EFFECT OF TRIPLE BOTTOM LINE ACCOUNTING, ON FINANCIAL PERFORMANCE OF LISTED MANUFACTURING FIRMS OF CONSUMER GOODS PRODUCT IN NIGERIA

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Abstract

This study examines effect of Triple Bottom Line Accounting on Financial Performance of Listed Manufacturing Firms of consumer goods products in Nigeria. The sample comprises of 21 manufacturing firms listed on the Nigerian stock exchange (NSE), covering the period of 2013 to 2017 five years. The combination of 21 firms for a five year period provides a balanced panel of observations to analyzed using a cross-sectional and ex-post facto research design. Triple Bottom Line Accounting measures are Economic cost (fund employed), Social cost (education tax), and Environmental cost. Financial Performance measure is Earnings per Share. The postulated Hypotheses is tested, using ordinary least square method of Multiple Regression Analysis. The empirical results states that, the r-squared of 0.78 suggest that our regression model which regressed Triple Bottom Line Accounting indicators on Financial Performance of Listed Manufacturing Firms of Consumer Goods Product in Nigeria is well-fitted. The outcome is 78% and the probability value of f-statistics is significant at 1% supporting the credibility of the regression equation. This shows the ability of the selected explanatory variables to predict more than half of the changes that occur in the Financial Performance of manufacturing firms of consumer goods product in Nigeria. Based on the findings, we recommend that government, as the main custodian and protector of the society and the environment should help put in place some guideline for manufacturers to contribute to their environment and the society at large.

Key Word; Triple Bottom Line, Fund Employed, Education Tax.

Intoduction

Business is a Socio-economic activity and it draws its inputs from the society. Hence, its objectives should include the welfare of the society (Abbot & Monsen 2009). Business therefore owes a responsibility towards solving many social problems. Triple bottom line accounting is a broader frame work that incorporates three dimensions of performance which include economic, social and environmental accounting (Onyali 2014). Triple bottom line accounting of social, economic and environmental reports considerably alters how organizations and stakeholders measure sustainable success.

Triple Bottom Line Accounting refers to a method of measuring the economic, environmental, and community service impacts of an organization rather than the traditional practice of measuring just the financial bottom line. Elkington (1997) coined 'triple bottom line' as a new term to advance his sustainability agenda. Companies aiming for sustainability need to perform, for not only a single financial bottom line, but for the triple bottom line (Elkington, 2012). His definition is intended to go beyond previous construction of sustainable development and corporate social responsibility to encompass an approach that emphasizes economic prosperity, social development and environmental quality as an integrated method of doing business. Ngwakwe (2008) reported that triple bottom line accounting has a capacity for long-term financial performance, investment return, and also value creation which refers to achieving sufficient profits**.** One of the best ways of evaluating a sector's financial performance is by the use of financial ratio analysis like Earnings Per Share of the firms. Financial performance principally reflects business sector outcomes and results

that shows overall financial health of the sector over a specific period of time. It indicates how well an entity is utilizing its resources to maximize the shareholders wealth and profitability.

Statement of problem

The problematic case of manufacturing firms' non reports on triple bottom line, represented by the deterioration of the firm's financial performance as well as social and environmental impacts, is a logical result of adopting an unusual business strategy that considers revenues solely. The interest in reporting accounting in a triple bottom line has inspired this study to look at actionable knowledge that would amount to an efficient and robust remedy for financial performance of listed manufacturing firms in Nigeria for now and in the future.

Objective of the Study

To determine the effect of Economic Cost, Social Cost and Environmental Cost on Earnings per Shares of listed manufacturing firms of consumer goods product in Nigeria. In other to analyze the effect of triple bottom line accounting on the financial performance we formulate the following hypotheses, "There is no significant effect of Economic Cost, Social Cost and Environmental Cost on Earnings per Shares of listed manufacturing firms in consumer goods product sector in Nigeria".

Literature Review

Triple bottom line is a sustainability-related construct that was coined by (Elkington 1997). The origin of sustainability dates back to over 130 years ago from an idea known as spaceship earth (George 2009). Evolving over the years, the construct gained significant popularity with the emergence of the term "sustainable development" from the Brundtland Report in 1987. The report defined sustainability as the "development that meets the needs of the present generations without compromising the ability of the future generations to meet their own needs" (Brundtland 2009). Driven by sustainability, Triple Bottom Line provides a framework for measuring the performance of the business and the success of the organization using three lines: economic, social, and environmental (Goel 2010). In essence, Triple Bottom Line expresses the expansion of the environmental agenda in a way that integrates the economic and social lines according to (ALhaddi, 2015).

Elkington (2004) introduced the sustainability concept as triple bottom line. Triple Bottom Line Accounting captures the essence of sustainability by measuring the impact of an organization's activities on the world. This accounting practice goes beyond the traditional measure of profit, returns on investment and shareholders' value to include environmental and social dimension. Such reporting can be an important tool to support sustainability goals (Onyali, 2014). Although, Jackson, Boswell and Davis,(2011), states that there is no real consensus as to the exact dimension used for performance measurement. However, according to them, performance can be measured based on the impact of companies on the society as a whole both now and into the future. Social and environmental information disclosure is also commonly referred to as corporate social responsibility reporting (Abbot & Monsen, 2009). It can also be defined as an environmental management strategy to communicate with stakeholders, which makes it corporate social and environmental reporting.

Oyali (2014) observed, that companies have been called upon to fulfill the needs of a wide range of stakeholders who pay attention to a company's value. They are interested in understanding the approach and performance of a company in managing sustainability such as economic, environmental, and social aspects, including the potential for value created from managing sustainability. Besides providing financial information for shareholders, a company needs to publish non-financial information as well (Alida, 2007). Sustainability reporting is a term which is widely used to explain the communication effect of companies' activities on social, environmental and

economic performance. Sustainability reports are also referred to as "triple bottom line reports". Many large companies publish such kinds of reports, especially for companies that are socially and environmentally sensitive, such as those engaged in oil and gas, mining, chemical, automotives, computers and electronics (Bourne, Franco & Wilkes, 2003). Triple bottom line is a catch phrase that is increasingly being used as a heuristic to help conceptualize sustainability as well as provide a framework for reporting against sustainability parameters (Dutta, 2012). Triple bottom line reporting is the corporate communication with stakeholders that describes a company's approach to managing the economic, environmental and social dimension of its activities. A triple bottom line report is usually a stand-alone annual report through which an organization accounts for its impacts on the broader environment, society and economy, as an advance on a traditional annual report which focuses solely on an organization's financial accountability.

The application of the Triple Bottom Line Accounting by businesses, nonprofits organization, profit making organizations and governments is motivated by the principles of economic, environmental and social sustainability, but differ with regard to the way they measure the three categories of outcomes (Goel, 2010). Triple Bottom Line, encountered many challenges, chief among them, how to make an index that is both comprehensive and meaningful and how to identify suitable data for the variables that compose the index. The Genuine Progress Indicator (GPI), for example, consists of variables that encompass economic, social and environmental factors. Those variables are converted into monetary units and summed into a single, dollar-denominated measure. Minnesota developed its own progress indicator comprising variables that focused on the goals of a healthy economy and gauged progress in achieving these goals (Slaper 2019).

Slaper and Hall (2011) argue that looking to Triple Bottom Line sustainability measures, the economic measures are straight forward money-related and financing figures, while the environmental sustainability measures incorporate measuring the potential influences of business environmental impacts on natural resources and their viability. Environmental variables should represent measurements of natural resources and reflect potential influences on their viability. This would incorporate the contamination impact of water and air quality, greenhouse gas emissions, material recycling rates, water consumption, energy consumption, pollutant gases and substances, waste management of hazards, landfill, and material waste management. The social sustainability dimension's measures incorporate an education level in the local community, equity level, welfare, careers retention, charitable contributions, level of health care and well-being, rate of unemployment, quality of life, per capita violent crimes, relative poverty, and social capital. In brief, the firm's stakeholders are the right party to determine the appropriate set of Triple Bottom Line sustainability measures applicable to subjected business tasks and activities that would remain flexible and dynamic during changes in business circumstances. The firm's stakeholders and experts can develop and establish an adaptive genuine progress indicator (GPI) for the firm/entity with business related variables that incorporate social, economic and environmental perspectives converted to monetary units and ultimately presented as a monetary value.

Saeed (2017) stated that performance is a word that originates from the old French word 'Parfournir' whose meaning is to bring through, to carry out, to do or to bring forth. Performance is an act of performing, implementing, achieving, and fulfilling of given tasks that needs to be measured against defined sets of precision-money, fullness and timing. In finance, it refers to the measurements of the company's policies, activities and operational results in financial terms. It is used to check a company's success, compliance and financial position. These results are reflected in the firm's return on investment, assets, equity, capital employed and profitability. **Earnings Per Share (EPS):** It is the portion of a company's profit allocated to each outstanding share of common stock. It serves as an indicator of a company's profitability. Chen (2019) states that earning per is calculated as a company's profit divided by the outstanding share of its common stock. The resulting number serves as an indicator of a company's profitability. It's matrix are one of the most important variables in

determining share price, price to earnings ratio, investors value to stock and how much the market is willing to pay (Chan 2019; Peavlerm, 2018).

Economic Cost

Slaper and Hall (2011) argue that looking to Triple Bottom Line sustainability measures, the economic measures are straight forward money-related and financing figures, it is the combination of any goods that have a value attached to them by any one individual. Economic cost is used mainly by economists as means to compare the prudence of one course of action with that of another. The factors to be taken into consideration are money, time, and other resources. It includes the gains and losses precluded by taking a course of action as well as those of the course taken. Economic cost differs from accounting cost because it includes opportunity cost, (sometimes accounting cost is refered to as explicit cost and opportunity or economic cost as implicit cost). The firm's primary objective in producing output is to maximize profits. The production of output, however, involves certain costs that reduce the profits a firm can make. The relationship between costs and profits is therefore critical to the firm's determination of how much output to produce.

Explicit and Implicit Cost; A firm's explicit costs comprise all explicit payments to the factors of production the firm uses. Wages paid to workers, payments to suppliers of raw materials, and fees paid to bankers and lawyers are all included among the firm's explicit costs. A firm's implicit costs consist of the opportunity costs of using the firm's own resources without receiving any explicit compensation for those resources. For example, a firm that uses its own building for production purposes forgoes the income that it might receive from renting the building out. As another example, consider the owner of a firm who works along with his employees but does not draw a salary; the owner forgoes the opportunity to earn a wage working for someone else. These implicit costs are not regarded as costs in an accounting sense, but they are a part of the firm's costs of doing business, nonetheless. When economists discuss *costs*, they have in mind *both* explicit and implicit costs (Kimberlee, 2019).

Environmental Cost

Environmental measures incorporate measuring the potential influences of business environmental impacts on natural resources and their viability. Environmental variables should represent measurements of natural resources and reflect potential influences on their viability. This would incorporate the contamination impact of water and air quality, greenhouse gas emissions, material recycling rates, water consumption, energy consumption, pollutant gases and substances, waste management of hazards, landfill, and material waste management. Environmental costs of business is an enterprise actions in order to fulfill environmental protection responsibilities, the implementation of national environmental protection laws, regulations and policies, and operations in order to prevent adverse impact on the natural environment and take appropriate measures to achieve environmental objectives. Environmental sustainability involves making decisions and taking action that are in the interests of protecting the natural world, with particular emphasis on preserving the capability of the environment to support human life. People are realising the full impact that businesses and individuals can have on the environment (Jing &Songing, 2011).

Environmental sustainability is about making responsible decision that will reduce your business negative impact on the environment. It is not simply about reducing the amount of waste you produce or using less energy, but is concerned with developing processes that will lead to businesses becoming completely sustainable in the future. Currently, environmental sustainability is a topical issue that receives plenty of attention from the media and from different governmental departments. This is a result of the amount of research going into assessing the impact that human activity can have on the environment. Although the long term implications of this serious issue are not yet fully

understood, it is generally agreed that the risk is high enough to merit an immediate response (Jing &Songing, 2011).

Social Cost

The social sustainability measure, incorporate an education level in the local community, equity level, welfare, careers retention, charitable contributions, level of health care and well-being, rate of unemployment, quality of life, per capita violent crimes, relative poverty, and social capital. Social cost in neoclassical economics is the sum of the private costs resulting from a transaction and the costs imposed on the consumers as a consequence of being exposed to the transaction for which they are not compensated or charged. In other words, it is the sum of personal and external costs. Private costs refer to direct costs to the producer for producing the good or service. Social cost includes these private costs and the additional costs (or external costs) associated with the production of the good for which are not accounted for by the free market (Gruber, 2012). Mathematically, social cost is the sum of private cost and the external costs The alternative to the above neoclassical definition is provided by the heterodox economics theory of social costs by K. William Kapp in (Berger, 2017). Social costs are here defined as the socialized portion of the total costs of production, i.e., the costs which businesses shift to society in their attempts to increase their profits (Gruber, 2012).

Theoretical Review

Though there is no agreed theoretical base for research on triple bottom line Accounting, Legitimacy Theory will be use to back up triple bottom line accounting and Pecking Order Theory will also be used to explain financial performance of firms. **Legitimacy Theory** Within the relationship between organisation and society, the responsibilities of organisations and the social expectations concerning them are constantly being discovered, examined, defined and revised. Legitimacy theory, being derived from the political economy paradigm, provides a view that the interrelationship between an organisation and related social expectations is simply a fact of social life. According to this theory, the survival of an organisation is established both by market forces and community expectations, and hence an understaniding of the broader concerns of society expressed in community expectations becomes a necessary precondition for an organisation's survival. The theory focuses on the assumption that an organization must retain its social role by responding to society's needs and giving society what it wants. This assumption has been supported by some early studies such as those of Sethi (1974); Shocker & Sethi (1974); Guthrie & Parker (1989).

The theory most widely used to explain motivations behind social and environmental reporting is legitimacy theory. Within the social and environmental accounting literature, legitimacy theory offers insights in describing and explaining the changing levels of social and environmental reporting behaviour of an organisation. Deegan (2002) provides a comprehensive overview of the legitimacy theory and a variety of motivations for managers to report social and environmental information. He has found a number of studies that have embraced the legitimacy theory to explain the motivation behind corporate social and environmental disclosures. The central point which can be put forward is the question of the analytic utility of the concept of legitimacy – that is, whether the concept of legitimacy is a useful one in explaining the social and environmental impacts of an organisation. As social relations may be created predictably, the concept of legitimacy can enable a researcher (who addresses this concept) to explain the social relations of an organisation. (Lindblom, 1994) defines legitimacy as a condition or status which exists when an organisation's value system is congruent with the value system of the larger social system of which the organisation is a part. It is a measure of the attitude of society toward a corporation and its activities, and it is a matter of degree ranging from highly legitimate to highly illegitimate. It is also important to point out that legitimacy is a social construct based on cultural norms for corporate behaviour (Norman & MacDonald, 2004).

Pecking Order Theory (1984)

Myers and Majluf, (1984) developed Pecking Order Theory (POT) upon the asymmetry of information between internal stakeholders (owners and managers) and external providers of funds to the firm. Business leaders adopt a financial policy, which aims at minimizing the costs associated with asymmetric information, especially adverse selection, and prefer internal financing to external financing. This theory assumes that a business leader complies with the following hierarchy: self financing, non-risky debt issuance, risky debt issuance and equity issuance as a last resort. Such behaviour eschews a fall in the prices of shares of the firm; it restricts the distribution of dividends in order to increase cash flow and reduces the cost of capital by limiting as much as possible access to loans. Thus, profitable firms enjoy more internal funds available. Asymmetric information should drive the issue of debt over equity. Debt issuance signals the confidence of the board that an investment is profitable and that the current stock price is undervalued. Equity issuance signals a lack of confidence in the board that may feel the share price is overvalued. An issue of equity would therefore lead to a drop in share price. However, this may not apply to intangible assets.

Ang (1991) and Holmes and Kent (1991) point out that POT applies to SMEs, save subcontracting SMEs or those belonging to a group (Kremp & Phillippon, 2008). SMEs do not aim to achieve an optimal financial structure; they rank their preferences for internal financing over external financing, as well as debt relative to equity. They may wish to borrow when investment funding exceeds their internal cash flow, albeit they will face transaction costs in their credit relationship. These costs may be zero for internal funds (cash flow), but higher for new shares issuance, whereas that of debt stand in between. Firms will first choose internal funds for financing and if such funds prove unavailable, they prefer using debt rather than increasing their capital (Berger & Udell, 1998). Matemilola and Bany-Ariffin, (2011) states that Pecking Order Theory emerge as one of the theory of capital structure that explain how firms finance themselves in real world.. Theories explaining capital structure and the variance of debt ratio across firms range from debt increase, value in tax models, trade off between cost of financing distress, agency cost tax benefit and optimal debt ratio. Six major theory have being use in explaining financial economy or capital structure namely, Modigliani Theory, Trade off Theory, Pecking Order Theory, Agency Theory, Market Timing Theory and Signaling Theory. Among all the theories Pecking order theory emerge as one of the best to possible explanation of financial performance and capital structure. (Matemilola, & Bany-Ariffin, 2011).

Empirical Review

Jackson, Boswell and Davis (2011) in his studies examined the relationship between ‘Sustainability’ and ‘Triple bottom line’ as two related concepts that are used interchangeably in the literature. A comprehensive review of the relevant literature was conducted and revealed an inconsistent use of the term sustainability with respect to social, environmental, and economic lines. On the other hand, consistency in terms of referring to the three lines simultaneously is built into the structure of Triple Bottom Line as the concept is clearly based on the combination of social, environmental, and economic lines. The purpose of this paper is not to support an argument that favours the use of one term over the other, but to provide an overview of the presence of both terms and their interconnectedness in the literature. It also explores ‘Sustainability’ and the ‘Triple Bottom Line’, as tools to examine, appraise or measure the effects of business activities on the economy, social equity, and environment. In the light of this, researchers in the business, management, and sustainability fields are encouraged to pay particular attention to how they use these terms in their studies for better understanding by other researchers.

Oyali, Okafor and Onodi (2015) in their study examined the effectiveness of triple bottom line disclosure practice of corporate firms in Nigeria by focusing on the perspective of corporate stakeholders. In achieving the above objective, three research questions were raised and two

hypotheses were also formulated. The descriptive method of research design was employed to generate the required data. The population of the study was made up of three distinctive groups: Investors, Customers/Consumers and Accountants. The primary data were summarized using tables and the formulated hypothesis was analyzed using one-sample z test procedure done. Their findings indicated that investors and consumers expressed dissatisfaction with the extent of firms Triple Bottom Line disclosure practice in Nigeria. In their own view, most Organizations' reports were often vague and far from the expression of actual performance. Also, Accountants' were negative on the level of rigor and transparency exerted in the preparation of triple bottom line report by corporate firms in Nigeria. Based on this, it was recommended that companies should disclose more quantifiable triple bottom line indicators encompassing social, environmental and economic performance indicators. The development of standards to guide companies in the identification of variables for disclosure is also suggested

Chapman and Milne (2004) in their work "The Triple Bottom Line: How New Zealand Companies Measured" stated that Triple Bottom Line involves the measurement and reporting of economic environment and social performance indicators in a single report. Over the past few years an increase number of New Zealand companies have produced such report, due mostly to the promotional effort of the New Zealand Business Council for Sustainability Development (NZBCSD). A lack of legal requirement or mandatory reporting standard, however, means the uptake of such reporting is not widespread beyond council members based on the UNEP\Sustainability benchmarking tools, their article report the result of an analysis of 30 NZBCSD members 200 triple bottom line reporting results from analysis showing that while the member of companies undertaking Triple Bottom Line Reporting is increasing, the standard of reporting generally remains poor. Only two report generates over half of the total possible score according to the benchmarking tool. Commonly disclosed issues relates to management policies and systems, with evidence of some efficiency metrics (mostly energy and waste) being commonly used, employee and local communities are those stakeholders most frequently addressed in these reports. The article concluded with a section on how future triple bottom line report can be improved upon.

Methodology

This study adopt a cross-sectional and ex-post fasto research design, we will examine the inter-relationship among variables using data obtained from Nigeria Stock Exchange on a cross section of listed manufacturing firms in consumer goods product in specific periods of 2013 to 2017. From the daily official list, it is stated that there are twenty one (21) publicly-owned quoted firms under consumer goods firms (Biliamin, 2017). the predictor variable of this study: Triple bottom line Accounting and the criterion variable: Financial Performance in the secondary data was measured (Baridam, 2017). The Secondary data, the predictor and criterion variables of this study were cardinal information (data derived from the annual report of quoted manufacturing firms in Nigeria as obtained from the Nigerian Stock Exchange (NSE) (Biliamin, 2017). The independent (predictor) variable which is Triple bottom line Accounting is indicated by Economic Cost, EC(Fund Employed Social Cost, SC (Education Tax), Environmental cost, EVC (Environmental Cost). (OECD 2003; USC 2011; Investopedia.com, 2018). While the dependent (criterion) variable (Financial Performance indicators is, Earnings per share (EPS). In order to ascertain the truth and consistency of our result, the results obtained was subjected to statisical test using the parametric statistical procedures. In this regard, the parametric statistical test is to be adopted in testing our hypotheses at a significant level of 0.05. A significant level of 0.05 shows that; there are 5 chances in a hundred that a true null hypothesis would be rejected. This test is said to be significant if the hypothesis is null (H_0) disregarded at 0.05 significant level, while the hypotheses in alternate (H1) accepted. Therefore, the parametric test that is to be used, is Panel Least Square regression and Multiple Regression.

Data Analysis

Descriptive Analysis for the Consumer Goods

The descriptive analyses of the variables in this work were conducted for the Consumer Goods in this section. Financial performance of listed manufacturing firms in Nigeria formed a panel studies data; and the descriptive analyses of each of the series were taking to assess the measure of variability obtainable in the series before further estimations was carried out.

Table 1.1: Result of Descriptive Analysis

	EC	EPS	EVC	SC
Mean	54695554	146.4016	62172212	1082348.
Median	22604258	34.56500	4512988.	115336.0
Maximum	2.84E+08	1682.000	1.49E+09	19244000
Minimum	1143.000	0.170000	0.000000	0.000000
Std. Dev.	67922443	266.2365	2.07E+08	3579611.
Skewness	1.390351	3.126224	5.047091	4.128312
Kurtosis	4.085066	14.96350	30.18965	18.50553
Jarque-Bera	37.12362	759.2439	3504.874	1285.806
Probability	0.000000	0.000000	0.000000	0.000000
Sum	5.47E+09	14640.16	6.22E+09	1.08E+08
Sum Sq. Dev.	4.57E+17	7017307.	4.25E+18	1.27E+15
Observations	105	105	105	105

Source: Researcher's Eviews Output 2019

The four variables in this work were all selected to have coverage of almost all the important indicators of consumer goods of manufacturing firms in Nigeria. The selected variables include Earning Per Shares (EPS) which is the dependent variable while the independents variables are: Economic Cost (EC), Social Cost (SC) and Environmental Cost (EVC). The combination of these indicators in this research is believed by the researcher to be able to generate the true picture of the manufacturing firms in Nigeria.

The result of the descriptive as shown on table 1.1 indicates that EC has a high level of spread. This is in consideration of the maximum value of 284000000 as against the minimum value of 1143.000 as well as the median score of 22604258. This shows that EC of consumer goods has a wide level of variability within the study time frame of 2013 to 2017. It also suggests that ECmay have improved over time or fluctuated significantly. EC is also found to have some data points lying away from the mean score of 54695554pointing to the fact that EC has more data points that are close to the minimum score that those closer to the maximum score. The central value of 22604258i.e. the median is far from the maximum value and being a value at the middle, it implies that more than half of the data points on EC are less than or equal to 22604258; hence we can say that the performance of the listed manufacturing firms within the five years period covered by the study is on the low side considering the maximum score of 284000000. The standard deviation of the variable also supports this finding as its value of 67922443implies a minimal deviation from of the observations from their mean.

The EPS which is the dependent variable, has a lesser level of spread as its values range from the minimum value of 0.170000 to maximum of 1682.000. This suggests that the variations in the consumer goods in this study are not widely spread as can be deduced by its median score of 34.56500 and mean score of 146approximately. It indicates that these listed consumer goods have little variation in their behavioral pattern as regarding EPS. The standard deviation of 266.2365 obtained for the series also suggests that the observations are not closely clustered around the mean.

EVC is another variable in the consumer goods from the standpoint of frequencies,according to the result obtained on the above table 1.1, EVC ranged from the minimum value of 0.000000 times to maximum of 1490000000 in a year across the listed manufacturing firms in Nigeria. However, these extreme values will not be enough to make a logical conclusion without recourse to the mid-values as depicted by the mean and median values which are 62172212 and 4512988 respectively. The mean as a measure of central tendency herein suggests that average consumer goods among our panel has 45020320 in a year. The median value of 62172212 also indicates the observations are well spread around their mean suggesting that the selected banks in this study have varying degree of EVC frequencies which are not tilted to any one side of the two extremities. SC is another variable in the consumer goods, from the descriptive analysis result obtained, the minimum value of 0.000 suggests that in at least year, at least one of the consumer goods in the study panel has a SC of 0.000. But the maximum value of 19244000. The observations for SC appears to be well dispersed judging from its median score of 115336.

Summarily from the results of the descriptive analysis, the data obtained and described above showed a manageable level of spread though they all have a Jarque-Bera probability values of less than 5%, hence the researcher deemed it fit to be utilized for the purpose of analyzing the objectives raised in the initial section of this work.

Panel Unit Root Test Results
Table 1.2: Panel Unit Root at Level

Method	Statistic	Prob.**	Cross-Sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.47597	0.0000	21	84
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.43073	0.6667	21	84
ADF - Fisher Chi-square	38.4733	0.6266	21	84
PP - Fisher Chi-square	54.1450	0.0991	21	84

Source: Researcher's Eviews Output 2019
The essence of conducting a panel unit root test in this study is to avoid the error of basing our projections and conclusions on a spurious result. Hence, we adopt the Levin, Lin & Chu (LLC) and ADF - Fisher Chi-square methods for common and individual unit root processes respectively. The results for each of the variables at level are shown on table 1.2 above.

From the results obtained on table 1.2 with respect to all the variables at level, all the series have a probability value of less than 5% with the assumption of common unit root processes. This is in line with figures in column four of table 1.2 so we can conclude that all the variables in this study do not possess unit root at level when the assumption of common unit root is made. However, in the second process which assumes an individual unit root process, all the variables with the exception of only risk management committee all possess unit root hence we proceed to conduct the test again at first differencing.
The panel unit root conducted again at first differencing yielded the results as shown on table 1.3 below.

Table 1.3: Panel Unit Root at First Differencing

Panel unit root test: Summary
Series: D(EPS)

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-11.5467	0.0000	21	63
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	82.0727	0.0002	21	63
PP - Fisher Chi-square	103.595	0.0000	21	63

Source: Researcher's Eviews Output 2019

The probability values of all the series at first differencing are less than 5%, hence we reject the null hypotheses proposed that the series each possess a unit root thereby accepting the alternative hypotheses for all the series.

Panel Co-integration Analysis Result

Table 1.4: Panel Co-integration Test for Consumer Goods

Kao Residual Cointegration Test
Series: D(EPS) D(EC) D(EVC) D(SC)
Sample: 2013 2017
Included observations: 105
Null Hypothesis: No cointegration
Trend assumption: No deterministic trend
Automatic lag length selection based on SIC with a max lag of 0
Newey-West automatic bandwidth selection and Bartlett kernel

	t-Statistic	Prob.
ADF	-5.657386	0.0000
Residual variance	80668.30	
HAC variance	48364.21	

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RESID)
Method: Least Squares
Date: 08/18/19 Time: 06:35
Sample (adjusted): 2015 2017

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID(-1)	-1.671481	0.136106	-12.28069	0.0000
R-squared	0.718012	Mean dependent var		15.03800

Adjusted R-squared	0.718012	S.D. dependent var	286.4667
S.E. of regression	152.1210	Akaike info criterion	12.90376
Sum squared resid	1365308.	Schwarz criterion	12.93866
Log likelihood	-386.1127	Hannan-Quinn criter.	12.91741
Durbin-Watson stat	3.185116		

Source: Researchers Eviews Output 2019

Having established from the unit root tests carried out in the last section, that the listed consumer goods variables are not stationary at level but are integrated of one another, it follows that the linear combination of one or more of these variables might exhibit a long run relationship. The researcher in a bid to capture the extent of co-integration among the variables utilized the Kao Engle Granger based method, and the results as shown on table 1.4 below suggests that there could be long run relationship between the Triple Bottom Line Accounting indicators and Earning Per Shares of listed manufacturing firms in Nigeria. The null hypothesis which holds that there is no co-integration among the specified variables was rejected at 5% level of significance; hence we conclude that Economic Cost (EC), Social Cost (SC), Environmental Cost (EVC) and Earning per Shares (EPS) exhibit a long run association. It is therefore feasible to assume a long run effect of each of the Triple Bottom Line variables on the Earning Per Shares (EPS) of the Listed Manufacturing Firms in Nigeria and not just a temporary or chance association. This also implies that in the long run, Economic Cost, Social Cost and Environmental Cost will continue to relate with the changes observable in the Earning Per Shares of listed manufacturing firms in Nigeria.

Discussion of Consumer Goods Regression Results

Prior to testing the objectives of this study, the regression result of the Consumer Goods is presented and discussed in this section; this was done using multiple regression analysis, and also adopting the fixed and random effect model. The fixed/random effect model is different from the pooled method of estimating a panel regression because it takes the cross section and time series nature of the data into cognizance thereby allowing for the individuality of the manufacturing firms that are listed in our study. It makes room for the heterogeneity which could exist among the listed manufacturing firms in our study.

The Hausman test proposes a set of hypothesis in the null and alternative forms as follows:

H0: Random effect regression model is more appropriate
H1: Fixed effect regression model is more appropriate.
The panel regression conducted for consumer goods analysis compared between the fixed effect model and random effect model using the Hausman test and the abridged result is shown on table 1.5 below.

Table 1.5: Hausman Test for Fixed and Random Effects Models

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.

Cross-section random	0.276299	3	0.9644

** WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
D(EC)	0.000000	0.000000	0.000000	0.7407
D(EVC)	-0.000000	-0.000000	0.000000	0.8318
D(SC)	0.000029	0.000011	0.000000	0.6958

Cross-section random effects test equation:
Dependent Variable: D(EPS)
Method: Panel Least Squares
Date: 08/18/19 Time: 06:42
Sample (adjusted): 2014 2017
Periods included: 4
Cross-sections included: 20
Total panel (balanced) observations: 80

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.856358	21.81266	0.130950	0.8963
D(EC)	1.76E-08	4.27E-07	0.041289	0.9672
D(EVC)	-3.71E-08	1.89E-07	-0.196635	0.8448
D(SC)	2.94E-05	7.24E-05	0.406229	0.6861

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.207683	Mean dependent var	5.296638
Adjusted R-squared	-0.098123	S.D. dependent var	179.5251
S.E. of regression	188.1268	Akaike info criterion	13.54813
Sum squared resid	2017327.	Schwarz criterion	14.23297
Log likelihood	-518.9254	Hannan-Quinn criter.	13.82270
F-statistic	0.679133	Durbin-Watson stat	3.156454
Prob(F-statistic)	0.840730		

Source: Researcher's Eviews Computation 2019

The null hypothesis of the above test proposes the acceptance of the random effect model which assumes a mean value for the intercepts of the various selected value whereas the alternative hypothesis suggests that the fixed effect regression model is appropriate including the assumption that though intercepts may differ among the various firms, it remains time invariant. However, the result of the Hausman test having a probability value of less than 5% accepted benchmark will lead to acceptance of the alternative hypothesis and conclusion that fixed effect model is the appropriate model for this regression model.

Panel Multiple Regression of Triple Bottom Line on consumer goods

Method: Panel Least Squares

Date: 08/25/19 Time: 13:32
Sample: 2013 2017
Periods included: 5
Cross-sections included: 20
Total panel (balanced) observations: 100

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	142.0533	46.65770	3.044585	0.0032
SC	6.62E-06	3.71E-05	0.178318	0.8589
EC	-4.34E-08	3.96E-07	-0.109549	0.9131
EVC	-7.10E-09	1.49E-07	-0.047729	0.9621

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.775971	Mean dependent var	146.4016
Adjusted R-squared	0.711962	S.D. dependent var	266.2365
S.E. of regression	142.8868	Akaike info criterion	12.96062
Sum squared resid	1572082.	Schwarz criterion	13.55981
Log likelihood	-625.0309	Hannan-Quinn criter.	13.20312
F-statistic	12.12296	Durbin-Watson stat	2.001136
Prob(F-statistic)	0.000000		

Source: Researcher's Eviews Computations 2019

The results on table 7 above shows the regression result obtained for Triple Bottom Line Accounting in this study and Financial Performance of Listed Manufacturing Firms in Nigeria. The result shows that Social Cost (SC) of these firms as an integral part of Triple Bottom Line Accounting have a positive and non-significant effect on Financial Performance of Listed Manufacturing Firms in Nigeria. This is because the beta coefficient of EC at the lag of three years has a positive result which suggests that Social Cost (SC) of the Triple Bottom Line Accounting moves in the same direction with Financial Performance of Listed Manufacturing Firms in Nigeria. The significance of this result is 85% as shown by the probability value of the Social Cost (SC) t-statistics. So the study argues on the merit of this finding that Financial Performance of Listed Manufacturing Firms of consumer goods in Nigeria is directly responsive to their Social Cost (SC) albeit at a non-statistically significant level. So we conclude that Social Cost (SC) has a positive but not significant effect on the Financial Performance of Listed Manufacturing Firms in Nigeria.

Economic Cost (EC) has a negative and not significant effect on the Financial Performance of Listed Manufacturing Firms as evidenced by the beta coefficient value of –0.000000434. This implies that Economic Cost (EC) of Triple Bottom Line Accounting has a does not move together with their Financial Performance of Listed Manufacturing Firms.

The Environmental Cost (EVC) is another variable of Triple Bottom Line Accounting, it has a negative and non-significant effect on the Financial Performance of Listed Manufacturing Firms in this study. The findings on table1.6 above suggests that increased frequencies of Environmental Cost (EVC) for the Triple Bottom Line Accounting in this study are associated by a corresponding increase in the Financial Performance of Listed Manufacturing Firms.

However, the residual statistics of the multiple regression model suggests that our regression model which regressed Triple Bottom Line Accountingon Financial Performance of Listed Manufacturing Firms is well-fitted. This is because the r-squared outcome of 78% underscores the ability of the selected explanatory variables to predict changes that occur in the Financial Performance of Listed Manufacturing Firms. The probability value of the f-statistics is significant at 1% lending credibility to regression equation and powers of the independent variables in predicting changes that occur in the Financial Performance of Listed Manufacturing Firms in Nigeria of the selected firms. The regression model is also supported by the outcome of the Durbin-Watson statistics is 2 indicating that possible absence of autocorrelation in the regression model. Hence the study argues that Triple Bottom Line Accountingattributes jointly explains the variations that occur in Financial Performance of Listed Manufacturing Firms to a significant extent.

Conclusion and Recommendation

Triple Bottom Line Accounting have a positive effect on Financial Performance of Listed Manufacturing Firms in Nigeria. This is because the beta coefficient of EPS at the lag of three years has a positive result which suggests that Social Cost (SC) of the Triple Bottom Line Accounting moves in the same direction with Financial Performance of Listed Manufacturing Firms in Nigeria. So the study argues on the merit of this finding that Financial Performance of Listed Manufacturing Firms of selected Consumer Goods in Nigeria is directly responsive to their Social Cost (SC) albeit at a non-statistically significant level. So we conclude that Social Cost (SC) has a positive but not significant effect on the Financial Performance of Listed Manufacturing Firms in Nigeria. Economic Cost (EC) has a negative and not significant effect on the Financial Performance of Listed Manufacturing Firms as evidenced by the beta coefficient value of –0.000000434. This implies that Economic Cost (EC) of Triple Bottom Line Accounting does not move together with their Financial Performance of Listed Manufacturing Firms. Environmental Cost (EVC) is another variable of Triple Bottom Line Accounting, it has a negative and non-significant effect on the Financial Performance of Listed Manufacturing Firms in this study. The findings on table 1.6 suggests that increased frequencies of Environmental Cost (EVC) for the Triple Bottom Line Accounting is associated by a corresponding increase in the Financial Performance of Listed Manufacturing Firms. However, the residual statistics of the multiple regression model suggests that our regression model which regressed Triple Bottom Line Accounting on Financial Performance of Listed Manufacturing Firms is well-fitted. This is because the r-squared outcome of 78% underscores the ability of the selected explanatory variables to predict changes that occur in the Financial Performance of Listed Manufacturing Firms. The multiple co-efficient of determination (R^2) of 0.78, indicates that about 78% variation in Earning Per Shares of listed manufacturing firms Nigeria is attributable to changes in Economic Cost, Social Cost and Environmental Cost. The probability value of the f-statistics is significant at 1% lending credibility to regression equation and powers of the independent variables in predicting changes that occur in the Financial Performance of Listed Manufacturing Firms in Nigeria. Hence, Triple Bottom Line Accounting attributes jointly explains the variations that occur in Financial Performance of Listed Manufacturing Firms to a significant extent.

The government, as the main custodian and protector of the society, Should help to put in place, some guideline for manufacturers to contribute to their environment and the society at large. Investors have this competitive nature that measures their performance and how to remain in business for a longer time, therefore, responsiveness to the environment and the society at large will help them in their investment decisions.

We encourage the regulatory authorities, such as the Financial Reporting Council (FRC), Nigeria Stock Exchange (NSE) and Securities and Exchange Commission (SEC) to be able to issue out necessary compliance directives and improve their compliance monitoring mechanisms to ensure a

reasonable level of compliance by all companies to present their account reports in compliance with triple bottom line accounting pattern.

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