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**Editorial**

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# PAPERS

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# Local Government: Getting the South African Municipal Finances Right

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**Abstract:** Local government in South Africa from Musina to Cape Town have sometimes faced with strategic financial management challenges concerning budget shortfalls, financial shambles and distress, leading to unmaintained infrastructure, deteriorating quality of services, increasing municipal deprivation, and intensifying social exclusion which is the unfortunate history of many municipalities. Finance resource controlling is a fundamental constituent of any organization. Municipal effective control leads to design, muster and fiscal wealth may accumulate effective approaches that accomplish its duty to be answerable to its inhabitants. Financial control and stewardship are preceded by the interconnected management facets towards augmenting the growing design, catalytic and hands-on route. Organizing the budget necessitates indestructible adoptions. Financial control is facilitated by effective reporting and auditing is chiefly paramount for accountability in the local government environment. Weak municipal management accountability and oversight institutions prevailing in local government compromise its integrity and a potential loss to the public's confidence. Local government is confronted, by municipal fiscal administration morass and forgone fiscal reserves. The efficient budget implementation demands that it should conform to the will of the legislature's authorizations. The financial position of municipalities in terms of the business model represents assets, liabilities and equity and displays the financial health at a specific time. The community and major stakeholders use financial statements to determine the financial position of any organization. The financial position and health determine how efficiently a municipality is expanding its resources and investment. This paper seeks to close the gap that other studies have not ventured to. This paper qualitatively and descriptively explores municipal financial management enigma and proposes a turnaround to get local government finances right.

**Keywords:** *Local government, financial management, municipal administration, resources, investment.*

## 1. Introduction

Globally, local governments are under increasing economic force to do extra with fewer resources (Farvacque-Vitkovic and Kopanyi, 2014). The local Government in South Africa accomplishes well in financial controlling as compared to other emerging countries. According to (IIAG) (2018) (from 2008-2017), South Africa ranked 7th and score 68 percent out of the 54 countries in Africa (Mo Ibrahim Foundation, 2018). The Global Competitiveness Report 2018 ranked South Africa 67or a score of 60.8 of 140 (World Economic Forum, 2018) countries as opposed to 61 (2017/18). Undoubtedly, local government should learn from its financial management mystery, improve from the report and strive for excellence in financial management effectiveness and efficiency. Resilient local government financial controls are a fundamental driver for both productivity and long-term growth. Local government financial benefits extend well beyond economics, affecting people's well-being on daily basis (World Economic Forum, 2018) in many municipalities. The plague of financial management syndrome signifies weak institutions in the history of democratic South African local government after a mere 26 years of ushering into this important phenomenon and an era.

Is it a huge achievement, an extraordinary hype for a brand New Mandela South Africa democracy and something to celebrate eloquently and confidently? Indeed the financial management in local government portrait a state of morass and financially ill health. From Musina to Cape Town, most municipalities have financial restraints regarding financial control, accountability, and grants dependence, non-payment of services culture, outstanding debts and governance. Municipalities are more and more reliant on intergovernmental allocations, which have been dwindling over time, in part because of the financial burden generated by the worldwide monetary degeneration, sluggish revenue collection generation and deteriorating economic growth and Covid-19 pandemic (Farvacque-Vitkovic and Kopanyi, 2014). Local government finances are customarily adequate to fund municipals' working expenditures but not much on desirable major investments. Paradoxically, how can municipalities create reserve further than allocations, is critical for increasing financial wealth in local government? Municipal officials have to be ardent, use,

incorporate fiscal controlling philosophies and apparatuses to device their overheads, recognize innovative income foundations, and expand the local tariff pool.

For those municipalities that are in healthier economic nature, augmenting their wealth and cautiously gain access to investment market places offer prospects for insightful transformation. Certainly, upgraded control practices and heightened answerability instruments developed are vital to all-encompassing community fiscal controlling. The significance of this paper is to assist the community, practitioners, accounting officers and authorities, policymakers in provincial, national and municipal administration to appreciate the need for effective and efficient financial management, to have a discourse and get the municipal finances right in the next decade. This research is paramount as municipalities have to ensure sufficient fiscal reserve and effective financial oversight.

## 2. Literature Review

Various dynamics position and hip the way of enlarged fiscal revenue deployment in local government. Local governments have inadequate lawful taxing power (Bahl, 2012). Local governments also often underuse the taxing power that they have and as such results in the fiscal administration conundrum. The conceptualization of the municipal financial management is underpinned by iconic financial management, capital and operating budget, municipal financial plan, financial overruns/over expenditure, assuring financial compliance, financial reports, and oversight-after party. The above issues are central to the financial management literature review process in this research.

**Financial Management:** According to (Mazibuko and Fourie, 2013b) municipal financial management is preceded by the interconnected management facets towards augmenting the growing budget design, catalytic and hands-on route. Arguably, such budgetary process enables growth for capital investment for infrastructure development, maintenance of and repairs to existing infrastructure and generating revenue. Local authorities pursue sustenance on how to plan and achieve significant reserves and formulate fundable developments. Fiscal administration is a vital constituent of public organization and more specifically municipal administration. It empowers the local authorities to streamline, activate, and utilize resources in a proficient and active mode, as well as accomplish its commitment to be held responsible to its inhabitants. Municipal financial management predominantly mirrors four pillars namely: budgeting or financial plan, accounting, financial reporting and auditing (Shah, 2006). The fundamentals of the municipal finances practice are strengthened by the machinery of municipal subdivision monetary administration such as allocations, bookkeeping, information, and auditing, and their submissions in municipal administration.

**Figure 1: Pillars of Municipal Financial Management**

**Source:** Adapted from Shah (2006)

**Capital and Operating Budget:** The MFMA (Municipal Finance Management Act) directs that an annual financial plan must largely be allocated into capital and an operating budget (South Africa, Republic, 2003). Municipalities draft budgets yearly and that is preceded by a service delivery improvement plan and thus service delivery follows. Municipal budgets comprise operating budget, capital budget, operating income and expenditure. The municipal financial plan is a plan for the municipality to follow succinctly according to the predetermined budget cycle (Mazibuko and Fourie, 2013b). The municipality must compile determination approving the financial plan, striking civic levy and locating charges for that specific year. The municipality has to quantify routine goals for income from each basis and division in the financial plan, captivating into description the municipality's incorporated improvement plan. Without a forecast of each cash flow for the economical classification by income foundation and apportioned it per month will influence the task. Such a financial plan should give specifics of public reserves.

In both coherent and sequential categorization, the central phases in the budget planning development progress from the explanation of the macroeconomic and financial structure to the question of financial, plan guidelines, planning of budget plans, debates on those plans, and then arrangement to and authorization by the governing body (Shah, 2007). Three main circumstances are required for the anticipated result of a budget that is both precisely comprehensive and authentic to dogmatic commands: enchanting an intermediate duration standpoint, building early pronouncements, and set an unbreakable control. To be a real tool of fiscal administration, the municipal budget must without hook or crook is a trustworthy instrument. To be dependable, the disbursement plan must be inexpensive (Shah, 2007). Therefore, financial planning should be evaluated on a monthly and quarterly basis to ensure that what revenue is budgeted for is still on course. The state of affairs should take into account that the revenue approximation may change before the budget is concluded and of course to produce a dependable revenue-expenditure compendium.

**Municipal Financial Plan:** Mazibuko and Fourie (2013b) allude that without financial resources municipalities cannot deliver services to the community. To this end, there would be a need to exploit sufficient revenue through by raising taxes, levies, rates and service changes from the inhabitants. The procedure is to put a budget or a financial plan in place and package the requirements according to financial

management norms and standards. Organizing the budget or municipal financial plan necessitates indestructible adoptions. These pronouncements are a charge driven, circumvented, at countless fees. The necessary interchanges must be made unambiguously when articulating the budget. This will result in a horizontal application of significance platforms, thwart interference and budget package administration accomplishment. Dogmatic intervention, managerial feebleness, and the dearth of required evidence frequently prime to rescheduling these durable ranges until budget implementation. According to (Simson, Sharma, Aziz, 2011), the various municipal procedures are designed in the financial plan phase. Such a yearly progression targets safeguarding public disbursement is a healthy prearranged implementation and accounted for. Hashim (2014) postulates that financial planning starts with the development of a circular demonstrating profitable prospect. The preparation is also comprehensive program intentions.

On how the financial plan is estimated to accomplish goals and sectoral apportionments and limits dependence with the macroeconomic structure. The financial planning or budgeting procedure is vibrant in setting out the municipality's prime of disbursement significances and classifying the funds indispensable for the apprehension of strategic overheads. Budgeting and resources are vibrant in the forecasting, control, and assessment of regime maneuvers. The financial arrangements and development make available moderate for formative what administration facilities will be provided and how they will be funded. The budget helps for the attainment of municipal objectives goals. The budget as a financial tool is compiled using monetary and other pertinent demographic data. Monetary data includes the approximations of resources, what is available and required to accomplish recognized essentials, while other sources of information entails public priorities, policy, and political considerations. The financial plan implementation is the phase whereby means are utilized to apply policies integrated with the plan. Good financial plan groundwork comes first, lucidly and chronologically. Municipal administrators should categorically understand that financial planning procedures are not originated simply instruments for warranting compliance with the original program design.

**Financial Overruns/Over Expenditure:** The internal and management control function in any municipal capacity is paramount, fundamental and without it, the pillars of financial management would be twisted (Mazibuko and Fourie, 2013). Fiscal plunders should be steered off of contradiction at all the intervals. Disbursement control applications on guaranteeing that funds are allotted and used to accomplish approved primacies are imperative. Besides, the evidence would be presented to qualify municipality to organize and screen the performing of their plug-ins and the bearing of their outflows. The material outfits comprise an arrangement of resources and outflows, apportioning or appropriating incomes and relocating resources and purposes, governing and achieving costs and the announcement of money and checking spending enactment (Farvacque-Vitkovic and Kopanyi, 2014). The assurance point is once an imminent commitment to pay is sustained. The commitment phase is paramount in monetary controlling, as expenditure decisions become effective.

Certainly, overruns are triggered by non-compliance with the expenditure parameters distinct in the financial plan, once expenditure is committed. Overruns shot into debts cohort, the effect thereof is off-budget outlay contrivances e.g. outflows from unusual, "below-the-line" of the account items. In certain municipal environments, spending procedure may be cumbrous, "unique techniques" are fashioned to side-step them. Deficiency in compliance may be overcome by solidification inspection structure, bolstered by reporting and co-ordination. In addition, guaranteeing the value of the rudimentary fiscal performance gearshifts should be considered part of the financial planning (Shah, 2007). The CFO (Chief Financial Officer) must appraise any directive or draft pronouncement that can have a financial bearing. Arguably, Chief Financial Officer may plunder; and knee-jerk appropriating developments. Comprehensive financial planning procedures and satisfactorily established measures are a precondition to circumventing plunders. However, in certain municipal environments with unscrupulous supremacy, pursuing resolutions on the procedural flank might be deceptive.

**Assuring Financial Compliance**: The CFO must take a pronouncement to transmit a program sanctioned in the financial plan. The rudimentary compliance gearshifts during financial planning related to the commitment phase. Certainly, financial imperative corroboration through proposals may expend budget that is ratified by a lawful official and adopted for the single-mindedness in the budget. Besides, it should ensure that sufficient funds are remaining available in the suitable grouping of spending. Further, the spending is

projected under the right grouping (Shah, 2007). Any non-compliance should be reported to the provincial treasury for intervention. Mazibuko and Fourie (2013b) posit that the stakeholders should ensure accountable employment, compliance and proprietorship of the structure of internal and management controls.

**Financial Reports**: Expenditure proposals and revenue forecasts and financial analysis will follow once the budget is finalized. Financial reporting and auditing are fundamental in local government (Mazibuko and Fourie, 2013b). The analysis of reports is done monthly pursuant section 71 of the MFMA whereby actual revenue, borrowings, expenditure, capital expenditure amount of any allocations received which are related to actual expenditure, material variances, remedial or corrective steps, projections of revenue and expenditure and any information of the state of budget are put (South Africa, Republic, 2003). Simson, Sharma and Aziz (2011), hypothesize that financial reports are aimed at cultivating budget compliance. They deliver wealth for internal or external actors to evaluate management routine. Pecuniary account and reporting demand mining and offering records from the bookkeeping system in traditions that expedite inquiry. Municipal administrations harvest an assortment of intelligence in the form of reports for internal and external assimilation. The Accounting Officer in the council must after 10 days of the month ending submit a monthly budget statement evaluating the budget implemented (South Africa, Republic, 2003). The Accounting Officer must provide a mid-year budget and performance assessment report as per the municipal budget statement. The report should also state failure if any and reported to Provincial Treasury and ultimately to National Treasury. There the implementation of oversight reports on annual reports cannot be overemphasized.

**Oversight-After Party**: Oversight is paramount in the financial management environment cycle. This can be applied through Council, Municipal Mayor, Municipal Executive Committees; Portfolio Committees especially the Municipal Public Account Committee, Finance committee should put their hands on the deck. The submission, auditing of annual financial statements, annual reports and monitoring thereof are the ingredients for municipal financial management safe nirvana, hegemony and dynasty. The Auditor-General is a Chapter 9 constitutional body autonomous of the government with the supremacies to examine government transactions, structures and practices. Mazibuko and Fourie (2013b) assert that financial audits are designed to detect problems in the system of internal control, adherence to reporting standards and anything matter thus results in misappropriation of funds.

Auditing is a valuable mechanism and the procedure of autonomous authentication of the accounts and monetary information. Auditing provides assurance to external persons and bodies around the trustworthiness of the municipal financial data. Auditing is liable for the examination and analysis of municipal pecuniary, ensure compliance and assurance to the municipality. In addition, the need for continuous municipal government audits is to guarantee the economic usage of municipal coffers in harmony with largely regime priorities (Hashim, 2014). Simson, Sharma and Aziz (2011) posit that external auditing is the critical compliance mechanism in municipal government. External auditing so designed when implemented in harmony with the legislation may deliver municipal amenities according to the wishes of the electorate.

## 3. Research Methods

This study used qualitative research to identify and collected secondary sources of information to explore the local government's financial challenges and opportunities. To this end, various books, journal articles and government reports were collected for this study.

## 4. Discussion

Local government revenue is self-generated. The sources are from property taxes and services to businesses and ratepayers cum residents. There are two main sources of revenue namely: own revenue and intergovernmental fiscal transfers (Mazibuko, 2013a). These two components in the main form a greater chunk of financial management. Despite the above all-encompassing organization, the financial health in the municipal government has circumnavigated to a locus of nimble state orchestrating and designing the

institution to a huge loss of public confidence in municipal governance. The state of financial mismanagement is widespread in the South African Municipal administration. The spending of more than the resources available at their disposal and that result in budgets those are unfunded. Municipal revenue streams are continuing to be less resistant and growing in harmony with the population growth of the municipal environment. The revenue growth conundrum is in the main caused by the non-elasticity of the revenue regimen. The political will to enforce, collect and exploit revenue from residents fully lead to high implementation of intergovernmental transfers or grants in local government.

The state of affairs is grant dependency in local government leads to financial management morass. The "culture of non-payment (Financial and Fiscal Commission, 2020) increases the financial management generally and specifically the municipal revenue mystery in municipal governance. The culture of non-payment in question surprisingly happens even to national and provincial governments not wanting to pay water and electricity rates and taxes accruing for local government. How do we then expect the municipalities to grow and be financially viable and autonomous in that kind of environment? Quite unlikely! Right/wrong? The local government in South Africa's financial management needs to be put right. The discussion on putting the municipal finances rights will focus on municipal planning and budgeting, local revenue management, municipal governance, budget Implementation, municipal financial position, creditors' management and municipal fiscal sustainability. The selected issues are paramount to assist in helping the local government put her finances right.

**Municipal Planning and Budgeting**: In municipal administration, planning and budgeting is an annual ritual. If the incompatibility of the different roles of planning and budgeting were not sufficient, more recently these problems have been exacerbated by events in that municipalities use budgeting systems to integrate everything. The increase in global competition is also putting pressure on municipal administration (Bourne, 2005). If dealing with the external market changes is not in itself, there are new management paradigms, reporting and regulatory requirements to deal with. The stakes from getting the budget wrong are getting higher. There is a move towards quarterly reporting, putting pressure on municipal councils to meet financial results quarterly and forecast more frequently. Municipal budget planning has to ensure a sufficient plan for infrastructure management, operations and maintenance.

**Local Revenue Management**: Mazibuko (2013a) refers that self-sufficient revenue collections are an organizational reform in municipalities. The municipality tax base in the context of the economic and social environment and legislative environment is paramount in the municipal administration. Municipal revenue has historically been introduced for purposes of financing municipal infrastructure development and services. Certainly, an excellent financial management system should be preceded by a set of high standard principles of revenue exploitation. The principles can be categorized as vertical equity, horizontal equity, and ability to pay principle, economic principle, financial principle, efficiency principle, simplicity principle, beneficiary principle and enforceability principle. It goes without saying that services should be financed by beneficiaries/residents/property owners (Shah (2006)) in terms of the general benefit principle, directly or indirectly (Slack, 2009). What is prevalent in municipalities is constraining funding for infrastructure development is the culture of non-payment of municipal services. The cause for the intensification in defaulters among households is connected with fragile income collection (South Africa, Republic, 2019). Shah (2006), states the application of payments is paramount in revenue collection.

What is also apparent in municipalities is the fragile prosecution which is instigated by the non-existence of consequences for non-compliance with legislation. Deprived revenue prosecution may be due to factors such as the absence of answerability; deficiency of political willpower to exploit and administer revenue collection; frail established and organizational capacity, a dearth of inducements, absence procedure in promulgation revenue, disbursement casualness associated with dishonesty. Dearth impedes leaders on how countless taxpayers are omitted from their revenue master files, In addition, how many of those who are registered are listless, and how much is actually being avoided in tax payments. Certainly, even when taxpayers are documented and enumerated and lively, sometimes there is no complete and reliable evidence on their tax charges, tax payments made, and their balances. Such revenue remains irrecoverable debt for the municipalities and would stay in the debtors' book for over 120 days. Land tax and environmental taxes on

the illegal cutting of trees in the rural areas and damaging the environment are some areas where such exploitation of revenue can be considered (Mazibuko, 2001).

Certainly, some taxes can be strategized in the municipal revue business model. Local business tax is another revenue source resilient than, for example, property taxes. Vehicle and conveyance taxes are revenue sources worth exploitation. Natural resource taxes with regards to fishing opportunities, quarrying, mining, molding of bricks in the rural areas, in particular, can generate revenue for the local government. Improvement on and construction: This is one area where revenue can be generated that can add an impetus for the growth of income of local government (Financial and Fiscal Commission, South Africa, 2020). Land-based revenue may be exploited in South Africa as they are appropriate for investment, especially from infrastructure development. The land is an instrument to be leveraged to finance local infrastructure development. Municipalities in North America levy development charges on developers which augment funding for infrastructure development (Un-Habitat, 2009). For good governance proper, financial plan execution structure must ensure amenability with fiscal sanctions.

**Municipal Governance**: The Weak municipal financial management accountability and oversight institutions prevailing in local government do not bring sustenance to municipal administration. Good governance is an armament that can save the local government from monetary anguish and unwholesome pecuniary atmospheres. Shah (2007) posits that, relates to answerability, predictableness, and membership. Answerability is a critical dimension for municipal administrators to be accountable for their actions. These theories are collective in the claim but comparative in the landscape. Answerability is an obligation, but it does not convert working pending one outlines answerability of whom, for what, and to whom. To this end, complete compliance by means of guidelines is not sufficient if the guidelines are ineffective and do not involve community members (Shah, 2007). In an endeavor to steer a people's socio-politico-economic development, governance is a multidimensional complex state of establishments, organisms, organizations, procedures, actions, practices, associations. Management performance in the implementation of social, political, economic, and leadership power in municipal administration is also paramount. Involvement of communities, listening to concern, as the powerful dynamism is a sign of good governance (Kauzya, 2003). Local government is confronted by municipal fiscal administration morass. Simson, Sharma and Aziz (2011) state that municipal financial management triggers all regime bustle. It embraces the deployment of income; the distribution of these resources to countless accomplishments; disbursement; and accounting for expended funds. Financial management execution calls for the budget to be employed in orthodoxy approved in the legislation.

**Budget Implementation:** The efficient financial plan implementation demands that the budget conforms to the will of the legislature's authorizations. The state of affairs should be in line with changes in budget program implementation that is managed efficiently, preventing any threat of exploitation and fraud (Shah, 2007). Simson, Sharma and Aziz (2011) assert that to gain any thoughtfulness on how resources were utilized should be through monitoring of expenditure results and proper implementation processes. According to Hashim (2014) the budget implementation, through well-thought accounting and financial reporting functions is tied to a financial plan or budget. The budget or financial plan dictates that municipalities should deliver the services that citizens have demanded. Such an action should be through choices made in a democratic process of public participation. Certainly, the available resources should be implemented efficiently and economically. Financial plans are tools of monetary self-restraint and control mechanism used by both the policymakers and the governmental divisions of a local government (Shah, 2006).

The budget for repairs and maintenance spending should be scrutinized by movement on monthly basis, and industrial endorsements. Municipalities undergoing pecuniary hassle repeatedly pursue to instantaneously decrease overheads on maintenances and upkeep as its influence is not directly noticeable (South Africa, Republic: National Treasury, 2018). Local government experience budget under-spending year in year out in the number of municipalities. The under-spending problematic distresses the endorsed financial plan and, predominantly, its infrastructure expansion budget. Certainly, under-spending is linked to inadequacies in planning. To this end, overrated financial plans and impracticable forecasts of incomes are central to redesigning the budget throughout budget implementation. Arguably, when a financial plan is poor, inefficiencies in budget planning are addressed through monotonous financial arrangements. Under-spending

replicates meager planning; save with unforeseen events such as natural disasters (South Africa, Republic: National Treasury, 2018).

**Municipal Financial Position:** The financial position of municipalities will normally represent assets, liabilities and equity, displays the financial health of the municipality. When diagnosing the reasons that contribute to the municipal liquidity challenges it is prudent to holistically examine the organizational and operational management inefficiencies. The causes related to organizational factors including mismanagement, transparency and public administration and other political factors. Organizational factors are relatively easier to resolve because they are often internal to the organization. The financial statements of a municipality show how it spends its money, where its revenue comes from, its assets and the state of those assets, how much it owes creditors, how much is owed to the municipality (South Africa, Republic: Auditor-General of South Africa, 18). Challenges are also experienced with enforcing debt collection and an increase in the aged debts, inadequate collection of service charges and culture of non-payment, poor compliance and inefficient collection of revenue (Fjeldstad, 2004), resources and managing in municipal government during fiscal crises.

The worrying and pathetic factor is that some municipalities are unable to pay salaries to 1,670 councilors, traditional leaders and all staff for four months. The municipality is in financial distress wants R330m more to cover for salary crisis and layoffs (Soyiso Maliti and Daily dispatch, 14 January 2021). Certain challenges have been exacerbated by the recession and financial shortfalls (Jacobson and Sowa, 2016). Liquidness encounters are the most shared exhibition of pecuniary misery in municipalities. Municipalities with liquidity encounters fail effectively to providing amenities, billing for services and collecting the revenue owed to them. A municipality must have sufficient reserves to provide its monthly fiscal obligations and commitment. Cash and liquidness glitches force result in a municipality with helpless exposure cash situation. Many municipalities experience impermanent complications. The reserve equilibrium balances a solid pointer of unembellished principal fiscal difficulties (South Africa, Republic: National Treasury, 2018).

**Creditors' Management:** Creditors' management is vital in financial management environments. Mazibuko and Fourie (2013b) postulate critically on creditors and accounts payable that remain unpaid after 30 days of the date of the invoice due to cash flow problems. Apparently, municipalities do not comply with the MFMA and that their cash flow administration is scrawny as creditors are not paid within the limits set in the procurement legislation. National and provincial governments provide capacity and certain interventions to assist municipalities to hit the ground running. However, despite this support municipalities continue to façade through fiscal organization watershed. Arguably, the deficiency of steadiness and organized compliance in organizational governance can taint the fiscal well-being of a municipality and thus public confidence (South Africa, Republic: National Treasury, 2018). Creditors are important stakeholders in the procurement authority as they provided services to the government. Certainly, an unrealistic budget can be the cause for this unfortunate state of affairs, and ultimately affect municipal integrity and hence dwindling in public's confidence in local government. Performance indicators on spending should be well-matched with financial limitations and be prearranged in the planning cycle.

**Municipal Fiscal Sustainability**: Arguably, South African municipalities are insufficiently fiscal sustainable. Local governments need fiscal reserves to manage fluctuations in revenues and spending without disrupting the provision of infrastructure development and services (Gorina, Maher & Park, 2019; Guo and Wang, 2017). To ensure municipalities remain going concerns, able to sustain existing services and progressively extend services, they need to ensure that the municipal budget is funded in accordance with legislative imperatives. Effective fiscal sustainability indicators have to assist municipalities as measures of the financial flexibility of municipalities. Certainly, the fiscal sustainability measure indicates the capacity of a municipal organization to respond to changing circumstances and that encompass the adverse financial shock. The liquidity of a council is very much important in the financial environment, financial standing and stability of the council (Ryan, Robinson & Grigg, 2000). Arguably, in the implementation phase, there would be no adequate techniques that exist. Such an arrangement of a measure should be able to measure the municipal council's ability to pay its short term commitments and providing a status of the viability of the council in the long term.

## 5. Conclusion and Recommendations

Despite several financial management reforms that took place in South Africa's local government since the dawn of democracy, municipalities are still faced with financial management conundrums. The major fiscal policy question to be addressed is how the alternative revenue to cover the shortfall will be found. However, there is a need to respond to financial management mystery that will focus on the unending riddle in financial management in local government. The public's confidence is dwindling day in and day out, this paper calls for government practitioners and policymakers across the board to be pained by what is transpiring in local government in general and specifically financial management and then take a break and take stock of the suggestions in this novel article. There is a need to sign a pledge and say enough is enough and ensure that things are indeed turned around for the good of future generations 100 years to come. The following are proposed for the local government financial management policy shift.

**Financial Management Policy Alternatives:** South African local government needs skills in strategic financial management positions at all levels. South Africa is part of the global world; municipalities should be considered business investment institutions. Certainly considering the alternative sources of revenue on an on-going basis is something needing a paradigm. Natural resource taxes with regards to fishing opportunities, quarrying, mining, and molding of bricks can generate revenue for the local government. Improvement on and construction is one area where revenue can be generated that can add an impetus for the growth of income of local government. Benefit charges can increase revenue potential in municipalities especially those levied on land. Municipalities could be empowered to levy the transfer tax on real property. Land tax and environmental taxes cutting of trees in the rural areas and damaging environment Local business taxes are another revenue source. Vehicle and transportation taxes-are revenue sources worth exploitation. Land-based revenues to finance local investment should be viewed as an investment. Public-private partnerships between municipalities and a private sector party can enhance the funding capacity of municipalities. This research calls for improvement in planning and budgeting processes. There is a need therefore to decouple the achievement of the budget from the compensation process. Decouple the budgeting and forecasting process.

Budgets are concerned with resource allocation and as such require management input and negotiation and forecast can be done using financial models. Use external benchmarking to set cost control targets. Certainly, financial targets are easy to manipulate, therefore set direction using both financial and non-financial performance measures. Improving the financial position can be done in the short run by reducing service levels and competitiveness. It is imperative therefore to build explicit links between the major non-financial activities and resulting performance and then manage the change in these relationships. Certainly, the fiscal exchange cannot be overemphasized in that compliance on the payment of services for example can be motivated by the presence of government expenditures. Residents may pay for service changes because they value the goods or infrastructure paid by municipalities, recognizing that their payments are necessary both to help finance infrastructure development. It should be borne in mind that fiscal exchange requires the trade-off gains that may be seen as a prerequisite of voluntary compliance. The existence of positive benefits, measured according to quantitative and qualitative criteria, may increase the probability that ratepayers will comply voluntarily without direct coercion. There is a need to consider fiscal sustainability which has a capacity of the organization that can meet present and future levels of debt and financial obligation. That has to be supported by the municipality's revenue constraints.

There is a need for municipalities to have a fiscal reserve in revenue and spending which may be driven by the financial management practices of the neighbors, shared environments. Certainly, fiscal sustainability measures should encompass own revenue reliance, revenue flexibility/intensity, indebtedness and liquidity. There is to get the basics of cash management and revenue management right. The relationship between financial planning and effectively managing municipal cash resources and ensuring regular bank reconciliations of municipal accounts are undertaken. In respect of revenue management, it means paying attention to the integrity of billing information, the accuracy of bills and having dedicated managers able to build administrative implementation systems that integrate each component of the revenue value chain. A careful balance will need to be struck between adjusting taxes and tariffs to cover the full, long term costs of service delivery and improved expenditure efficiencies. There is a need for the crop of Leadership acumen

and strategists with a proven pedigree of running corporate without outstanding professional ethics. South African local government needs skills in strategic financial management positions at all levels. It can be through cadre deployment/political connected or whatever-the skills requirement. To do financial management work should be the key goal to gunner for effectiveness and efficiency and value for money.

Skills so required should amass sound and strong financial management capacity, strategic management capacity, and business acumen regimen just to cite few examples that could turn around the financial fortunes of municipalities. There is a need to strengthen local government budget execution systems. Amend legislation for large cities and accord them provincial and local government status. The local Government in South Africa may design an approach to address the municipal fiscal conundrum by moving large cities to state government status. The state of affairs may take away some of the roadblocks to increased revenue-raising powers. To this end, it would resolve much of the local government fragmentation problem and thus restores her fiscal autonomy to the local government. To ease the financial distress in some of the municipalities, it would be imperative to design a new fiscal architecture that encompasses the city-state. The municipal area may have spread across jurisdiction boundaries so that the city-province status is assigned to the core city. The municipal government becomes a state in the province and have more manageable boundaries without the understructure of local governments to deal with. Based on the above, the local government would have turned the tide and finances may be put right.

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# E-Commerce Adoption by Small Medium Enterprises: An Extensive Literature Review

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**Abstract:** This study aims to review academic research work carried out in the field of e-commerce adoption. The e-commerce area has been classified into three broad categories, namely technological context, organizational context and environmental context. Finally, this study identifies the important role of SMEs, an overview of e-commerce technology and the adoption of e-commerce. This study collected 52 research studies in the field of e-commerce. This research provides a systematic review of the above studies. This study classifies 3 important factors in e-commerce adoption, namely technology, organization and environmental factors. This study identifies that to increase the success of e-commerce, it is necessary to consider the determinants of e-commerce adoption so that e-commerce players can excel in the competition. This study will make a positive contribution to understanding e-commerce adoption for academics, industry, regulators, and other e-commerce users.

**Keywords:** *SMEs, E-commerce Adoption, Determinant Factors.*

## 1. Introduction

E-commerce, one of the advances in information technology, has undoubtedly become very prevalent in recent years, not just among academics but also among professionals. Four distinct innovation attributes are linked to its success: the opportunity to enter markets and worldwide expertise directly; industry expeditions; the ability to transform business processes; and a shift in the power balance between suppliers and customers as knowledge becomes easier to access (Bohme et al., 2008). While e-commerce research started in the 1990s, this topic is still an important subject to be studied today. Most e-commerce studies were conducted from the 1990s to 2008 in developing countries. Based on an exhaustive analysis of 345 IT innovation-related papers published by Williams et al. (2009) in 19 peer-reviewed journals between 1985 and 2007, 82.7% of IT studies are performed in developing countries, in developed countries, there are few IT studies. In recent years, e-commerce studies have been performed in developing countries, but primarily for African and Arab countries along with China.

It is, therefore, no surprise that e-commerce has become common in recent decades. In2009, based on the IDC report (2011), 624 million web users made online transactions with gross revenues of approximately $8 trillion (B2B and B2C), and this figure is expected to rise to more than $16 trillion in transactions by the end of 2013. According to Statita, B2B transactions were $1,058 trillion worldwide for B2C alone in 2012 and by the end of 2015, this figure is estimated to hit $1.92 trillion. In Asia, the data released by World Statistics Internet (2015) also shows substantial growth in e-commerce which is 1.56 billion Internet users in Asia as of June 2015, while the number of Internet users in 2000 was just 114 million. Nevertheless, the increasing use of e-commerce by companies is mostly seen by big corporations. Compared to large businesses, the adoption of e-commerce by SMEs is considered to be relatively slow (Alam et al., 2011; Govindaraju et al., 2015; Chiliya et al., 2011). In addition, the objectives of this analysis are what factors influence the adoption of e-commerce by SMEs.

## 2. Important Role of SMEs

It cannot be denied that in terms of economic development, SMEs play an important role. On average, 95% of the world's companies are SMEs; they consume up to 65% of employment (Kotelnikov, 2007). These SMEs allow an immense contribution, not just in terms of numbers, in almost every country in the world, but also in terms of work provision. In the United States, for example, a statistical study from the Office of Small Business Administration (SBA) Advocacy (2011) reported that 99.7 percent of all hiring companies serve small firms. They hire about 49.6 percent in the private sector of all workers and have created 60 to 80 percent of the net new employment every year over the past decade. In the United Kingdom, the Federation of Small Business Reports (2012) estimates that SMEs account for 99.9 percent of all private sector companies and employ

more than 14 million employees (59.2 percent). While the EU Annual Report on SMEs (2011/12) refers to the European Union, approximately 99.8% of businesses are small and medium-sized enterprises, which provide 67.4% of all jobs and contribute 58.1% of the gross value added. In developed countries, as well as in developing countries, such as the Philippines, Indonesia, Thailand and Malaysia. A large number of SMEs (97% of all enterprises on average) also exist and account for more than 60% of the workforce. For more information, Table 1 below indicates the contribution of SMEs in selected developing countries in Asia.

**Table 1: Role of SMEs**

| No | Country | Number of units | Employment | Value Added |
|---|---|---|---|---|
| 1 | China | 99.7 | 74 | 60 |
| 2 | India | 95 | 80 | 40 |
| 3 | Indonesia | 99.9 | 99 | 63.1 |
| 4 | Malaysia | 94.5 | 40.4 | 26 |
| 5 | Philippines | 99.6 | 69.1 | 32 |
| 6 | Thailand | 98 | 55.8 | 47 |
| 7 | Vietnam | 96.8 | 96.8 | 39 |

Ayyagari et al. (2011) would also have supporting evidence. They found that SMEs made a major impact in terms of jobs and job growth, Based on a 2006-2010 survey of 104 countries. The findings show that SMEs contribute 47.94 percent of employment on average. UKM contributed 75.6 percent to job growth as well. This contribution is very high in relation to large corporations. This study collected 52 research studies from Google scholar, the social science research network, and the research gate in the area of Small Medium Enterprises. This study presents the systematic review of the above studies.

## 3. Overview of E-Commerce Technology

E-commerce defines by Turban (2010) as “the process of purchasing, selling, transferring, or sharing goods, services and/or data over computer networks, often the Internet and intranets." Clarke (2005) provides a more comprehensive element of the e-commerce feature to describe e-commerce, which is "commerce support services. It encompasses inter-organizational e-mail, databases, commodity trading support systems, goods, personalized goods and services, knowledge management and statistical reporting systems. Then, e-commerce is described by Govindaraju et al. (2012) as the process of exchange of information and transactions involving products and services through information technology such as networks, software, non-wireless equipment and electronic wireless equipment". Besides, all internet-based economic activities have been reported to be called e-commerce (Tagliavini et al., 2001). E-commerce differs from the traditional approach in terms of using the Internet in business processes. The business process usually begins with the client manually drafting the purchasing document, printing the paper and sending it via fax or courier service to the supplier.

In e-commerce, on the other hand, certain conventional steps can be performed electronically, such as filing documents manually, faxing or couriering documents and entering documents, so they can be removed. As a result, transactions are done more quickly and economically. Abell and Lim (1996) found that in New Zealand, SMEs use the internet to connect with internal and external parties, obtain supplier information, provide data, conduct market and product analysis, position supplier orders, and accept customer orders. Drew (2003) discovered that the internet is used for advertising and marketing of SME products, sales to end consumers, sales to distributors, while e-mail and intranet systems are used for internal correspondence. In line with this, Daniel and Wilson (2002) claim, summarizing from previous research, that e-commerce technology helps SMEs in various activities, namely: providing knowledge about companies, Providing details on the products and services provided, acquisition and placement of orders, receiving payments, selling products and services, contacting service or after-sales, finding suppliers, supplies and non-inventory sales, interacting with both internal and external parties.

Exchanging customer or supplier documents and designs, finding information, advertisement and hiring activities. The above description demonstrates that the technology of e-commerce is also appropriate for SMEs, it can be used in many business operations, and it also allows them to do so. In addition to allowing

SMEs to carry out different tasks, e-commerce also offers several benefits for SMEs. The study of 118 SMEs in Sweden conducted by MacGregor and Vrazalic (2006) found seven benefits for SMEs through e-commerce. Reducing costs, reducing stock overhead, increasing load times, improving control, enhancement of the standard of knowledge, increasing sales and improvements in e-commerce adoption partnerships with business partners experienced by SMEs. These advantages are categorized into two important classes by MacGregor and Vrazalic (2006), in which "internal performance" factors are five advantages, and "marketing benefits" factors are the last two advantages. Daniel and Wilson (2002) found that six advantages recognized by SMEs in relation to the adoption of e-commerce have been established, centered on a study of the UK's 678 SMEs.

There are enhanced internal information sharing, enhanced competitive position, better and productive operation, attracting new customers, increased supply and workers recruited online. Santarelli and D'Altri (2003) found, in the Italian context, that e-commerce allows SMEs to increase customer numbers, broaden markets and improve communication. Meanwhile, Wade and Johnston (2007) discovered in three EU countries (Germany and, UK, and France) E-commerce continues to fuel revenue growth for SMEs, increase the cost of goods sold and reduce the cost of goods sold. Another research by Tan et al. (2009) conducted the study on Australian small businesses facing the problem with the launch of internet commerce. After using e-commerce, a participant in this study was twenty-three small businesses. They find new customers, for example, become part of a new business network, and while some businesses also have reduced time to search and retrieve data, especially if they know the exact address. Some organizations have also achieved cost savings by using e-commerce. Furthermore, Jahanshahi and Zhang (2013) found that five key significant benefits of e-commerce identified by SMEs have also been revealed such as Iran, India, Malaysia and Iran, are improved corporate and brand image, reduced costs, improved customer support, improved business process flow, increased productivity.

## 4. E-Commerce Adoption

In political social, educational, legal and infrastructure matters, developed countries vary greatly from developing countries. These gaps would restrict the use of emerging technologies, including e-commerce technologies, which were originally made in developing countries based on developed countries' conditions (Kartiwi, & MacGregor, 2007; Tan et al., 2007). There are also political, socioeconomic, cultural, legal and infrastructural inequalities between developing countries, but not as high as developed countries and developing countries. Also, it could be argued that it is not possible to generalize the study results obtained in some developed countries to other developing countries. Certainly, the absence of EC studies focused on developed countries provides researchers the ability to do so. This research was therefore carried out in the developing world, Indonesia in this case, to fill this void. Some studies are in the field of e-commerce, which focuses on big business (Daniel & Grimshaw, 2002), and fewer researches are in the field of SMEs (Parker & Castleman, 2007). Just 120 journals on the adoption of e-business/e-commerce in SMEs were found in their systematic search of 51 journals published between 2003 and 2006. Big business, or vice versa, not only is the big version of small business. Not only do they vary because of scale, but they also differ in several ways.

There are at least four characteristics that differentiate it according to Kartiwi and MacGregor (2008), Management-related; decision-making and planning processes; availability of resources. Some examples of these attributes are that SME firms tend to focus on the viewpoint of short-term planning; insufficient planning; lack of technology; small market share; limited emphasis on goods; more uncertainties; less risk-averse; and then SMEs are riskier than large enterprises. This illustrates SMEs are unable to quickly enforce strategies or policies implemented by large enterprises, introducing e-commerce technologies planned to fulfill the needs of major corporations in developed countries. On the other hand, SMEs are known in many countries as the engine of economic development, this will have a direct effect on the national economy, particularly in developing countries (Ghobakhloo & Tang, 2013) and their performance (Poon & Swatman, 1999). The limited number of studies and the strong efforts of several parties promoting e-commerce adoption by SMEs provide researchers with opportunities to conduct studies on e-commerce adoption in SMEs, especially in developed countries. In addition, two major groups, namely upstream and downstream studies, can also be divided into e-commerce studies (Molla & Heeks, 2007). The first refers to research that aims to look at the variables that promote the adoption of e-commerce.

On the other hand, the latter applies to research that aims to look at benefits post-adoption. Some examples of upstream studies are a study performed by Alam et al. (2011), Aboelmaged (2010), Al-Qirim (2007), Aboelmaged (2010), Baridam and Nwibere (2015), Chiliya et al. (2011), Kurnia, Choudrie, et al. (2015), Tan et al. (2007), Grandon and Pearson (2004b), Govindaraju et al. (2012), Saffu et al. (2008), Raymond (2001), Quaddus and Hofmeyer (2007). In the meantime, the analysis performed in a downstream review by Sila and Dobni (2012), Molla and Heeks (2007), Mustaffa and Beaumont (2004) and Abebe (2014) is graded as. It is important to know the factors that drive or hinder business especially for SMEs, but it is equally important to understand how implementing e-commerce benefits business efficiency. Salwani et al. (2009) some of the main reasons why SMEs are still reluctant to implement e-commerce technology are recognized as: lack of success stories; absence of awareness of e-commerce and lack of understanding of the potential effects on business results of e-commerce implementation (Salwani et al., 2009). For these reasons, SMEs are afraid to invest their capital in this technology, particularly in developing countries. Then, based on their level of study, technical innovation studies may also be graded (Frambach & Schillewaert, 2002: Hameed et al., 2012; Premkumar, 2003; Quaddus & Hofmeyer, 2007).

The classified this study into three main levels: individual, group and organizational by Hameed et al. (2012), while Premkumar (2003), Frambach and Schillewaert (2002), and Quaddus and Hofmeyer (2007) conducted study was classified into two main levels which are individual and organizational. In terms of innovation adoption, individual-level studies concentrate on individual behavior. Some of the ideas mentioned in the previous section apply to the organizational and individual level, and some of them can be extended to research at individual and organizational levels. TPB, TRA, and TAM are closely related to the analysis of the individual level; TOE and PERM are linked to the analysis of the organizational level, while IDT can be used as an analysis of individuals and organizations. Based on a systematic analysis of 151 studies performed by Hameed et al. (2012), most of the studies were undertaken at the level of organizational and few at the personal level. This makes sense, because not only can one person be credited to the implementation of IT innovation in organizations because it will include several people. The decisions taken in organizations to approve or reject IT technologies are made by consensus of individuals with sufficient organizational authority or left to several individuals (Premkumar & Roberts, 1999).

While decisions are taken by consensus among individuals in the company, to obtain an organizational level image, it is not advisable to combine individual perspectives. This condition will cause bias in aggregation, decreased predictive ability and may also lead to results being over or underestimated (Hameed et al., 2012). Furthermore, as stated in the previous subsection, in the review of e-commerce adoption by SMEs, the use of individual perspective theory cannot capture the peculiarities of SMEs, and organizational level research is proposed to be used to recognize the implementation of IT innovation within organizations, such as e-commerce. Therefore, this study uses an organizational level analysis to clarify the adoption of e-commerce by SMEs in Indonesia. Besides, based on the viewpoint used, which is an individualistic, structuralist and interactive process perspective, innovation studies can also be categorized (Hameed et al., 2012). Furthermore, Hameed et al. (2012) explain that individualists believe that the individuals in the organization are the key cause of change in organizations; individualist studies, therefore, focus only on the behavior taken by people.

A structuralist considers that organizational features primarily dictate changes in organizations, such that individual contributions are not taken into account in structuralist studies (Hameed et al., 2012). In the implementation of creativity in organizations, neither individualists nor structuralists alone can see a systematic mechanism. The last viewpoint, namely the interactive process perspective, suggests, in contrast to this perspective, these organizational changes are determined not only by the people in the organization but also by the features of the organizations in which they function. This viewpoint enables researchers to deal with all variables and their interactions in a single complex system (Molla & Licker, 2005a) and is believed to be able to clarify the acceptance of IT invention comprehensively. Consequently, this point of view is used to explain the general acceptance of e-commerce by SMEs in Indonesia. TOE is considered a theory among the theories mentioned above that uses an interactive viewpoint since it incorporates different contexts, which are the contexts of technology, organization and the environment (Sila & Dobni, 2012).

## 5. Conclusion

This study conducts a thorough analysis of different factors in e-commerce adoption, such as the context of technology, environmental and organizational context. The variables influencing e-commerce adoption can be divided into 3 major contexts, namely the context of technology, organization and climate, based on the above description. Three key contexts are therefore regarded in this study as factors affecting SMEs in their e-commerce adoption. The technology background defines, according to Tornatzky et al. (1990), Not only existing technology available in an enterprise but also emerging technology on the market that determines an organization's ability to respond to new technology or other technical initiatives. The technical context relates to technological variables, such as perceived benefits, compatibility and costs. In addition, the organizational context relates to the features of enterprise that could affect the implementation of e-commerce technology in this case. Readiness for technology and company size, which are considerations in the corporate sense, are recognized as factors that can impact SMEs in e-commerce adoption. An organization's decision to implement some kind of technology for innovation is not only motivated by legitimate expectations for productivity, but also by environmental and social factors. Environmental factors apply to external factors, such as pressure from consumers, vendors, rivals, and governments that affect e-commerce implementation organizations.

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# The Buffering Effects of Social Insurance for the Spread of Covid-19

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**Abstract**: Global pandemics are associated with substantial losses of human capital. The best strategy of policymakers in public health before a population-wide vaccination is to reduce the outbreak of the disease and finding ways to alleviate its negative consequences in society. Previous studies show that welfare programs have externalities in unintended areas and for unplanned outcomes including a wide range of health outcomes. In this paper, we show that payments under the Unemployment Insurance (UI) program have the potential to reduce the spread of the novel coronavirus. Applying a difference-in-difference technique on a monthly data of all US counties from January 2020 to January 2021, we document that the social insurance under the umbrella of UI payments can reduce the transmission rate of Covid-19. The results show heterogeneity across subsample with the largest effects among blacks, poor, and low educated regions.

**Keywords**: *Health, Disease, Global Pandemic, Novel Coronavirus, Unemployment Insurance, Covid-19, Health, Unemployment Rate, Welfare Program, Social Insurance, Panel Data.*

## 1. Introduction

The novel coronavirus started as a local pandemic in a small cluster in Wuhan China in January 2020 and spread across the globe in the following days at an unprecedented speed. As of January 2021, its global death toll adds up to 1.8 million counts with roughly 400,000 deaths only in the United States. The pandemic generated various responses from local and federal governments across the globe. These responses vary from encouragements of social distancing and personal health care to stay-at-home policies and welfare payments. One specific case of these welfare programs is the payments through Unemployment Insurance (UI) generosity program. The UI program has been the topic of many political debates as well as discussions among scholars in academia. Two reasons make the UI payments controversial. First, the UI payments create a large cost to the government and ultimately to taxpayers. Second, it also could generate disincentive among the unemployed people to stay out of the job market to benefit from the payments (Card et al., 2015; K. P. Classen, 1977; Farber & Valletta, 2015; Krueger & Mueller, 2010). This fact is most obvious when the recession is deep, many people lose their jobs, and the duration of unemployment is expected to be lengthy. The covid-19 pandemic generated this environment. Forbes (2020) reports that from March 2020 to August 2020 roughly 58 million laid-off workers filed for unemployment insurance. Assuming an average benefit of $10,886, this number means that over six months (average duration of UI payments) the government has to pay $631 billion in benefits. Comparing with the US GDP in 2019, the payments only between March-August has been roughly 3.3 percent of GDP.

These costs would easily be amplified if disincentives stop the unemployed to look for jobs. As Chetty (2006) suggested in his seminal work, an optimal design of UI schedule should be based on the program's costs and benefits to society. While the costs of the program are observable to both taxpayers and authorities the benefits go beyond their initial goals and cover a wide range of outcomes. A small but growing body of literature explores the potential positive externality of UI payments on various economic and non-economic outcomes. For instance, Beach & Lopresti (2019) show the externality of UI payments for crime rates. The document that while the unemployment rate has positive effects on crime rates the higher UI benefits protect society against its impacts. In a similar study, NoghaniBehambari & Maden (2020) document the buffering effect of unemployment insurance against crime rates. They use data on all US counties over the years 1990-

2016 and apply a difference-in-difference model to show that while unemployment rates increase the incidence of crime at the county level the UI benefits could alleviate their negative effects. In another study, Noghanibehambari & Salari (2020) show that the unemployment insurance program has the potential to improve birth outcomes. They found that pregnant mothers who are unemployed and reside in states with higher UI benefits compared to mothers residing in states with lower UI payments have higher birth weight.

Fewer low birth weight, and higher gestational period. They show that the UI payments encourage mothers to use better health insurance which in turn has positive effects on birth outcomes. The UI benefits also have been documented to affect drinking habits (Lantis & Teahan, 2018), smoking (Fu & Liu, 2019), foreclosure (Hsu et al., 2018), self-reported health (Ferrarini et al., 2014), general health (Kuka, 2020), mental health (Tefft, 2011), consumer credit (J. Hsu et al., 2014), suicide rates (T. J. Classen & Dunn, 2012), reemployment success (Burgess & Kingston, 1976), and education (Barr & Turner, 2015; Kettunen, 1997). These effects are unplanned externalities for untargeted outcomes while the main targeted outcomes include income and consumption inequality. The degree to which the program was successful in smoothing the income and consumption of unemployed individuals has been documented in a relatively large literature (Baily, 1978; Baker & Fradkin, 2017; Burdett et al., 2003; Chetty, 2006; T. J. Classen & Dunn, 2012; Corneo & Marquardt, 2000; East & Kuka, 2015; Farber & Valletta, 2015; Feldstein, 2005; Fredriksson & Holmlund, 2001; Kettunen, 1997; Kroft & Notowidigdo, 2016; Krueger & Mueller, 2010; Landais et al., 2018; Long & Polito, 2014; Mitman & Rabinovich, 2015; Mueller et al., 2016; Noghanibehambari & Rahnamamoghadam, 2020; Schmieder et al., 2012; Stiglitz & Yun, 2005).

An avenue in economic research documents the effects of income and increases in earnings under welfare programs on health and mortality (Andrés, 2005; Kim, 2017; Tacke & Waldmann, 2013). For instance, NoghaniBehambari, Noghani, et al. (2020) show that an increase in income during the first two years of life has potential health effects that appear at the end of life. Individuals who are born and spend the first two years of their life during an economic recession are more likely to die due to certain causes of death including cardiovascular diseases and malignant neoplasm diseases. They document that a 1 percent decrease in the aggregate business cycle in the year of birth is associated with a 2.2, 2.3, 3.1, 3.7, 0.9, and 2.1 percent increase in the likelihood of mortality in old ages due to malignant neoplasms, Diabetes Mellitus, cardiovascular diseases, Influenza, chronic respiratory diseases, and all other diseases, respectively. However, their result suggests that the onset of government welfare programs in the US was associated with alleviating this long-term link. They conclude that these early life effects could be offset with welfare payments specifically during difficult times. In a similar study, Gryzbowski et al. (2021) show the effects of UI payments on child mortality in the US between the years 1970-2000.

They apply a difference-in-difference technique and document that an increase of $1,000 in UI payments reduces child mortality rates by about 48 percent from the mean. The income-mortality relationship could also hold for the long run. Several studies document that income shocks during the prenatal development and first years of life have the potential to influence adult morbidity and old-age mortality (Aalen, 1994; Adda et al., 2009; Arno et al., 2009, 2011; Cawley et al., 2009; Clark & Royer, 2013; Cristia, 2009; Ensor et al., 2010; Espinosa & Evans, 2008; Evans & Moore, 2011; Lawlor et al., 2006; Lindahl, 2005; McCormick, 1985; Myrskylä, 2010a, 2010b; Myrskylä et al., 2013; Philipson & Becker, 1998; Schnalzenberger, 2016; Snyder & Evans, 2006; Strand & Kunst, 2006). Unemployment Insurance benefits could act as a welfare program that although temporary but helps a vulnerable population, i.e. the unemployed individuals. The literature suggests that the UI payments could be beneficial for the health of people and specifically during a pandemic with ever-rising mortality rates. In this paper, we attempt to address this question. The main idea is whether those counties that are in more generous states reveal lower mortality rates compared to counties in less generous states. In so doing, we use data on all US counties (3140 counties) between January 2020 and January 2021 (thirteen months) and implement a difference-in-difference technique. The underlying assumption is that the variations in the predetermined UI schedule.

The main source of our identification strategy is probably orthogonal to other county characteristics that could also influence death rates and confirmed case rates. We find that a $1,000 higher UI benefit is associated with roughly 0.028 fewer deaths per 100,000 population on a county-by-month basis which is about a 12.12 percent reduction from the mean. Also, an increase of $1,000 in maximum benefit is associated

with 3.84 fewer confirmed cases per 100,000 population on a county-by-month level, which is a reduction of 28.52 percent from the mean over the sample period. The results are robust across specifications and subsamples. The marginal effects are statistically significant and economically large. Poorer counties with a higher concentration of blacks, poor, and low educated individuals had experienced larger buffering effects of UI payments for the outbreak and death due to covid-19. The results of this paper have important policy implications for policymakers in public health and welfare designs. The optimal design of welfare programs, specifically the UI benefits, is based on its costs and benefits. In the absence of the potential external benefits, the designs will be only suboptimal. The results of this paper help the policymakers to reach the optimal design of UI benefits by documenting their positive externalities during a global pandemic. The rest of the paper is organized as follows. Section 2 discusses the data sources and empirical method. Section 3 reports the results. We depart some concluding remarks in section 4.

## 2. Data Sources and Empirical Strategy

The econometric strategy compares the mortality rates in counties with higher unemployment rates to counties with lower unemployment rates (first difference) in states with higher UI benefits to states with, lower UI benefits (second difference). Specifically, we implement the regressions of the following form:

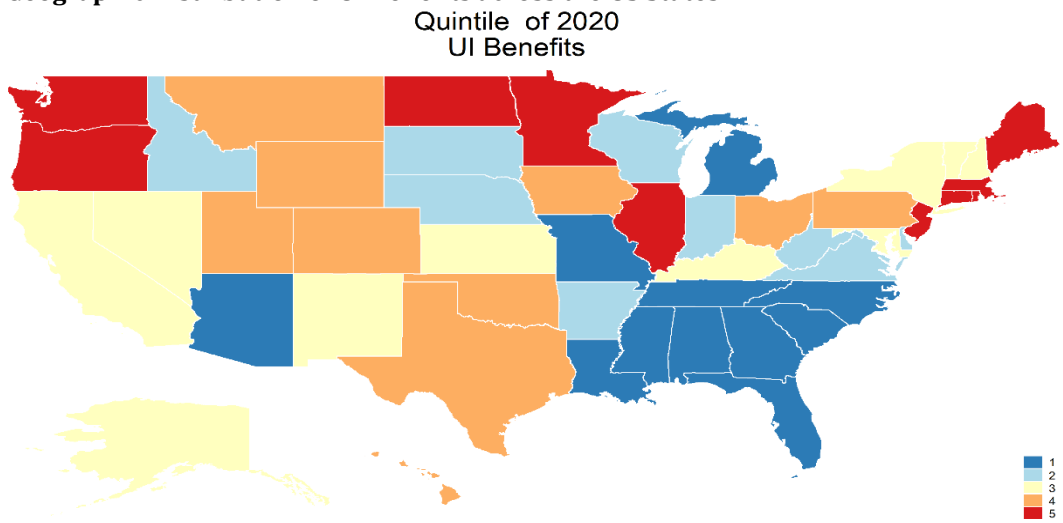
$$y_{cst} = \beta_1 Unemployment\ Rate_{cst} \times Maximum\ Benefit_s + \beta_2 Unemployment\ Rate_{cst} + \beta_3 Maximum\ Benefit_s + \alpha_1 T_{cst} + \alpha_2 X_{cs} + \zeta_c + \xi_{st} + \zeta_c \times T + \varepsilon_{csm} \quad (1)$$

Where $y$ is the outcome (confirmed case or death due to covid-19 per 100,000 population). $c$ indexes county, $s$ state, and $t$ month-year. The data on cases and deaths are extracted from (USA-Facts, 2020). $Unemployment\ rate$ is unemployment rate at the county level that varies by month and is taken from the Local Area Unemployment Statistics reports of the Bureau of Labor Statistics. The parameter $Maximum\ benefit$ is a proxy for UI benefits.

It is calculated by multiplying the maximum weekly pay (the maximum an eligible laid-off worker could possibly get under the UI program). The maximum weekly payment (the maximum duration during which a UI eligible laid-off worker could be covered by state-level UI law). This value reflects the maximum possible amount of money that can be transferred to the laid-off eligible worker under the state-level UI law. This proxy has been widely implemented in the literature (Hsu et al., 2018; Noghanibehambari & Salari, 2020). We also include average monthly temperature as it has been shown to affect the outbreak of covid-19. The parameter $T$ represents the average county-by-month temperature data extracted from NoghaniBehambari, Salari, et al. (2020). In $X$, we include a series of county and state economic indicators as follows. Population composition data is extracted from (SEER, 2019). Share of different industries in county employment is computed from the Quarterly Census of Employment and Wages data files. Job destruction data is extracted from the Quarterly Workforce Indicator.

Gross State Product (GSP) and personal income per capita are extracted from the Bureau of Economic Analysis. The parameters $\zeta$ and $\xi$ are counties and state-by-month fixed effects. In some specifications, we also include county by month-by--year linear trend, as represented by the interaction term $T \times \zeta$. All standard errors are clustered at the county level. The coefficient of interest is $\beta_1$ which shows the effect of a $1,000 rise in UI benefits for a county that experiences a 1 percent rise in the unemployment rate. All regressions are weighted using the average county population over the sample period.

**Figure 1: Geographic Distribution of UI Benefits across the US States**




## 3. Results

Table 1 reports a summary statistics of the final sample. On average, the UI maximum benefit is $10,886. The average death count at the county-by-month level is 0.231 counts per 100,000 population. Figure 1 shows the geographic distribution of UI maximum benefit across US states. Figure 2 shows the geographic distribution of confirmed cases and deaths based on quintiles of these variables in the top and bottom panels, respectively.

**Table 1: Summary Statistics**

| Variable | Observations | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Covid-19 Monthly Death Rate | 37,621 | 0.231 | 0.583 | 0 | 17.627 |
| Covid-19 Total Death Rate | 37,621 | 115.037 | 87.261 | 0 | 834.598 |
| Covid-19 Monthly Confirmed Cases Rate | 37,621 | 13.46 | 24.191 | 0 | 608.331 |
| Covid-19 Total Confirmed Cases Rate | 37,621 | 6590.289 | 2811.116 | 0 | 27388.221 |
| **Average Characteristics at 2019:** | | | | | |
| %Manufacturing Employment | 37,621 | 0.033 | 0.028 | 0 | 0.193 |
| %Mining Employment | 37,621 | 0.013 | 0.02 | 0 | 0.247 |
| %Construction Employment | 37,621 | 0.013 | 0.01 | 0 | 0.216 |
| %Blacks | 37,621 | 9.912 | 14.6 | 0 | 86.391 |
| %Whites | 37,621 | 85.845 | 16.221 | 9.27 | 99.454 |
| %Males | 37,621 | 50.102 | 2.241 | 42.996 | 73.425 |
| %Aged 25-65 | 37,621 | 50.265 | 3.167 | 28.821 | 72.653 |
| Average Weekly Wages | 37,621 | 768.784 | 174.289 | 436.67 | 2430.1 |
| Ln Total Wages | 37,621 | 19.734 | 1.757 | 14.632 | 26.403 |
| Per Capita Income | 37,621 | 41836.027 | 11508.849 | 11900.763 | 233150.06 |
| Average Monthly Earnings | 37,621 | 3175.572 | 721.66 | 1658.667 | 9836.333 |
| Job Destruction Rate | 37,621 | 0.043 | 0.016 | 0.008 | 0.241 |
| %Less than High School | 37,621 | 13.408 | 6.338 | 1.2 | 66.3 |
| Population Density | 37,621 | 226.813 | 1269.112 | .035 | 48229.375 |
| **UI Schedule at 2020:** | | | | | |
| UI Maximum Weeks | 37,621 | 24.088 | 4.231 | 12 | 30 |
| UI Maximum Weekly Pay | 37,621 | 442.715 | 125.741 | 235.294 | 1104.38 |
| UI Maximum Benefit | 37,621 | 10886.89 | 4123.764 | 3304.129 | 33131.398 |

| | | | | | |
|---|---|---|---|---|---|
| Log UI Maximum Benefit | 37,621 | 9.214 | 0.424 | 8.103 | 10.408 |
| Unemployment Rate | 37,621 | 7.063 | 3.971 | 0.4 | 41 |

**Figure 2: Geographic Distribution of Confirmed Cases and Deaths due to Covid-19 across the US States**

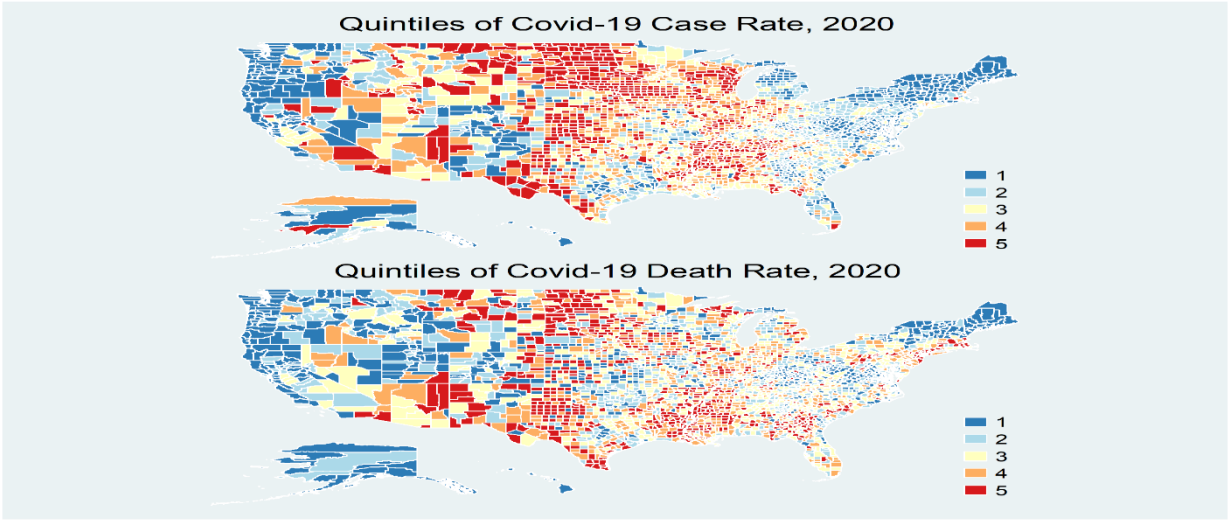



Table 2 reports the main results of the paper. An increase of $1,000 in maximum UI benefit is associated with 0.022 fewer death rates (death per 100,000 individuals) in a county-by-month level. This effect is larger for counties with a higher unemployment rate. Looking at the difference in difference (hereafter DiD term), for a 1 percent higher unemployment rate, an increase of $1,000 in maximum UI benefits is associated with 0.025 fewer death rate (column 1). This effect holds quite robust when we include county-by-month linear trend (column 2) and add state and county level indicators as a control[1] (column 3). In the full specification, an increase of $1,000 in maximum UI benefits is associated with 0.028 fewer death rates and 3.84 fewer inflicted persons at the county-by-month level. To put these numbers into perspective, an increase of $1,000 in maximum UI benefits leads to a reduction of 12.12 and 28.52 percent from the mean of death rate and confirmed case rate, respectively.

**Table 2: The Nexus between UI Maximum Benefit, Unemployment Rate, and the Outbreak of Covid-19**

| | Covid-19 Death Rate | | | Covid-19 Case Rate | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| UI Maximum Benefits | -0.022** (0.009) | -0.019** (0.008) | -0.016* (0.008) | -1.115*** (0.409) | -0.975** (0.468) | -0.846* (0.388) |
| Unemployment Rate | 1.125** (0.514) | 1.008* (0.498) | 0.894* (0.476) | 39.282*** (17.463) | 12.135 (14.863) | 10.567 (12.349) |
| UI Maximum Benefits × Unemployment Rate | -0.019*** (0.004) | -0.025*** (0.004) | -0.028*** (0.005) | -2.569*** (0.356) | -3.489*** (0.584) | -3.846*** (0.595) |
| County Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| State-by-Month Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| County-by-Month Linear Trend | No | Yes | Yes | No | Yes | Yes |

[1] Controls include: percentage manufacturing employment, percentage mining employment, percentage construction employment, percentage blacks, percentage whites, percentage foreign nationals, percentage males, percentage aged 25-65, and percentage less than high school, average weekly wages, Log total wages, job destruction rate, and per capita income.

| | | | | | | |
|---|---|---|---|---|---|---|
| Controls | No | No | Yes | No | No | Yes |
| $R^2$ | 0.133 | 0.162 | 0.184 | 0.348 | 0.413 | 0.440 |
| Observations | 37,621 | 37,621 | 37,621 | 37,621 | 37,621 | 37,621 |

**Notes:** Standard errors are reported in parenthesis and clustered at the state level. All regressions are weighted by the average county population. County and state controls are explained in the text.

Next, we show the heterogeneity of the main results across subsamples in Table 3. Since the main focus is on the DiD term, we only report the results for the DiD coefficient ($\alpha_1$ in equation 1). For 1 percent higher county-level unemployment rate, an increase of $1,000 maximum UI benefits is associated with 0.057, 0.037, and 0.067 fewer death rates for counties above-median blacks, above median low education, and below-median per capita personal income. The effects and the percentage changes from the mean are larger among the poor counties, counties with a higher concentration of blacks, and counties with more low educated individuals. The observed variation in the effects of welfare and income on confirmed cases and mortality is in-line with previous literature that document the racial and socioeconomic disparities in the outbreak of covid-19 (Allen et al., 2021; Choi & Unwin, 2020; Figueroa et al., 2020; Kopel et al., 2020; Li et al., 2020; McClure et al., 2020; Paul et al., 2020; Yang et al., 2020).

**Table 3: The Heterogeneity of the Main Results across Subsamples**

| | **Above Median Blacks** | **Below Median Blacks** | **Above Median Low Education** | **Below Median Low Education** | **Above Median Income** | **Below Median Income** |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Panel A. Outcome: Covid-19 Death Rate** | | | | | | |
| UI Maximum Benefits × Unemployment Rate | -0.057*** (0.014) | -0.029** (0.009) | -0.037*** (0.013) | -0.024** (0.012) | -0.018 (0.015) | -0.067*** (0.019) |
| **Panel B. Outcome: Covid-19 Case Rate** | | | | | | |
| UI Maximum Benefits × Unemployment Rate | -5.479*** (1.149) | -2.468*** (1.146) | -3.854*** (0.847) | -2.729*** (0.874) | -2.256** (1.059) | -7.089*** (1.127) |
| County Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| State-by-Month Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| County-by-Month Linear Trend | Yes | Yes | Yes | Yes | Yes | Yes |
| State Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 18,810 | 18,789 | 18,812 | 18,809 | 18,810 | 18,805 |

**Notes:** Standard errors are reported in parenthesis and clustered at the state level. State controls are explained in the text. All regressions are weighted by the average county population. County and state controls are explained in the text.

## 4. Conclusion

The optimal design of a welfare program depends on its costs and benefits. For a social program like unemployment insurance, the costs to the taxpayers and government is mainly the payment burden on taxpayers and the potential moral conflicts associated with disincentives regarding job search. However, the benefits of the program are more controversial and could go beyond the initial targets and plans. Therefore, an optimal policy design requires quantifying the positive externalities of UI benefits on other outcomes. One potential area of UI externality is health. In this paper, we provided the potential externality of UI benefits on confirmed cases and death due to covid-19. We used county-by-month data from January 2020 to January 2021 across all US counties and implemented a difference-in-difference technique. We found that for a 1

percent higher unemployment rate, a $1,000 increase in maximum benefits is associated with 0.028 and 3.846 fewer death and confirmed cases per 100,000 population at the county-by-month level.

The results show heterogeneity across subsample with the largest effects among the disadvantaged population including blacks, poor, and low educated individuals. This heterogeneity shows that policies that aim to help the society during pandemics are more efficient if they focus on more vulnerable individuals including minorities, low educated people, and people below the poverty line. There are two primary policy suggestions based on the results of this paper. The first fact comes from the potential effect of income and welfare program on controlling the spread of a global disease. Policymakers who try to reduce the transmission rate of a population-wide disease should focus on policies that increase the welfare payments. Second, policymakers should differentiate between different subpopulations in welfare payments as the payments have differential effects among people from different socioeconomic and demographic groups.

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# The Effect of Brand Awareness, Credibility, Quality and Loyalty on Word-of-Mouth in a Competitive Medicine Market

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**Abstract:** Brands with a high level of awareness, credibility, quality and loyalty provide a platform for strengthening customers` favourable word-of-mouth, which may contribute to increasing market share in a competitive environment. However, there is few or no research on the effect of awareness, credibility and quality on word-of-mouth through the impact of attitudinal loyalty and behavioural loyalty, particularly in the traditional medicine market. Consequently, this research aims to evaluate the effect of awareness, credibility and quality on word-of-mouth via the impact of the dimensions of loyalty in the traditional medicine market. Survey questionnaires were administered to 265 customers chosen from the traditional medicine market through a systematic sampling strategy. The data collected were statistically analyzed using structural equation modelling through SPSS Amos 20. The study revealed that awareness, credibility and quality positively influence word-of-mouth through the impact of behavioural loyalty. The research further found that awareness and credibility significantly influence positive word-of-mouth through the impact of attitudinal loyalty in the traditional medicine market. Therefore, this paper extends the prior studies by exhibiting the potential role of brand awareness, credibility and quality in strengthening word-of-mouth through the impact of attitudinal loyalty and behavioural loyalty, particularly in the traditional medicine market. This paper also advances managers` knowledge about creating and exploiting brand awareness, credibility, perceived quality, attitudinal loyalty and behavioural loyalty to increase positive word-of-mouth in the traditional medicine market.

**Keywords:** *Brand Awareness; Credibility; Quality; Loyalty; Word-of-Mouth; Herbal medicine.*

## 1. Introduction

Long before the advent of conventional medicines, herbal medicines were used to treat various diseases in different cultures across the world. In the last few decades, herbal medicines' contribution to health care delivery has garnered much attention due to their increasing use to complement allopathic drugs across the globe. Herbal medicines "include herbal herbs, herbal material, herbal preparations and finished herbal products, that contain as active ingredients parts of plants, or other plant materials, or combinations thereof" (WHO, 2002, p.1). It has been estimated that 70 to 80% of the developed world`s population have used complementary or alternative medicine (CAM) at one point in time (WHO, 2008). While more than two-thirds of developing countries` population still depends on herbal medicinal products to meet their health needs (WHO, 2011). According to UNDP (2007), roughly 80% of Ghanaians use herbal medicines for combating diseases. Generally, herbal medicinal products are purchased to treat minor sicknesses, manage chronic diseases, and maintain health fitness (Naresh & Reddy, 2016). To respond to the ever-increasing demand for herbal medicines in Ghana, traditional medicine (TM) practitioners have adopted various product and process innovations.

These innovations include manufacturing different well-designed packaged herbal medications such as pills, tablets, capsules, creams and mixtures and extensive advertisements, especially those operating on an enhanced scale (Essegbey, Awuni, Essegbey, Akuffobea & Mica, 2014). Now, herbal medicines` production and commercialization are regulated by the Food and Drugs Authority (FDA) and the Traditional Medicine Practice Council (TMPC). The herbal medicines are sold as over-the-counter medications in pharmacies, over-the-counter medicine stores, herbal stores and clinics (WHO, 2011; Essegbey et al., 2014). The traditional medicine industry is facing intense competition from the establishment of rival firms and partly due to the influx of CAM and allopathic drugs, which might have led to lower prices and hence, lower profit margins. Brands with a high level of awareness, credibility, quality and loyalty have been recognized to have a significant impact on customers` positive word-of-mouth (WOM) in a market (Hyun & Kim, 2011; Yoo, Donthu & Lee, 2000; Ameri & Behnam, 2014; Bahri-Ammari, 2012). It has also been highlighted that

consumers` positive WOM communication is viewed as reliable, credible and trustworthy (Barreda, Bilgihan & Kageyama, 2015).

As a result, nearly 67 per cent of all consumer buying decisions are influenced by favorable WOM (Mothersbaugh & Hawkins, 2016), which may contribute to business success. The role of awareness, credibility, quality and loyalty to WOM has received considerable attention from several authors (e.g. Hyun & Kim, 2011; Yoo et al., 2000; Ameri & Behnam, 2014; Bahri-Ammari, 2012; Oppong & Phiri, 2018). However, there is few or no research on the impact of brand awareness, credibility and quality on WOM through the impact of attitudinal loyalty and behavioural loyalty, particularly in the TM market. Similar studies conducted by earlier authors, however, examined the impact of brand trust and brand effect (Chaudhuri & Holbrook, 2001), perceived value dimensions (Chuah, Marimuthu & Ramayah, 2014), and expressive brand relationship and brand love (Zhang et al., 2020) on attitudinal and behavioural loyalty. The current research, however, sought to determine the significance of brand awareness, credibility and quality in enhancing WOM via the impact of attitudinal loyalty and behavioural loyalty in the TM market. In this respect, this research adds to the previous studies by highlighting the potential role of awareness, credibility and quality in strengthening WOM via the impact of attitudinal loyalty and behavioural loyalty in the TM market. This paper also advances managers` knowledge about how to create and exploit brand awareness, credibility, perceived quality, attitudinal loyalty and behavioural loyalty to increase positive WOM in the TM market.

## 2. Theoretical Review and Research Hypotheses

**Word-of-Mouth:** WOM is one of the dominant means of human communication and has been present since human existence. However, in the last few years, WOM communication has gained researchers and practitioners' attention because it has become a vital marketing communications element affecting consumer behavioural intentions. Harrison-Walker (2001, p.63) explained "WOM communication as informal, person-to-person communication between perceived non-commercial communicator and a receiver regarding a brand, a product, an organisation or a service". Mothersbaugh and Hawkins (2016) suggested that WOM communication involves individuals sharing information with another verbally, including face-to-face, phone and over the internet. Hoyer and Maclnnis (2010) pointed out that WOM can be seven times more effective than print media, twice as broadcast media and four times as sales force in driving brand switching behaviour. The authors further emphasized that WOM is pervasive, persuasive and very vivid compared to a written form of communication. Moreover, the WOM communications provided by friends, relatives and acquaintances are considered more credible and trustworthy. This is because communication from friends and relatives is rarely advertising or sales pitches.

But instead an expression of true feelings and opinions (Hoyer & Maclnnis, 2010; Mothersbaugh & Hawkins, 2016; Kardes, Cronley & Cline, 2011) about their experiences with a product, service or an organisation. Barreda et al. (2015) pointed out that favourable WOM is considered to be reliable, credible and trustworthy. Consequently, roughly 67 per cent of all consumer product decisions are positively affected by favourable WOM, which can enhance business success (Mothersbaugh & Hawkins, 2016). WOM can either be favorable or unfavorable, and successful companies recognizing the heightened role of WOM in business success have become more proactive to create favourable WOM about their products and services deliberately. However, since negative product experiences are highly emotional and memorable, consumers are strongly motivated to spread negative WOM, greatly influencing recipients' attitudes and behaviours. While merely satisfying customers may not drive positive WOM, delivering more than is expected appears to have the potential to motivate WOM (*ibid)*. Empirical research revealed that a positive WOM message creates a sense of relief, enthusiasm, confidence and optimism to the receiver and improves customers` opinions about the firm (Sweeney, Soutar & Mazzarol, 2008).

**Brand Awareness:** Enhanced consumers` awareness of a firm's brands can increase their market value (Aaker, 1996). Awareness reflects the health of a brand's presence in the potential buyer's memory (Aaker, 1991). Keller (2013) noted that awareness involves recognition and recall of the brand. Brand recognition measures the familiarity generated from previous experiences with the brand. In contrast, recall describes the extent to which the brand is retrieved from the mind when the product group is mentioned (Hoeffler & Keller, 2002). It has been noted that brand awareness enriches its association (Keller, 2013). Moreover,

consumers buy brands they are familiar with because they are usually viewed as credible and of good quality (Aaker, 1991). Also, increased awareness positively affects consumers` choice and loyalty (Ferrell & Hartline, 2011; Aaker, 1996). Furthermore, empirical investigations revealed that awareness directly impacts loyalty (Oppong & Phiri, 2018; Hyun & Kim, 2011). Hence, the following hypotheses are proposed:
**H1:** Brand awareness significantly and positively influences behavioural loyalty.
**H2:** Brand awareness significantly and positively influences attitudinal loyalty.

**Perceived Quality:** Perceived quality is a significant element for many organisations because it drives financial performance. Zeithaml (1988) viewed perceived quality as customers` judgement of a product's overall excellence. Perceived quality differs from an objective, manufacturing, and product quality because it is based on consumer perceptions. Actual product quality is concerned with the degree to which a product offers excellent service (Aaker, 1991). In contrast, product quality refers to the overall attributes that permit it to function as expected (Ferrell & Hartline, 2011). Lastly, manufacturing quality also describes the degree to which a product conforms to manufacturing requirements (Zeithaml, 1988). Gil, Andres and Martinez (2007) asserted that customers` perceptions of quality could be enhanced by improving its actual quality. Product performance, reliability, durability, serviceability, fit and finish, features, and conformance to specification have been identified in the literature as to how consumers perceive product quality (Aaker, 1991).

Increased perceived product quality can potentially reduce the perceived risk of consumption and search cost of a product in the market (Erdem & Swait, 1998). Aaker (1996) also suggested that perceived quality can provide a platform for a higher market share, line extensions, a point of differentiation, high price, and ultimately, contributes to a firm's overall profitability. The author also noted that high perceived quality adds value to customers by enriching user satisfaction and loyalty. Empirical studies suggest that perceived quality directly affects loyalty (Hyun & Kim, 2001; Oppong, Yeboah & Gyawu, 2020; Yoo et al., 2000). Based on the above discussions, the hypotheses posited are:
**H3:** Perceived quality significantly and positively influences behavioural loyalty.
**H4:** Perceived quality significantly and positively influences attitudinal loyalty.

**Brand Credibility:** Brand credibility is one of the essential elements that simplify consumer brand choice as it reduces the potential perceived risk associated with the buying-decisions process. Brand credibility is described as the extent to which the brand`s information is believable, requiring that the brand endlessly meets its stated purpose (Erdem & Swait, 2004). The authors further posited that trustworthiness and expertise are elements of brand credibility. The brand's trustworthiness indicates the consumers` perceptions of an organization's preparedness to deliver its promises, whilst its expertise relates to its ability to meet the promise made. However, Keller (2013) believes that brand credibility is concerned with how customers perceive the brand as authentic. The author also suggested that brand credibility includes brand expertise, trustworthiness and likeability or attractiveness. Brand expertise looks at whether customers perceive the brand as competent, innovative, and a leader in the market, whilst brand trustworthiness describes how dependable the brand is and keeps the customers' welfare in mind.

Finally, brand attractiveness relates to whether the brand entertains and is worth spending time with. The trustworthiness and expertise represent the cumulative effect of prior and current marketing strategies and actions (Erdem & Swait, 2004). It has been suggested that imperfect and asymmetric market information creates uncertainty about product attributes, commanding greater perceived risk of purchase and consumption. However, reliable brands can lower the information cost and perceived risks which may engender confidence in the firm's product claims. Prior studies also indicated that credible brands positively affect loyalty (Rizwan, Javed, Aslam, Khan, & Bibi, 2014; Ameri & Behnam, 2014). Consequently, the hypotheses stated are:
**H5:** Brand credibility significantly and positively influences behavioural loyalty.
**H6:** Brand credibility significantly and positively influences attitudinal loyalty.

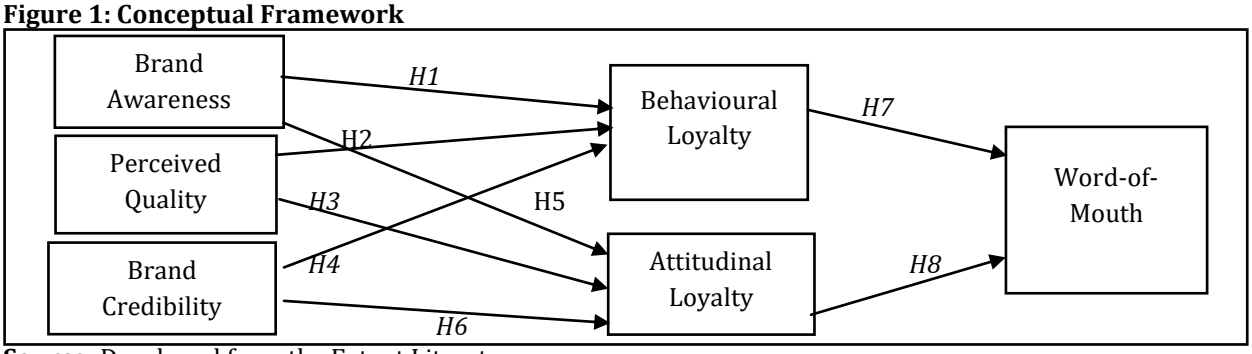
**Brand Loyalty:** The development, enrichment and maintenance of customer loyalty has long been recognised as a strategic objective of a company`s marketing actions because it provides an essential basis for creating a sustainable competitive edge in the market. Loyalty refers to the relationship between relative attitude and

repeated purchase of a brand (Dick & Basu, 1994). Based on this conceptualisation, loyalty consists of attitude and repeated behaviour. In their view, loyalty occurs when the favourable attitude creates high repeated patronage behaviour towards a firm's products or services. Attitudinal loyalty relates to the strength of commitment toward a brand, whereas behavioural refers to repeated patronage (Chaudhuri & Holbrook, 2001). According to Lovelock and Wirtz (2016), loyalty refers to the willingness to persistently transact business with a firm, especially on an exclusive basis over a long time, recommending the firm's products or services to others.

In the authors` view, loyalty extends beyond behaviour to include preference, liking, and future intentions. Empirical study also reported that attitudinal loyalty and behavioural loyalty significantly contribute to higher market share and relative price for a brand, respectively *(ibid*). Aaker (1996) noted that greater loyalty is associated with high market share, the difficulty of entry of rival firms, enhanced trade leverage and resistance to rival activities, contributing to long-term profitability. Besides, loyal customers stay longer with a firm, increase the volume of their purchases, provide favourable word-of-mouth and are price tolerance (Kotler & Keller, 2012). Empirical studies also suggest that brand loyalty positively impacts word-of-mouth behaviour (Liao, Chung, Hung & Widowati, 2010; Bahri-Ammari, 2012). Hence, the hypotheses formulated are:
**H7:** Behavioural loyalty significantly and positively influences word-of-mouth.
**H8:** Attitudinal loyalty significantly and positively influences word-of-mouth.

**Conceptual Framework:** The conceptual model describes graphically or in narrative form the important variables and their inter-relationships in a study (Miles, Huberman & Saldăna, 2014). In the present research, awareness, credibility, and quality are independent variables, while behavioural loyalty and attitudinal loyalty are the intervening variables, and WOM is the independent variable. The conceptual framework shown in Figure 1 indicates that awareness, credibility and quality directly influence behavioural loyalty and attitudinal loyalty. In turn, behavioural loyalty and attitudinal loyalty directly relate to WOM. Here, credibility relates to the brand's ability and willingness to deliver its promise and is operationalised as the brand's trustworthiness and expertise (Erdem & Swait, 2004). Brand awareness also measures a brand's health in the potential buyer's memory (Aaker, 1991), and is manifested in recognition and recall (Keller, 1993). Attitudinal loyalty measures the level of commitment toward a brand, whereas behavioural relates to repeated patronage (Chaudhuri & Holbrook, 2001). Likewise, quality is concerned with consumers' assessment of a product's superiority (Zeithaml, 1988). Similarly, WOM is operationalised as "informal or person-to-person communication between perceived non-commercial communicator and a receiver regarding a brand, a product, an organisation or a service" (Harrison-Walker, 2001, p. 63).

**Figure 1: Conceptual Framework**




**Source:** Developed from the Extant Literature

## 3. Research Methodology

The methodology employed to evaluate the hypotheses postulated to address the aim of the study is elaborated below.

**Population and Sample:** The research population involves locally-made herbal medicinal products, 26 licensed herbal stores located in the central business district and 854 customers above 18 years who buy

herbal medicines for their consumption in the metropolis. The number of authorized herbal stores operating within the metropolis was obtained from TMPC in Cape Coast, while that of the customers was from daily sales data of herbal stores. Relying on Krejcie and Morgan's (1970) framework for estimating sample size, the researcher picked a sample of 265 customers.

**Scale Items of Development and Data Collection Procedure:** The constructs were measured by a five-point response questionnaire, thus, 1 = strongly disagree, and 5 = strongly agree. This type of questionnaire was adopted since the information gathered permits the use of statistics to examine the data with a much more straightforward interpretation of the results (Creswell, 2014). The test responses were borrowed from prior studies. The test responses of credibility were adopted from Erdem and Swait (2004), perceived quality from Yoo et al. (2000), and Gil et al. (2007), WOM from Zeithaml, Berry & Parasuraman (1996), behavioural and attitudinal loyalty from Chaudhuri and Holbrook (2001), Zeithaml et al. (1996) and Zhang et al. (2020). Through a systematic sampling process, the research assistants distributed the questionnaires face-to-face to the respondents after shopping. The first client was thus randomly selected, and a third of every client was later invited to take part in the research. The systematic sampling method was employed as it provides an opportunity to select respondents without prior knowledge of the cases in the sampling frame (Malhotra, Nunan, & Birks, 2017). The respondents were first asked if they had bought the herbal medicine for their personal use before allowing them to participate in the survey. The aim was to obtain the respondents` perceptions on brand awareness, credibility, quality, word-of-mouth, behavioural loyalty and attitudinal loyalty. In all, the research assistants distributed 230 questionnaires, but 208 were usable due to incomplete responses.

## 4. Data Analysis and Results

The analytical methods used to test the hypotheses were descriptive statistics, exploratory factor analysis (EFA) and covariance-based structural equation modelling (C-SEM) via software known as SPSS Amos 20.

**Descriptive Statistics:** The findings of the sample characteristics regarding age, gender, and educational background were presented through descriptive statistics. The results demonstrate that a large percentage of the sample was male, youth and had secondary education. Thus, 104 (50.7%) were male, 81(39.1%) were between the age of 26 and 35 years, and 74 (36.5%) held secondary education.

**Exploratory Factor Analysis:** The EFA was performed to determine whether the indicators developed to measure awareness, quality, credibility, WOM, behavioural loyalty and attitudinal loyalty load on their stated constructs. 22 indicators were used to carry out the EFA through the principal axis factoring method by using the oblimin rotation procedure. The results of Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy of .843 and Bartlett's Test of Sphericity at the significance level of $p < 0.05$, shown in Table 2, indicate suitable EFA (Hair, Black, Babin & Anderson, 2010; Pallant, 2013). More so, the EFA through pattern matrix produced a six-factor model. Factor 1 signifies attitudinal loyalty, 2 is credibility, 3 is awareness, 4 is quality, 5 is WOM, and 6 is behavioural loyalty. The total scale items retained were 20 because one scale item had loadings below .30, whilst the other one cross-loaded with different factors and were all discarded (Floyd & Widaman, 1995). Furthermore, all six variables had eigenvalues exceeding 1.0 and explained 69.76% of the analysis` variance. Again, a coefficient alpha analysis was carried out to evaluate the indicator item's internal consistency reliability that emerged from the EFA to discard indicators with lower inter-item correlations. The analysis results presented in Table 2 indicate that all the factors had a coefficient alpha higher than .70, signifying good reliability (Tavakol & Dennick, 2011).

**Table 1: Results of Exploratory Factor Analysis**

| Scale Items | | Factor 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| AL1 | I would be willing to continue to buy more of X even if its price increases somewhat | .862 | | | | | |
| AL2 | I would be willing to pay a higher price for X than the other brands | .741 | | | | | |
| AL3 | The price of X would have to go up quite high before I would switch to another brand | .718 | | | | | |
| AL4 | I am committed to X | .569 | | | | | |
| BC4 | The X's product claims are believable | | .783 | | | | |
| BC2 | X delivers what it promises | | .772 | | | | |
| BC3 | X has the ability to deliver what it promises | | .724 | | | | |
| BC5 | Over time, my experiences with X had led me to expect it to keep its promises. | | .687 | | | | |
| BC1 | X has a name you can trust | | .672 | | | | |
| BW2 | I can easily recognize X among other competing brands | | | .935 | | | |
| BW3 | I know what X looks like | | | .655 | | | |
| BW1 | I am aware of X | | | .549 | | | |
| PQ4 | The likelihood that X would be functional is very high | | | | .880 | | |
| PQ3 | X is very reliable | | | | .789 | | |
| WOM3 | I would encourage my friends and relatives to buy X | | | | | .850 | |
| WOM2 | I would recommend X to someone who asks for my advice | | | | | .616 | |
| BL2 | I intend to keep buying more of X in the future | | | | | | .700 |
| BL3 | I will buy X the next time | | | | | | .634 |
| BL1 | I would consider X as my first choice when buying herbal medicine | | | | | | .623 |
| BL4 | Overall, I buy X most often | | | | | | .505 |
| Cronbach alpha | | .856 | .861 | .775 | .839 | .824 | .859 |
| Eigenvalues | | 7.165 | 2.340 | 2.013 | 1.385 | 1.324 | 1.121 |
| Percentage of Variance Explained | | 32.567 | 10.636 | 9.150 | 6.296 | 6.019 | 5.095 |
| Percentage of Total Variance Explained = 69.764 | | | | | | | |
| KMO = .843; Bartlett`s Test of Sphericity: X2 = 2355.165; DF = 231; p = 0.000 | | | | | | | |

**Notes:** X is the focal brand.

**Reliability and Validity of the Constructs**: Composite reliability and construct validity were the psychometric measures used in the CFA. The Fornell and Lacker (1981) criterion and average variance extracted (AVE) were employed to evaluate the convergent validity and discriminant validity to determine construct validity, respectively. Table 2 presents the construct's psychometric properties, which demonstrate that all the AVEs are greater than .50, proving convergent validity (Bagozzi & Yi, 1988; Hair et al., 2010). Furthermore, the analysis shows that all the squared correlation coefficients between one factor and another were lower than the square root of the constructs` AVEs, supporting discriminant validity (Fornell & Lacker, 1981). Moreover, due to Cronbach alpha's vulnerability to the number of scale items, resulting in underestimating reliability, composite reliability is recognised as a suitable measure of the reliability of latent factors in the CFA (Hair, Sarstedt, Hopkins & Kuppelwieser, 2014). The composite reliability`s results suggest that all the estimates exceeded .70 ranging from .789 to .841, showing construct reliability (Fornell & Larcker, 1981; Bagozzi & Yi, 1988). These results show that the latent factors are reliable and valid for the analysis.

**Table 2: Results of Reliability and Validity Analysis**

| Latent Variables | CR | AVEs | BW | PQ | BC | BL | AL | WOM |
|---|---|---|---|---|---|---|---|---|
| Brand Awareness (BW) | .789 | .560 | .748* | | | | | |
| Perceived Quality (PQ) | .841 | .726 | .137 | .852* | | | | |
| Brand Credibility (BC) | .835 | .635 | .104 | .154 | .797* | | | |
| Behavioural Loyalty (BL) | .815 | .595 | .089 | .048 | .200 | .771* | | |
| Attitudinal Loyalty (AL) | .813 | .592 | .097 | .131 | .135 | .482 | .769* | |
| Word-of-Mouth (WOM) | .829 | .708 | .097 | .114 | .154 | .378 | .228 | .841* |

**Notes:** CR = composite reliability; * = Square root of AVEs; Off-diagonal estimates measure the squared inter-construct correlations.

**Structural Equation Modelling:** The C-SEM was employed to test the hypotheses proposed in the study. This multivariate statistical technique was used because the data collected entail latent variables measured by multiple indicators. The C-SEM is versatile for analyzing multiple distinct equations simultaneously, provides the model's overall fit and measurement errors connected to the individual scale items (Hair et al., 2010; Bryne, 2016). The C-SEM was conducted through a two-step approach, as suggested by Bryne (2016). Hence, the CFA was conducted before the structural model.

**Confirmatory Factor Analysis:** The CFA was undertaken through the maximum likelihood approach to validate the outcome of the EFA. Twenty (20) indicators that emerged from the EFA were subjected to the CFA. Indicators having standardized regression weights below .50 were rejected, and as a result, 16 were retained. The aim was to obtain good convergent validity (Hair et al., 2010). The 16 indicators converged on the six (6) constructs, and their standardized estimates proved to be significant, ranging between .615 and .864, as depicted in Table 3. Again, except for the Chi-square statistic (CMIN= 155.954, DF = 89, p = .000), the other indexes supported the model because the former has been reported to be biased towards sample size. The Normed Chi-Square statistic (CMIN/DF) = 1.752; Goodness-of-Fit Index (GFI) = .914; Root Mean Residual (RMR) = .038; Root Mean Square Error of Approximation (RMSEA) = .060 (with 90% confidence interval falls within the range of .044 and .076); Comparative Fit Index (CFI) = .954; Tucker-Lewis Index (TLI) = .938; Incremental Fit Index (IFI) = .955; and Normed Fit Index (NFI) = .901, proved the model admissible (Hu & Bentler, 1999; Kline, 2015; Hair et al., 2010).

**Table 3: Results of the Confirmatory Factor Analysis**

| Latent Constructs and their Indicators | Standardized Estimate | t-value |
|---|---|---|
| Brand Credibility | | |
| BC2 | .864 | — a |
| BC3 | .794 | 11.603 |
| BC4 | .727 | 10.721 |
| Attitudinal Loyalty | | |
| AL4 | .768 | — a |
| AL3 | .741 | 9.934 |
| AL1 | .798 | 10.505 |
| Behavioural Loyalty | | |
| BL3 | .731 | — a |
| BL2 | .772 | 10.053 |
| BL1 | .808 | 10.390 |
| Brand Awareness | | |
| BW1 | .615 | — a |
| BW2 | .877 | 8.042 |
| BW3 | .730 | 8.021 |
| Perceived Quality | | |
| PQ3 | .859 | — a |
| PQ4 | .845 | 8.293 |
| Word-of-Mouth | | |
| WOM3 | .852 | — a |

| | | |
|---|---|---|
| WOM2 | .830 | 9.754 |

**Notes:** a = path parameter was set to 1; therefore, not-values were estimated; all standardised estimates are significant at p = 0.001 level.

**Path Analysis:** Here, the path analysis was used to evaluate the hypotheses postulated in the study. As alluded to, brand awareness, credibility and perceived quality are independent variables, while behavioural loyalty and attitudinal loyalty are intervening variables, and WOM is the dependent variable. The Chi-square test (CMIN = 214.923, DF = 93, p = .000) was not acceptable but CMIN/DF = 2.311; GFI = .882; TLI = .892; IFI = .918; CFI = .916; RMSEA = .080, supported the model. The analysis of the path model displayed in Table 4 show that awareness has a positive effect on behavioural loyalty (β = .204, p = .022) and attitudinal loyalty (β = .192, p = .031) at a significance level of p < .05, confirming *H1* and *H2* respectively. Again, the results demonstrate that the direct effect of quality (β = .048, p = .580) on behavioural loyalty is statistically insignificant and hence, rejecting *H3*. However, the analysis reveals that perceived quality (β = .206, p = .021) is significant and positively related to attitudinal loyalty at p < .05 level, supporting *H4*. Also, the findings of the analysis indicate that credibility directly influences behavioural loyalty (β = .400, p = .000) and attitudinal loyalty (β = .279, p = .002) at significance level of p < .05, confirming *H5* and *H6,* respectively. Furthermore, the findings show that behavioural loyalty (β = .536, p = .000) and attitudinal loyalty (β = .197, p = .011) positively affect WOM at p < 0.05 significant level, providing strong support to *H7* and *H8,* respectively.

**Table 4: Results of Structural Model**

| Hypotheses | Structural Relations | | | Standardized Estimate | C.R. | p-value |
|---|---|---|---|---|---|---|
| H1 | Behavioural Loyalty | <------- | Brand Awareness | .204 | 2.295 | .022 |
| H2 | Attitudinal Loyalty | <------- | Brand Awareness | .192 | 2.154 | .031 |
| H3 | Behavioural Loyalty | <------- | Perceived Quality | .048 | .554 | .580 |
| H4 | Attitudinal Loyalty | <------- | Perceived Quality | .206 | 2.300 | .021 |
| H5 | Behavioural Loyalty | <------- | Brand Credibility | .400 | 4.408 | .000 |
| H6 | Attitudinal Loyalty | <------- | Brand Credibility | .279 | 3.149 | .002 |
| H7 | Word-of-Mouth | <------- | Behavioural Loyalty | .536 | 6.088 | .000 |
| H8 | Word-of-Mouth | <------- | Attitudinal Loyalty | .197 | 2.528 | .011 |

**Discussion of Results**

The study's goal was to identify the effect of brand awareness, credibility and quality on WOM through the impact of loyalty dimensions in the TM market. The results show that awareness contributes to strengthening both attitudinal loyalty and behavioural loyalty in the TM market. This result is in consonance with previous studies (Oppong & Phiri, 2018; Hyun & Kim, 2011), which found that loyalty is directly affected by awareness. This outcome also supports the current literature (Ferrell & Hartline, 2011; Aaker, 1996), which suggests that a high level of awareness enhances loyalty in the market. Customers usually buy well-known brands because they are considered reliable and of high quality and ultimately, enriches their loyalty. The research further found that quality positively affects behavioural loyalty but has no impact on attitudinal loyalty. It has been suggested that an individual's decision to buy a particular brand depends mostly on the perceived differences among brands sold in the market, which may result in attitudinal loyalty (Dick & Basu, 1994). Consequently, this study's findings suggest that the perceived quality differences among the brands sold in the TM market are low, resulting in the absence of attitudinal loyalty.

Besides, the study revealed that credibility directly affects attitudinal and behavioural loyalty in the TM market. This result is in line with previous studies' findings (Rizwan et al., 2014; Ameri & Behnam, 2014) which reported that credible brands positively affect loyalty. Moreover, credibility has the greatest influence on attitudinal loyalty and behavioural loyalty in the TM market compared to the other variables in the study. Credible brands reduce search cost and the perceived risk associated with purchase and consumption as they are considered more reliable. Increased customers favourable experiences with credible brands over time create strong loyalty. Lastly, the results show that both attitudinal and behavioural loyalty positively impact customers` word-of-mouth behaviour in the TM market. This result concurs with the current literature (Kotler & Keller, 2012; Dick & Basu, 1994), suggesting that greater loyalty strengthens positive WOM. This

result is also similar to previous studies (Liao et al., 2010; Bahri-Ammari, 2012), which found that loyalty has a significant impact on WOM recommendations. This outcome indicates that loyal customers recommend the brand they buy to anyone who asks for their advice and encourages their friends and relatives to purchase these brands. Increased customers` WOM behaviour may help TM practitioners to increase and sustain their market share.

## 5. Conclusion and Recommendations

**Conclusion:** This study aimed to ascertain the effect of awareness, credibility, and quality on WOM via the impact of loyalty dimensions in the TM market. The study has shown that awareness directly influences attitudinal and behavioral loyalty. In turn, both attitudinal and behavioral loyalty significantly enriches the customers' WOM behavior in the TM market. Not only this but also, the study established that quality positively influences behavioral loyalty, which in turn strengthens the WOM behavior of the customers in the TM market. However, the study reported that quality does not significantly affect the customers` attitudinal loyalty in the TM market. Furthermore, the research revealed that credibility directly influences attitudinal and behavioral loyalty, contributing to increasing positive WOM in the TM market. The study, therefore, established that awareness, credibility, and quality are vital predictors of behavioral loyalty, whilst awareness and credibility are key drivers of attitudinal loyalty in the TM market. Besides, both attitudinal loyalty and behavioral loyalty are critical sources of the TM market customers' positive WOM behavior.

**Recommendations:** Per the study`s results, the following recommendations are made that have practical relevance to the strategic branding decisions of management in the TM industry. The results show that brand awareness contributes to strengthening attitudinal loyalty and behavioural loyalty in the TM market. Thus, greater brand awareness has the potential to reinforce customers` attitudinal loyalty and purchase loyalty. Hence, TM practitioners should strengthen the awareness of their brands to generate loyalty in the industry. The study further found that perceived quality positively affects behavioural loyalty but has no impact on attitudinal loyalty. Hence, TM practitioners should carve a strategy to increase their brands' perceived quality to enhance the customers` behavioural loyalty and attitudinal loyalty in the TM industry. The study also revealed that brand credibility directly affects both attitudinal and behavioural loyalty in the TM market. Also, among the variables, brand credibility has the greatest impact on both attitudinal loyalty and behavioural loyalty in the TM market. Consequently, realizing credible brands' role in building loyalty, the TM practitioners need to develop and exploit credible brands' potential to enhance attitudinal loyalty and behavioural loyalty. Finally, the results show that both attitudinal loyalty and behavioural loyalty positively impact customers` positive WOM behaviour in the TM market. Thus, TM practitioners should design a program to build attitudinal loyalty and behavioural loyalty to increase the customers` favourable WOM behaviour in the market in the Cape Coast metropolis.

**Limitations and Direction for Future Research:** This paper was based on robust literature and methodology; it had limitations that need to be attended to if similar future research is conducted. The TM market encompasses in-store and marketspace environment, but data were gathered from the marketplace environment. Future research should involve collecting information from both online and in-store environments to enhance the study's generalization. Furthermore, this paper looked at only Made-in-Ghana herbal medicines and ignored foreign-based herbal medications such as alternative medicines and/or CAM. Similar future study should consider both locally and foreign-based manufactured herbal medicines to enhance its generalization. The study also adopted a quantitative methodology to test hypothesized relationships to achieve this paper's purpose. Similar future studies should look at mixed methods to enhance the results of the investigation.

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# Evaluation of Cashless Policy in Nigeria: The Pros and Cons

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**Abstract:** The essence of this paper is to evaluate the practice of cashless policy that was introduced almost a decade ago in Nigeria. It was discovered through literature that the security threats of ATM users and the inappropriate use of POS are at an alarming rate. The paper used a structured questionnaire to collect data and the data were analyzed using descriptive statistics with the use of mean, median, and percentage. The results indicate that the awareness level is almost globally known, however; there are still more technological devices and development that are needed for Nigerians to be considered among the top 20 economies to drive the development and modernization of her payment system in line with the global vision. Based on the findings, some recommendations made were: POS should be approved only for the unbanked areas, panic alert buttons should be included in the ATMs, and comprehensive insurance should be available for ATM cash hijackers.

**Keywords:** *Automated Teller Machine (ATM), Cashless Economy, Hijack, Point of Sales (POS), Tax*

## 1. Introduction

Historically, we read and we were taught about the concept of a trade by barter. Trade by barter is still very much in practice as opposed to the idea that it is a pre-colonial idea where the Europeans traded with Africans from the coast (Ashike, 2020). What would you say to a colleague who released his car to be used for a few days all because I proofread his paper and other similar examples that may cut across your mind as you read this? Shortly, while the trade by barter is ongoing, money was introduced. Money is nothing if unacceptable as a medium of exchange and services. It can be a shell, a coin, or a piece of paper which have potential values. Money allows the exchange of services which is where it derives its value. At the secondary school levels, we learned further that money is a unit of measurement and a storehouse for wealth. Money is valuable because it is generally accepted by all as a medium of exchange. The emergence of a cashless policy which includes Internet banking, mobile banking, automated teller machine (ATM) came up as a development that enhances the reduction of physical cash as the emergence of information.

Technology has turned banking activities to paperless as it brought socioeconomic development and growth into the nation (Agu, & Agu, 2020). Therefore, the implementation of a cashless policy was started by the CBN in 2012 to ensure that Nigeria is one of the best economies in the world by going cashless. From this implementation, it is expected to know by evaluation how the country fears the use of the policy and how is this helping to place the country at the forefront of the cashless policy. Therefore, the specific objectives are to evaluate the benefits of the cashless policy as established almost a decade ago in Nigeria and to know the prevailing challenges. Looking at the progress achieved, it is evidenced according to Iwedi, Igbanibo, & Uzo-ahunanya, (2018) that there has not been any substantive achievement recorded since the tenure of the last Central Bank Governor (CBN) Lamido Sanusi Lamido. However, in 2017, he made a substantial move to attract charges to the high cost associated with the volume of cash handling along the value chain from the CBN and bank of operations and traders as seen in table 1.

**Table 1: Penalties Attached to Large Withdrawal of Cash**

| | Amount | Deposit | Withdrawal |
|---|---|---|---|
| **Individual** | Less than #500,000 | Free of Charge | Free of Charge |
| | #500,000 - #1,000,000 | 1.5% | 2% |
| | #1,000,000 - #5,000,000 | 2% | 3% |
| | Above #5,000,000 | 3% | 7.5% |
| | Less than #3,000,000 | Free of Charge | Free of Charge |
| **Corporate** | #3,000,000 - #10,000,000 | 2% | 5% |
| | #10,000,000 - #40,000,000 | 3% | 7.5% |
| | Above #40,000,000 | 5% | 10% |

**Source**: (CBN, 2021).

## 2. Literature Review

The cashless policy which is a common trend globally was introduced by the Central Bank of Nigeria in 2012 to reduce excesses of handling cash in the society. A cashless society is a situation where a transaction takes place without the movement of physical cash thereby reducing cash transaction to the barest minimum as mentioned by (Ezuwore-Obodoekwe, Eyisi, Emengini, & Chukwubuzo, 2014; Omotunde, Sunday, & John-Dewole, 2013). However, before the emergence of cashless and paper money, different forms of means of exchange were in existence which includes gold, commodity money, legal tender money, and near money assets (Obafemi, & Araoye, 2020). It is a society where transactions are carried out without the need for cash movement as a means of exchange. Similarly, it is done by electronic platforms such as the use of Automatic Teller Machine (ATM) available at various bank areas where cash can be withdrawn at intervals. Other platforms that support the cashless policy include; Point of Sale (POS)-terminals which are developed for merchant locations or unbank areas that enable users to swipe their electronic cards to make payment for purchases or services, NEFT-is an online platform where the money is being transferred between an individual or multiple beneficiaries, Real Time Gross Settlement (RTGS)-deals with the transfer of money in favor of a single beneficiary which is faster than cheque, e-transfer is an electronic transfer via the mobile devices using the Internet as the architecture, E-wallets are another method of electronic payment that store card numbers and cash. It is a virtual wallet that can store credit cards, debit cards, and other information electronically. An example of an E-wallet is PayPal. Mobile Wallet is also used in place of holding cash which is downloadable through mobile wallet application (app).

However, users do not need a credit card, debit card, or Internet banking password for making such transactions. It involves transferring money via IMPS which can be useful anywhere. A credit card is a digitized security card printed by financial institutions and configured for individual users which are used as a means of payment for goods and services. A credit card is the replicant of the holder's account (saving or current). A debit card is a new form of transaction in Nigeria where the cardholder can spend as much as their net pay. Therefore, electronic banking forms the major bedrock of a cashless society (Ikpefan, Enobong, Osuma, Evbuomwan, & Ndigwe, 2018; Wali, Wright, & Reynolds, 2014). Before the advent of the CBN cashless policy in Nigeria as of 2012, the business activities in Nigeria were carried out in cash to the tune of over 90% (Wali, Wright, & Reynolds, 2014). The CBN cashless policy is more evident and grounded in aiming at modernization of payment system, provision of more efficient transaction options to enhance financial inclusion, increase convenience, and reduction of cash-related crimes in the country. In January 2012, the Central Bank of Nigeria placed the daily limit of individual cash withdrawal and deposit to N150, 000 and that of corporate entity to N1,000,000 any deposit or withdrawal above this limit attracts the processing cost of 10% for individual and 20% for corporate entities. However, in June 2012, the policy was watered down to the limit of N500,000 for individual and N3,000,000 for corporate with the processing cost of 2% and 3% respectively with the main aim of reducing physical cash in the circulation and not total eradication as the beliefs of some authors as represented in table 2.

**Table 2: Showing Limited Withdrawal of Cash**

| Year | Jan 2012 | | June 2012 | |
|---|---|---|---|---|
| | Individual | Corporate | Individual | Corporate |
| Limit withdrawal | N150,000 | N1,000,000 | N500,000 | N3,000,000 |
| Processing cost | 10% | 20% | 2% | 3% |

The cashless policy initially took effect in Lagos, however, in 2017, the policy extended to the rest of the states of the federation and focused on turning Nigeria from a cash-based economy into an electronic-based economy whereby all transactions were on an electronic payment system to enable Nigeria monetary system to align with the international best practices. This will eventually enhance the proficiency of the Nigerian payment system aiming at achieving the overall quality of the banking system in Nigeria. Also, the negativity attached to handling physical cash such as high subsidy, high cost of cash, inefficiency, and corruption among others will be reduced to the barest minimum (Taiwo, Oluwafemi, & Agwu, 2016; Adu, 2016). Other benefits associated with the cashless policy are the development and mineralization of the payment system by reducing the cost of banking services through the provision of a more effective transaction and also serve as means of eradicating inflation and boosting economic growth. However, one of the objectives of instituting the cashless policy in Nigeria by the (CBN) was to fully modernize the payment system in line with the Nigerian vision of being among the top 20 economics to drive development and modernization of her payment system in line with the global practices in the year 2020 (Iwedi, Igbanibo, & Uzo-ahunanya, 2018).

Even though we are far beyond 2020, the goal is still unreachable. Some of the factors that may have hindered the achievements are lack of proper education which result from bad network connectivity that can enable multiple debiting on a spot and the issue of security had led many to still fall back to cash while transacting (Ikpefan, Enobong, Osuma, Evbuomwan, & Ndigwe, 2018; Kasie & Nwaolisa, 2012). Therefore, there is still so much concern regarding its implementation in Nigeria especially with respect to security issues which was visited in the next paragraph. Although, the cash-based society had been characterized by a number of negative factors such as robbery, kidnapping for ransom, the outrageous cost of currency printing and minting, corruption, currency leakages among others- Central Bank of Nigeria (CBN) (Wali, Wright, & Reynolds 2014), (Adewale, 2013) & (CBN, 2020). Similarly, the study of Akhalumeh and Ohiokah, (2011) stated some problems with the use of cashless policy which include the existence of Internet fraud, inadequate availability of e-payment or e-transaction platform, high level of illiteracy among others. The privacy of digital transactions is not 100% guaranteed as transactions are tied to a particular identity which might end up in malicious hands, unlike the cash-based society where cash can be received anonymously (Pritchard, 2020).

More so, except if CBN and other financial organizations concern should make special outreach efforts where the poor, homeless, and unbanked will experience fewer challenges in a cashless society especially if smartphones become the standard way to transact because they do not have the ways and means to procure a smart device (Noone, 2018). Therefore, to enhance the successful implementation of a cashless society in Nigeria, the issue of infrastructure, adequate security, and vulnerability of cash to all sorts of Internet crimes must be adequately attended to. The CBN must consider the level of literacy of the populace before the implementation of a cashless society in Nigeria and the level of infrastructure for a successful electronic transaction. The electronic system of transacting has been seen to be of great impact on the cashless policy as it will help the actualization of the vision of the Central Bank of Nigeria (Omotunde, Sunday, & John-Dewole, 2013), (Ikpefan, Enobong, Osuma, Evbuomwan, & Ndigwe, 2018), (Wali, Wright, & Reynolds, 2014). Electronic banking is a means of transferring funds with the use of the Internet and computer as iterated earlier, so there is a need for the CBN to work in collaboration with the Deposit money banks and Telecommunication companies Wali, Wright, & Reynolds, 2014).

Having seen the benefits of a cashless economy extensively as mentioned and most of the challenges have been handled by financial institutions. However, some setbacks have not been able to get attention from various solution providers of either Information Technology (IT) or banking experts. The first of this is transforming the POS into a business of cash withdrawal points against payment for goods and services even though these areas are bank areas. Similarly, the security threats that ATM users have suffered as a result of

maintaining the cashless economy are overwhelming. Most of the holders are robbed at gunpoint and forced to the nearest outlet where they are asked to enter their identification number (PIN). Although, there is a myth that has never been proven 'that users should reverse their codes and such sends security alert'. Obviously, this may be possible in developed countries where security agencies are at alert to solving problems, not in developing countries where agencies form a coalition to rub innocent citizens. Other challenges that have been addressed but still prevailed in cashless societies are the poor network that has consistently caused illegal deductions, and high transaction charges by banks. Therefore, the objective of this paper is to find out among the frequent users of ATM, POS, and other technologies associated with the use of a cashless economy whether these aforementioned challenges are existing. If they do, the paper aimed to proffer a lasting solution.

## 3. Methodology

Evaluation of cashless policy in Nigeria for its pros and cons were measured using the quantitative methods. This method employed the use of descriptive analysis which involved mean, median, mode, and percentage to compare the results to previous researches to evaluate the status of Nigeria concerning cashless policy. Seventy (70) users were randomly selected in South-West, Nigeria, where Lagos, Ibadan, Osogbo, and Akure were considered to participate in the quantitative research. Only fifty-two successfully returned their questionnaire. It is expected that all those who have bank accounts with other facilities such as ATM and POS be considered while those who don't have these experiences should not be included as participants.

**Instrumentation**: A research instrument was adopted with two constructs; awareness and security measures on the use of ATM and POS in a cashless economy. **1.** The second section of the instrument after the demographic data was named 'awareness of cashless economy and this was measured using the Yes/No since this was testing for the knowledge of users. Yes means 1 while No means 0 as coded in the Statistical Package for Social Scientist (SPSS). **2.** Similarly, the second construct was titled 'security of the use of ATM and POS'. This was measured using five Likert scale namely; strongly agree (1), agree (2), neutral (3), disagree (4), and strongly disagree (5).

**The Validity and Reliability of the Instrument**: The questionnaire was carefully developed to ensure that it covers the constructs and contents needed to measure the awareness and security level of ATM and POS. The instrument was scrutinized by researchers and other experts in the fields of computing, and financial institutions. Corrections were made to ensure the face and content validity of the instrument matches with the intention. The reliability of the instrument was achieved by administering the questionnaire to five (5) users in Benin City in the Edo State of Nigeria to establish the reliability of the instrument. The data collected was used to estimate the reliability of the instrument using Cronbach Alpha to bring out the internal consistency and construct reliability of the instrument. It was found to be 0.795 for the awareness and 0.845 for the security of ATM and POS.

**Method of Data Analysis**: The questionnaire was administered randomly and fifty-two (52) respondents were captured. The questionnaire was screened for outliers and missing values. This was further coded and analyzed using the Statistical Package for Social Sciences (SPSS) version 21. Descriptive statistics were used to determine the mean, median, mode, and percentage of the awareness and security of the ATM and POS.

## 4. Results and Discussion

From the demographics section of the instrument, Table 3 indicates that 30 males and 22 females responded to the questionnaire which is equivalents to 57.7/42.3 % respectively. This shows an unbiased sex distribution. Similarly, it is evidenced from the table that the frequent users of the ATM and POS are within the working-class age of 18-57. Between 18-37, there were 42 (80.8%) and 38—57, 10 (19.2) were discovered. It can therefore be concluded from this analysis that the active users are youth within the ages of 18-57 which is influenced by educational status; those in the tertiary level were noticed to be more active where 40 participants were recorded to be involved with 76.9%. Meanwhile, it appears that the awareness level of a cashless economy is no longer an issue in Nigeria. Table 3 shows that 40 respondents indicated interest that they are well aware of the existence of a cashless economy with 76.9% while only 6 respondents with 11.5%

within the ages of 18-57 showed that they are not aware of the practice of cashless economy. There is a significant increase in the awareness of cashless policy as reported in Maitanmi, Awodele, Ogbonna and Osundina (2013) previously.

One can also judge by this data that the country is not doing too bad in fast-tracking the Nigerian economy to be among the first 20 world economist come 2020 and beyond that would drive development and modernization of our payment system in line with the Nigerian vision as claimed by Iwedi, Igbanibo, and Uzo-ahunanya (2018) and further supported by the research of John, Emmanuel, Ikechi, and Eke (2020), though there are still several challenges militating against that such as the COVID-19 pandemic issue and other related factors which is a global phenomenon. Also, revenue collection has been improved as supported by Bosupeng (2017) who claimed that the government found the cashless economy lucrative because it facilitates taxation which raises tax revenue. There were other insinuations about a cashless economy/policy being too expensive or that it prevents savings. Table 3 shows clearly that these are not valid statements. With respect to savings, the table shows that 52 respondents with 100% disagree that the cashless economy prevents savings. On the other hand, 44 respondents with 85% agreed that a cashless economy is not expensive with respect to the security of the liquid (money).

**Table 3: Awareness of Cashless Economy**

| **Gender** | **Number** | **Percentages** |
|---|---|---|
| Male | 30 | 57.7 |
| Female | 22 | 42.3 |
| **Total** | **52** | **100** |
| | | |
| **Age** | **Number** | **Percentages** |
| 18-37 | 42 | 80.8 |
| 38-57 | 10 | 19.2 |
| **Total** | **52** | **100** |
| | | |
| **Educational** | **Number** | **Percentages** |
| Primary | 12 | 23.1 |
| Tertiary | 40 | 76.9 |
| **Total** | **52** | **100** |
| | | |
| **Awareness of the benefits of cashless** | **Number** | **Percentage** |
| Yes | 40 | 76.9 |
| No | 6 | 11.5 |
| Others | 6 | 11.5 |
| **Total** | **52** | **100** |
| | | |
| **Cashless policy prevent savings** | **Number** | **Percentage** |
| Yes | 0 | 0 |
| No | 52 | 100 |
| **Total** | **52** | **100** |
| | | |
| **Cashless transactions are expensive** | **Number** | **Percentage** |
| Yes | 8 | 15.4 |
| No | 44 | 84.6 |
| **Total** | **52** | **100** |

Table 4 titled Security of ATM and POS in a cashless economy starts with the security awareness of a cashless economy. The security of the cashless economy has greatly improved compared to the previous challenges when it was first launched in 2012 [Maitanmi, Awodele, Ogbonna and Osundina, 2013]. ATM was previously porous such that a third party that guessed the password of users can penetrate within three triers without blocking the card. However, technology has improved. Table 4 shows that 39 (75%) believed that the security awareness of the cashless economy has increased users. Similarly, literature has shown that physical

transaction has reduced tremendously in Banks. This is shown in table 4, where 20 (38.5%) respondents consented to this claim.

**Table 4: Security of ATM and POS in a Cashless Economy**

| **Security of Cashless Advert Increase users** | **Number** | **Percentage** |
|---|---|---|
| Yes | 39 | 75 |
| No | 13 | 25 |
| **Total** | **52** | **100** |
| | | |
| **The physical transaction has reduced due to the cashless economy** | **Number** | **Percentage** |
| Yes | 20 | 38.5 |
| No | 12 | 23.1 |
| Others | 20 | 38.4 |
| **Total** | **52** | **100** |
| | | |
| **POS is used for more cash dispenser unit than payment unit in Nigeria** | **Number** | **Percentage** |
| Strongly Agree | 27 | 51.9 |
| Agree | 25 | 48.1 |
| **Total** | **52** | **100** |
| | | |
| **ATM users are easily hijacked for force withdrawal** | **Number** | **Percentage** |
| Strongly Agree | 27 | 51.9 |
| Agree | 25 | 48.1 |
| **Total** | **52** | **100** |
| | | |
| **Illiteracy increased cashless fraud** | **Number** | **Percentage** |
| Strongly agree | 39 | 75 |
| Agree | 13 | 25 |
| **Total** | **52** | **100** |
| | | |
| **Cashless reduced black money** | **Number** | **Percentage** |
| Strongly agree | 11 | 21.2 |
| Agree | 41 | 78.8 |
| **Total** | **52** | **100** |

The POS is originally developed to help reduce cash handling in a cashless economy, it is most disheartening that the reverse has taken effect in the Nigerian economy where the merchants are no longer in the possession of the POS. Rather, the POS is now being handled by individuals who can afford the registration money through banks, and they are therefore used for businesses around as cash withdrawal points even with the existence of banks with huge percentages to their credits. Table 4 supports this view where the majority of the respondents 27/25 (100%) believed that POS is used for more cash withdrawal rather than the payment unit in Nigeria. This is a call to the Nigerian Government to investigate those applying for the procurement of POS and ban those applying for personal gains if the cashless economy would have to be improved like the developed countries. Further hindrances to the cashless economy have been going on for over three years in Nigeria where owners of ATM cards (credit/debit) were hijacked at gunpoint and would be forced to the nearest ATM where they would be requested to withdraw all their earnings.

Many Nigerian have lost billions of Naira to the arm bandits through this method (CBN, 2018). No wonder, table 4 shows that all the respondents 52 (100%) agreed to the fact that ATM users are easily hijacked at gunpoint. This is a call to the Nigerian government and the banking sector to beef up the security camera in various ATM outlets like developed countries, in additional panic alert code should be embedded into the ATM

keyboard that works seamlessly as Artificial Intelligence (AI) with the camera and this will usually be ignited if the transaction history of the customers is considered strange for previous transactions. Lastly, on this issue, the CBN should introduce an insurance policy for all financial holders, where insurance companies pay back any amount lost to thefts and other accidental discharge. Table 4 supported that a cashless economy has reduced black money where 100% of the respondents agreed that a cashless economy has reduced corruption in terms of the movement of money to foreign countries this was possible with the introduction of bank verification number (BVN).

## 5. Conclusion, Recommendations and Further Research

The paper has extensively evaluated the security of ATM and POS cashless economy from 2012 to date. We have looked into the awareness level and various security measures and the loopholes involved. It is evidenced that there are still more technological developments needed before Nigerian could be considered among the top 20 economies by the year 2020 and beyond who would drive modernization and development of payment system in line with the Nigerian vision. The following recommendations were made. While the awareness level keeps increasing, the government and the CBN should not relent in their efforts in educating the populace of the advantages involved. The measures to keep users safe and secure should not be kept away from them. For instance, it is still amusing to know that majority of the Nigerians are still in the dark with the fact that rubbers cannot succeed by extorting account holders with POS. Holders of account should willingly release their pin and ATM to robbers knowing fully that the receivers will be picked. The government of Nigeria should strive to fulfill the mandates of the POS to merchandise and unbank areas alone. Further research is needed to find lasting solutions to the issue of armed bandits robbing ATM users.

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