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Effects of Sales and Distribution Expenses on Organizational Performance in Nigeria's Consumer Goods Sector

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Abstract: The end goal of any organization is to deliver value to the consumers. This can be achieved by ensuring quality products get to the consumer through efficient sales and distribution channels. There are several costs associated with sales and distribution, including costs relating to the moment production is complete to the point it gets to the consumer and everything in between, including the cost associated with making the products attractive or desirable to consumers. These costs related to sales and distribution have the potential to impact some metrics of organizational performance. This study examines the impact of such costs on revenue, return on assets, and return on equity and gross margin in the Nigeria consumer goods sector from 2013 to 2021 in 14 companies. The results revealed that sales and distribution cost has (a) moderate to high positive association to revenue; (b) very high positive association to gross margin (c) and no established relationship with Return on Asset and Return on Equity. The study also revealed that alcoholic beverage companies spend comparatively more on sales and distribution costs. Ultimately, this results from this study when combined with future studies can help identify points of maximum efficiency in the sales and distribution cost, i.e. the point where maximum returns in terms of revenue and profit is reached before equilibrium or decline happens for every sales and distribution expense.

Keywords: Sales and distribution; marketing; revenue; return on equity; return on asset; gross margin

1. Introduction

The population of Nigeria is estimated to be around 202 million, accounting for about half the population of West Africa (UN, 2022). This whole population provides a current market in the case of the already reached and a potential market in the case of the unreached for the consumer goods sector in the Country (Arazu *et al.*, 2022). Low-cost products with high-every day demand characterize this sector and, as a result, low-profit margins (KPMG, 2016). Hence a large market is essential for the success of businesses in this sector. Notwithstanding, the operating strategy is always focused on achieving a high number of sales and top-line distribution channels to deliver as much value to the consumer as possible (McKinsey, 2020). Sometimes, these products are also associated with short shelf lives (Sarker & Rahman, 2017). Hence, sales and distribution need to be achieved not just in large volumes but also swiftly.

After goods are produced, the process through which it reaches the consumers is referred to as the sales and distribution process (Mulky, 2013). The sales and distribution process plays a crucial role in the performance of an organization. These costs associated with this process include expenses incurred by promoting, advertising, selling and distributing products to customers (Bhowmik *et al.*, 2020). The impact of sales and distribution costs on organizational performance is a topic that has garnered significant attention in recent years. The goal of this study is to examine the effect that the weight of these costs has on organizational performance. The study is expected to achieve the following objectives:

(1) To examine if there is proportionate growth in the revenue with each successive increase in sales and distribution costs (SADC) across all companies included in the study.

(2) To examine the overall impact of sales and distribution on the organization performance based on the revenue, Return on Equity (ROE), Return on Asset (ROA) and gross margin.

(3) To examine if there is any relationship between sales and distribution costs and organization performance based on the revenue, ROE, ROA and gross margin.

(4) To contribute to the national macro knowledge of management and marketing reporting.

Overall, this study will contribute to the body of knowledge on the efficiency of sales and distribution in the largest economy in Africa and also help managers and decision makers, especially in the consumer goods sector, to examine the sales and distribution strategy and the accompanying cost with respect to how efficient it is in achieving their overall organizational performance. The rest of this paper is organized as follows; Section 2 presents a literature review on sales and distribution and organizational performance. Sections 3 and 4 present the methodology and results, respectively. Section 5 presents the discussion, while Section 6 presents conclusions, and recommendation for further studies and limitations.

2. Literature review

2.1 Sales and distribution cost

Generally, sales and distribution costs include costs associated with processes such as distribution, conventional marketing, and selling costs such as wages, commissions, and out-of-pocket expenses. According to Schaefer (1958), the Association of National Advertisers defines distribution costs as;

> "including direct selling costs, advertising and sales promotion costs, transportation costs, warehousing and storage costs, credit and collection expense, financial expense, general administrative expense, and "all other" distribution costs."

Sales and distribution are vital parts of a business's supply chain and include the whole marketing process. Weber (2002) defined marketing costs as costs including sales, distribution, advertising, product development, sales promotion, order fulfilment, public relations, outbound logistics and customer service. Marketing and distribution in an organization are interwoven and inclusive of the same set of processes. For instance, Hardesty and Leff (2010) classified marketing costs as storage, selling, packing, administration and transportation costs. Similarly, Balat *et al.* (2009) classified marketing/trading costs as transportation, transaction, and distribution costs. Dinesh and Sharma (2019) defined marketing cost as all costs incurred post-production until the product reaches the final consumers. Comparing the description of distribution cost by the Association of National Advertisers mentioned above and the marketing cost definition of Dinesh and Sharma (2019) as well as the posit of Balat *et al.* (2009) and Hardesty and Leff (2010) on what constitutes the marketing cost, it is safe to conclude that both terms, "selling and distribution cost" and "marketing cost" refers to costs associated with the same set of processes whose aim is to ensure that the product or ultimate value is delivered to the consumer.

Though not directly related to the manufacturing of the product, sales and distribution expenses link directly to sales and may impact profitability. Generally, most management expects a high level of efficiency and productivity from sales and distribution expense not only in terms of revenue, but also in terms of the return on shareholders' investment (Day & Fahey, 1988; Srivastava *et al.*, 1998), which can also be influenced by peculiarities' of different business environments.

By extension, distribution is inclusive of other processes such as logistics, products insurance, warehousing and shipping, which occur right after the product is manufactured until it gets to a distributor, wholesaler, retailer and/ or consumer, depending on the supply chain flow chart (Mwanza & Ingari, 2015). Products are generally associated with two types of costs; production cost, which ends at the point of shipment of products and distribution costs which is directly and indirectly related to the distribution of the product, such as the cost of sales management, delivery, samples and promotions, sales efforts, order processing, advertising and every other marketing cost. It is primarily concerned with the process from when the product is manufactured until it gets to the first intermediary or consumer, as the case may be (Kotler & Keller, 2009). Empirical evidence has placed distribution costs between 50 to 60 per cent of the cost of consumer goods (Dora, 1966). However, this was over five decades ago, and a lot has changed in how selling, distribution and marketing are done. For example, some businesses might be spending more on advertisements (via digital or social media adverts) than on sales people, now, compared to what they used to spend in the past which seems to be a better option for the current market trend (Scott, 2009).

As a concept, marketing is defined by the Chartered Institute of Marketing (2015) as cited by Baines *et al.* (2017) as:

"the management process responsible for identifying, anticipating, and satisfying customer requirements profitably."

Similarly, the American Marketing Association (AMA, 2013) defined it as:

"the activity, set of institutions, and processes for creating communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large."

Hence, marketing as a concept is done to create awareness of the product before the literal distribution (not distribution as a concept) is embarked on. This is done through a web of processes and activities that can be collectively referred to as marketing and encompass adverts and promotions, both digital and traditional. The purposes of marketing (as a concept) are to:

1. Create sufficient demand for the product in the market.
2. Create a market for the product in a new market.
3. Convince and influence potential buyers towards the product.
4. Influence existing customers' decisions to buy more of the product.
5. Win over potential buyers from and away from the competition.
6. Ease the work of wholesalers and retailers by creating sufficient awareness for the product, thereby inducing them to have such a product in their stock.
7. Facilitate and build brand loyalty across all levels of the supply chain.

Efforts from product marketing and distribution are corroborated and brought to perfection by actual sales activities without which the previous two would be a waste of organizational time, human and monetary resources. Sales activities have associated costs as well such as wages and commissions.

2.2 Organizational performance

Generally, one of the overall goals of any organization is to ensure sustainability and achieve an optimal level of organizational performance. Organizational performance is one of the most widely used concepts in management research and, generally, can be measured from the viewpoint of the organization's operation, finances and overall performance based on the organization's goals for the set period being evaluated. However, there are other dimensions to it, some of which were clearly expressed by Richard *et al.* (2009) as the financial performance perspective, the product-market performance perspective and the perspective of the shareholder's return. This study is focused on the impact of sales and distribution expenses on organizational performance following the approach of Richard *et al.* (2009): Financial performance via gross margin and return on asset. Product-market performance through revenue and, Shareholders return through return on equity.

As evidenced in some studies, sales, distribution and marketing expenses affect organizational performance. Scholars like Kosan (2014) have regarded marketing expenditure as an investment expected to improve organizational performance, not a cost-based expenditure. Ideally, if an expenditure is viewed as an investment, it is only fair to expect a return that can be direct or indirect, tangible or intangible. The direct impact of marketing investment is expected to be observed in an organization's overall sales/revenue, as well as the return on equity and assets, which is the focus of this study. Indirect returns may come in the form of market share, customer loyalty, brand awareness, the share of the customer wallet, etc. Srinivasan *et al.* (2004) linked an increase in brand promotional efforts to an increase in revenue for medium and large brands. Contrarily, Abdullahi (2015) also reported that advertising cost does not significantly increase the sales revenue of food and beverage organizations in Nigeria. However, similar to Bolton's (1989) study, Srinivasan *et al.*, (2004) also revealed that the higher the market share, the lower the return on subsequent investment in promotional efforts in terms of revenue. This implies that as the peak of the market share is approached, subsequent return on promotional efforts approaches diminishing returns as well. Assaf *et al.* (2015) reported a positive relationship between advertisement expenses and sales revenue.

Similarly, Bhowmik *et al.* (2020) assessed the impact of sales promotions and advertising costs on sales revenue and profits. The results of their study revealed that a positive correlation exists between sales promotion cost and the following metrics of organizational performance; net profit, return on investment and sales revenue. However, a significant negative correlation was reported between advertising costs and the following metrics of organizational performance; return on investment, return on equity and net profit.

Another primary metric of organizational performance that is impacted by sales and distribution costs is the return on assets. ROA is a financial ratio that measures a company's profitability in relation to its total assets. The ROA measures how effectively a company uses its assets to generate profits and calculated by the net income divided by the net assets of the company. The ROE is another organizational performance metric and measures a company's profitability, calculated as the net income divided by shareholder equity. The ROE is used to measure the success of a business in generating profits for its shareholders and is therefore perceived as a representation of the shareholders' wealth in the business (Mardiyanto, 2009). It is used to evaluate a company's efficiency in using its equity to generate profits. Some studies have reported a positive relationship between marketing efforts in an organization with ROA and ROE. For example, Konak (2015) reported a significant positive relationship between ROE, ROA and organizational marketing efforts. Similarly, Ullah (2019) researched the Impact of Advertisement Expenses on Profitability (measured by return on assets) of Food and Personal Care Products Companies in Pakistan and reported a significant positive relationship between both variables. Some other studies have revealed the impact of marketing costs on ROE and ROA to go in different directions. An example is Haryanto and Retnaningrum's (2020) study of Indonesia's big four telecommunications companies. They reported that marketing cost had a partially significant effect on ROI, ROE and profit margin, while there was no effect on ROA at all.

Sales and distribution costs can also impact the profitability of an organization measured by the Gross margin. The gross margin is an accounting metric calculated as the difference between revenue and cost of goods sold (COGS). Gross margin is an essential metric for evaluating a company's financial performance, as it measures the ability of a company to generate profits from its sales. When sales and distribution costs are high, they can eat into a company's profits, reducing gross margin. On the other hand, when these costs are managed effectively, they can drive sales growth and increase gross margin. Studies have shown that there is a positive relationship between sales and distribution costs and gross margin. Agbeja *et al.* (2015) in their study of the impact that advertising has on sales and profitability, reported a significant relationship between advertising, marketing, and organizational profitability. This finding is similar to that of Abdullahi (2015), who found advertising costs positively affect Nigerian food and beverage organizations' profitability. Similarly, Markota *et al.* (2015) also examined the impact of the cost of promotion, which is part of selling and distribution costs, on organizational profitability and reported a positive relationship. The research of Sharma and Husain (2015) on the telecom sector in Saudi Arabia revealed that selling and marketing cost does not have any significant impact on the gross operating profitability of the organizations generally. However, some aspects of selling and marketing costs, such as advertising costs, wages, dealers' commissions, salaries and other costs associated with employee benefits, significantly impacted the profitability of the studied organizations. This implies that various aspects or components of selling and distribution expenses may have differing or even contrasting effects on the performance of an organization.

The impact of sales and distribution costs on organizational performance is significant and warrants careful consideration. Effective management of these costs can lead to improved performance and competitiveness, while high costs can negatively impact financial performance. In an emerging economy like Nigeria, lots of study are needed to help improve the operational efficiencies of our business sectors and to the best of our knowledge, this is the first study to assess the impact and relationships between organizational performance, and sales and distribution in the Nigerian consumer goods sector across many years.

3. Methodology

Pearson correlation coefficients were calculated for the data obtained on a year on year basis across the various companies to determine if any relationship exists between the variables and the direction of the relationship. Pearson correlation coefficient is a parametric test employed to examine the relationship between two variables, and draw logical conclusion between them in term of the direction of the relationship and the magnitude (Jackson, 2017; Polit & Beck, 2017). Pearson correlation is calculated using the following formula:

$$r_{xy} = \frac{n\sum x_i y_i - \sum x_i \sum y_i}{\sqrt{n\sum x_i^2 - \left(\sum x_i\right)^2}\sqrt{n\sum y_i^2 - \left(\sum y_i\right)^2} \tag{1}$$

where *n* is sample size, and x_i, y_i are the individual sample points indexed with *i*. The following correlations were examined in the study:

(1) Correlation between sales and distribution cost and revenue.
(2) Correlation between sales and distribution cost and return on asset (ROA).
(3) Correlation between sales and distribution cost and return on equity (ROE).
(4) Correlation between sales and distribution cost and gross margin.

The Revenue, Return on the asset, Return on equity, and gross margin because they are top-line quantitative parameters used in measuring the performance of a company that is accessible for the annual reports available in the public domain. The selection of these four parameters is to give the study a conventional approach in terms of performance and avoid debatable unconventional measures of performance. The data was analyzed across nine years from 2013 to 2021 for 14 companies in the consumer goods sector listed on the Nigeria Stock Exchange. Since the broad goal of this study is to assess the effect or contribution of sales and distribution costs on the performance of these organizations. Percentages were also used to measure revenue and gross margin yields. The following were calculated, and the results are presented in the table:

(1) Revenue yield per 1 NGN (one Nigerian Naira) Sales and distribution cost. This was calculated as:

$$\text{Revenue yield} = (\text{Revenue}/\text{SADC}) \times 100 \tag{2}$$

(2) Gross margin yield per 1 NGN Sales and distribution cost. This was calculated as:

$$\text{Gross margin yield} = (\text{Gross margin}/\text{SADC}) \times 100 \tag{3}$$

(3) The third percentage calculation was not to measure yield but rather the proportion of sales and distribution cost to the cost of goods sold. The purpose is to have a clear view of the proportion

of the two costs related to producing and selling goods. Hence, sales and distribution cost is the numerator in this case, and the cost of goods is the denominator. This calculation's results are comparable to the effects of Dora (1966) on sales and distribution cost as a percentage of the cost of goods sold.

$$\text{SADC as a percentage of COGS} = (\text{SADC}/\text{COGS}) \times 100 \tag{4}$$

where, SADC is Sales and distribution cost and COGS is Cost of goods sold.

(4) Return on Equity

$$\text{ROE} = (\text{Net Income}/\text{Average Shareholders' Equity}) \tag{5}$$

(5) Return on Assets

$$\text{ROE} = (\text{Net Income}/\text{Total Assets}) \tag{6}$$

The total assets and equity were exempted from the yield calculations as they are often not limited to a specific period (annual, bi-annual, monthly etc.) even though they are reported periodically. Unlike revenue, gross margin, and sales and distribution costs that can be isolated within a particular time frame or period.

Lastly, regression analysis was also carried out for the variables that showed a relationship with SADC, the gross margin and revenue. The regression analysis was done to see how much of the gross margin and revenue can be predicted by SADC, which is determined by converting the co-efficient of determination R-squared (R^2) to percentage.

4. Results and analysis

Annual financial data of consumer goods companies was obtained from the Nigerian Stock exchange platform. Out of the 21 companies listed in the consumer goods sector, 14 with the most comprehensive financial report from the years 2013 to 2021 was selected for the study. These companies are indexed 1 to 14 as follows: Cadbury Nigeria Plc (1), Champion Breweries Plc (2), Pz Cussons (3), Unilever Nigeria Plc (4), Dangote Sugar (5), Flour Mills (6), Guinness (7), Honeywell (8), Vitafoam (9), Nascon Allied (10), International Breweries (11), Northern Nigeria Flour Mills (12), Nestle (13), Nigerian Breweries (14).

The Pearson correlation coefficients using Equation (1) was calculated for the data obtained on a year on year basis across the various companies to determine if any relationship exists between the variables and the direction of the relationship, as result are given in Table 1. Furthermore, the yield per single unit of sales and distribution cost (SADC) was also calculated using Equations (3) and (4). All calculations were done on Microsoft Excel.

It is imperative to note that other business factors such as market share, state of the national economy etc. might contribute to revenue, and gross margin. This implies that these variables might to be an exclusive function of the sales and distribution costs. This is further proven by the coefficient of determination (R2) (Table 2) obtained from the regression analysis of the combined data for revenue SADC, and Gross Margin & SADC. The coefficient of determination revealed that only 85% and 41% of the gross margin and revenue can be predicted by SADC, respectively.

Table 1. Pearson correlation among sale and distribution costs pairs

Pairs / Year	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue & SADC	0.74	0.71	0.74	0.71	0.61	0.64	0.67	0.64	0.6
ROA & SADC	0.78	0.75	0.56	0.04	0.28	0.23	0.12	0.07	0.08
ROE & SADC	-0.12	-0.11	-0.04	0.29	0.23	0.23	0.12	0.42	0.35
Gross Margin & SADC	0.98	0.97	0.9	0.95	0.91	0.9	0.93	0.9	0.96

0.9 to 1.0 (+/-) = Very high correlation (positive or negative)
0.7 to 0.9 (+/-) = High correlation (positive or negative)
0.5 to 0.7 (+/-) = Moderate correlation (positive or negative)
0.3 to 0.5 (+/-) = Low correlation (positive or negative)
0.0 to 0.3 (+/-) = Negligible correlation (positive or negative)

Table 2. The summary of regression analysis

Regression Statistics	**SADC & Revenue**	**SADC & Gross Margin**
Multiple R	0.64	0.92
R^2 (Coefficient of determination)	0.41 (41%)	0.85 (85%)
Adjusted R^2	0.41	0.85
Standard Error	89655939875	17071872301
Observations	126	126

This implies that 15% of the gross margin and 59% of the revenue can only be explained by other factors not determined in this study. Further visual depiction of this can be seen in the line fit plots in Figures 1 and 2 and the regression equation generated from the analysis.

The total assets and total equity were exempted from the yield calculations as they are often not limited to a certain period, such as annual, bi-annual, or monthly, even though they are reported periodically. Unlike revenue, gross margin, and sales and distribution costs that can be isolated within a particular time frame or period.

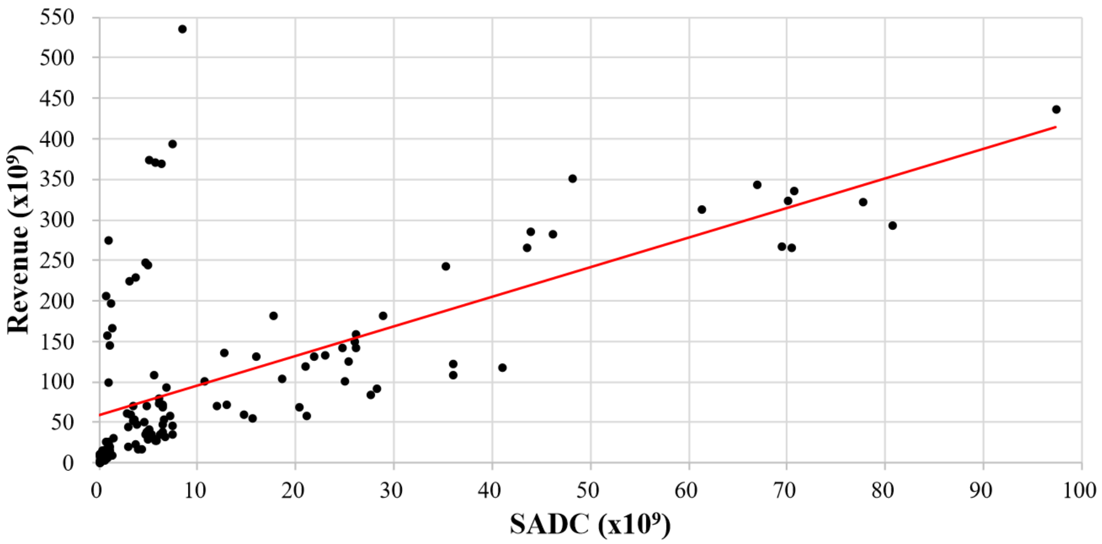


Fig 1. Scatter plot with fit line of SADC vs Revenue

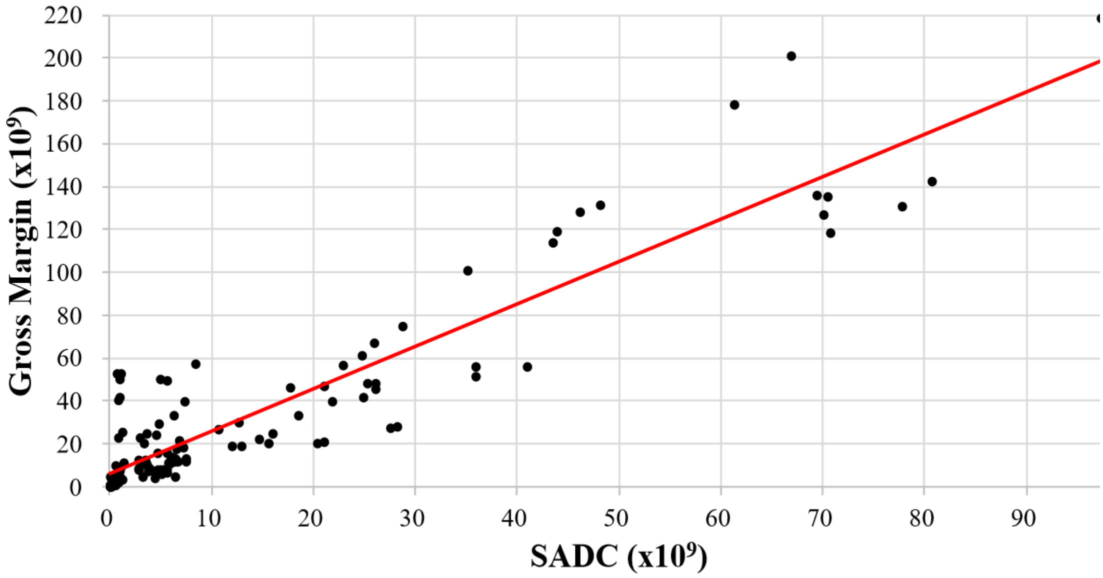


Fig 2. Scatter plot with fit line of SADC vs Gross Margin

The revenue yield ranged from 281% (Unilever - 2015) to 105860% (Northern Nigerian Flour mills - 2013) which indicated at a least 2.81 NGN in revenue for every 1 NGN spent on sales and distribution and at most 1058.60 NGN, as given in Table 3. There was a high positive correlation between revenue and SADC from 2013 to 2016 and a moderate positive correlation from 2017 to 2021. The reason for difference in correlation ranges from high to moderate is unknown, however, what the study has established is a relationship that can be interpreted as a moderate to high increase in revenue as sales and distribution cost increases.

The performance of the companies falls under three major categories; improved efficiency, proportionate growth and undetermined pattern, as can be determined from the heat map in Figure 3. The heat map is a pictorial representation of sales and distribution costs compared to revenue on a company-by-company basis. These charts support the Revenue yield per 1 NGN Sales and distribution cost. It gives a pictorial view of how much revenue is generated by the corresponding sales and distribution costs for each company and each year.

The improved efficiency category included companies that turned over more revenue with fewer sales and distribution costs over the years. Among these companies are Cadbury, Unilever and Guinness, which had improved efficiency, especially when you compare the year 2013 with the year 2021. Dangote Sugar had the most outstanding improved efficiency, with the revenue increasing as sales and distribution costs kept dropping.

The second category is proportionate growth. These companies showed growth in revenue as sales and distribution costs increased and included Champion Breweries, Flour Mills, Honeywell, Vitafoam, Nascon Allied, International Breweries, and Nestle. As the sales and distribution costs dropped over the years for PZ Cussons, so did the revenue. This is a completely opposite pattern from what was observed in Dangote Sugar.

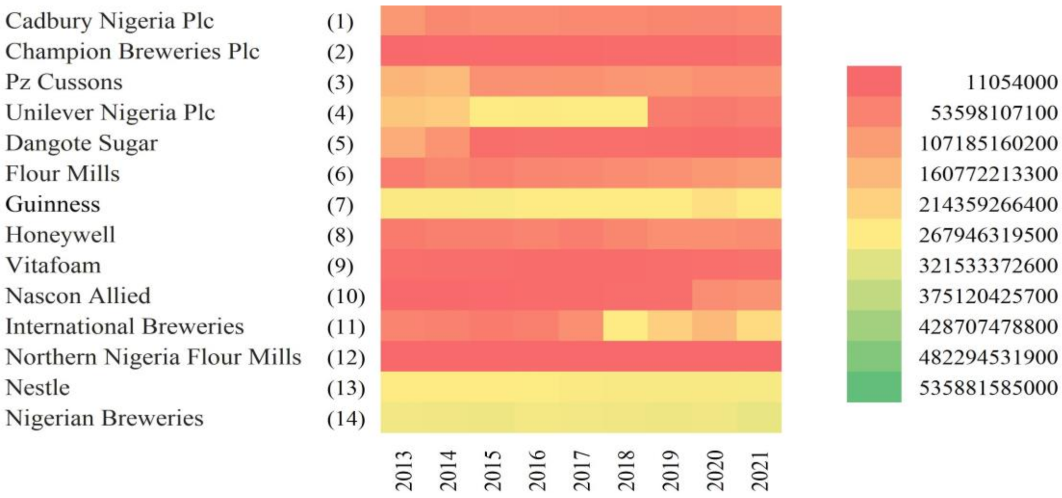
The third category is an unreliable pattern. The company in this category showed random patterns between sales and distribution cost and revenue. Only the Northern Nigerian Flour Mills fall within this category.

Two costs are associated with production, the cost of goods sold, which is the cost from start to finish of the production of the goods and the sales and distribution cost. Table 4 shows sales and distribution costs as a percentage of the cost of goods. The minimum value was 0.10% in 2013 for the Northern Nigeria Flour Mills, generally, the company had low percentage of sales and distribution cost to cost of goods sold. The maximum value for the percentage is 65.41 for Guinness in 2015. Generally, Guinness, Nigerian Breweries and International Breweries; three companies in the alcoholic beverage industry had the highest percentage of sales and distribution cost to cost of goods.

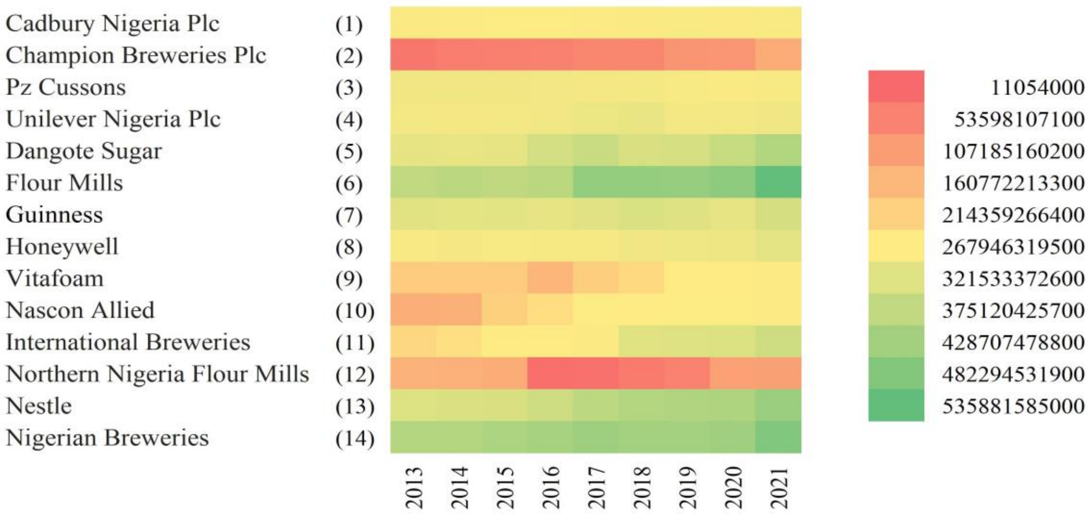
The correlation between ROA and SADC showed no particular pattern across the years as shown in Table 1 which might indicate no particular relationship between the variables. Also, the result of the correlation between ROE and SADC indicated negligible correlations for 7 years and

Table 3. Revenue yield per 1 NGN SADC

Companies/Years	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	481	626	495	536	633	691	836	773	837
2	2295	1779	1368	1202	1146	900	891	906	835
3	597	565	1140	1093	845	817	637	609	746
4	410	358	281	344	310	329	1919	2221	2125
5	965	1386	12238	13287	18563	15124	19517	30936	30453
6	7516	5082	6259	5388	7532	6637	5879	5364	6375
7	341	304	289	410	498	550	605	564	615
8	1589	1580	1328	1144	1557	1515	1237	1333	1977
9	1637	1807	1848	1979	2319	2356	2212	2105	2336
10	15171	9094	7400	2866	4476	3109	3313	483	497
11	406	474	722	647	600	576	829	1081	1031
12	105860	57131	90464	8426	2657	18044	32733	27021	10074
13	580	581	584	632	694	612	616	655	731
14	387	378	364	512	515	463	416	477	449



(a) SADC of companies



(b) Revenue of companies

Fig 3. Heat map of Sales And Distribution Cost (SADC) versus Revenue

low correlation for 2 years which implies that, from the study, no relationship exists between the return on investment and sales and distribution costs.

The maximum yield in gross margin is NGN 70.87 (Northern Nigeria Flour Mills - 2013) for every NGN 1 spent on SADC while the minimum yield is NGN -8.67 (Northern Nigeria Flour Mills - 2016), which is a negative yield owning to the fact that the company recorded loss for the referenced year, as given in Table 5. However, generally, a very high correlation was observed between the sales and distribution cost and the gross margin of across the 9 years of the study. This implies a positive upward relationship and a significant increase in gross margin with every increase in sales and distribution cost.

5. Discussion

Sales and distribution are crucial for the success of companies operating in the consumer goods sector (KPMG, 2016). The trade volume gives diversity to the low margin that characterizes the industry, making the businesses sustainable. There are contradicting reports on the impact that costs relating to sales, and distribution have on business sales revenue. However, the results of this study revealed three categories of organizations or organizational performance considering revenue turnover on company-to-company analysis: the first is improved efficiency, the second is

Table 4. Sales and distribution as a percentage of the cost of goods

Companies/Years	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	32.83	22.04	29.75	24.2	20.39	18.59	15.18	15.51	14.1
2	4.41	6.97	10.23	11.49	12.29	14.81	15.57	15.22	18.04
3	22.85	24	10.71	11.06	17.6	17.97	21.16	18.6	18.05
4	38.97	43.73	55.14	41.02	47.7	43.64	5.65	5.67	6.62
5	14.07	9.38	1.06	0.89	0.73	0.93	0.69	0.44	0.4
6	1.48	2.23	1.79	2.06	1.53	1.74	1.87	2.07	1.76
7	54.17	62.11	65.41	41.37	32.58	27.57	23.81	26.06	22.72
8	7.61	7.81	8.89	9.56	8.44	8.51	9.57	9.06	5.9
9	8.92	8.14	7.67	7.5	5.82	5.85	7.12	8.28	6.6
10	1.14	1.66	1.85	5.16	3.54	4.61	3.83	35.24	31.39
11	44.25	40.72	24.67	28.63	26.67	28.6	14.9	11.9	13
12	0.1	0.18	0.11	1.08	5.04	0.74	0.36	0.41	1.09
13	30.06	30.07	30.87	27	24.54	28.55	29.56	26.12	21.86
14	52.51	53.86	53.27	45.24	46.6	35.47	40.52	32.38	44.56

Table 5. Gross Margin yield per 1 Naira spent on SADC

Companies/Years	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	176	172	159	123	142	153	177	129	128
2	27	345	391	332	333	225	249	249	281
3	160	149	206	189	277	261	165	71	192
4	153	130	100	100	100	100	151	459	613
5	254	320	2792	2023	4933	4330	4979	7976	5539
6	772	606	679	526	1010	884	526	542	687
7	156	143	136	168	191	187	184	180	175
8	275	300	203	98	372	340	191	230	282
9	516	579	544	645	601	646	808	897	820
10	6430	3060	1994	927	1653	939	704	199	179
11	180	228	317	298	225	226	158	241	262
12	7087	2394	2200	-867	674	4490	4577	2677	922
13	248	248	260	262	287	262	278	272	274
14	197	192	177	291	300	181	169	168	225

proportionate growth, and the third is the undetermined pattern. Improved efficiency has the highest form of turnover or efficiency in revenue, achieving more with less over the years. This is where every organization should strive to be. Nonetheless, some other factors might be responsible as the findings of Srinivasan *et al.* (2004) revealed that point of saturation in revenue return on subsequent investment in sales and distribution effort is reached as the market share increases. However, overall, the high to moderate positive correlation reported between sales and distribution cost and revenue shows an average proportionate growth in revenue as sales and distribution cost increase.

Overall, the results of this study revealed a high and moderate positive association between revenue and SADC, while the association between SADC and Gross margin was observed to be a very high positive association. In terms of revenue, this agrees with the findings of Srinivasan *et al.* (2004), Assaf *et al.* (2015) and Bhowmik *et al.* (2020) and establishes that there is some form of a positive relationship between revenue and costs associated with selling, distribution and marketing. Also, in terms of gross margin and profitability generally, the study agrees with the findings of Agbeja *et al.* (2015), Markota *et al.* (2015) and Sharma and Husain (2015). It can be deduced that there is a positive association between the sales and distribution cost and revenue as well as gross margin in the consumer goods sector in the Nigerian ecosystem.

This suggests the predictability of increasing revenue and gross profits when sales and distribution cost is increased. However, other factors may have an overwhelming effect not identified in this study, the regression analysis revealed that only 85% of the gross margin is predictable by SADC. In comparison, the remaining 15% is attributable to other factors. However, less than only 41% of revenue is predictable by SADC, while the remaining 59% is attributable to other factors as revealed by the regression analysis. The results from the regression of both gross margin and the revenue from the SADC shows that gross margin have more in common with SADC than revenue. This is because the actual cost of production is subtracted out when calculating the gross margin and is responsible for the larger percentage of the other factors that influence revenue.

The study revealed the sales and distribution cost as a percentage of the cost of goods ranged from 0.10 percent to 65.41 percent of the companies involved in the study as against the 50 to 60 per cent by Dora (1966). This reveals a wider margin, with companies in the alcoholic business having the highest percentage, and this implies a high cost of sales and distribution relative to the cost of goods. The implication suggests that these companies spend more to sell and distribute their products to reach a profitable and sustainable volume, and aligns with the report of KPMG (2016) that companies in the tobacco and alcoholic beverage industries struggle comparably. Many factors may be responsible for this, such as fierce competition in the industry, especially with the large importation of other alternatives of alcoholic beverages; however, more study is needed to establish this possibility.

Unlike the observations reported by Konak (2015) on the relationship between ROE, ROA and organizational marketing efforts, as well as the research of Ullah (2019), and Haryanto and Retnaningrum (2020), this study did not observe any apparent pattern or association between either ROE or ROA with sales and distribution costs. This suggests that organizational outcomes regarding ROE and ROA are less affected by sales and distribution costs in the Nigerian consumer goods sector.

6. Conclusion

To establish the categories of efficiencies identified in this study, further studies are needed across other sectors operating in the Nigerian business ecosystem and even globally. In like manner, as reported by Srinivasan *et al.* (2004) that the higher the market share, the lower the return on subsequent investment in promotional efforts in revenue.

Further studies are needed on the efficiency of sales and distribution costs if there is a point of diminishing return where each successive increase in sales and distribution cost results in a lower return on revenue. Studies such as this will help determine if there is a point of market saturation where sales and distribution costs should be benchmarked or part of the cost or weight transferred to the wholesalers and distributors as key members of the supply chain process. Also, to establish that ROE and ROA are not affected by sales and distribution costs across all sectors, further studies are needed across other industries and other climes outside the Nigerian business ecosystem.

The study was limited by the way accounting reporting is done in consolidating the financials of these organizations, which did not allow specific queries into how the various aspects/ components of selling, marketing and distributions costs such as promotion, logistics, sales staffs commission and wages, digital marketing, endorsement/influencer marketing etc., affect the various metrics through which the organizational performances were measured. Therefore, further research is needed on how the various components of selling, marketing and distribution costs influence organizational performance and profitability.

To achieve peak efficiency from expense on sales and distribution, it is recommended that each organization research the other factors that are responsible for the turnover they receive and the gross margin. This information can be used to maximize the return from investment in sales and distribution especially when channels/models of highest returns have been identified already.

It is recommended that expenses towards sales and distribution be targeted at specific models/channels and strategies as well as eliminate channels that does not contribute to the overall efficient return from sales and distribution cost.

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