availability of a large pool of educated, English-speaking youth, focus on attaining college degree in the hard sciences, ready access to human capital, and an insatiable hunger of other countries to outsource their services to Indian companies (Kaushal and Pathak 2015, Shetty 2017, Sharma 2016b). Simultaneously, the government realizes that it needs to improve in the areas of population increase, basic infrastructure, and corruption (Chakrabarti et al. 2015, Ganguli 2016, Sharma 2016b, Mukherji 2016). India's economic and strategic threats arise from other countries in the BRICS conglomerate as wells as China, Vietnam, and Korea. In terms of opportunities, India continues to exhibit a lot of potential in handicrafts exports, space technology and human capital (Kavalski 2016, Burgess 2015, Thayer 2014, Envall and Hall 2016, Seth 2016). Consequently, India has had to juggle its strategic partnerships with countries all over the globe, both big and small. Therefore, the author's research will also reveal the efficacy of the current government's marketing tool in terms of improving India's image in the international arena.

Conceptual Framework and Proposition Development

The current research is anchored to two theoretical frameworks: Theory of Reasoned Action and Maslow's Hierarchy of Needs Model. The following two sections will be devoted to a brief description of these two streams of research, supported by a brief review of relevant literature, which the author will utilize to dovetail into the research propositions.

Theory of Reasoned Action

The Theory of Reasoned Action (TRA) provides an appropriate framework within which the current research can be anchored. According to this framework, the individual's beliefs about the outcomes or consequences of his/her action influences the individual's attitude towards such actions. The individual's attitude, in turn, influences his/her intention to actually conduct such behavior (Fishbein et al. 1980, Fishbein and Ajzen 1975, Fishbein and Jaccard 1973). Ajzen subsequently revised the TRA to present the Theory of Planned Behavior (TPB). Ajzen emphasizes that in general, human beings are "rational", and not fickle-minded. Once they set a goal/intend to achieve an outcome, it can be predicted with reasonable certainty that they will take action to achieve that goal. To quote Ajzen (1985), "Before attending a concert, for example, a person may extend an invitation to a date, purchase tickets, change into proper attire, call a cab, collect the date, and proceed to the concert hall. Most, if not all, of these activities will have been designed in advance; their execution occurs as the plan unfolds. To be sure, a certain sequence of actions can become so habitual or routine that it is performed almost automatically, as in the case of driving from home to work or playing the piano. Highly developed skills of this kind typically no longer require conscious formulation of a behavioral plan".

Thus, if an individual believes that the government has drafted and implemented policies that have enhanced their standard of living, they will have a favorable attitude towards the government and vice versa. Consequently, such attitude will be reflected in their intention to participate in certain behaviors such as spend more (or less) on consumer goods, borrow more (or less) to buy big ticket items, invest more (or less) in education, health, real estate, and consume more (or less) self-esteem activities such as enrolling in prestigious societies, attending concerts and participate in more (or less) self-actualization activities such as charity work, and donations. Given that an individual's intention is a robust indicator of actual behavior as per the TPB, the author measures the respondent's intention rather than actual behavior in a survey. In other words, the respondents' perceptions about purchase behavior, prices, health care, education opportunities and living standards constitute the independent variables, whereas the perception/ attitude towards the present Indian government's claims is the dependent variable for the current research model (Figure 1).

Figure 1. *The Theory of Reasoned Action as Applied to Consumer Behavior*

Antecedents   Consequences

| Beliefs about present state of economy and standard of living | → | Attitude towards and intention to participate in consumer activities | → | Attitude towards the Government's claims |
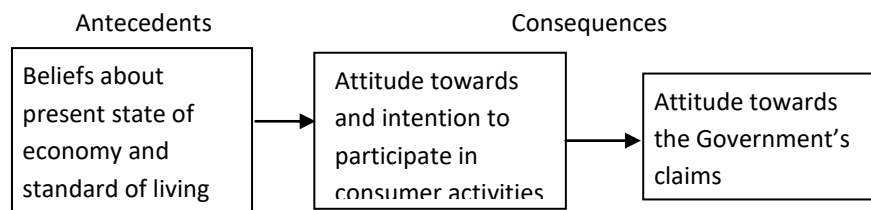
Source: Adapted from Fishbein et al. (1980, p. 8).

<u>Maslow's Hierarchy of Needs</u>

The author bases his proposed research on Maslow's Pyramid of social needs, which suggests that individuals' priorities shift in favor of higher-level needs only after more mundane needs have been satisfied. In other words, only when an individual's basic necessities like food, water, shelter and other physiological needs have been met, will they strive for (higher) safety needs (such as healthcare, insurance, protection from harm). As McLeod (2007) argues, Maslow believed that every individual has the capability and the desire to achieve more in life. However, human beings typically need to accomplish and feel content with the 'lower' level needs before they set their sights on the "higher" level traits such as love, self-esteem, self-actualization and so on. Sometimes, however, an individual might attempt to skip an intermediate step to strive for higher and greener pastures due to sudden and unexpected life events such as getting a new, higher-paying job, birth or loss of a loved one, marriage or divorce, winning a lottery or an unexpected major property loss due to fire or flood. Maslow's original model (Maslow 1943, 1954) as depicted in Figure 2, has been extensively used in social sciences research and modified/extended later (Maslow 1987, 2013). Given the significant transformation that Maslow's hierarchy has gone through in the last few decades, the author reviews the different stages of the hierarchy

Figure 2. *Maslow's Hierarchy of Needs*
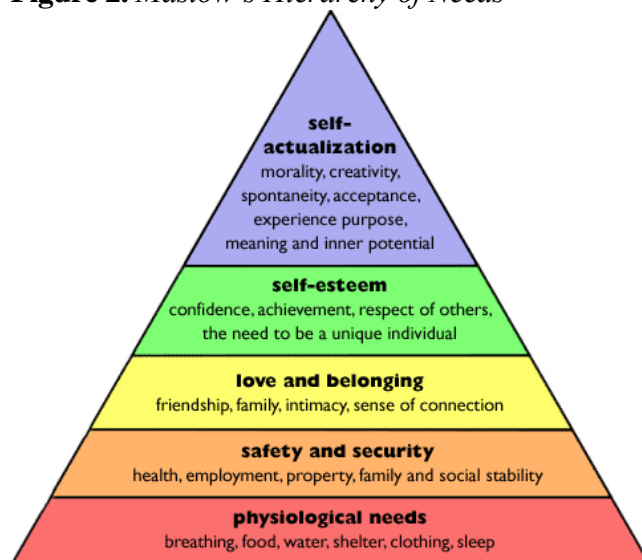
Source: Reproduced from Maslow (1943).

Physiological Needs

Maslow suggested that physiological needs (such as food and sex) are critical for the very existence of the human body. Lack or want of food can lead to "hunger" or "appetite". In the poorest of poor circumstances, people suffer from hunger. This is different from a situation when a person suffers from appetite i.e., the person is not necessarily starving but would rather have something to eat.

In India, starvation is a malignant issue. For example, in 2012, about 18% of India's population was undernourished, which amounted to almost 218 million people, and higher than the mal-nourishment rate of most countries (Mitra 2015). While average recommended calorie intake is 2,000 for women and 2,500 for men (Gunnars 2018), the poorest of the Indian adult population can afford no more than 60% of the recommended calories. In other words, a considerable percentage of the population is still struggling with access to physiological needs, which motivates the first proposition for this research:

> *P1: The lower-middle income level population who may not have access to physiological needs may exhibit negative attitude towards the government's claims*

Safety Needs

Maslow's characterization is based on safety and security from external dangers like road accidents, attacks by miscreants, and physical safety from diseases, attack from animals, bug bites etc. It is for this reason that people often drive bigger cars, buy organic foods, live in gated communities, undergo preventative health check-ups and vaccines, or purchase health and life insurance. Arguably, it is only the middle-income segment of the population (who has fulfilled their physiological needs,) that turns their attention to higher (safety) needs. Consequently, if the government's claims are true, they might be more inclined to bear a positive disposition towards the government's claims, which motivates the second proposition as:

> *P2: Population at the middle-income level who perceive that they have access to better and more resources than before, may have a positive attitude towards the government's claims*

Love and Belonging Needs

Once a person has adequate amount of bread on the table and protection from external threats, he/she wants to build a family, stay close to acquaintances, to be loved and cared for and reciprocate the same, empathize and have feelings towards close ones (Sheth et al. 1999, p. 347). While physiological needs are *required* for an individual to *live*, what Maslow referred to as "love and belonging" offers an individual a *reason to live*, which can be compared to an improvement in the person's standard of living. Hence, our next proposition is:

> *P3: Population that perceives an improved standard of living compared to the past may exhibit a positive attitude towards the government's claims*

Self-Esteem Needs

The next higher-level need in Maslow's hierarchy can be attributed to two sources: internal and external. While internal self-esteem can come from achievement, recognition, self-indulgence or rewarding oneself with affordable luxuries, external self-esteem can be attributed to attention from others, professional achievements, membership and acquaintances in prestigious societies and the like (Datta 2014). Such status can typically be achieved by middle to higher-middle income population. In either case, such a feeling of esteem can be enhanced through earning a higher salary and consequent access to and purchase of luxury consumer goods (hi-tech gadgets, smart fridge, multifunctional cooking range), which motivates the following proposition:

> *P4: Population that now has access to more luxury goods than before and hence higher self-esteem, may exhibit a positive attitude towards the government's claims*

Globalization, government encouragement to prop up the production infrastructure of the country, dramatic increase in bank loans and use of credit cards by the average person, have resulted in possession of more disposable income for the middle and higher-income Indian population of India. But such changes in economic outlook and access to resources can also be a double-edged sword, for the simple reason that people may experience a feeling of inadequacy. In other words, individuals who have acquired more money will realize that certain luxury items that were beyond their reach before, are still unaffordable. For some, this can lead to resentment and a feeling that the Government has not done enough for the hard-working people. For others, this can result in a perception that they are not rewarded appropriately for their hard work or, that the cost of living is too high. Consequently, Maslow's *self-esteem needs* also motivate the following proposition:

> *P5: Population at the lower middle-income level may be worse off compared to high-middle income people, and hence, may exhibit a negative attitude towards the government's claims*

Self-actualization Needs: Maslow notes: "what a man can be must be. They must be true to their own nature.…Musicians must make music, artists must paint, poets must write…" (Maslow 1987, chap. 2). In other words, every person must be given the option and opportunity to realize their potential. Arguably, individuals can reach their potential only when they have been able to satisfy their basic needs of food and shelter, built a safety net for themselves/family, accomplished the fruits of hard work by improving their standard of living and achieved self-satisfaction and recognition from others. Self-actualization is a stage in the lifecycle of an individual where the person begins to think about his/her larger role in life: contribute to society, create a difference in others' lives and how he/she can make a "mark" on this earth. Typically, only one percent of the population (who control 99 percent of the aggregate wealth of the world) is privy to this ultimate

stage of Maslow's hierarchy (De Neve and Powdthavee 2016, Martin 2015, Wolfers 2105). Individuals at this stage of Maslow's hierarchy are content with their accomplishments and current state in life. Naturally, they are likely to harbor a positive disposition towards the present government, which prompts the final proposition:

> *P6: Population at the top of the economic ladder may exhibit a positive attitude towards the government's claims*

The following sections describe the methodology of the study, analyze the results, and validate the propositions presented by the author.

Methodology

Instrument

In order to collect primary data from Indian respondents, an instrument was designed consisting detailed queries on consumer's perceptions and actions about product purchase behavior, (see attached sample), health care, education opportunities and living standards, as well as items about the individual's trust in the present government. This instrument is loosely based on the Reserve Bank of India's Consumer Confidence Survey (2019). Needless to mention, the survey instrument underwent rigorous levels of scrutiny, several draft versions, and was reviewed thoroughly by experts in the fields of qualitative research and marketing.

The author collected data online from subjects representing the different professions such as government bureaucrats, physicians, students, retired people, and different demographics such as genders, age groups, income and education levels etc. This minimized any potential source of bias in responses.

Results

Descriptive Statistics (Table 1)

Respondents were marginally male-dominated (fifty-three percent), whereas their age-group was slightly skewed towards under-40 years (forty-three percent). An overwhelming majority of respondents were married (eighty percent), whereas their household size was more or less evenly distributed (two, three, four or more than four). In terms of monthly income, forty-three percent of respondents made more than sixty-thousand rupees. Sixty-one percent of respondents were employed, and thirty percent were retired or homemakers. Finally, an overwhelming majority of respondents owned their homes (eighty-three percent). These numbers are not significantly different from the overall Indian population (see Kharas 2017). As such, we can conclude that the data is representative of the general population and does not pose any concern for bias in the findings.

As indicated earlier, respondents earning 20,000 rupees or less are considered at the lower spectrum of the middle-income population; those earning in the range of 20,001–40,000 rupees are considered the middle spectrum, whereas those earning 40,001-60,000 rupees are considered to be in the upper range of the middle-income population (Birdsall 2010, Javalgi and Grossman 2016, Kharas, 2017, World Bank 2012).

About sixty-five percent of the respondents in this income category thought that they were either the "same" or "worse off" in response to the following questions: "Compared to a year ago, how is your family doing financially these days?"; "Do you think that a year from now how will be your family financially". In response to the question "Do you think that this is generally a good or bad time to buy things like furniture, refrigerator, television, two-wheeler, car?" sixty percent of respondents responded as *bad time* or *about the same*. Secondly, an overwhelming majority (seventy percent) either *strongly disagree* or *somewhat disagree* with "the government's claims about "acchey din" (good days) for the common people?" Finally, when asked "please feel free to provide your opinion about why you support or oppose the present government", two respondents in the lower middle-income category opined as follows: "Decisions taken in haste turned to be disastrous for the present government" and "I don't totally oppose or support the present government as the promises made by them could really better the situations of the country. The reasons to moderately oppose them are that they are very slow to react, till now nothing has changed, rather few things deteriorated". Thus, we find reasonable support for our first proposition *P1: The lower-middle income level population who may not have access to physiological needs may exhibit negative attitude towards the government's claims*

Fifty nine percent of respondents in the middle-tier noted that they are *better off* when asked "Compared to a year ago, how is your family doing financially these days?" while fifty percent of respondents noted they will be *better off* when asked "Do you think that a year from now your family will be financially". When asked "Do you think that this is generally a good or bad time to buy things like furniture, refrigerator, television, two-wheeler, car?" about sixty four percent of respondents noted *good time*; when asked the question "Do you think that compared to last year, government red tape in everyday affairs this year (decreased, remained the same, increased)", about sixty seven percent of the respondents responded *decreased*; finally, when asked about whether they agree with the government's claim about "acchey din" (good days), about seventy percent of the respondents opined they either *moderately agree* or *strongly agree*. Therefore, the author argues that in general, respondents categorized as belonging to the middle spectrum of the middle-income population generally harbor a positive view of the government, thereby lending credence to our second proposal: *P2: Population at the middle-income level who perceive that they have access to better and more resources than before, may have a positive attitude towards the government's claims*

We asked the following questions to inquire about improvement in standard of living of the respondents: "Compared to a year ago, how is your family faring financially these days?" and "Do you think that a year from now how your family

would be faring financially?" Seventy nine percent and seventy percent of respondents noted they were *better* or *same* for these two questions respectively.

We also queried our subjects on the following questions, with possible responses as *increased, stayed the same,* or *decreased*: "Do you think that compared to last year, the cost of living this year has…"; "Do you think that compared to last year, your healthcare costs this year have…" and "Do you think that compared to last year, education costs this year have…". Sixty five percent, seventy three percent and sixty percent of respondents chose *decreased* or *stayed the same* respectively for these two questions. Consequently, the author argues that there is considerable support for the third proposition *P3: Population that perceives an improved standard of living compared to the past may exhibit a positive attitude towards the government's claims*

Our survey respondent's ability to access more luxury goods was measured by their perceived buying power of higher-end consumer goods and perception about cost of living. To that end, the survey posed the following two questions: "Do you think that this is generally a good or bad time to buy things like furniture, refrigerator, television, two-wheeler, car?" and "Do you think that compared to last year, the cost of living this year has increased, stayed the same or decreased?" Eighty percent of respondents noted *good time* or *same as other times* in response to the first question, whereas sixty eight percent of respondents noted *decreased* or *stayed the same*. Thus, the author concludes that there is marginal support for the fourth proposition *P4: Population that now has access to more luxury goods than before and hence higher self-esteem, may exhibit a positive attitude towards the government's claims.*

Historical data suggests that the middle-income population of India (like in many other countries) have enjoyed considerable increase in income over the last decade. This has resulted in access to more goods and services which were hitherto beyond their reach (such as electronic gadgets, automobiles, high-end televisions etc.), resulting in an upliftment in the standard of living and/or quality of life (Kharas 2017). On one hand, both the number and percentage of the population at the poverty or low-middle income level (by World Bank standards) have steadily decreased since 1985 and is predicted to continue to do so until at least 2025. On the other hand, the percentage of the population joining the ranks of "middle-class" have exponentially increased, and the trend is expected to continue till at least 2025 (Ablett et al. 2007).

For most middle-income individuals (income 20,000 rupees per month or less), their perception of improvement in standard of living and eventual support of the government's policies are guided by how far their consumption enhances their "status symbol" in the eyes of their peers. In other words, most citizens in this category assess their own financial and economic well-being not necessarily based on what they have but based on what they do not have, and frequently use their higher-income counterparts as a "benchmark" to assess whether they are better or worse off than before. Consequently, such perception plays a critical role in their assessment of the government's performance.

Historical data, once again, supports the author's contention in this respect. For middle-class consumers, their spending pattern has been steadily shifting from

basic necessities (food, beverage, apparel) to discretionary items (transportation, communication, education, recreation and healthcare). For example, middle-class consumers spent 51% on basic necessities and 18% on discretionary items in 1995. The corresponding numbers for 2005, 2015 and 2025 (predicted) are 48% and 31%; 39% and 37% and 34% and 48% respectively (Ablett et al. 2007).

In order to investigate the respondents' perception of their improvement in standard of living, the survey posed the following four questions: 1) "Compared to a year ago, how is your family faring financially these days? (Better, Same, Worse)" 2) "Do you think that compared to last year, your healthcare costs this year have (increased, stayed the same, decreased)" 3) "Do you think that compared to last year, education costs this year have (increased, stayed the same, decreased)"; and 4) "Referring to the government's claims about "acchey din" (good days), do you (Strongly Disagree, Moderately disagree, Neither Agree nor Disagree, Moderately agree, Strongly Agree) with that claim?" As per the results of the survey, for question 1, sixty five percent of respondents noted *same* or *worse off*; for question 2, seventy one percent noted *increased* or *stayed the same*; for question 3, seventy five percent noted *increased* or *stayed the same*; and for question 4, eighty percent noted *strongly disagree* or *moderately disagree*. Based on these numbers, therefore, the author argues that low-middle income individuals felt that their social and economic position had become worse off than before, their cost of living had increased and finally, they strongly disagreed with the government's claim that *good days* had arrived during the current government's rule. The author, therefore, claims that there is moderate to strong support for his fifth proposition *P5: Population at the low-middle income level may be worse off compared to high-middle income people, and hence, may exhibit a negative attitude towards the government's claims*.

Conversely, upper-middle income citizens of India perceive their fortunes soar because of considerable increase in income, availability of higher-end consumer goods and services, which not only leads to higher perceived standard of living but also positions them at a higher social status compared to their lower-income counterparts. As such, the upper-middle income citizens of India may have a positive attitude towards the government claims of "good days" and improvement in general conditions of the common people. Referring to the same four questions in the preceding section, the upper-middle income category responded as follows: for question 1, fifty-two percent noted *better off* or *same*; for question 2, forty nine percent noted *decreased* or *stayed the same*; for question 3, sixty percent noted *decreased* or *stayed the same*, while for question 4, forty three percent noted *strongly agree* or *moderately agree*. Therefore, the author failed to find moderate support for his sixth and final proposition: *P6: Population at the top of the economic ladder may exhibit a positive attitude towards the government's claims*.

Summary, Implications, Limitations, and Future Directions

The goal of this pilot study was to assess the Indian government's recent claims that its globalization policies have had a positive effect on the economy and the quality of life of its people. For this purpose, the author collected primary data from Indian citizens through an online survey, as well as secondary data from the Indian government and international economic development organizations (World Bank, Government of India, Asian Development Bank).

After the data was compiled, subjects' responses (product purchase behavior, health care, education opportunities, living standards and trust in the present government) were measured using categorical scales, ordinal scales and fixed-anchor scales. Given that this was a pilot study, the author collected data from a small sample of about 30 respondents. As such, no sophisticated statistical analysis was conducted, nor was that the author's intention in the first place. Instead, the author ran cross tabs of the responses across different income categories and assessed the respective responses to draw a conclusion for each of his six propositions. The author found moderate to strong support for five propositions, while he failed to find any support for one of his propositions.

This pilot study has several implications from a global marketing perspective. Today, India is considered as one of the most "happening" countries in the world. Frequently referred to in the context of the BRICS conglomerate (Brazil, Russia, India, China, South Africa), India has exhibited highest levels of growth over the last several years. It has made its mark not just economically but also in terms of space exploration, knowledge management, education, foreign collaboration and infrastructure development etc. Many of the economically strongest countries including Japan, US, China, France, UK and Germany have strategic and trade partnerships with India that are critical from both regional stability as well as global development perspectives.

Kharas (2017) notes that the world's middle-class could potentially spend almost $10 trillion more by 2022 than what they spend today (purchasing power parity, constant 2011 dollars) of which, Indian middle-class alone could be spending almost 2.4 trillion dollars. Looking at specific spending trends, the Indian middle-class spent about 1.9 trillion dollars (5% of the top 10 middle-class spenders) in 2015. The corresponding numbers for 2020 and 2030 are projected at $3.7 trillion (9%) and $10.7 trillion (17%). In other words, the Indian middle class has exhibited phenomenal growth and the trend is expected to continue well into the next decade. Given that the middle-class is the most predominant earner in India (as in many other countries), it is no surprise that India has demonstrated the highest growth rate of all countries in the world for a considerable portion of the last decade.

The current research is representative of some of the conflicting indicators of government's performance between developed and developing countries (that may otherwise be masked by international indicators of progress). For example, it is hard to explain why 70% Indians have greater confidence in their own government (which has been historically perceived as slow, inefficient, and corrupt) than that by Americans, where confidence level has dropped a whopping 37%? (McCarthy

2018). Why did the latest economic downturn affect the industrialized countries more severely than countries like India (as exemplified by India's current growth rate of 7.1% vs US growth rate of 1.6%)? The author hopes to find answers to such perplexing questions by conducting a detailed analysis of the government's claims on one hand, and views of the middle-class person in India on the other. Insights such as these can help the government reshape their policies and priorities so that the country can harness the full benefits of the government's efforts towards development.

From a marketing practitioner's perspective, the relation between the government and the citizens of the country is similar to that between a "service-provider" and the "customer". The government's responsibility is to provide service to the citizen (i.e., the "customer") in lieu of the taxes he/she pays to the government. Very often, however, the customer rates the quality of service as "low", mainly because of one or both of the following reasons: a) quality of service is a "perception" that is highly subjective and 2) differences in perception of what the provider feels is "good service" and what the customer expects as "good service" (Dabholkar 2015, Bansal and Taylor 2015, Kaura et al. 2015). For example, the government might feel that a period of 3 months is appropriate to issue a driver's license or a passport, but the private citizen might feel that it is too long. Consequently, the researcher feels that an in-depth research based on comparative study of candid feedback from the government personnel and the common man has larger implications in terms of marketing, ethics, customer service, customer relationship management and policy.

The current pilot study lays the perfect groundwork for a more detailed, full-blown study in the near future for which, the author has already designed a more rigorous instrument. Given that five out the six propositions received moderate to strong support, the author is encouraged to conduct a more extensive study that will involve collecting data from at least 300 respondents. The author will conduct exploratory factor analysis once the data is collected and coded and will perform a multiple regression of the dependent variables on the independent variable. The respondents' perceptions about purchase behavior, prices, health care, education opportunities, living standards and trust in present government constitute the independent variables, whereas the perception/attitude towards the present Indian government's claims (about the effects of its policies) is the dependent variable for the future research model.

The current research has several indirect implications as well: 1. The present Indian government has done a superb job of marketing the country's interests, aspirations and vision to the global community. It is because of such efforts that India's indicators of progress have been acknowledged and lauded not just as an Asian superpower but also by the entire international community. 2. The efficiency and effectiveness of some of the draconian measures (demonetization, "aadhar" scheme, goods and services tax, to name a few) are in question, and have not yielded the desired results. Consequently, it is important to gauge the effect of the present government's globalization efforts through the eyes of the common person. 3. Surprisingly, a quick search using relevant keywords revealed no research on the ABI-inform database. Thus, given the importance of India from a

global perspective, the current research addresses a major gap. 4. The data collected from this research can be applied to conduct a comparative study between India and the US civil system (for example, why is the average American citizen more "law-abiding" compared to the average Indian citizen; why was the US banking system affected much more adversely by the recent economic downturn compared to the Indian banking system?) 5. The author can also conduct a similar survey on Indians residing abroad and apply a test for difference of means methodology. It will reveal if resident Indians perceive their government significantly different from non-resident Indians (aka NRI-s). In other words, the author believes that this research project can and will motivate a renewed interest in the globalization efforts by the current Indian government.

One obvious limitation of this research is the recency of the data posted on government and other organizational websites. Realizing that this issue is beyond his control, the researcher will make every attempt to interview government representatives and collect primary data. Another limitation is to come up with a universally-acceptable portfolio of items representing all dimensions of "global marketing". Consequently, the author has focused on the following five dimensions of globalization: product purchase behavior, health care, education opportunities, living standards and trust in the present government.

A second limitation is the small sample size of thirty, which is acceptable for a qualitative pilot study of this nature (Johanson and Brooks 2010, Hertzog 2008, Birkett and Day 1994). Consequently, the author's goal is to collect data from a much larger sample size of 200–300 for his final research study, which is already under way. The author believes the results of this pilot study will be a great asset in honing the quality, validity, reliability –and hence, the generalizability of the final study.

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Factors that Influence FinTech Adoption in South Africa: A Study of Consumer Behaviour towards Branchless Mobile Banking

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The widespread use of mobile phones and growth in internet penetration has created a unique opportunity to increase access to financial services. Financial Technology (FinTech) companies and mobile banking (m-banking) empower customers to use digital platforms to utilise financial services without the physical access requirements of traditional banking. This has led to the rise of FinTech firms that are disrupting traditional industry standards by servicing consumers through a range of digital channels and mobile devices. A new completely branchless bank, Bank Zero, is set to launch in South Africa in 2020 to exploit these opportunities. This consumer behavioural study focuses on analysing FinTech adoption in the South African market. An adapted mixed-method approach was used to identify the enabling and inhibiting factors that motivate consumers to adopt or reject m-banking. Qualitative research was initially conducted via in-depth interviews with 7 respondents. The most salient factors identified in the literature review were tested, and the results were used to develop a quantitative, online questionnaire. A convenience sample of 217 valid responses was collected, and the data was analysed using exploratory factor analysis (EFA). The EFA identified 6 influencing factors: four enabling and two inhibiting factors. The enabling factors that positively influenced FinTech adoption were: Utility, Socio-Economic Influencers, Mobile Device Trust and Youth. The two inhibiting factors were: Perceived Risks and Associated Costs. Interestingly, 74% of the 217 respondents indicated that they would join a completely branchless bank, using only their mobile phones and the internet to access banking services, showing a high propensity to branchless, m-banking. Finally, the Enhancement Criteria Model based on insights gained from the research findings, is proposed. This model provides recommendation criteria for existing and new FinTech providers who are looking to improve their business models.

Introduction

The widespread use of mobile phones and growth in internet penetration have created a unique opportunity to increase access to financial resources and services (Bertha Centre 2016, EY 2016). Unlike traditional banking, which limits customers

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to physical branch visits or costly telephonic account services, Financial Technology (FinTech) and mobile banking (m-banking) empower customers to use digitised platforms to access financial services at any time, from any place (Kim et al. 2009, Pandiya and Gupta 2015, Shaikh and Karjaluoto 2014).

The penetration of mobile phones into the South African market is substantial: it is estimated that there were 38 million unique mobile users in South Africa in 2018, giving a 67% penetration rate, which continues to grow and outperform the continent's average (Kemp 2018). Similarly, internet penetration is 54%, with 30.81 million South Africans accessing the internet (Kemp 2018), and this continues to grow.

FinTech is broadly defined as "technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services" (Financial Stability Board 2017). FinTech is a compounded term consisting of "finance" and "technology", and denotes the industrial change that results due to the convergence of financial services and Information Technology (IT) (Kim et al. 2016). Given the proliferation of FinTech products and services it is no surprise that there is also a growing number of FinTech users entering the market. It is expected that FinTech adoption will increase to a global average of 52%, with the highest intended use in developing markets like South Africa, Mexico and Singapore (EY 2016). Industry experts are increasingly forecasting that the future of financial services will involve the forging of meaningful customer relationship (Basel Committee on Banking Supervision 2018). However, although FinTech adoption by digitally active consumers tends to be higher in developing markets, research on mobile commerce suggests potential consumers may not adopt these m-services in spite of availability (Wang et al. 2006).

According to the Global Findex Database (Demirguc-Kunt et al. 2017), growth in FinTech has largely been driven by digital payments, government policies, and a new generation of financial services accessed through mobile phones and the internet. FinTech adoption, by digitally active consumers, tends to be higher in developing markets (EY 2016). The reason for this high adoption rate is twofold: Firstly, FinTech firms are successfully targeting tech-literate consumers thereby minimising budgetary and resource wastage trying to convert non-responsive audiences. Secondly, FinTech firms are offering products to the financially underserved population of which there are proportionally higher ratios in emerging countries (EY 2016). In South Africa, money transfers and m-payments are driving FinTech adoption (EY 2016).

FinTech firms are earning a reputation for customer-centricity and are characterised by innovative business models and technology to enable, enhance and disrupt financial services (Gomber et al. 2018, Gulamhuseinwala et al. 2015). Dhar and Stein (2017) go further to state that the future of financial services are set to follow retail and travel industries which means that access to financial advisory services could experience the same digital disruption as brick-and-mortar retail stores have experienced over the past decade.

To ensure commercial success in this growing digital paradigm, all banks and/ or non-bank providers of financial services need to understand and address the factors that drive and hinder consumer adoption of FinTech services and products. Competitive advantage lies in this understanding, especially in light of the new completely branchless bank that is set to launch in South Africa in Q1 2020, namely Bank Zero (Bank Zero 2018). However, academic literature and research on FinTech adoption remains limited, especially in the South African emerging market context.

Consequently, the aim of this study is to determine the enabling and inhibiting factors that influence the adoption of Fintech and mobile banking services in the South African market.

Literature Review

Consumer Behaviour and Technology Adoption Frameworks

The Technology Acceptance Model (TAM) is the first framework to hone in on modeling and predicting user acceptance of information systems (Davis et al. 1986). The TAM is highly regarded as a framework that allows for the reasonable depiction of a user's intention to use technology (Akturan and Tezcan 2012). The two direct adoption drivers that impact user attitudes are "perceived usefulness" (PU) and "perceived ease of use" (PEOU) (Davis et al. 1986). The TAM is a prevalent theory in the study of technology acceptance of mobile money in Africa (Chigada and Hirschfelder 2017). Notwithstanding alternative frameworks, the TAM and all its variations is regarded as the most attested model to analyse technology adoption (Adams et al. 2007, Venkatesh et al. 2003, Wentzel et al. 2013). However, Bagozzi (2007) argues that the TAM has a range of limitations especially in its neglect of group, social and cultural aspects of technology adoption.

The Unified Theory of Acceptance and Use of Technology (UTAUT) model was subsequently developed by Venkatesh et al. (2003) to study IT-related adoption in corporate environments. Aptly named, the UTAUT model consolidated eight models, all of which are focused on explaining information systems usage behaviour (Venkatesh et al. 2003). These models include Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Motivational Model (MM), Theory of Planned Behaviour (TPB), Model Combining the Technology Acceptance Model and Theory of Planned Behaviour (C-TAM-TPB), Model of PC Utilisation (MPCU), and Innovation Diffusion Theory (IDT).

The UTAUT model is illustrated in Figure 1. Gangwal and Bansal (2016) highlight Venkatesh et al.'s (2003) construct as follows:

i.   Performance expectancy is where the user believes that using the system will help him/her to attain gains in job performance.
ii.   Effort expectancy is the degree of ease associated with the use of the system.

iii.   Social influence relates to how the individual perceives that important others believe he/she should use the new system.

iv.   Facilitating conditions relate to the degree to which an individual believes that an organisational and technical infrastructure exists to support use of the system.

Figure 1. *Unified Theory of Acceptance and Use of technology Model (UTAUT)*
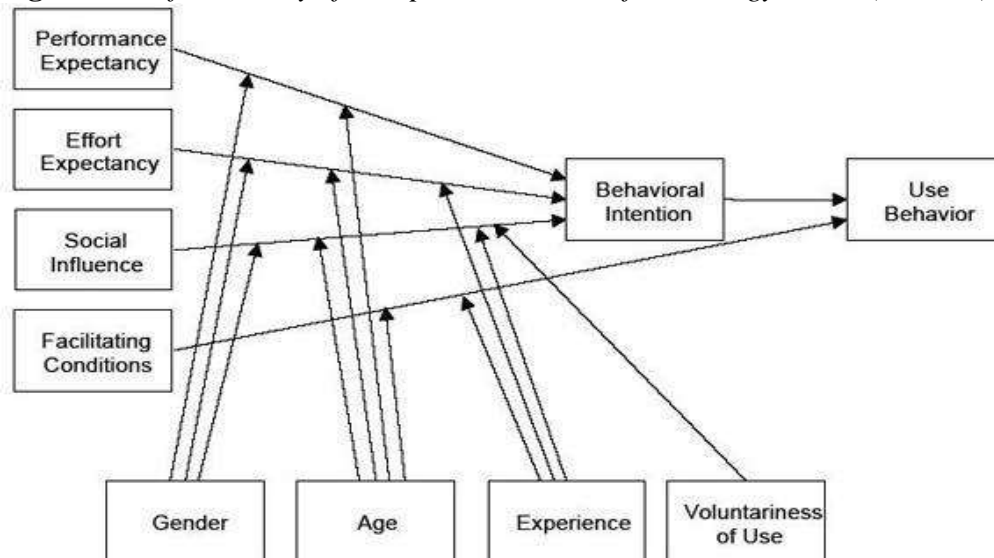
Source: Venkatesh et al. (2003).

A further applicable model explaining technology adoption is the Diffusion of Innovation. Rogers (2005, p. 5) defines diffusion as "the process by which an innovation is communicated through certain channels over time among the members of a social system". The successful adoption of the innovation relies heavily on taking a "client-oriented" approach in communicating the benefits of the innovation to potential adopters (Gomber et al. 2018, Rogers 2005). Innovation is regarded as an idea, practice or object that is perceived as new by an individual (Rogers 2005), and this study focuses on FinTech platforms, products and services as a stellar example of 21st century innovation.

Rogers (2005) argues that all social systems can be segmented into the following five distinct groups: Brave pioneers, Early adopters, Early majority, Late majority, and Laggards. According to Ernst & Young's Fintech Adoption Index (EY 2016), South Africa is regarded as an "early majority" FinTech market with a 35% adoption rate, 2% above the global average of 33%.

Factors that Enable Consumer Adoption of FinTech

Perceived Usefulness (PU)

Perceived Usefulness (PU) is the extent to which an individual believes that he/she will benefit from using technology, or in this case FinTech and related m-banking services. It is fair to state that individuals firstly determine the consequences of their behaviour and then make a choice based on PU (Kim et al.

2009). The popular saying "build it and they will come" is an excellent example of the absence of PU and customer-centricity. It could be argued that customers' growing need for personalisation and bespoke services (Dapp 2014) are a contributing element to PU.

Of all factors identified in the reviewed literature, PU was found to be the single most cited factor that enables FinTech adoption. It has a significant effect on attitudes toward using FinTech (Chuang et al. 2016, Wentzel et al. 2013), m-banking (Ismail and Masinge 2011, Pandiya and Gupta 2015, Singh and Srivastava 2018) and m-payment systems (Kim et al. 2016).

Trust

Trust and consumer confidence in the security of transactions remain key components to why customers entrust institutions with their finances (Dapp 2014, Wentzel et al. 2013). Based on research done by Dapp (2014) and Zhou (2011), FinTech companies that are able to offer clients lasting and credible data security assurance will obtain the biggest growth and revenue opportunities. Due to the high levels of security risks and relative low switching cost, it is crucial to build initial user trust in order to foster m-banking adoption (Singh and Srivastava 2018, Zhou 2011).

Trust, and its related constructs, was found to be the second most cited enabling factor. It was prevalent in research regarding Internet banking (Akhlaq and Ahmed 2013, Pikkarainen et al. 2004), m-banking (Baptista and Oliveira 2015, Hanafizadeh et al. 2014, Ismail and Masinge 2011, Kim et al. 2009, Maduku 2017, Priya et al. 2018, Singh and Srivastava 2018), m-payments (Dastan and Gurler 2016, Kim et al. 2016) and FinTech adoption (Dapp 2014, EY 2016).

Perceived Ease of Use (PEOU)

The TAM, and its various derivatives, postulate that PEOU and PU work in conjunction for the when it comes to technology adoption. Davis (1985) refers to PEOU as the degree to which an individual believes that using the system will be free of effort. Mobile or FinTech services that are easy to use will be less threatening to individual customers and in turn be perceived as less complex to use (Davis 1985, Priya et al. 2018, Venkatesh et al. 2003). PEOU enables users to adopt hassle-free technology of m-banking and its services in everyday use (Priya et al. 2018).

The literature reviewed found that PEOU has a significant effect on attitudes toward using FinTech (Chuang et al. 2016, Wentzel et al. 2013) and m-banking (Pandiya and Gupta 2015, Singh and Srivastava 2018). Studies show that customers will be more likely to adopt m-banking if they find it easy to use and understand (Pandiya and Gupta 2015).

Self-Efficacy

Self-efficacy is a construct that describes consumers' perceived confidence regarding the use of technological innovations (Koksal 2016). In the context of m-banking and FinTech, self-efficacy translates into customers' belief that the required knowledge, skill, or ability to operate this new service results in a higher

chance of attempting to use the service. Past studies have shown a causal link between self-efficacy and m-banking adoption (Alalwan et al. 2015, Koksal 2016, Lee et al. 2003, Maduku 2017, Makanyeza 2017).

Economic Benefit

Rogers' (2005) Innovation Diffusion Theory (IDT) introduces "relative advantage" as a major influencing factor in consumers' adoption of technology. Karjaluoto et al. (2002) and Maduku (2017) highlight the cost saving factor of m-banking to be highly revolutionary and advantageous from a consumer perspective. Offering previously paid-for services free of charge or at significantly cheaper prices is the reason why many FinTech providers are regarded as industry disrupters (EY 2016).

Social Influence

Ernst & Young's FinTech Adoption Index (EY 2016) highlights the impact that peer-endorsement and positive 'word of mouth' referrals have on encouraging potential customers to adopt FinTech services. Social constructs, specifically social influence, have therefore become an important addition to the TAM to better enable the understanding of adoption (Wentzel et al. 2013). Prior studies of m-banking adoption have also shown a relationship between social influence and intention to use m-banking (Bankole and Cloete 2011, Chitungo and Munongo 2013, Maduku 2017, Makanyeza 2017, Püschel et al. 2010) and FinTech (Wentzel et al. 2013).

Enjoyment, Innovation and Novelty

In contrast with PU, which is regarded as an extrinsic motivation, perceived enjoyment (PE) is seen as an intrinsic motivation to use information systems (Venkatesh et al. 2003). The aspect of fun was less prevalent in FinTech literature reviewed, yet a number of studies have noticed that PE significantly affects intentions to use m-banking and internet banking (Akhlaq and Ahmed 2013, Alalwan et al. 2015, Lee et al. 2003, Pikkarainen et al. 2004).

This leads us to **Proposition 1**: The *enabling* factors for the adoption of FinTech in the South African market are:

- Perceived Usefulness
- Perceived Ease of Use
- Trust
- Self-efficacy
- Economic benefit
- Social influence
- Enjoyment/Innovation / Rarity

Factors that Inhibit Consumer Adoption of FinTech

<u>Perceived Risk</u>

In the context of the FinTech industry, both real and perceived risk is central to the adoption and usage process (Chigada and Hirschfelder 2017, EY 2016). Dapp (2014) emphasises the rise of cybercrime and the increasing number of data misuse cases in the Deutsche Bank's FinTech Report; an increasing number of customers are displaying a greater vigilance when using digital channels to access financial service. Identity theft, phishing, hacking, malware, data breaches and SIM swaps are commonly seen in FinTech environments on the African continent. Due to the high levels of security risk and relative low switching cost, it is crucial to build initial user trust in order to foster m-banking adoption (Singh and Srivastava 2018, Zhou 2011).

<u>Perceived Cost of Use</u>

Ismail and Masinge (2011, p.11) define perceived cost as "the extent to which a person believes that using m-banking will cost money". M-banking costs can include transactional cost in the form of bank charges, mobile network charges for sending communication traffic in the form of data or SMSs, and mobile device costs e.g. buying a mobile device be it a smart phone or basic feature phone (Ismail and Masinge 2011). Cruz et al.'s (2010) research in Brazil and Hanafizadeh et al.'s (2014) research in Iran found that perception of cost is one of the main reasons behind the reluctance to use m-banking in these developing economies. Pandiya and Gupta (2015) also mention that perceived cost is an important factor in m-banking in India.

This leads us to **Proposition 2**: The ***inhibiting*** factors for the adoption of FinTech in the South African market are:

- Perceived Risk
- Perceived Cost of Use

Methodology

The research methodology utilised was an adapted mixed method approach. The qualitative phase collected data from a purposive sample of 7 respondents through telephonic and skype interviews, using a semi-structured interview schedule. The purpose of this phase was to validate the FinTech adoption factors identified during the literature review, to identify any further insights through thematic analysis of the data, and to develop the questionnaire for the quantitative phase.

In the quantitative phase, the structured questionnaire included six demographic questions, nine behavioural questions, and 24 statements using a five-point Likert rating scale, ranging from strongly agree (rating 1) to strongly disagree (rating 5), and two open-ended questions to explore further enabling and

inhibiting factors. This questionnaire was pilot tested on five respondents to identify any misinterpretations. The population included all mobile phone/ smartphone owners who have a bank account. The sampling method used was a convenience sampling with snowballing (Bryman and Bell 2011). The questionnaire was administered using an online survey platform "Google Survey", and allowed a link to be generated and circulated via various online and social media channels, including email, Facebook, WhatsApp and LinkedIn; 217 completed responses were obtained for data analysis.

Data was analysed using exploratory factor analysis (EFA), with IBM SPSS statistics software, to identify hidden constructs and the underlying factor structure of a set of variables that are not always apparent from direct analysis (Zikmund et al. 2012). Orthogonal varimax rotation was used to optimise the factors (Pett et al. 2003). The relevant factors were determined using Eigenvalues > 1, cumulative percentage explained by factors exceeding 60%, and a significant decline in the scree plot. Validity was ensured through pilot testing of the questionnaire, and by including both FinTech adopters and FinTech rejecters in the pool, although the results cannot be generalised due to the sampling method. Reliability was ensured through the large sample size, the use of Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of 0.839 (> 0.8), Bartlett's test of sphericity as significant at 0.000 (Leung et al. 2010, Pett et al. 2003), and a Cronbach Alpha test of 0.715, which is greater than the requirement of 0.7 for reliability of the questionnaire (Cronbach 1951).

Results – Qualitative Phase

The convenience sample of seven participants was both frequent users and early adopters of m-banking, and confirmed the following factors as given in Table 1.

The enabling factor *Enjoyment/Innovation/Rarity* was not felt to be applicable, respondents mentioned that "The Fun factor is not something I think of when doing banking, I don't play around on my app, I go there to do something specific and then I log off."

Two newly identified inhibiting factors were:

- Age: respondents felt that the older generation would be hesitant
- Internet Access: this could be a major obstacle in rural areas with poor internet connection.

The ten factors identified were then used to develop the quantitative research instrument.

Table 1. *Confirmed Influencing Factors – Qualitative Study*

Enabling Factors	Respondent Comments
Perceived Usefulness (PU)	"When I think of mobile banking I immediately think of convenience, because I can access it 24/7 from my phone or iPad."
Perceived Ease of Use (PEOU)	"Fingerprint authentication on my iPhone is much easier and quicker than using a password on my laptop."
Trust	"It makes me feel comfortable to use the app because they have security measures in place."
Self-efficacy	"Because I was already using internet banking, I saw it [m-banking] as an extension of what I was already doing on my PC"
Economic Benefit	"It was cheaper for me to use m-banking, especially through the app, and that's why I switched over from traditional banking methods."
Social Influence	"Definitely, word-of-mouth works. The more people use it [m-banking], the higher the likelihood of more people trying it."
Inhibiting Factors	**Respondent Comments**
Perceived Risk	"People want to be able to speak to a human, they don't trust a completely digitised experience."
Perceived Cost of Use (PCOU)	"Cost of data is a stumbling block and can inhibit people from using m-banking because it costs them money."

Results – Quantitative Phase

Respondent Profile

The demographic profile of the respondents revealed a reasonable spread: 55% were female; the majority (51%) were in the 26–35 year age group, followed by 25% in the 36–45 year age group; and 93% had a tertiary education, indicating a fairly educated segment.

In terms of the behavioural profile, 97% indicated having a smartphone; 94% use their mobile phones on a daily basis to access the internet; the majority (91%) make use of m-banking (only 9% did not), and of this majority, 25% use it daily and 50% use it weekly; and 90% use a banking app. The most frequently performed m-banking tasks were: account balance checks (95%), bill payments (86%), airtime/data/electricity purchases (83%), and bank statement requests (67%). In addition, a sizeable 74% of respondents indicated that they would join a completely branchless bank, using only their mobile phone/the internet to access their banking services.

Factors Analysis Results

Exploratory factor analysis was conducted on the data from the 22 statements in the questionnaire that related to the various attributes of each factor or construct. This revealed that six factors met the eigenvalue criterion of a value greater than 1;

this is also confirmed by the scree plot. The results of the factor analysis after varimax rotation are given in Table 2.

Table 2. *Eigenvalues and Variance Explained*

	Total Variance Explained					
	Initial Eigenvalues			**Extraction Sums of Squared Loadings**		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.521	29.640	29.640	6.521	29.640	29.640
2	2.874	13.064	42.704	2.874	13.064	42.704
3	1.632	7.418	50.122	1.632	7.418	50.122
4	1.375	6.249	56.371	1.375	6.249	56.371
5	1.241	5.640	62.012	1.241	5.640	62.012
6	1.076	4.891	66.903	1.076	4.891	66.903
7	0.902	4.102	71.005			
8	0.840	3.818	74.823			
9	0.719	3.268	78.091			
10	0.618	2.810	80.900			
11	0.600	2.726	83.626			
12	0.541	2.460	86.086			
13	0.510	2.318	88.404			
14	0.488	2.217	90.621			
15	0.427	1.941	92.562			
16	0.375	1.706	94.268			
17	0.331	1.503	95.772			
18	0.283	1.286	97.058			
19	0.203	0.923	97.980			
20	0.175	0.795	98.776			
21	0.144	0.654	99.429			
22	0.126	0.571	100.000			

Factors loadings were produced by means of orthogonal varimax rotation. Rotated factors were then extracted based on variable values – the higher the value, the greater influence the variable has on the factor. Hair et al. (2010) consider values with a reading of 0.5 or greater to be particularly significant. Table 3 below shows the Rotated Component Matrix with the highlighted variables that loaded onto the six newly identified factors.

Table 3. *Factor Loadings after Orthogonal Varimax Rotation*

Rotated Component Matrix[a]

	Component					
	1	**2**	**3**	**4**	**5**	**6**
Improvement (PU1)	0.858	0.042	-0.108	-0.128	0.181	0.054
Specific need (PU2)	0.854	0.101	-0.059	-0.092	0.160	-0.030
Time saver (PU3)	0.870	0.017	-0.096	-0.046	0.150	0.061
On-the-go access (PU4)	0.785	0.111	-0.114	-0.014	0.096	-0.029
UX functionality (PEOU1)	0.648	0.141	-0.147	-0.221	-0.068	0.108
Speed (PEOU2)	0.786	0.096	-0.059	-0.119	0.015	0.081
Finger print authentic (PEOU3)	0.110	0.105	0.095	-0.016	0.823	-0.057
Transaction security (TRUST1)	0.388	0.124	-0.491	-0.115	0.573	0.182
Device security (TRUST2)	0.363	0.103	-0.481	-0.210	0.590	0.186
Digital confidence (SE1)	0.490	0.032	-0.360	-0.175	0.370	0.104
Cost saving (EB1)	0.267	0.751	0.031	-0.039	0.114	-0.020
Loyalty programmes (EB2)	-0.023	0.667	0.082	-0.042	0.179	-0.110
Community influencers (SI1)	0.105	0.848	-0.025	0.122	-0.071	0.182
Peer influencers (SI2)	0.095	0.826	0.000	0.101	-0.032	0.232
Human interaction (RISK1)	-0.198	0.099	0.628	0.353	-0.022	0.104
Bigger transactions (RISK2)	-0.034	-0.032	0.808	0.034	0.134	0.092
Data security (RISK3)	-0.195	0.156	0.617	0.151	-0.293	-0.015
Cost of data (PCOU1)	-0.122	0.035	0.101	0.850	-0.037	-0.047
Cost of using service (PCOU2)	-0.310	-0.106	0.214	0.612	0.033	-0.064
Youth (AGE1)	0.104	0.121	-0.116	0.048	0.051	0.798
Older generation (AGE2)	0.035	0.056	0.236	-0.129	0.000	0.753
Network coverage (ACCESS1)	-0.055	0.144	0.096	0.712	-0.136	0.008

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalisation. a. Rotation converged in 8 iterations.

Factor 1 has an eigenvalue of 6.521, and six statements load onto this factor, as given in Table 4. These statements have to do with the convenience and usefulness of m-banking, which is beneficial and something valuable that improves their lives, so this factor is termed *"Perceived Utility"*.

Table 4. *Factor 1 loading*

Factor 1: Perceived Utility		
PU1	Improvement	M-banking makes my life simpler and easier.
PU2	Specific need	M-banking fulfils a specific banking need that I have.
PU3	Time saver	I use m-banking because it saves me time.
PU4	On-the-go access	M-banking gives me the freedom to do banking whenever I need to.
PEOU1	UX functionality	M-banking is easy to use and understand.
PEOU2	Speed	M-banking is quicker than other forms of banking.

Factor 2 has an eigenvalue of 2.87, with four statements loading onto this factor that have to do with the economic benefit and social influence, as given in Table 5; this factor is termed *"Socio-Economic Influencers"*.

Table 5. *Factor 2 Loading*

	Factor 2: Socio-Economic Influencers	
EB1	Cost saving	I use m-banking because it saves me money.
EB2	Loyalty programs	I use m-banking because my bank rewards me for using this platform.
SI1	Community influencers	I use m-banking because reputable people in my community use m-banking.
SI2	Peer influencers	I use m-banking because my family and friends do.

Factor 3 has an eigenvalue of 1.63, with the three risk construct variables loading onto this factor, as given in Table 6; this factor is termed ***"Perceived Risk"***.

Table 6. *Factor 3 Loading*

	Factor 3: Perceived Risk	
RISK1	Human interaction	I prefer to interact with a human when I do my banking.
RISK2	Bigger transactions	I prefer to interact with a human when I do big financial transactions.
RISK3	Data security	There is greater risk of fraud when using m-banking compared to using other forms of banking.

Factor 4 has an eigenvalue of 1.38, with three statements loading onto this factor that have to do with direct and indirect costs of m-banking, as given in Table 7; this factor is termed ***"Associated Costs"***.

Table 7. *Factor 4 Loading*

	Factor 4: Associated Costs	
PCOU1	Cost of data	Data costs are keeping me from using m-banking.
PCOU2	Service cost	M-banking is more expensive than other forms of banking.
ACCESS1	Network coverage	Unreliable network coverage keeps me from using m-banking.

Factor 5 has an eigenvalue of 1.24, with three statements loading onto this factor, which have to do with user preference and trust factors in m-banking, as given in Table 8; this factor is termed ***"Mobile Device Trust"***.

Table 8. *Factor 5 Loading*

	Factor 5: Mobile Device Trust	
PEOU3	Finger print authentication	I prefer using finger print authentication because it is quicker than typing in a password.
TRUST1	Transaction security	M-banking is as secure as traditional forms of banking.
TRUST2	Device security	It is secure to use my mobile phone to do banking.

The final factor 6 has an eigenvalue of 1.08, with two variables loading on to this factor, which both have to do with the perception that m-banking is for the younger generation, as given in Table 9; this factor is termed ***"Youth"***.

Table 9. *Factor 6 Loading*

Factor 6: Youth		
AGE1	Youth	Young people are more likely to use their mobile devices to do banking.
AGE2	Older generation	Older people are more reluctant to use their mobile devices to do banking.

Additional Findings

The two final open-ended questions in the survey enabled respondents to mention any additional influencing factors pertaining to FinTech adoption. The additional enabling factors identified were: Traceability (included in Factor 1), Travel convenience (also in Factor 1), and Facial recognition (part of Factor 5).

The additional inhibiting factors identified were: Downtime (part of Factor 4), Lack of awareness of m-banking, Platform limitations (certain functionalities not available on m-banking), and Device limitations (size of the font and buttons on a phone). While some of these are difficult for banks to address, certainly the lack of awareness points to an opportunity to educate the consumer, especially non-users of m-banking.

Discussion and Conclusion

Discussion Pertaining to Proposition 1

The objective of this study was to identify the factors that influence consumer adoption of FinTech services in the South African market. The results of this study compared to the factors identified by prior research are given in Table 10.

Table 10. *Findings on Proposition 1*

Proposition: Enablers	Research Findings	Conclusions
Perceived Usefulness	Factor 1: Perceived Utility	Effectively found – combination of two constructs
Perceived Ease of Use	Factor 1: Perceived Utility	Effectively found – combination of two constructs
Trust	Factor 5: Mobile Device Trust	Found
Self-efficacy		Not found
Economic Benefit	Factor 2: Socio-Economic Influencers	Effectively found – combination of two constructs
Social Influence	Factor 2: Socio-Economic Influencers	Effectively found – combination of two constructs
Enjoyment /Innovation /Rarity		Not found
N.A.	Factor 6: Youth	New factor
Results: Proposition 1 is partially supported		

Table 10 indicates that five of the original enabling factors from Proposition 1 were found, two original factors were not found, and one new enabling factor was identified. Therefore, Proposition 1 is ***partially supported***.

"Perceived Usefulness" was effectively found in combination with "perceived ease of use" to form the enabling factor, *Perceived Utility*. South African users are thus more inclined to adopt FinTech services if it makes their lives simpler and easier, if it fulfils a specific need that they have, if it saves them time, and if it allows them to access these services when they are on-the-go. These findings support existing research (Akturan and Tezcan 2012, Dapp 2014, EY 2016, Ismail and Masinge 2011, Kim et al. 2016, Pandiya and Gupta 2015, Singh and Srivastava 2018, Wentzel et al. 2013). "Perceived Ease of Use" variables, as found in *Perceived Utility*, positively influence FinTech adoption in South Africa if users view the technology as easy to use and understand, and if it saves them time. This directly supports both local and international research (Chuang et al. 2016, Dastan and Gurler 2016, EY 2016, Pandiya and Gupta 2015, Wentzel et al. 2013).

"Trust" was also identified as an enabling factor with specific focus on data security and device trust as encapsulated by factor 5, *Mobile Device Trust*. This supports the findings of existing research that trust can have a positive effect on FinTech adoption (Baptista and Oliveira 2015, Hanafizadeh et al. 2014, Ismail and Masinge 2011, Kim et al. 2009, Maduku 2017, Priya et al. 2018, Singh and Srivastava 2018). As most new FinTech entrants tend to be unknown players in the market (EY 2016) the role of brand trust initially plays a secondary role in relation to the more functional trust drivers like data privacy and account security. However, the role of brand will increasingly become important as the market matures, emotive benefits come into play and consumers start making switching decisions post adoption. This needs to be studied in further detail in future research.

"Economic benefit" was effectively found as part of Factor 2, *Socio-Economic Influencers.* This is consistent with existing research on South African m-banking adoption (Chigada and Hirschfelder 2017, Maduku 2017) and supports the notion that FinTech adoption is positively influenced by cost savings. Existing research did not touch on loyalty programmes, but this study found reward systems to be a significant driver of adoption and therefore a possible area for future research.

"Social influence" also forms part of Factor 2, *Socio-Economic Influencers*. Positive word-of-mouth and peer influence have been cited as enabling forces that help with FinTech adoption (EY 2016, Wentzel et al. 2013) and this was also the case in this study's research findings.

As mentioned, two original enabling factors were not found during the study namely, "Enjoyment/Innovation/Rarity" and "Self-efficacy". The former was deemed irrelevant during the qualitative phase and the latter did not garner sufficient statistical relevance during the quantitative phase. Therefore, in contrast to existing literature on "Enjoyment/Innovation/Rarity" (Lee et al. 2003, Pikkarainen et al. 2004) and "Self-efficacy" (Alalwan et al. 2015, Koksal 2016), these factors were not deemed to be relevant in terms of FinTech adoption in the South African milieu.

A new enabling factor was however identified, *Youth*. Given the results of the research findings, South Africans view the younger generation to be more open towards using FinTech and "youth" was therefore recognised as an enabling factor. Notably, "Age" did not surface as a significant factor during the literature review on FinTech adoption, but was included in the quantitative phase due to insights gathered in the preceding qualitative phase.

Discussion Pertaining to Proposition 2

Table 11 indicates that one of the original inhibiting factors from Proposition 2 was found whilst the other was effectively found. Firstly, *Perceived Risk* was initially identified during the literature review as an inhibitor to FinTech adoption (Dapp 2014, Koenig-Lewis et al. 2010, Wentzel et al. 2013) and subsequently supported by the research findings. Interestingly, the role of human interaction came through very strongly and is an ideal area for future research, in order to better understand how the lack of human interaction has a negative influence on South African consumers when it comes to FinTech adoption.

Table 11. *Findings on Proposition 2*

Proposition: Inhibitors	Research Findings	Conclusions
Perceived risk and lack of trust	Factor 3: Perceived Risk	Found
Perceived Cost of Use	Factor 4: Associated Costs	Effectively found – combination of two constructs
Results: Proposition 2 is effectively supported		

"Perceived cost of use" was effectively found along with internet accesses in Factor 4, *associated costs*. The fact that the study showed a negative relationship between FinTech adoption and perceived FinTech costs correlates with prior research (Hanafizadeh et al. 2014, Ismail and Masinge 2011, Pandiya and Gupta 2015). Respondents did not necessarily agree that they were personally deterred from adopting FinTech based on associated costs, but this is very likely due to the skewed sample demographic. In other words, it can be assumed based on the high levels of education that the research sample consisted of more affluent South African consumers who can afford to pay a premium on certain banking services. Future research should explore this further by studying a more diverse pool of South African respondents and how associated costs impact their adoption behaviour.

The additional insight that there is a lack of awareness of m-banking can be addressed by banks developing marketing campaigns to educate consumers, particularly prospective new customers.

Proposition 2 was ***effectively supported*** based on the above findings.

Recommendations

This research provides a number of findings and recommendations in terms of the identified enabling and inhibiting factors for FinTech adoption which ultimately form the basis of an Enhancement Criteria Model. These enhancement criteria can be used by new and existing FinTechs to improve their businesses models and to be more aligned to South African consumer perspectives. This Enhancement Criteria Model encapsulates an external and internal environment, consisting of the following components given in Figure 2.

The Enhancement Criteria Model identifies two main components from the External Environment that influence both potential and existing users namely, demographics & psychographics and social influence.

Demographics and Psychographics

Demographics and psychographics each play a major role in shaping consumer behaviour. Firstly, it is recommended to segment audiences based on age profile. An inverse relationship was found between seniority and youth; older people tend to be more reluctant to use mobile devices. Secondly, it is important to understand users' attitudes towards human-interaction when dealing with FinTech services. Early adopters, who predominantly fall into the Millennial 20–35 year old age group, are typically more comfortable with a completely digitised experience.

Figure 2. *Enhancement Criteria Model for New and Existing FinTech Providers*
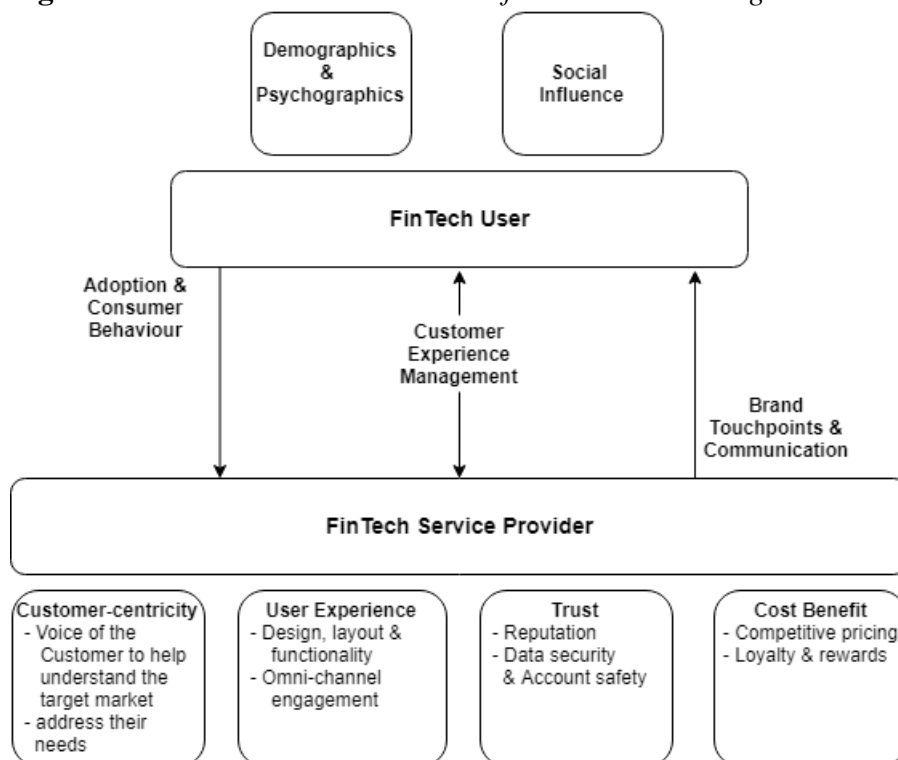
Source: Derived from this study.

Social Influence

FinTech providers should be aware of the persuasive role that social influence plays in FinTech adoption. It was found that reputable community members, family and friends all impact users' intention to use FinTech services/products. Therefore, businesses should treat existing customers as direct marketing and referral sources that have the potential to generate commercial value through positive word-of-mouth. Marketing departments should be focused on creating community brand ambassadors that will help forge authentic and trusted relationship with users at grassroots level.

The Enhancement Criteria Model focuses on four main components of the Internal Environment that are of utmost importance and should be addressed by new entrants and established FinTechs alike:

Customer-Centricity

It is essential for FinTechs to adopt a customer-centric and not a product-centric business philosophy. Global business consultancy, Ernst & Young stresses the importance of customer-centricity by stating that "having a clear understanding of customer needs and behaviours across the organisation will help drive profitable growth strategies and provide the confidence to invest in opportunities at a time when staying within budget is extremely difficult" (2013, p. 1). This way of thinking has led many organisations to launch programmes that focus on understanding their ideal customer and giving this customer a proverbial seat at the boardroom table.

User Experience

User Experience (UX) is all about optimising users' interaction with your brand; this commonly pertains to the navigation of digital assets like websites and mobile apps. The research found that users highly valued "ease of use" when it came to FinTech. Therefore businesses need to ensure that they provide thoughtful interface design and clear navigation, as well as an omni-channel content strategy to facilitate user engagement, with appropriate alignment and integration.

Trust

Data security, account safety, transparency and clear communication are key components of any FinTech provider's success, especially in terms of building trust and stimulating user adoption. Given the highly regulated environments in which these FinTechs operate, trust has become a point of parity rather than being a point of differentiation. FinTechs need to ensure data security an account safety is maintained, and that they build a reputation as a trusted provider of financial services. Regulatory accreditation and social endorsement are also examples of how FinTech start-ups can to build trust in the hearts and minds of potential new customers.

Cost Benefit

Consumers look for high utility services at competitive prices. Offering "value for money" to consumers is always a major benefit, but in the financial services industry this is not mutually exclusive to offering consumers a trusted service, i.e., consumers will consider pricing and rates, but not at the cost of trust and surety. FinTechs need to ensure that they provide competitive pricing, and should provide loyalty and reward programmes to build long-term relationships.

The interaction between FinTech providers and users is dependent on delivering consistent and on-brand messaging through all communication channels, at every *brand touchpoint. Customer Experience Management* (CEM) is at the heart of managing the interactions. It is a holistic approach to how the company and its offering can be relevant to a customer's life (Schmitt 2003). If executed properly, CEM will increase profitability as it relates to increased customer retention and loyalty. CEM is the proverbial golden thread that runs throughout the Enhancement Criteria Model and ties all internal and external components together.

Recommendations for Future Research

Further research could be conducted with different respondent groups. A mixed-methods study consisting of a more representative and diverse sample of respondents could be utilized. A study that focuses on FinTech rejecters and the factors that inhibit them from adopting FinTech offerings would provide further insights, as well as a study on potential switching behaviour barriers and incentives.

A quantitative, cross-generational study to measure FinTech adoption in different age profiles. This longitudinal study can analyse FinTech user migration between generations and test whether the adoption gap closes as time progresses and Millennials/Generation Y/Baby Boomers age.

A comparative brand study to test what effect trust, loyalty and referrals have on new FinTech providers' brand equity development could be applied. It would be interesting to compare consumer confidence levels and user adoption between a start-up FinTech and an incumbent financial institution.

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The Influence of Publicity and Sales Promotion on Marketing Performance in Nigeria

By Michael Segun Ogunmuyiwa[*]

Sales promotion and publicity are key promotional marketing tools which have assisted organizations to wax stronger in a global competitive environment. This study investigates the significance of publicity and sales promotion in Nigeria. The research design adopted for this study is survey research design while the sampling technique adopted is simple random sampling technique The Chi-square method is used to test the hypothesis based on the responses from the five-point Likert rating scale of the structured questionnaire. The findings reveal that publicity and sales promotion are veritable tools for achieving organizational marketing goals in a competitive marketing environment. It is recommended that publicity and sales promotion should be well utilized to stimulate customers demand, boost organizational reputation without detriment to product quality and performance.

Introduction

In today's digital marketing era marked by intense technological revolution and increasing global competition, there is an increasing demand for innovative approach of stimulating sales and patronage for the company's products and services. Pembi et al. (2017) described that the marketing communication mix elements have become important players in the life of any businesses be it small, medium or large. They foster the movement of market offerings (goods, services and ideas) from producers to consumers and assists in building relationships with customers and other stakeholders of the company. Promotion is used as a tool to gain the support of the trade, either directly through trade promotion or indirectly through consumer promotion (Akanbi and Ajagbe 2012). This has largely necessitated the pronounced use of sales promotion as a promotion tool to increase customers demand and patronage, stimulate trial purchase, create brand switching and market share (sales revenue) in many competitive industries (Preko 2012).

Sale promotion are any intermittent and/or a short term incentives designed to encourage purchase or sale of product or service usually but not always personal in nature and usually non media base (Dzansi 2016). The study conducted by Oyedapo et al. (2012) revealed that sales promotion consists of the related promotional activities that are necessary to supplement personal selling. The scholars emphasized that sales promotion emerged as a reaction by manufacturers,

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marketers and salesmen alike to find a short term solution to the problems of excess stock of goods which are available in manufacturer's warehouses but are not demanded by consumers and organizations.

Olawore (2013) asserted that there is a growing significance of sales promotion due to appreciable interest in the impact of sales promotion on different dimension such as brand perception, brand switching behaviour, brand choice, evaluation of brand equity and consumer decision process. Chaharsoughi and Yasory (2012) succinctly affirmed that sales promotions is a range of marketing techniques designed within a strategic marketing framework to add extra value to a product or service over and above the "normal" offering in order to achieve specific sales and marketing objectives. This extra value may be a short term tactical nature or it may be part of a longer-term franchise-building program. Sales Promotion is a short term incentive to encourage purchase or sales of a product or service. It includes those marketing activities, other than personal selling, advertising and publicity, which stimulate consumers purchasing and dealers' effectiveness such as window display, shows, expositions, demonstrations, etc., (Jain 2014).

Sales promotion is also concerned with the creation, application and dissemination of materials and techniques that supplement advertising and personal selling (Preko 2012, Salaam 2017). Moreover, Tandoh and Sarpong (2015) described sales promotions as a short term promotional activities designed to stimulate consumer buying or co-operation from distributors, sales agents, or other members of the trade.

All organizations operate in diverse public spheres and create new publicity with their actions to build public trust and reputation. Tufail et al. (2014) contended that publicity is one of the best management functions that establishes, recognizes and assists in maintaining reciprocal and mutually benefiting relationship with the public. Publicity is the distribution of information by personal or non-personal ways, which is not directly rewarded for by the company, nor is the company the source (Salaam 2017). He stressed further that publicity has a resounding and positive effects on brand equity and position institutions and their products in the consumer's mind which is influencing the desirable and effective marketing performance. Publicity is the movement of information with the effect of increasing public awareness of a subject. Technology has revolutionized business activities across the globe and has resulted to intense local and international competition which resulted into brand switching, declining marketing performance and decreasing market share which hinder the realization of firm marketing objectives (Pandey and Singh 2017, Zeng 2013).

Previous empirical study and extant literatures reviewed (Oyeniyi 2011, Pandey and Singh 2017, Pembi et al. 2017) failed to capture the significance of publicity and sales promotion on firm marketing objectives. Therefore, this study intends to fill the identified gap by examining the influence of publicity and sales promotion on marketing performance in the new digital marketing era using Nigerian Breweries PLC as a case study. This paper is structured in the following format. After the introduction; section two centers on the concepts of publicity, sales promotion and theoretical framework. Section three focuses on the

methodology and section four is the empirical results and discussion, while section five discusses the conclusion and policy recommendations.

Theoretical Background and Literature Review

Publicity and Marketing Performance

The concept of public relations is a very important promotion tool for business organizations because positive relations built with the public can directly and indirectly affect the business organization activities. Public relations is the process of "building good relations with the firm's various publics by obtaining favourable publicity, building up a good corporate image, and handling off unfavorable rumors, events and stories" (Bernays 1955).

Brassington and Pettit (2000) also posited that the essence of public relations (PR) is to look after the nature and quality of the relationship between the organization and its different publics, and to create a mutual understanding. Public relations cover a range of activities, for example the creation and maintenance of corporate identity and image; charitable involvement, such as sponsorship, and community initiatives; media relation for the spreading of good news as well as for crisis management. Alli (2010) succinctly affirmed that publicity is an instrument used by firms to neither disseminate information about itself through mass media but does not pay for exposure. It is geared towards increasing the company image and popularity. Publicity is the process of building good relations with the firm's various publics by obtaining favorable publicity, building up a good corporate image, and handling or heading off unfavorable rumors, stories, and events (Alli 2010, Pandey and Singh 2017). Publicity, as a social system, is never totally predictable, and a small change at one point in time may generate disproportionate social change later (Aula and Aberg 2013). Publicity is a dynamic process in which issues arise, may reach the tipping point, or fade away (Evgeny 2011).

Publicity is described as any unpaid broadcasting or publishing about positive or negative news of the company, or its products and activities by using mass media (Nour et al. 2014). Similarly, Kotler and Keller (2006) saw publicity as one of the key pillars for an organization success regardless of the size and age. It aids self-image and promotion of personality (Alli 2010, Zeng 2013). Positive publicity results to increased trust and high expectations (Tarlow 2011). Publicity as defined by Aremu and Lawal (2012) is regarded as news about the organization or its product reported in the press and other media without charge to the organization. It has provided a platform for organizations to raise awareness among stakeholders and encourage their participation, change people's thinking and behavior in relation to a particular organization and product, informing people about the organization and product and its achievements and any changes in regulations or management activities and raising awareness at regional and International levels to strengthen linkages (Aula and Åberg 2013, Evgeny 2011, Oyedapo et al. 2012).

Gbolagade et al. (2013) conducted a study on the impact   of marketing strategy on business performance a study of selected Small and Medium Enterprises (SMEs) in Oluyole local government, Ibadan, Nigeria. The survey research design method was used in this study which involves using a self-design close-ended questionnaire in collecting data from one hundred and three (103) respondents. Correlation coefficient and multiple regression analysis were used to analyze the data. The results showed that the independent variables (i.e Product, Promotion, Place, Price, Packaging and After sales service) were significant joint predictors of business performance in term of profitability, market share, return on investment, and expansion.

In a study conducted by Mohammed and Adamkolo (2018) on public relations and employee performance in Nigerian tertiary institutions affirmed that effective public relations practice that addresses both the comprehensive and specific needs of the various classifications of internal publics enhances job performance and productivity.

Sales Promotions and Marketing Performance

Sales promotion is the process of persuading a potential customer to buy the product. It is designed to be used as a short term tactic to boost sales. Sales promotion is a marketing tool for manufacturers as well as for retailers. The manufacturers normally use the promotional strategy to increase sales to retailers in form of trade promotions and consumers in form of consumer's promotions. Sales promotions are vital for companies to increase sales and project their brand names. If used moderately with careful planning, sales promotion increases sales, even after the promotions period is completed. When sales promotion is overdosed, the emotion that surrounds them disappears. Oyedapo et al. (2012) posited that sales promotion is a direct inducement that offers an extra value or incentive for the product to the sales force, distributors or the ultimate consumer with the primary objective of creating an immediate sale. The purpose of sales promotion is to motivate the customers to immediately purchase a particular product thus enhancing its sales volume (Sadia and Syeda 2012). Sales promotion campaign is often the only promotional material available at the point of purchases which inform, remind and also stimulate the buyers (Daramola et al. 2014).

Odunlami and Ogunsiji (2011) said that sales promotion is an initiative undertaken by organizations to promote increase in sales, usage or trial of a product or service (i.e., initiations that are not covered by other elements of the marketing communication/ promotional mix). Sales promotion is defined as a diverse collection of incentive tools, mostly, short term designed to stimulate quicker and/or greater purchase of particular products/services by consumers (Sadia and Syeda 2012). Bagavathi-Pillai (2007) stated that sales promotion refers to those promotions selling that stimulate interest, trial or purchase by final customers or others in the channel.

Sales promotion is therefore an incentive marketing tool in that it helps to increase repeat purchase, contributes to both short and long term sales increase of

a product or service and contributes to the utilization values of advertising in that many advertising programmes are undertaken to support the firm's promotional activities (Ekankumo and Henry 2011). Sales promotion is an important component of an organizations overall marketing strategy along with advertising, public relations, and personal selling. Sale promotion acts as a competitive weapon by providing an extra incentive for the target audience to purchase or support one brand over another (Oladele 2006). Accordingly, Preko (2012) argued that sales promotions are all other promotional tools that are classified as advertising, personal selling or publicity. It includes consumer promotion (samples, coupons, money refund offers, trading stamps, demonstrations) and trade promotion (e.g., buying allowances, free goods, merchandise allowances, dealer's sales contest) and sales force promotion (e.g., bonuses and sales rallies). Onu (2000) cited in Daramola et al. (2014) opined that sales promotion are those marketing activities other than personal selling, advertising and publicity that arouse consumers' purchases and dealer efficacy such as display shows, and exhibition, demonstrations and various non-current selling efforts not in the ordinary routine.

Nadeem et al. (2013) carried out a study on the role of sales promotion on sales volume in the context of fast moving consuming goods industry in Dera Ghazi Khan. The study adopted a survey research design using structured questionnaire to collect information from 120 respondents. The result shows that all sales promotion dimensions independently and jointly predict sales volume, which implies that premiums, bonus, have significant effect on sales volume. Moreover, sales promotion tends to work best when it is applied to impulse items whose features can be judged at the point of purchase, rather than more complex, expensive items that might require hands on demonstration. Sales promotion includes communication activities that provide extra value or incentives to ultimate consumers, wholesalers, retailers or other organizational customers. It also stimulates sales, and product trial (Boone and Kurtz 2002). Sales promotion when implemented effectively often results in an increase in short term sales returns. This explains the inclination of corporations to put in a large percentage of their funds in carrying out various sales promotion activities. However, variations occur in effects of sales promotion based on the attractiveness of the concerned brand (Sadia and Syeda 2012).

Musibau et al. (2014) posited in their study on the impact of sales promotion and product branding on company performance in Nigeria posited that product branding and sales promotion affect organizational growth. Also, Onyejiaku et al. (2018) in a paper titled does promotional strategy affect the growth of manufacturing firms in South East Nigeria using a both Speraman's rank correlation and logistic regression on both primary and secondary data affirmed that advertising, public relations and personal selling were promotional strategies that affected sales growth in the manufacturing firms. The study also revealed that promotional strategy had a positive and significant effect on sales growth.

Mbogo (2013) carried out a study on the influence of promotion mix strategies on the growth of customers of Pathologists Lancet Kenya. The study adopted a descriptive research design and the target population was clustered into 4 regions in Nairobi (Nairobi East, West North and South) on Pathologists

Lancet Kenya's customers. Forty customers were sampled and semi-structure questionnaire administered. Pearson correlation and multiple linear regression analysis were done to test the relationship between promotion and customer growth. The findings revealed that Pathologists Lancet Kenya as a brand is associated with product quality and cheap price that both adds value and satisfaction to its customers. The study revealed that promotion strategies (advertising, sales promotion, public relations, personal selling and direct marketing) positively influence customer growth.

Festus (2016) conducted a research on the impact of sales promotion on organizational performance of Guinness Ghana Breweries Limited. The study adopted a descriptive research design. The population of the study was estimated at 865 (management, staff and key distributors) out of which a sample of 160 was used Questionnaire was used to collect primary data whilst secondary data was taken from financial statements of GGBL from 1985 to 2014. The study found a positive and significant relationship between sales promotion and profitability.

Theoretical Framework

The theoretical underpinnings for this study are Planned Behaviour Theory and Combination Theory. The Planned Behaviour Theory emphasized that behaviour may be modified by sales promotion stimuli, which change beliefs, attitudes and eventually intentions and behaviour. If the intervention influences customers, it changes intentions and eventually changes the behaviour. While the Combination Theory embrace the use of Push and Pull strategies. "Push" is used to get more products into the hands of retailers and wholesalers while sales promotion dimensions and product tie-ins with other products are used as a "pull" to get more people to want to buy the product.

Research Methods and Procedure

The study employed a survey research design of the descriptive type and data were gathered using the primary data method. The research instrument used is the questionnaire and the sample size is purposively selected from a population of one hundred and five (105) sales and marketing staff in Nigerian Breweries PLC in Lagos and Ota plants of the company. Purposive sampling was used to select two (2) out of the several plants of Nigerian Breweries PLC in Nigeria. The plants were chosen because of nearness and convenience to administer the questionnaire. In addition, the management style of Nigerian Breweries is similar in all the plants.

Out of a total population of 105, sixty (60) sales and marketing officers were selected. Thirty (30) copies each of the structured questionnaire on a five point Likert rating scale were administered on the sales and marketing staff of both Ota and Lagos breweries. Twenty-seven (27) out of the 30 questionnaire in Ota and Twenty-eight (28) out of the 30 in Lagos were duly filled and returned. From these, fifty (50) copies of the questionnaire representing Twenty-five (25) from

each plant were finally made use of and this is the final sample size for this study. Data were analyzed using simple percentage and Chi-square statistical tool.

Reliability/Validity of the Research Instrument

In determining the reliability of this instrument, the researcher utilized test-re-test reliability method instead of Multiple, Split-half and Cronbach alpha methods because it is easy to understand, applied and also facilitate easy interpretations of the reliability test. Pilot reliability test of (10 students) was carried out before administering the real research questionnaires. In the preceding week, we re-administered another 10 copies of the questionnaire to ascertain whether the results obtained in the first pretest and piloted study agreed with the second pilot/test-re-test research.

It was discovered that there was similarity in the results obtained. This shows high degree of reliability of the research instrument used since over 78% of reliability was obtained because the responses obtained in the first and second test and retest reliability study was similar. The instrument was subjected to both face and content validity. The drafted questionnaire was given to two (2) professors and two (2) senior lecturers in our department for evaluation and correction. Based on the identified mistakes, necessary corrections were done to ensure that the research instrument is valid.

Results and Discussion

Question by Question Analysis

Table 1. *Publicity and Sales Promotion Enhance Achievement of Organizational Marketing Objectives*

	Frequency	Percentage (%)
Strongly agreed	44	88
Agreed	5	10
Undecided	1	2
Disagree	0	0
Strongly disagreed	0	0
Total	50	100%

Table 1 indicates that 88% of the respondents indicating strongly agreed, 10% agreed, 2% was undecided; zero respondent disagreed and strongly disagree. This shows that publicity and sales promotion enhance achievement of organizational marketing objectives.

Table 2. *Publicity and Sales Promotion Increase Sales Returns*

	Frequency	Percentage (%)
Strongly Agreed	40	80
Agreed	5	10
Undecided	2	4
Disagreed	3	6
Strongly disagreed	0	0
Total	50	100%

Table 2 shows that 80% strongly agreed, 10% agreed, 4% undecided, 6% disagreed, while 0% strongly disagreed. This indicates that publicity and sales promotion increase sales returns.

Table 3. *Publicity as a Promotional Tool Promotes Reputation of the Organization*

	Frequency	Percentage (%)
Strongly Agree	36	72
Agree	10	20
Undecided	2	4
Disagree	1	2
Strongly disagree	1	2
Total	50	100%

Table 3 shows that 72% of the respondents strongly agreed, 20% agreed, 4% were undecided, 2% disagreed, while 2% strongly disagreed. This indicates that publicity as a promotional tool promotes reputation of the firm.

Table 4. *Publicity and Sales Promotion Influence Consumer Buying Decisions*

	Frequency	Percentage (%)
Strongly agree	25	50
Agree	12	24
Undecided	5	10
Disagree	6	12
Strongly disagree	2	4
Total	50	100%

Table 4 indicates that 50% of the respondents as strongly agree, 24% agreed, 10% were undecided, 12% disagreed, while 4% strongly disagreed. This indicates that publicity and sales promotion influences consumer buying decisions.

Test of Hypothesis

The formulated hypothesis is tested using the Chi-square technique.

H_0: Publicity and sales promotion do not enhance firm's marketing performance in the new digital marketing era.

H₁: Publicity and sales promotion enhance firm's marketing performance in the new digital marketing era.

To test this hypothesis, the relevant questions in the questionnaire as shown in the responses in Tables 1 to 4 are polled together to actually perform the analysis. Thus, RES.1, RES.2, RES.3 and RES.4 in Table 5 stand for responses in Tables 1, 2, 3 and 4.

Table 5. *Table of Observed Frequency*

Responses	RES.1	RES.2	RES.3	RES.4	Total
Strongly Agree	44	40	36	25	145
Agree	5	5	10	12	32
Undecided	1	2	2	5	10
Disagree	0	3	1	6	10
Strongly Disagree	0	0	1	2	3
Total	50	50	50	50	200

To calculate Table 6, we employed the use of the Chi-square test of "independence and homogeneity" which is used once the number of rows is more than two (2). The formulae for calculating it is given as

$$\frac{RT \; X \; CT}{GT} \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots (1)$$

Table 6. *Table of Expected Frequencies*

Responses	RES.1	RES.2	RES.3	RES.4
Strongly Agree	32.5	32.5	32.5	32.5
Agree	8	8	8	8
Undecided	2.5	2.5	2.5	2.5
Disagree	2.5	2.5	2.5	2.5
Strongly Disagree	0.75	0.75	0.75	0.75

The formulae for computing the Chi-square is given as

$$X^2 = \sum \frac{(0i - E_i)2}{E_i} \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots \dots (2)$$

where, χ^2 = Chi- Square, O = Observed Value, E = Expected Value. The Level of Significance is taken to be 5% or confidence level of 95%. With a degree of freedom of DF=V= (R-1)(C-1), The Chi Square $(X^{2)}$ is computed as follows.

Table 7. *Chi Square (X^2) Contingency Table*

O	E	(O-E)	(O-E)^2	(O-E)^2/E
44	32.5	11.5	132.5	4.07
5	8	-3	9	1.8
1	2.5	-1.5	2.25	2.25
0	2.5	-2.5	6.25	6.25
0	0.75	-0.75	0.56	0.56
40	32.5	7.5	56.25	1.4
5	8	-3	9	1.8
2	2.5	-0.5	0.25	0.13
3	2.5	0.5	0.25	0.08
0	0.75	-0.75	0.56	0.56
36	32.5	3.5	12.25	0.34
10	8	2	4	0.4
2	2.5	0.5	0.25	0.13
1	2.5	-1.5	2.25	2.25
1	0.75	0.25	0.06	0.06
25	32.5	-7.5	56.25	2.25
12	8	4	16	1.33
5	2.5	2.5	6.25	1.25
6	2.5	3.25	10.56	1.76
2	0.75	1.25	1.56	0.78
Total				29.45

X_2cal = 29.45

To determine the table value (X^2tab); DF = (R-1) (C-1) = (5-1) (4-1) = (4) (3) = 12

The critical value X^2 with D.F = 12 at 0.05 level of significance is 21.03.

Decision Rule: Accept H_0 if Chi Square calculated (X^2 cal) is less than (<) Chi Square tabulated (X^2 tab), otherwise don't accept.

Managerial Decision: From Table 7, X^2cal (29.45) is greater than X^2tab (21.03) i.e. X^2cal (29.45) > X^2tab (21.03). Therefore, the null hypothesis (Ho) is rejected and the alternative hypothesis (Hi) is accepted. Thus, publicity and sales promotion are veritable promotional tools for achieving corporate marketing objectives in the new digital marketing era.

The findings from the study revealed that publicity and sales promotion enhance achievement of organizational marketing goals. It was also revealed that publicity and sales promotion is a veritable tool for increasing sales volume and enhancing corporate reputation in Nigerian Breweries PLC.

Conclusion and Policy Recommendations

Based on the findings from this study, it is evident that publicity and sales promotion are panacea for enhancing, stimulating as well as arousing customers demand for the firm's product. Publicity and sales promotion foster spontaneous

reactions and response to sales and it influences the achievement of firm's marketing performance in the new digital era particularly in our case study company-Nigerian Breweries PLC.

Based on the aforementioned, the following policy recommendations are hereby proffered. (a) Organizations should have a planned and systematic publicity and sales promotion programmes to enhance product sales performance. (b) They should set up a more and effective promotional department with experienced staff with a view to developing more promotional strategies in line with the company's objectives without compromising product quality, performance and reliability during the campaign. (c) In addition, since effective implementation of sales promotion tools lead to increase in sales volume and invariably higher profit, therefore, adequate promotional budget should be put in place by firms to enhance the achievement of marketing objectives in the digital marketing era.

Acknowledgments

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Exchange Rate and Trade in Services Nexus in Nigeria: A Non-Linear ARDL Approach

By Nathan Audu[*] and Titus Obiezue[±]

*A nonlinear ARDL model is employed to investigate the asymmetric drivers of non-oil trade in services between Nigeria and Netherlands. A significant number of past studies have concentrated their attention on the elasticity of trade in services to real exchange rates and income as well as on non-oil export, total export trade or import, yet none have delve into asymmetric relationship. This study aims to fills this void. Our result shows that the effects of exchange rate variations have both positive and negative displays with more negative asymmetry. This provides further insights in the nature of service asymmetries. (**JEL Codes:** C22, D43, E31, L71, Q41)*

Keywords: *asymmetric cointegration, exchange rate adjustment, disaggregated, services*

Introduction

The link between foreign exchange rates and trade in services has captured the interest of both policy makers and investors as services play a vital role in the development of an economy. Services contribute significantly to global gross domestic product (GDP) as a more efficient services sector promotes economic growth both directly and indirectly via spillover effects. For instance, in 2017 it accounted for over 63% of global GDP and more than 35% to Nigeria's GDP. However, the contribution of services in international trade remains very poor as the country's international trade is dominated by the export of merchandise goods. In 2018 crude oil export contributed 92.6% of total foreign exchange. Thus, services sector's contribution to total export and foreign exchange is insignificant.

This study has become important because of the peculiarities of the Nigeria policy environment. For instance, Nigeria is net importer of international services, which has increased the burden payments for travels, transportation and other business services. Available data from NBS (2018) also indicates that the Netherlands was Nigeria's highest non-oil trading partner accounting for over 18.8% of total non-oil exports. Nigeria's major import from the Netherlands include higher education services, travels, other business services, frozen fish, petroleum oils and engines & motor parts; while the major export to the Netherlands include crude oil, cocoa beans, cocoa cake, cocoa butter, frozen shrimps and crabs, dried split ginger, and cashew kernel. There is, therefore, a major scope to boost services trade with major trading partners, especially the Netherlands, as the country has been a net importer of services and a net exporter

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of primary commodities. Studies that clarify our understanding of the exchange rate drivers of trade in services in Nigeria are extremely important. This is extremely important for trade in service literature and exchange rate policy.

Following the introduction of the Structural Adjustment Programme (SAP) in 1986, Nigeria reformed its foreign exchange system, trade policies, and business and agricultural regulations. The adoption and implementation of the neo-liberal policies of the SAP in many African countries between the 1980s and 1990s truncated and stagnated the pace and pendulum of economic growth and development in the continent. As a matter of fact, many countries were stuck in a debt trap at the end of the 1990s. This situation had been exacerbated by SAPs. The SAP policies of deregulation and privatization worsened the unemployment crisis which had reached a crisis point by the mid-1980s. Their reform was ill-conceived and unsuitable for African economics considering its poor volatility and skewed structure and form. In the past years, we have seen a debt-trap scenario in Greece. After ten years of crisis, conditionalities, bailouts and insufficient debt relief, EU lending countries seriously consider demanding that Greece generate budget surpluses until the year 2060 so it can service its debt. Clearly, the core of Nigeria's SAP is a radical reform of trade and exchange rate policies combined with enhanced market liberalization measures and institutional changes to create a degree of economic flexibility which would enhance the effectiveness of the incentive system.

Even though the liberalisation of the exchange rate promoted economic growth and development, it also contributed to exchange rate volatilities. Evaluating the asymmetry effects of exchange rate volatilities and using a nonlinear model is perhaps the direction of current and future economic research. In particular, Bussiere (2013) in assessing the pass-through effect of exchange rate volatility to import and export prices found an asymmetric relationship. Exchange rate volatilities impact on traded goods' prices in an asymmetric manner and on trade itself which finally impact on the trade balance. Secondly, Bahmani-Oskooee and Fariditavana (2016) employed the non-linear ARDL approach to evaluate the J-Curve phenomenon and found more evidence of the J-curve supporting non-linear adjustment of variables as well as asymmetric effects of exchange rate changes on the trade balance, using bilateral trade balance models of the U.S. with each of her six largest trading partners.

This paper contributes in two ways. First, it confirms asymmetric effects of exchange rate volatilities on bilateral trade balances on three service sectors between Nigeria and Netherlands. The Netherlands tops the list of Nigeria's non-oil traders with about 20%. Secondly, it employed the a generalized NARDL model, which distinguishes small to large volatilities in exchange rate change and captures nonlinear exchange rate effects between Nigeria and Netherlands with greater precision than the more common two-way decomposition of appreciation and depreciation.

Empirical Literature on Trade in Services and Exchange Rate

Large volume of literature on exchange rate volatility and trade in service exist and discussions are ongoing. Pattichis (2012) used disaggregated data on US - UK trade to investigate the effects of exchange rate depreciation on trade in services both in the short-and long-run. The study focused on travel, passenger fares and other transportation services and employs the ARDL approach. The results reveal that the real exchange rate has a statistically significant effect on trade in services in at least one of the time periods. Similarly, Mallick (2012) carried out a comparative empirical analysis of the role of exchange rate on services and goods exports. The study finds that while depreciation of exchange rate encourages services exports, it discourages goods exports. The finding suggests that depreciation of currencies strategy has a greater potential for the poor economies to gain from their exports.

Baggs et al. (2010) analyse the effects of industry specific real exchange rate movements on the profitability, survival, and sales of Canadian service sector firms. The study show significant exchange rate effect on service firms that is qualitatively similar to that found for manufacturing firms. Employing a VAR model to investigate the exchange rate propagation mechanisms to real exports of U.S. services and agricultural sectors on monthly data from 1992:1 to 2009:12, Ojede (2015) found that exchange rate shocks impact services exports more than they do on agricultural exports. However, Ketenci and Uz (2010) empirical findings revealed that the real exchange rate is not a significant determinant for the trade in services. Other studies such as Prieto et al. (2011) revealed that internet penetration is a significant determinant of trade in services in the importing country as opposed to the exporter.

Utilizing traditional and recent models of import and export demand functions Moshirian (2007) estimated the determinants of trade flows for two service industries, travel and passenger transportation services for 16 Organisation for Economic Co-operation and Development (OECD) countries. The empirical results indicate similarity between trades in goods and trade in services. Also, Khan et al. (2014) employed GARCH-based exchange rate volatilities and the least-squares dummy variable technique with fixed-effects estimation to measure the volatility impact on both demand functions with reference to Pakistan's trading partners. The results show that, when Pakistan employed the US dollar as the vehicle currency with its trading partners, volatility discouraged both imports and exports.

It is therefore obvious from the literature that the impact of exchange rate volatility on trade in services vary across countries and services sector. Babatunde (2016) estimated the elasticity of trade in services to real exchange rates and income in Nigeria. Adopting the imperfect substitute's model, the empirical findings revealed an inelastic real exchange rate and income elasticities in export and import of services functions in the long and short run. In his work, Aliyu (2010) used the VECM and the VAR model to analyse the impact of exchange rate volatility on Nigeria's non-oil exports. The result established a long-run stable and negative relationship between Naira exchange rate volatility and non-oil

exports in Nigeria. In the alternative, the result was positive for the US Dollar exchange rate volatility and non-oil exports.

Dickson and Andrew (2013) using the error correction and GARCH models investigated the impact of exchange rate fluctuations on trade variations in Nigeria. The result of the study had it that exchange rate volatility is not significant in explaining variations in import but it was found to be statistically significant and positive in accounting for variations export. In the same vein, Aliyu and Tijjani (2015) empirically examine the long-run pass through of the official exchange rates into trade balance in Nigeria by means of threshold cointegration and asymmetric error correction modeling. The estimated asymmetric ECM provide new evidence for slower transmission of exchange rate depreciations into the country's trade balance, which in turn appears to offer partial support for the Dutch disease hypothesis.

Imoughele and Ismaila (2015) investigated the impact of exchange rate on non-oil export in Nigeria. They applied Johansen's co-integration test to establish both the short and long run relationship between non-oil exports and the independent variables. The OLS result showed that effective exchange rate, money supply, credit to the private sector and economic performance have a significant impact on the growth of non-oil export, while appreciation of exchange rate has negative effect. Using the same methodology, Abogan et al. (2014) investigated the impact of non-oil export on economic growth in Nigeria. They found that the impact of non-oil export on economic growth was moderate. From the above, it is clear that apart from Babatunde (2016) who estimated the elasticity of trade in services to real exchange rates and income, other studies in Nigeria have focused on the impact of exchange rate on non-oil export, total export trade or import. This study fills the gap by investigating the asymmetry effects of exchange rate volatilities on bilateral trade balances of Nigeria with the Netherlands.

Model Specification and Data Description

To moderate the likely risk of aggregation bias and to capture the sub-sectoral effects which may occur at the service level, demand for travels (TRV), transportation (TRN) and other business services (OBS) trade in services is specified based on the top three NBS services groupings. We opted for TRV, TRN and OBS because they constitute over 85% of trade balance in Nigeria. Also, available data from NBS (2018) indicated that the highest ten trading partners in descending other in oil and non-oil shows that Netherlands (oil) and Netherland (non-oil) accounts for 15.2% and 18.8%, respectively. Chiu et al. (2010) investigated the nexus between real exchange rate and trade balance. They employed Rose and Yellen, (1989) the reduced form equation with similar countries. Their result revealed that the impact of trade balance depends on the real exchange rate as well as the incomes of both the domestic and foreign economies. Thus, in the case of Netherland (non-oil) and Nigeria trade, the relationship for each grouping of service i is represented by an algebraic function thus:

$$TBAL_{i,t} = f(BDC, GDPNetherland, GDPNigeria) \qquad (1)$$

where $TBAL_{i,t}$ equals trade balance of grouping I, which defines Nigerian non-oil exports to Netherlands divided by Nigerian imports from Netherlands in that grouping; Average bureau de change exchange rate is the real exchange bilateral rate in US dollars between Nigeria, Netherlands, hence, an increase connotes a depreciation of the naira and vice versa. GDP–Netherland and Nigeria, is the nominal GDP of both countries, respectively. All variables except TBAL are in logarithmic form.

The foregoing argument in equation (1) is symmetrical, thus, our disaggregated model follows an eclectic Shin et al. (2014), Atil et al. (2014) and Kilian et al. (2011) methodology to inspect the asymmetric effect of nominal exchange rate on trade in services as shown in equations (2) and (3).

$$\omega_i = \gamma_{10} + \sum_{k=1}^{\alpha} \gamma_{11}, k^i t - k$$

$$+ \sum_{k=1}^{\alpha} \gamma_{12}, k^\pi t - k + \mu_{1,t}, \quad where \ t = 1,2,\ldots,T \qquad (2)$$

$$\pi_i = \gamma_{20} + \sum_{k=1}^{\alpha} \gamma_{21}, k^i t - k$$

$$+ \sum_{k=1}^{\alpha} \gamma_{22}, k^\pi t - k + \mu_{1,t} + \sum_{k=1}^{\alpha} \lambda_{21}, k^{\pi^*} t - k + \mu_{2,t} \ where \ t$$

$$= 1,2,\ldots,T \qquad (3)$$

where α = lag order, i_t = change in exchange rate and π_t = column vector of macroeconomic variables: exchange rate and output. The linear symmetric model of i_t and π_t is represented in equation (2), while in equation (3), we included exchange rate change and a censored variable i_t or (i_t^+). The $i_t^\pm$ variable depicts the positive and negative changes in exchange rate, as presented in equation (4):

$$i_t^+ = \begin{cases} i_t, & if \ i_t > 0 \\ 0, & if \ i_t \leq 0 \end{cases}$$
$$i_t^- = \begin{cases} i_t, & if \ i_t < 0 \\ 0, & if \ i_t \geq 0 \end{cases} \qquad (4)$$

The coefficient γ_{10} and γ_{20} in equations (2) and (3) represents the intercept term of column vector. Similarly, γ_{11} and γ_{21}, symbolizes the coefficients of the exchange rate change. The value γ_{12} and γ_{22} is the matrix of macroeconomic variables. λ_{21} = censored variable column vector coefficient. $\mu_{1,t}$ and $\mu_{2,t}$ are the residual vectors.

Data Description Fluctuation

From Figure 1, we presented graphs (a, b, c, d, e and f) for trend analysis at levels for the variables in our model: ratios of trade balance for Travels, Transportation, Other business services, Bureau de Change exchange rate as well as Netherlands and Nigeria nominal gross domestic product, respectively. We

graphed and the outcome is presented in Figure 1. The evaluation of Figure 1a, reveals that the element of the ratio of Nigeria's exports to Netherlands over Nigeria's imports from Netherlands on travels (TBTRVNN) exhibits a continuous variability with the lowest ebb in 2018Q1 and has a deterministic trend in the oscillation while Figure 1b showed that the ratio of Nigeria's exports to Netherlands over Nigeria's imports from Netherlands on transportation (TBTRNNN) unveils a endless cyclical fluctuation with the lowest recede in 2014Q4 and a deterministic trend in the variation.

Figure 1. *Quarterly Macroeconomic Sample from 2008:1 to 2019:2*
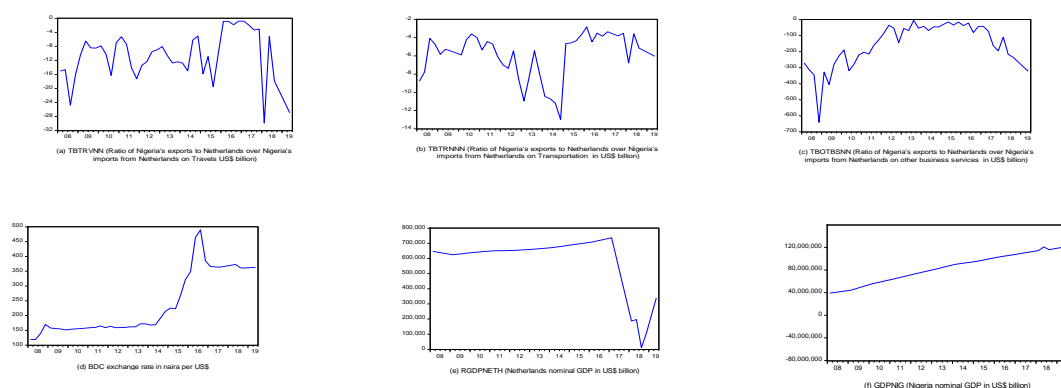
Figure 1c, indicated that it has a humped shaped instability but showed a major downward break around 2008Q4 and this could be attributed to the 2008 global financial crisis while Figures 1d – BCD exchange rate exhibited element of minor break in 2016Q3 as result of the shift to a more flexible exchange rate regime. Similarly, Figures 1e – Netherlands nominal GDP and 1f – Nigeria's nominal GDP, demonstrated rectilinearly upward with a deterministic trend in the pattern. Also, graphs e and f, reveal that the gross domestic product (GDP) of Netherlands and Nigeria maintained a steady growth throughout the period. The GDP of Netherlands grew from US$563.011 million to US$1.88 billion from 2008Q1 to 2018Q2, it is an increase of about 70%. Similarly, the GDP of Nigeria grew from US$391.5 million to US$1.21 billion from 2008Q1 to 2018Q2, it represents an increase of about 68%.

Analysis

The evaluation of the asymmetric influence of trade in services on exchange rate, a reduced-form equation was estimated which was derived from a simple dual country (Nigeria and Netherlands) model of trade harkened to Rose and Yellen (1989) using quarterly series spanning 2008Q1 to 2018Q4. The factors used in our VAR model included trade in services, exchange rate (BDC), foreign output (The Netherlands), domestic output (Nigeria). The BDC exchange rate represents the value of the naira in the basket, comprising 0.5US$ + 0.5EUR.

Output is nominal gross domestic product. All the parameters employed in this study are in their natural logarithms.

We conducted summary statistics, correlation matrix and other preliminary tests for all the series as shown in Tables 1, 2 and 3, respectively. The summary statistics in Table 1 provides information about the mean, range, standard deviation, skewness, kurtosis and Jarque-Bera statistics, respectively. The average of Nigerian trade balance (Travels – TBTRVNN, Transportation – TBTRNNN and Other business services -TBOTBSNN), the logarithms of Bureau de Change exchange rate (LBDC), The Netherlands's nominal GDP (LRGDPNeth) and Nigeria's nominal GDP (LGDPNig) were –11.11, –5.89, –160.92, ₦236.13, US$589,144.10 million and US$83,321,717.00 million, respectively.

Table 1. *Summary Statistics*

Statistics	Tbtrvnn	Tbtrnnn	Tbotbsnn	Bdc	Gdpneth	Gdpnig
Mean	-11.11	-5.89	-160.92	236.13	589144.10	83321717.00
Median	-10.29	-5.38	-134.81	169.50	651336.60	86714353.00
Maximum	-0.80	-2.82	-5.00	490.00	737048.00	121000000.00
Minimum	-29.86	-12.98	-640.69	119.00	10315.33	39157884.00
Std. Dev.	7.13	2.42	134.27	105.01	177615.60	25509685.00
Skewness	-0.61	-1.18	-1.12	0.79	-1.97	-0.22
Kurtosis	3.00	3.68	4.60	2.16	5.62	1.80
Jarque-Bera	2.88	11.64	14.52	6.19	43.01	3.13
Probability	0.24	0.00	0.00	0.05	0.00	0.21

The series range (maximum and minimum) values were –0.80 and –29.86 for TBTRVNN, –2.82 and –12.98 for TBTRNNN, –5.00 and –640.69 for TBOTBSNN, ₦490 and ₦119.00 for LBDC, US$737,048.00 million and US$10,315.33 million for LGDPNeth, US$121,000,000.00 million and US$39,157,884.00 million for LRGDPNIG with the highest standard deviation of US$25,509,685.00 million for GDPNig, US$177,615.60 million for GDPNeth, 134.27 for TBOTBOBSNN, ₦105.01 for BDC, followed by 7.13 (TBTRVNN), while the standard deviation of 2.42 for TBTRNNN, respectively.

The evidence of a positive skewness exist in the statistical distribution of Bureau De Change exchange rate, thus, inferring that the variable is extreme right tailed. Conversely, TBTRVNN, TBTRNNN, TBOTBSNN, GDPNeth and RGDPNig possesses a small and negative skewness statistics (i.e., leptokurtic), thus, signifying the presence of a left tail. However, the kurtosis which measures peakedness and tailedness of a normal series indicated that all the variables are highly peaked as well as platykurtic than normal distribution except BDC and GDPNig which are less than 3, thus, indicating that the series is reasonably peaked and mesokurtic. The Jarque–Bera (JB) which employs the evidence from skewness and kurtosis to validate normality confirms normality for all the series shows that all the series are normality distributed.

Table 2. *Correlation Matrix*

{Correlation} [t-Statistics] (Probability)	TBTRVNN	TBTRNNN	TBOTBSNN	BDC	GDPNETH	GDPNIG
TBTRVNN	1					
TBTRNNN		1				
TBOTBSNN			1			
BDC	{0.1693} [1.1392] (0.2608)	{0.4282} [3.1433] (0.0030)	{0.2245} [1.5281] (0.1336)	1		
GDPNETH	{0.4381} [3.2327] (0.0023)	{-0.1233} [-0.8245] (0.4141)	{0.3126} [2.1832] (0.0344)	{-0.4397} [-3.2474] (0.0022)	1	
GDPNIG	{0.0408} [0.2709] (0.7877)	{0.1187} [0.7931] (0.4320)	{0.4967} [3.7963] (0.0004)	{0.8321} [9.9530] (0.0000)	{-0.4776} [-3.6059] (0.0008)	1

Table 2 presents correlation summaries for the three models at 5 per cent significant levels. The result indicated that the relationship between TBTRVNN and BDC, GDPNig; between TBTRNNN and GDPNig as well as between TBOBSNN and BDC where positive but insignificant while that of TBTRNNN and GDPNeth was also insignificant and negative. Table 2 also shows a significant positive association (0.44) of TBTRVNN and GDPNeth. These results confirmed the import dependent nature of the Nigerian economy. The result from Table 2 reveals a significant positive association (0.43) of TBTRNNN and BDC. These results confirmed that most Nigerian source for their dollar from the parallel market when traveling abroad. A moderate significant positive correlation of 0.31 and 0.50 exists between TBOTBSNN and GDPNeth and GDPNig, respectively. This confirms that both Netherlands and Nigeria benefit from transportation services. A very high positive significant relationship of 0.83 exists between BDC and GDPNig. This confirms that appreciation of the naira to US dollar is more beneficial to the Nigerian economy. A moderate significant negative correspondence of 0.44 and 0.48 exist between BDC and GDPNeth as well as between GDPNeth and GDPNig, respectively. This confirms that trade in service between Netherlands and Nigeria is negatively skewed in-favour of Netherlands than Nigeria.

Table 3. *Unit Root Test*

Variables	Phillip–Perron (PP)		NG–Perron (NP)		Decision
	Level	1st Diff	Level	1st Diff	
TBTRVNN	–3.720	–11.501	–2.707	–2.980	I(0)
TBTRNNN	–3.074	–8.342	–2.259	–3.284	I(0)
TBOTBSNN	–1.814	–10.398	–1.772	–3.105	I(1)
LBDC	–0.925	–4.948	–0.692	–3.192	I(1)
LGDPNeth	–1.216	–3.824	–1.311	–0.546	I(1)
LGDPNig	–2.343	–8.856	–12.37	–3.206	I(0)

Reference: Findings of Research

Our VAR model requires that the series must be stationary. To ascertain the used Phillip–Perron (PP) and NG–Perron (NP) unit root tests is shown in Table 3. The preliminary test result in Table 3 reveals that the null hypothesis of unit root was accepted for TBTRVNN, TBTRNNN and GDPNig in levels while all other series were reject the null hypothesis of unit root at first differences. In the light of the above result, it was inferred that the data were I(0) and I(1). This means that our autoregressive distributed lag (ARDL) model can be employed satisfactory. Also, except TBTRVNN, TBTRNNN and GDPNig, all other variables enter into the analysis in their levels. The study used the Akaike, Schwarz and Hannan-Quinn information criterion which selected lag order 2 and 1, respectively, was selected in the three models as shown in Table 4.

Table 4. *Lag Selection Criteria*

Lag	LogL	LR	FPE	AIC	SC	HQ
Travels						
0	90.07	NA	1.42	-4.41	-4.24	-4.35
1	357.11	465.6	3.67	-17.29	-16.43	-16.98
2	**397.26**	**61.77***	**1.09**	**-18.52**	**-16.99***	**-17.98***
3	416.77	26.02	9.82*	-18.71*	-16.49	-17.91
Transportation						
0	151.52	NA	0.00	-7.57	-7.39	-7.50
1	416.54	462.09	0.00	-20.34	-19.48*	-20.03
2	**443.41**	**41.34***	**1.03***	**-20.89***	**-19.36**	**-20.34***
3	449.51	8.14	0.00	-20.39	-18.17	-19.59
Other Business Services						
0	168.95	NA	2.49	-8.46	-8.29	-8.40
1	**427.61**	**451.00**	**9.87**	**-21.90***	**-20.05***	**-20.60***
2	447.03	29.87*	8.52*	-21.08*	-19.54	-20.53
3	458.61	15.45	1.15	-20.85	-18.63	-20.06

The AR Roots Table and AR Roots graph for Travels, Transportation and Other Business Services in Table 3 and Figure 2, respectively, indicated that all the VAR models are stable. All the data series used in this study were retrieved from the International Financial Statistics (IFS) and national Bureau of Statistics (NBS), the electronic data base of the Central Bank of Nigeria (CBN).

Table 5. *Roots of Characteristic Polynomial*

Travels		Transportation		Other Business Services	
Root	**Modulus**	**Root**	**Modulus**	**Root**	**Modulus**
0.9906	0.9906	0.9964	0.9964	0.9943	0.9943
0.9523	0.9523	0.9632	0.9631	0.9585	0.9585
0.8187	0.8187	0.7771	0.7771	0.7754	0.7754
0.1807	0.1807	0.1947	0.1947	-0.0229	0.0229

Note: No root lies outside the unit circle. VAR satisfies the stability condition.

Figure 2. *Inverse Roots of AR Characteristic Polynomial for VAR Stability*
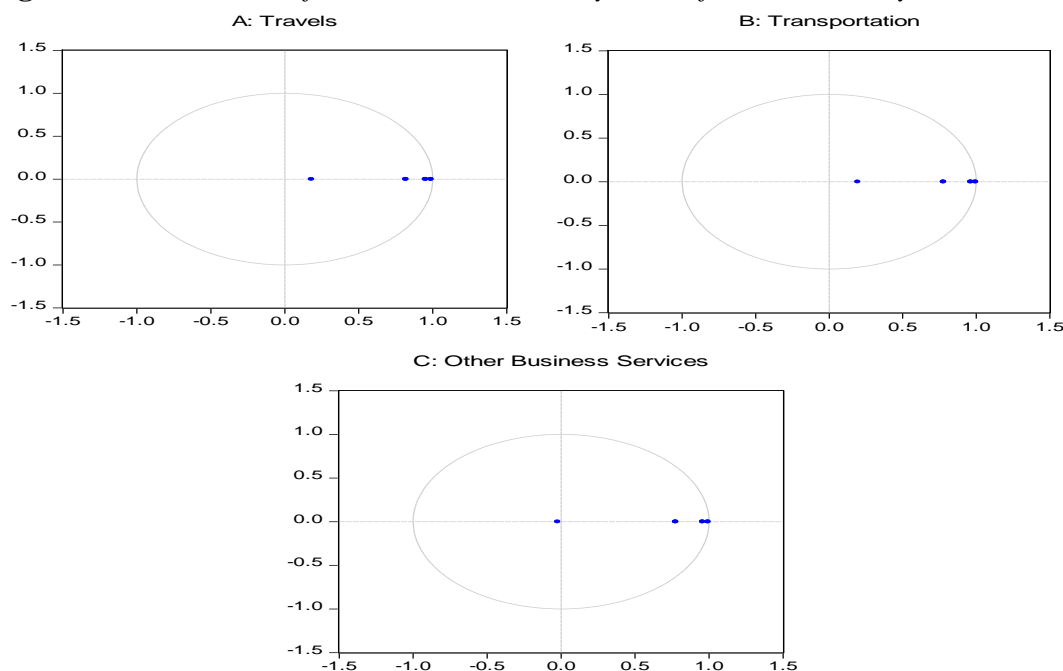
We conducted test for the existence of either symmetry or asymmetry in our model. To ascertain this we adopted the bounds test for linear and non-linear cointegration tests as shown in Table 6. The linear and non-linear bounds test result in Table 6, shows that the two key variables have an asymmetric effect on each other in the long-run form models for both the linear and non-linear form specification, since the calculated F-statistics value are greater than both the lower and upper critical bound values at the 5% significant level, thus, signifying the existence of cointegration. The linear and non-linear results reveal that an incorrect model specification would lead to an unreliable conclusion vis-à-vis whether the selected macroeconomic variables co-move in the same direction in the long run or not.

We employed the general-to-specific methodology to evaluate the non-linear model in equations (2), (3) and (4). The results are presented in Tables 7, 8 and 9, respectively. The model allows us to gauge the dynamics in balance of travels, transportation and other business services and their reaction to the selected macroeconomic variables, positive (POS) and negative (NEG) changes in the nominal naira exchange rates. To validate the finding in our long-run equation, we

conducted various diagnostic tests to ascertain the efficacy of the adjusted R-square in the dynamic model and the various outcomes are presented in Table 7. Given the adjusted R-squared value of about 0.82, 0.57 and 0.55, respectively, indicates the existence of a high explanatory command of the regressors in explaining changes of the regressands.

Table 6. *Bounds Test for Linear/Nonlinear Cointegration*

A: Travels Model				
Model specification	**F-statistics**	**Bounds**		**Conclusion**
		Lower	**Upper**	
Linear	6.71	2.79	3.67	Cointegration
Non-linear	11.38	2.56	3.49	Cointegration
B: Transportation Model				
Model specification	**F-statistics**	**Bounds**		**Conclusion**
		Lower	**Upper**	
Linear	4.29	2.79	3.67	Cointegration
Non-linear	4.05	2.56	3.49	Cointegration
C: Other Business Services Model				
Model specification	**F-statistics**	**Bounds**		**Conclusion**
		Lower	**Upper**	
Linear	7.58	2.79	3.67	Cointegration
Non-linear	7.13	2.56	3.49	Cointegration

Note: 5% level of significance. The optimal lag order were based on SIC for A and AIC for B and C.

Table 7. *Diagnostics*

Test	Dependent Variables		
	Travels	**Transportation**	**Other Business Services**
	Statistics	**Statistics**	**Statistics**
Serial correlation LM tests	1.2007 (0.4119)	1.2332 (0.3062)	0.4489 (0.6421)
Heteroskedasticity ARCH test	3.5421 (0.8366)	0.0844 (0.7731)	0.0228 (0.8807)
Normality test: Jarque-Bera	7.0447 (0.5189)	0.8161 (0.6649)	9.6450 (0.8732)
Ramsey RESET test	3.0652 (0.1866)	1.7991 (0.1338)	0.6229 (0.7104)
CUSUM	Stable	Stable	Stable
CUSUM sum of squares	Stable	Stable	Stable
R-squared	0.8551	0.6025	0.5913
Adjusted R-squared	0.8211	0.5749	0.5597

Note: Probability values of the respective tests are shown in brackets.

More so, the serial correlation LM test and the heteroskedasticity ARCH test show the absence of serial correlation in the residuals and that the residuals have constant variance overtime. Also, the Jarque-Bera test and Ramsey RESET tests, respectively, discloses that the error of variables are normally distributed and the

model is properly specified while the CUSUM and CUSUM of squares tests shows that the model is stable since the appraised model lies within the 5 per cent bound. In all the tests, the null hypothesis indicates that there is no serial correlation, no heteroscedasticity, and normally distributed errors. The three models passed all the diagnostic tests as presented in Table 7 as all the p-values exceed the various 5 percent levels of significance.

Short–run and long–run results are presented in Tables 8 and 9. The results in Tables 8 and 9, reveals that all the parameters conform to a priori expectation both in the short– and long– run. The short–run result in Table 8 shows that the first lag of travels, transportation and other business services except TBOBTSNI was positive but only significantly impacted on the current TBTRVNN.

Table 8. *NARDL Short–Run Results*

A: Travels				
Travels	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
TBTRVNN(-1)	0.2655	0.1153	2.3035	0.0084
ΔLBDC_POS	0.1018	0.0142	7.1889	0.0000
ΔLBDC_NEG	2.6283	0.6534	4.0223	0.0004
ΔLBDC_NEG(-1)	1.8094	0.8043	2.2497	0.0020
ΔLGDPNeth	-1.0231	7.2411	-0.1413	0.8886
LGDPNIG	-1.8708	3.8944	-0.4804	0.6346
ECM(-1)	-0.9982	0.1372	-7.2785	0.0000
B: Transportation				
TBTRNNI(-1)	0.2237	0.1857	1.2046	0.2375
ΔLBDC_POS	-0.0407	0.0136	-2.9995	0.0071
ΔLBDC_NEG	-0.5033	0.2004	-2.5111	0.0014
ΔLGDPNeth	4.9153	1.1545	4.2574	0.0002
LGDPNIG	-1.7085	0.4928	-3.4671	0.0649
ECM(-1)	-0.7763	0.1461	-5.3140	0.0000
C: Other Business Services				
ΔTBOTBSNI(-1)	-0.1155	0.1711	-0.6754	0.5039
ΔLBDC_POS	0.1326	0.0445	2.9838	0.0076
ΔLBDC_NEG	-0.3432	0.0881	-3.8964	0.0011
ΔLGDPNeth	-0.2144	0.3451	-0.6212	0.5385
LRGDPNIG	0.0969	0.3030	0.3199	0.7510
ECM(-1)	-1.1155	0.1595	-6.9932	0.0000

The positive and negative (current and first lag) of Bureau de change exchange rate (BDC) positively and significantly impacted on travels trade balance (TBTRVNN) asymmetrically. Also, an asymmetric relationship exists in the transportation (TBTRNNI) trade balance model. This is attributed to the positive and negative Bureau de change exchange rate (BDC) with a positive and significant impact.

This implies that if there is an increased inflow of foreign currency into Nigeria, this will increase the wealth of the citizens and the country at large. This will in turn improves the country's gross domestic product. Conversely, the other business services (TBOTBSNI) trade balance model observed an asymmetric

relationship in the positive and negative Bureau de change exchange rate (BDC) but with a negative and significant impact. This infers that appreciation of the country's currency, the naira may adversely effects the other business services but not the travels and transportation sectors. The increase in Nigeria's income may support to enhance exports of Netherlands, while rise in Netherland's income could have negative effects on the services sectors. These findings were in consonance with Chesson et al. (2018), Bahmani-Oskooee and Hajilee (2011), Bahmani-Oskooee et al. (2006) and supported by the empirical findings of Bahmani-Oskooee and Arize (2020), Mahmood and Al-Khateeb (2017) who opined that devaluation confirms existence of J-curve after some lag and thus, the existence of asymmetric relationship between the services sectors and exchange rate in both the short- and long- run.

Table 9. *NARDL Long–Run Results*

A: Travels	Coefficient	Std. Error	t-Statistic	Prob.
C	0.0613	0.5098	0.1203	0.4482
TBTRVNN(-1)	-1.0597	0.1737	-6.0996	0.0000
ΔLBDC_POS)	-1.2101	0.3698	-3.2721	0.0051
ΔLBDC_NEG(-1)	-0.7831	0.2106	-3.7176	0.0019
ΔLGDPNeth	-0.9654	0.2800	-3.448	0.0038
LRGDPNIG	-1.7654	0.7138	-2.4732	0.0073
B: Transportation				
C	-2.6474	1.8823	-1.4064	0.1695
TBTRNNI(-1)	-0.7763	0.1857	-4.1807	0.0002
ΔLBDC_POS	-0.3907	0.1287	-3.0350	0.0009
ΔLBDC_POS(-1)	-0.2232	0.0313	-7.1358	0.0000
ΔLBDC_NEG	-0.3033	0.0404	-7.5021	0.0000
ΔLGDPNeth	4.9153	1.6642	2.9536	0.0046
ΔLGDPNeth(-1)	0.2086	0.7100	0.2939	0.7708
LGDPNIG)	-1.7085	0.5375	-3.1788	0.0017
LGDPNIG(-1)	-0.6107	0.6398	-2.7784	0.9614
C: Other Business Services				
C	1.5923	0.8027	1.9836	0.0552
ΔTBOTBSNI(-1)	-1.1155	0.1711	-6.5204	0.0000
ΔLBDC_POS	0.3665	0.1345	0.7344	0.0087
ΔLBDC_NEG	-0.1432	0.0381	-1.6258	0.0023
ΔLGDPNeth	-0.3451	0.1144	-0.6212	0.0071
LGDPNIG	0.3030	0.0969	0.3199	0.0057

This will translate to a worsening of the country's gross domestic product. The real GDP of Netherlands and Nigeria negatively influenced travels and other business services. However, the variables were statistically insignificant, same scenario was observed in the transport model for Nigeria's GDP. This means that a contraction of GDP in both economies would worsen the travels, transportation and other business services balance in Nigeria. The real GDP of Nigeria positively influenced transportation balance but was also statistically insignificant. This implies that an increase in Nigeria's GDP would greatly improve transportation

services balance, Bahmani-Oskooee and Arize (2020), Bahmani-Oskooee and Harvey (2017) and Mahmood and Al-Khateeb (2017) also elucidated a similar result. They also found asymmetric exchange rate and service sector behaviour was strongly evident in both the long run and short run, while it was only significant in the long run for Chesson et al. (2018).

The error correction term was properly signed as expected and the speed of adjustment was 99.8%, 77.6% and 111.5%, respectively. This implies that travels, transportation and other business services trade balance adjust by 99.8%, 77.6% and 111.5%, respectively to the changes in exchange rate in the previous period. Hence, the period it will take to completely adjustment to a given change in BDC is almost eight quarters for Travels and other business services model and twelve quarters for transportation model.

Haven ascertained the asymmetry presence in the Travels, Transportation and Other business services model, we present the long-run asymmetric dynamics as presented in Table 6. The first lag of travels, transportation and other business services negatively and significantly impacted on their current values. This implies that if their first lag increases by a percent, Travels, Transportation and Other business services will decrease by their respective coefficient.

Furthermore, the positive (POS) components of the main regressor variables in all the three models were statistically significant. However, it negatively influenced the behaviour of travels and transportation variables and positively influenced other business services in the long-run. For instance, a 1% rise in BDC_POS, BDC_NEG in Travels, would results in travels balance decreasing by 1.21% and 0.78%, respectively in the long–run. Also, a per cent rise in first lag of travels, Netherlands and Nigeria's GDP, would translate to a significant decline in Nigeria's travels balance by 1.06%, 0.97% and 1.77%, respectively. Given the long–run asymmetry in BDC, the result shows that a percentage increase in the exchange rate will result in an asymmetric fall to revenue accruable to Nigeria through travels. These findings were in line with the study by Bahmani-Oskooee and Fariditavana (2016) and Chui et al. (2010), on J-curve curve phenomenon and US trade imbalance and real exchange rate, respectively, and Chesson et al. (2018) for long run asymmetry only.

The Granger Causality test in Table 10 was implemented under the NARDL model. The variables in the model were assessed at both level and first difference in an ARDL context. The lag length criterion was automatically selected. The non-linear autoregressive distributed lag model was evaluated using four lag and the result reveals the absence of autocorrelation. The result in Table 7 show three types of Granger causalities were examine, namely Short-run, long-run and strong NARDL causality test.

The result shows that all the variables in the short-run except LRGDPNIG were significant in the three models, for the long-run test all the variables were significant while for strong test, only the LBDC_POS and LBDC_NEG were significant for Travels, and except LRGDPNIG all other variables significant in the Transportation and Other Business Services Model. This confirms the existence of convergence of the system back to equilibrium position, which satisfies equations (2, 3 and 4). Furthermore, a mutual (short-run, long-run and

strong) causality also exists between the selected macroeconomic variables, Travels, Transportation and Other Business Services balance which confirms the existence of bi-directional causality between the variables.

Table 10. *NARDL Causality*

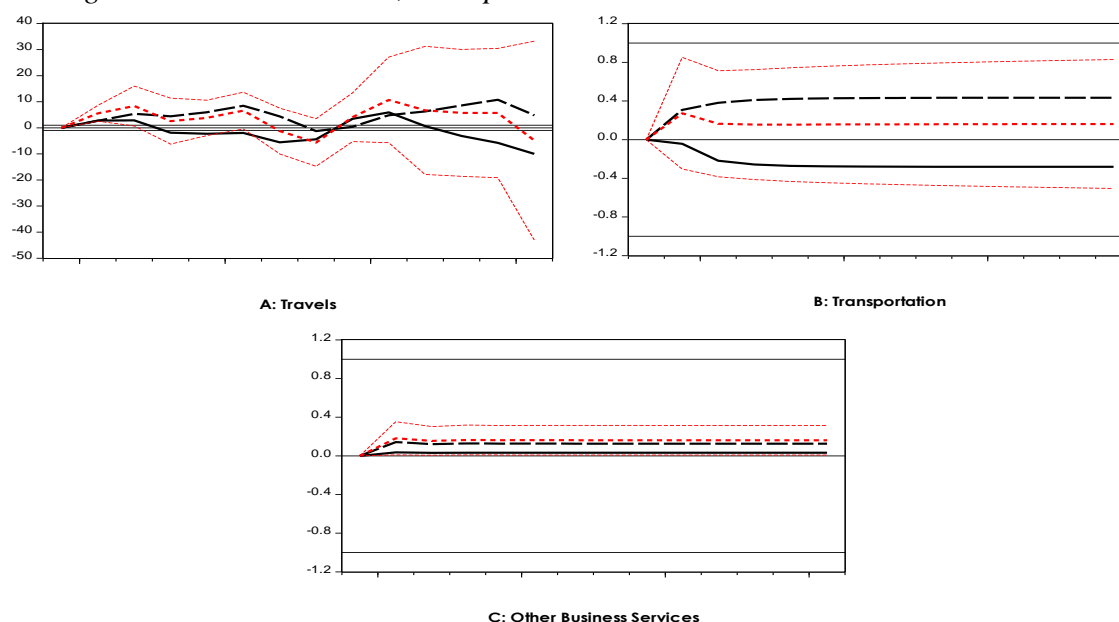| A: Travels						
A: Travel	**Short-Run**	**p-value**	**Long- Run**	**p-value**	**Strong**	**p-value**
ΔLBDC_POS	8.3631	0.0008	28.202	0.0000	7.9110	0.0049
ΔLBDC_NEG	13.030	0.0003	28.202	0.0000	7.6804	0.0056
ΔLGDPNeth	12.134	0.0004	28.202	0.0000	0.9056	0.3413
LGDPNIG	0.0504	0.8223	28.202	0.0000	0.0008	0.9769
B: Transportation						
ΔLBDC_POS	18.0472	0.0000	17.4781	0.0000	12.2029	0.0005
ΔLBDC_NEG	8.2900	0.0002	17.4781	0.0000	32.6284	0.0000
ΔLGDPNeth	3.4039	0.0650	17.4781	0.0000	4.4897	0.0341
LGDPNIG	2.2561	0.1331	17.4781	0.0000	0.6501	0.4201
C: Other Business Services						
ΔLBDC_POS	10.5393	0.0009	42.5162	0.0000	40.2401	0.0000
ΔLBDC_NEG	12.6431	0.0003	42.5162	0.0000	34.0046	0.0000
ΔLGDPNeth	10.3859	0.0012	42.5162	0.0000	6.0490	0.0139
LGDPNIG	0.1023	0.7491	42.5162	0.0000	11.4234	0.0007

To confirm the existence of asymmetry in our model, we carried out the Wald tests both in the long and the short-run. The Wald test null hypothesis for long-run symmetry was rejected and the alternative hypothesis accepted because the calculated F-statistic exceeds the upper critical bound value in all the cases (see Table 11).

Table 11. *Wald Test*

A: Travels		
Test	**Statistics**	**Probability**
F-statistic	155.7139	0.0000
B: Transportation		
F-statistic	4.1718	0.0052
C: Other Business Services		
F-statistic	97.3019	0.0000

We also test for the long-run multipliers effects for asymmetrical in the three models as presented in A, B and C of Figure 1. The upper and lower thinned dotted line represents the 95% confidence interval bound. The upper thick dashed black line represents the cumulative dynamics of Travels, Transportation and Other Business Services, respectively, with respect to a per cent rise (negative shock) in BDC while the lower thick solid black solid line denote the influence of a per cent positive shock (decrease) hitting BDC in Travels, Transportation and Other Business Services, respectively.

Figure 3. *Dynamic Multiplier Effects - Asymmetric LR & Symmetric SR for a 1% Exchange Rate Shock on Travels, Transportation and Other Business Services*

A: Travels

B: Transportation

C: Other Business Services

The red thick dotted line between the 95% confidence intervals provides the difference between a positive and negative reactions. Figure 1, illustrates that the negative component of BDC drives the asymmetry in relation to Travels, Transportation and Other Business Services, respectively. Accordingly, the reaction of Travels, Transportation and Other Business Services during periods when BDC depreciate (loss in value) surpasses that in periods of increase. However, from 2014Q1 to 2018Q4, the asymmetric response was driven mainly by the negative component in all three model.

In each model and each shock, Figure 3 (A, B and C), presents the dynamic multiplier for a positive shock (thick dashed line), for a negative shock (dotted thick line), and the difference between the positive and negative multipliers (dotted red line), along with its 95% confidence interval. Acceptance of long-run asymmetry means that zero do fall within the confidence interval in the long run.

Conclusion

Our paper employed the recent Shin et al. (2014) NARDL econometric methodology, to investigate the existence and nature of definite reactions of exchange rate for the period 2008Q1 to 2018Q4. Asymmetries in the adjustment of exchange rate were found in the three models. The study implemented a more flexible modelling approach that cautiously make a distinction concerning the short–run and the long– run performances, which allow one to resolve some mystifying evidence in extant literature and to explicate some obvious ambiguities.

The results reveal that the short-run adjustment in exchange rate in Nigeria's Transportation and Other Business Services is symmetric. The result also affirmed

that in all the three NARDL estimates, our results indicated evidently that linearity do not apply in both the short– and long– run responses. It also proves that the negative non-linearity of exchange rate to Travels, Transportation and other Business Services changes is evident between Nigeria and Netherlands. A positive non-linearity with regard to exchange rate, characteristics in all three services sectors analyzed. We discovered "asymmetric asymmetry" the coexistence of a negative and positive non-linearity with regard to bureau de change exchange rate. Finally, the exchange rate depreciation pass in the disaggregated service balance increased larger in travels than that found in transportation and other business services.

The findings from this study can be extended in several perspectives. For example, the analysis of the presence a hysteretic effects in the exchange rate adjustment mechanism would be an interesting development for Nigeria. Furthermore, our investigation was based on only on two regimes (that is, the positive and negative regimes) of bureau de change exchange rate changes. This can be attributed to the low level of the impact of diversification changes, which are distributed differently. Since this is beyond the scope of this paper, we leave it future research.

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