Switching Among Brands of Poultry Feeds: The Egg Farmers' Acuity in Ogun State, Nigeria

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ABSTRACT : In spite of the contribution of poultry to the protein intake and income generation of the growing population of Nigeria, not many studies have been instituted at understanding the switching behaviour of the poultry farmers when they make purchases of their major inputs, feed, which empirical evidences showed to constitute about three-quarter of the variable cost of production. This study was therefore conducted to address the gap by analysing primary data obtained from 480 poultry Egg-farmers in Ogun State through a multistage sampling technique. The results revealed that poultry is a male dominated enterprise cutting across two major religions in the country. Many of the farmers had been in operation for more than eight years and are relatively educated with a mean age of 41 years. The Switching Cost (Monetized) indicated that, costs was highest with Top feed users who opted for Vital feed at N2.20/bird/day and least for users of Hybrid who considered Premium as an option at N0.12/bird/day. Similarly, Switching Cost (Psychological) revealed that switching from Top feed to Premium feed will also be highest at 4.8 units and least with Hybrid to Chikun at 3.3 units. The study therefore recommended that feed producers should imbibe ways of increasing the likely switching cost, both monetized and psychological that an Egg-farmer may incur if he switches to the Next Best Alternative Brand through sound relationship management, lock-in programmes and reward of loyalty.

Keywords : switching costs, egg-farmers, feeds and ogun state
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1. INTRODUCTION

Poultry industry has witnessed so much growth in both intensification and concentration across the globe (Alistair, Dominic and Stephen, 2009). For instance, as at 2015 and using 1995/97 as the base year, FAO (2016) noted annual growth rates of 4.3% and 4.0% for meat and eggs respectively in the Sub-Saharan African. The record further projected slightly higher figures till 2030. For meat it was expected to grow yearly at 5.1% till 2030 while egg production was expected to grow within the same period at 4.1% per year. In Nigeria, available statistics also affirm that there has been increase in growth exemplified by population of chicken and output level of both eggs and meat production. The estimated chicken population grew from 82.4 million in 1992 (Bourn, Wint, Blench, and Woolley, 1994) to 200 million (FAOSTAT, 2013). Similarly, Lenis et al. (2017), computing from the LSMS-ISA demonstrated that egg output grew 300% (three-fold) from 1980 to 2012, while chicken output grew 220% (2.2 times) from 1980 to 2008. In the same vein, SAHEL (2015) reported that the industry was worth N80 billion and have 165 million birds with an output of 650,000 Metric Tons (MT) of eggs and 290,000 MT of meat in 2013, thus giving it the position of the largest market in terms of egg production in Africa. Further affirmation of growth was evidenced from the feed consumption of birds noted by the Federal Department of Animal Husbandry Services (FDAHS). The department observed that the total feed consumption

by layers alone in Nigeria was put at 1,463,453.33 tonnes at a value of N2.26 billion naira in the first quarter of 2017. This figure increased to 1,495,974.5 tonnes at a value of N2.01billion in the third quarter of the same year.

This growth maybe adduced to the ban on poultry importation (still in force as at the presentation of the 2019 budget in the country) and the attendant increase in the consumption of local poultry products (SAHEL, 2015). For instance, FAO, reported in SAHEL (2015), forecast about 73% increase in animal meat consumption by Nigerians by 2030 with a projected population of 250 million people which are expected to consume two-third more animal protein. On his own account, OECD-Agricultural Outlook estimated that about 400 million MT. of poultry meat would be consumed in Nigeria by the year 2021.

The above clearly attested to the growth in both intensification and concentration of poultry production activities in Nigeria with its attendant elevation in feed consumption arising from increased demand in poultry products (SAHEL, 2015). This is a further pointer to the size of the poultry market and how huge the feed market could be as feed is an essential input of poultry production. Jolaosho (2014) noted that feed constituted between 74 and 85% of the total variable cost and has a significant negative effect on profits of poultry farmers in Ogun State. This view had earlier been posited by Amos (2006) when he asserted that 53.54% of the variable cost of poultry farmers in Ondo State of Nigeria was accounted for by feed inputs. Recent study by Isitor, Ehien, Makinta, and Olude (2018) have also lent voice to this view as they found out that over 98.2% of the cost of production was on the variable inputs, especially feed and feeding stock from poultry farmers in Kwara State of Nigeria. This demonstrate that feed input is critical to the success or otherwise of a poultry business, which is providing employment for a couple of youths in Nigeria as noted by Yusuf, Tiamiyu, and Aliu (2016) as they affirmed in their study that 72.5% of the Egg-farmers were youths with the mean age of 39 years and that 63.8% them confirmed poultry farming as their main occupation.

It is however saddening to note that only until very recently was a legislation enacted in the nomenclature of "Regulation for the feed milling industry in Nigeria, 2017" to compel and monitor the production of quality feeds in the country after several effort made by the Nigeria Institute of Animal Scientists. Before then, Eruvbetine (2009) had observed that no significant impact of the actions of Standard Organisation of Nigeria (SON) was felt in the poultry feed industry. In the same vein, Adene and Oguntade (2006); AlabiandIsah (2002), both noted in Heise, Crisan, and Theuvsen (2015) have also recognised a weak feed industry as one of the factors poultry farmers contend with. This clearly gives room for quacks or unwholesome/unethical/sharp practices with respect to the feed ingredients and this may have negative consequences on the poultry farmers and the poultry business as a whole and consequently create dissatisfaction which may promote poor brand commitment and switching.

Switching is most times considered as a consequence of dissatisfaction as a satisfied consumer (in this case, the Egg-farmers) are more likely to be loyal to a particular brand (Zeithaml, Berry, &Parasuraman, 1996) and will, even at toughest times, purchase the product offering at high price (Zohaib, 2014). Thus, confirming that a satisfied customer to a brand may not only be loyal but also have a higher willingness to pay (WTP). An understanding of the switching behaviour could therefore inform a producer of poultry feed of the strength of commitment attached to its brand as well as the extent to which consumers' (Egg-farmers') expectations are met which is an indication of the level of customer satisfaction. Furthermore, information about switching among the various brands of feeds can inform about the health and extent of competition in the market and the effectiveness of the regulating framework for quality and standard compliance in the industry. It was against these backdrops that the study was conducted with a view to identifying the inherent switches and the anticipated cost associated with various switches that may occur among the brands as expressed by farmers in Ogun State of Nigeria. The report is presented in three sections: methodology, results and discussion and recommendations.

2. METHODOLOGY

The study was conducted in Ogun State, using members of the Poultry Association of Nigeria in Ogun State (PANOG) as the observation units. Ogun State was chosen as it remains the poultry hub of the country. The State lies within latitude 6^0N and 8^0N and longitude 2^0E and 15^0E and effectively supports poultry enterprises poultry. The Poultry Association of Nigeria in the state was made the focus of the study because most of the government and private interventions in the poultry industry were channelled through the association. The association has six functioning zones- Egba, Ijebu, Remo, Yewa, Mowe, and Ota spread across the 20 Local Government Areas. The PANOG usually host all stakeholders in the poultry industry annually under the PANOG International Poultry Exhibition (PIPE), which later metamorphosed into the Nigerian Poultry show (NPS). In determining the sample size for the study, the rule of thumb established by Taro Yamane (1967) when a sample frame exist was applied to obtain a sample size of 320 following the availed sample frame of 1600 of poultry farmers at PANOG secretariat as represented in the equation (1)

$$n = \frac{N}{1 + N(e)^2}$$

-------------------------------- (1)

Where n is the sample size, N is the size of the population, and e is the level of precision (0.05).
By substituting the size of the population in the formula gives:

$$n = \frac{1,600}{1 + 1,600(0.05)^2}$$

$$n = \frac{1,600}{5}$$

$$n = 320$$

This was adjusted for 40% non-response rate. The large non-response rate was informed by the unwillingness of the egg farmers to complete the pilot survey questionnaires and the low turnout of participants at the three gatherings of poultry farmers in Abeokuta (Egba zone), Ilaro (Yewa zone) and Sagamu (Remo zone), where the pilot questionnaires were administered. This adjustment gave a sample size of 533. Simple random sampling technique was used in selecting the respondents across the six zones and structured questionnaires were used to elicit information on socio-economic characteristics, brand preferences, next best alternatives (switching) and the anticipated switching cost which was categorised into monetized and psychological. However, 520 of the questionnaires could be administered as some of the egg farmers refused to participate in the study.

The primary data elicited for the socio-economic characteristics of the Egg-farmers were analysed using the frequency counts and percentages while the anticipated switching costs between a preference brand and a corresponding Next Best Alternative Brand (NBAB) was estimated by adapting the 8-facet switching cost model of Burnham, Frels, and Mahajan (2003) as re-categorised by Aydin, Gokhan, Halin, and Cineyd (2009). The cost considered by Burnham et al. (2003) are Economic Risk Cost, Evaluation Cost, Learning Cost, Set-up Cost, Benefit-loss cost, monetary loss cost, personal relationship loss cost, and brand relationship lost cost. However, Burnham et al. (2003) categorised economic risk cost as a procedural cost, Aydin et al. (2009) categorised it as uncertainty cost or perceived risk as it relates to the fact that no consumer can successfully evaluate product he has not used. He argued that the cost is a pre-purchase cost and is more of psychological than procedural.

The study therefore, recognised two categories of switching costs: monetized and non-monetized/psychological switching costs. The monetized switching costs include the financial costs (Monetary loss cost and the benefit loss cost) and the procedural cost (evaluation costs and set-up course) as presented in Table 1. The learning cost under the procedural cost was not considered significant as a cost element. This is

because there is not much technicality associated with the use of feed coupled with the absence of any customisation with the feed. The psychological cost was included to further enhance the understanding of the role of emotion in purchase decisions of Egg-farmers. This inclusion was further justified on the premise of the behavioural economists that economic man, has noted by classical economists, are sometimes not rational but rather emotional in their decision making. The various elements of the monetized cost were then summed up (Equation 2) while the items capturing the psychological switching costs were anchored on a 5-point Likert scale of 1 to 5 with 1 being the least perceived cost (*strongly disagree*) and 5 the most perceived cost (*strongly agree*) as presented in Table 2.

$$MSC = IP + NVOR + CCF + ITC + RIC + HC_{eb}$$ …………………………………………..…… (2)

Where: MSC = Monetized Switching Costs; IP = Increase Price; NVOR = Naira Value of Reduced Output; ITC = Increase Transportation Cost; RIC = Relationship Initiation Cost and HC_{eb} = Holding Cost of Extra bags.

Table 1: Facets of Monetized Switching Costs

Cost Type	Facets	Proxies for Cost Computation	Operationalisation of proxies
Financial	Monetary-Loss Cost	Incremental cost incur in terms of price for every bag of NBAB bought.	Difference between the price of NBAB and brand in use (Increase in Price, IP).
		Tray of eggs/day and number of days loss can be tolerated before switching from NBAB, if failed to meet expectation.	Reduction in Price x number of tolerable days x price of unsorted eggs (Naira Value of Output Reduction, NVOR).
	Benefit-loss cost	Cost of credit if credit sales were not to be available on moving to NBAB.	Reduction in credit x number of days for which the stock worth of the difference in credit that will be available x borrowing rate of agricultural credit guarantee scheme (ACGS) @ 14%. This is Cost of Credit Forgone (CCF).
		Cost to obtaining additional benefits presently being enjoyed with Brand in use if NBAB is switched to specific benefit.	
Procedural	Evaluation cost	Cost of carrying out proximate analysis for the NBAB.	Summation of the naira value expended in carrying out proximate analysis.
	Set-up cost	Relationship initiation cost (RIC).	Summation of expenses incurred when initiating relationship with NBAB.
		Incremental holding cost if the minimum tonnage purchasable for NBAB is higher than for Brand in use.	Holding cost for extra bags of feeds (HCeb) was computed by obtaining the product of cost of extra bags; number of days for consuming regular purchase and cost of borrowing from ACGS @ 14%
		Possible Incremental transport cost if switched to NBAB	Incremental Cost of Transportation (ITC) was obtained by multiplying the extra transportation cost per bag by the number of stock of feeds consumed (regular + extra bags).

Source: Adapted from Aydin et al. (2009) Switching Costs Scale Items

Table 2: Scale Items for Psychological Switching Costs

Statements Capturing Psychological Switching Cost	5 SA	4 A	3 UN	2 D	1 SD
I have strong emotional attachment to my choice feed					
I do not see myself not using my choice feed to the end of this production cycle and for the next					
Mention of my choice feed gives me joy					
I do not feel any affinity if other brands of feeds are mentioned					
I do not see a need to forgo my choice feed					
I have been using my choice feed for a long time					
I am not sure other brands of feeds will not fail me					
Failure of feed can result in an untold economic loss					
I cannot assess the performance of alternative brands of feeds with certainty					
The performance of alternative brands is not known to me					

Source: Adapted from Aydin et al. (2009) Switching Costs Scale Items

Note: SA = Strongly Agree, A = Agree, UN = Undecided, D = Disagree, and SD = Strongly Disagree.

3. RESULTS

Preliminary Analysis

A total of 533 copies of the questionnaires were administered to the respondents but 520 copies were successfully retrieved. During the data cleaning exercise, eighty-one Egg-farmers were dropped for not completing 90% of the survey items and thirty-one, for not paying attention while completing the questionnaire as they answered neither 1, 2, 3, 4 or 5 all through the survey items which resulted in 408 copies of the questionnaire that were retained for further analysis. Therefore, the effective response rate from the cleaned and validated questionnaires received from the farmers was found to be 78.46% with Yewa zone having the least (50%) while Egba zone had the highest (88.33%) (Table 3).

Table 3: Response Rate for the Administered Questionnaires across PANOG Zones

Zone	Distributed Questionnaire	Validated Questionnaire	Return rate (%)
Egba	120	106	88.33
Ijebu	80	70	87.50
Mowe	80	56	70.00
Ota	80	66	82.50
Remo	80	70	87.50
Yewa	80	40	50.00
Total	520	408	78.46

Source: Field Survey, 2019.

The missing response mechanism was determined as Missing Completely at Random (MCAR) since the null hypothesis was not rejected as a result of the non-significant Little's (1988) test with (df) = 46.140 (120), p > .05. Therefore, in order to handle missing data, the multiple imputation method was used (Baraldi& Ender, 2010).

Furthermore, univariate outlier was accessed by examining the boxplot results which confirmed the presence of three outliers among the data with respect to Egg-farmers educational qualification. In order to rectify this occurrence, the original copies of the questionnaire that tallied with the number identified by the boxplot result were examined. It was discovered that the outliers were due to typos during data imputation. The value of six was inputted instead of five for the three Egg-farmers and was corrected.

Socio-Demographic Characteristics of Egg Farmers Surveyed

After completing the preliminary analysis, the demographic features of the respondents were explored and the result is as presented in Table 4. The results showed that poultry egg production is an economic activity that cuts across the two main religious practices in the country as the adherents of the two faiths were

adequately represented in the study: Christianity (60%) and Islam (40%). The study also observed that more than three-quarter (77%) of the sample surveyed are males. This clearly suggests that poultry production, specifically layers production, is more favoured by males compared to females. This observation, which had early been affirmed by Jolaosho (2014), may not be unconnected with the fact that poultry production is energy sapping as it demands high physical exertion which are relatively absent in females. Tasks such as dipping, debeaking, jabbing, inoculation, vaccination and packing of litters could often be daunting for females, especially in a developing economy like Nigeria where the level of automation of activities in poultry production is still at the low ebb. With respect to age, the study noted that majority (64.7%) of the Egg-farmers is captured in the age bracket of between 24 and 44 years with an average age of 41 years. This suggests that most of the egg farmers are still within the productive age. This observation also adds credence to the claim that poultry production demand high physical exertion on those involved in the production activities. The study also observed that poultry is a vocation that can be done irrespective of the marriage status, though the bulk (82.4%) of the Egg-farmers is married. This observation attested to the fact that poultry enterprise can be a good source of livelihood for not only the married but also the singles and the widows, especially in a situation like Nigeria where the rate of unemployment (23.1% in 3rd quarter of 2018) is on the increase coupled with the government resolve to use agriculture as a means of solving unemployment challenges and a diversification strategy from a mono-economy that has characterised the country since early 1960 following the discovery of oil at Oloibiri, in Delta State in 1958.

Furthermore, the study revealed that all poultry Egg-farmers had one form of formal education or another with about 66% being graduates of various degree programmes. This clearly demonstrate that poultry production can be a good start-up business for fresh graduates and a veritable tool for youth empowerment as it is currently being done in Nigeria and many Sub-Saharan countries. The observation also affirms the fact that egg farming enterprise can be done with varying degree of educational qualification, though formal education enhances the human capacity for economic activities as a higher level of qualification may likely result in higher productivity. Considering the years of experience in egg farming enterprise, majority (63.2%) had spent not less than five years in operation, suggesting that poultry egg farming can be a sustainable business. This could also be a pointer to the fact that poultry egg farming can be a good source of livelihood.

Table 4: Socio-demographic Characteristics of Egg Farmers Surveyed

Characteristics	Options	Frequency	Percentage
Religion	Islam	161	39.71
	Christianity	236	57.84
	Other	11	2.70
	Total	408	100
Sex	Male	314	77
	Female	94	23
	Total	408	100
Age (years)	24-34	99	24.3
Mean age = 41	35-44	165	40.4
	45-54	111	27.2
	> 54	33	8.1
	Total	408	100
Marital Status	Married	336	82.4
	Single	60	14.7
	Divorced	5	1.2
	Widow	7	1.7
	Total	408	100
Educational Qualification	Below Graduate	50	12.25
	First Degree	269	65.93
	Second Degree	66	16.17
	Doctoral Degree	9	2.21
	Others	14	3.43
	Total	408	100
Experience	< 5	150	36.8
Mean years = 8	5-10	175	42.9
	11-16	49	12
	> 16	34	6.6
	Total	408	100

Source: Field Survey, 2019.

Monetized Switching Costs

The results of the anticipated monetised switches between a preference feed or a focal brand and a NBAB are presented in tables 5 and 6 below. Table 5 reflects the cost by components while table 6 reported the aggregate cost per day per bird when switching takes place. The study revealed that Topfeed is prone to more switches than any other brand while Chikun users expressed the least switches. Topfeed users reported 7 possible switches while Chikun users reported only 3 possible switches. Topfeed was followed by Hybrid feed with 5 possible switches and Animalcare with 4 switches. These clearly indicates that Topfeed brand has more latent competitors and may therefore be more prone to switching experiences in case of failed customer experiences or when the brand is out of stock in the retail outlets. The findings also revealed that, on the least, switching can persist for 3 days while at most, switching can last for a maximum of 9 days if the NBAB failed to meet the expectation of the Egg-farmers. Users of Animalcare can tolerate a failed NBAB for between 6 and 9 days; hybrid users, 5-6 days and Topfeed, 3-7 days while Chikun feed users can only tolerate 4 days of failed experienced performance. The most tolerated switching occurs between Animalcare and Cap feed (9 days) while the least tolerated occurred between Topfeed and Vital feed (3days).

In addition, the element of the monetized cost is largely made up of the naira value of the perceived output reduction (NVOR) that the Egg-farmers were prepared to tolerate if switching occurs. The next fairly recognised cost relates to the anticipated increase in cost of transportation, which was not that pronounced as many switches also noted zero naira between preferred and NBAB. This may not be unconnected with the fact that most of the outlets sell more than one type of feed. It is also not impossible that NBAB are sold within the same locality of the preferred brand, hence the Egg-farmers did not perceive any meaningful difference in the transportation cost. Another cost of importance noted by the study is the cost associated with difference in prices of the preferred feed and the NBAB. The negative signs with some figures in the table indicate a cost saving as the ruling price of the NBAB are lesser than the price of the preferred feed in use. There are also a few instances where there were no changes between the price of the preferred feed and the NBAB.

Table 5: Components of Switching Costs

NBAB	IP	NVOR	CCF	ITC	RIC	HC$_{ab}$	MSC	NDSP	STK	AMSC (in ₦)	
										MSC/day	MSC/day/bird
ANIMALCARE											
CAP	50	8100	0	0	0	0	8150	9	1275	934	0.73
CHI	50	3925	0	0	0	0	3975	7	979	596	0.61
HYB	0	7343	0	1143	0	0	8486	8	1034	1067	1.03
TOP	84	7461	0	6	0	0	7551	6	2350	1324	0.56
CHIKUN											
ANI	-93	4671	0	143	0	0	4721	4	709	1153	1.63
HYB	-123	8660	0	1675	0	0	10212	4	1559	2286	1.47
TOP	-36	7588	37	1640	0	0	9229	4		2506	0.54
HYBRID											
ANI	16	5891	0	91	0	0	5998	5	1865	1299	0.70
CHI	110	3330	0	0	0	0	3440	5	450	677	1.50
PRE	0	4250	0	0	0	0	4250	6	6000	708	0.12
TOP	70	8978	1	74	0	0	9132	5	1248	1997	1.60
VIT	50	11200	0	0	0	0	11250	5	1500	2411	1.61
TOPFEED											
ANI	-73	6583	1	57	0	0	6568	5	935	1273	1.36
CHI	33	5584	0	841	0	0	6458	4	1818	1551	0.85
HYB	-53	6448	0	78	0	0	6473	7	999	942	0.94
LIV	-150	3400	0	0	0	0	3250	4	400	813	2.03
PRE	113	8800	0	0	0	0	8913	4	2900	2097	0.72
SUP	-10	5100	0	0	0	0	5090	4	1538	1309	0.85
VIT	59	6132	0	0	0	0	6191	3	813	1792	2.20

Source: Field Survey, 2019.
Note: MSC = monetized switching cost; NDSP = No of days switching persist ; STK = stock of

birds (flock size)

Chikun feed is observed to command higher price than all its possible NBAB while the switching from Topfeed to Livestock feed recorded the highest saving of N150. Difference in price (cost) will be highest if an egg-farmers using Topfeed at the time of call switches to the Premium feed. On the aggregate, switching is most costly in terms of naira and kobo that may be expended or benefit forgone, if switching occurs between farmers who are presently using Topfeed and preferred Vital feed if the need arises by as much as N2.20 per day per bird for the duration of Switching. Switching will however cost least for egg-farmers who are presently using Hybrid but identified Premium as their NBAB by as low as N0.12/per day per bird and this is preceded by switching between Chikun feed users when they see the need to pick Topfeed as an alternative by as much as N0.54 per day per bird. The implication of the associated switching, even though latent, is to inform the ease of switching, all other things being equal. Hence, the lower the switching cost the more readily a user of a brand can switched from his presently preferred feed to its NBAB. For instance, it would be a lot easier for users of Hybrid feed to change to Premium feed at N0.12 compared with changing to Vitalfeed at N1.61. Similarly, users of Topfeed will find it a lot easier to change to Chikun feed at N0.85 than changing to Vitalfeed at N2.2. Reduced switching costs also indicate stiffer competition between the preferred feed and the NBAB as the NBAB can easily have a good run over the preferred and corner part of the market current being enjoyed by the preferred brand. Therefore, if the distribution of the switching cost is obtained it may give an impression of how dispersed or skewed the market is and that may inform the extent of competition or the strength of the competing brands in the markets.

Table 6: Switching Cost matrix of Major Feed Brands

Focal Brand	CAP	ANI	CHI	HYB	TOP	VIT	LIV	JOY	PRE	SUP
ANI	0.73		0.61	1.03	0.56					
CHI		1.63		1.47	0.54					
HYB		0.70	1.50		1.60	1.61			0.12	
TOP		1.36	0.85	0.94		2.20	2.03		0.72	0.85

Source: Field Survey, 2019

Psychological Switching Cost

Findings relating to the psychological switching costs are shown in Tables 7, 8 and 9 below. The sum scores averages obtained by summing the individual responses to the scale items of the psychological costs in table 2 and dividing by the number of items was used as the factor scores for each individual and the mean obtained to represent the cost for the egg farmers using a particular brand and intending to switch to another. The cost were then categorised as in table 7. The study revealed that of the total switches, five are moderates in cost while the remaining fourteen switches have high costs. Switching from Topfeed to Premium has the highest psychological cost of 4.8 and is closely followed by that from Hybrid to Premium, which is 4.7. These results suggest that egg-farmers using Topfeed and Hybrid feed are not strongly disposed to picking Premium, if it turns out to be the only available alternative. This may also be a pointer to the fact that the egg- farmers using Topfeed are skeptical of the performance of Premium feed or that the performance has not been evaluated or known to them.

Table 7: Categorisation of Psychological Cost Range

Perceived Cost Range	Cost Category
1 ≥ sum scores < 2	Very Low
2 ≥ sum scores < 3	Low
3 ≥ sum scores < 4	Moderate
4 ≥ sum scores < 5	High
sum scores = 5	Very High

Source: Field Survey, 2019

Table 8: Summary of Psychological Switching Cost of Egg-Farmers

Brand in use	Next Best Alternative Brands (NBAB)								
	CAP	ANI	CHI	HYB	TOP	VIT	LIV	PRE	SUP
ANI	4.2	N/A	4.4	3.9	4.4	N/A	N/A	N/A	N/A
CHI	N/A	4.1	N/A	3.7	4.2	N/A	N/A	N/A	N/A
HYB	N/A	4.1	3.3	N/A	4.4	3.6	N/A	4.7	N/A
TOP	N/A	4.3	4.1	4.2	N/A	3.6	4.1	4.8	4.4

Source: Field Survey, 2019

The fact that the psychological costs of switching among brands ranges between moderate (3.3) and high (4.8), presupposes that all the egg-farmers are, to a greater extent committed, to their brand in use and may not be easily convinced to switch to their corresponding NBAB. This may not be unconnected with the fear of failure in changing to NBAB, especially where evaluation of the alternative has not been carried out or where the performance of such alternative has not been established or simply because of the affinity between the egg-famers and his preferred brand. There is also the possibility of birds getting accustomed to a particular feed, thus compelling a lock-in on the part of the egg-farmers towards such a brand of feed.

Table 9: Components of Psychological Switching Costs and Distribution Users According to Switches

NBAB	Frequency	Percentage	Sum Scores Average	Remark of Cost
ANIMALCARE				
CAP	4	5.19	4.2	High
CHI	8	10.39	4.4	High
HYB	7	9.09	3.9	Moderate
TOP	58	75.32	4.4	High
Total	77			
CHIKUN				
ANI	7	18.91	4.1	High
HYB	10	27.03	3.7	Moderate
TOP	20	54.05	4.2	High
Total	37			
HYBRID				
ANI	11	13.58	4.1	High
CHI	5	6.17	3.3	Moderate
PRE	2	2.47	4.7	High
TOP	61	75.31	4.4	High
VIT	2	2.47	3.6	Moderate
Total	81			
TOPFEED				
ANI	111	64.16	4.3	High
CHI	22	12.72	4.1	High
HYB	20	11.56	4.2	High
LIV	1	0.58	4.1	High
PRE	4	2.31	4.8	High
SUP	4	2.31	4.4	High
VIT	11	6.36	3.6	Moderate
Total	173			

Source: Field Survey, 2019

4. CONCLUSIONS AND RECOMMENDATIONS

The study has been able to further confirmed the assertion of (Klemperer, 1991) that consumers who have previously purchased one brand (e.g Animalcare or Topfeed) have (or are perceived to have) costs of switching to a competitor's brand, even when the brands (feeds) of the two different firms are functionally identical for example Hybrid and Chikun Layersmash are for egg laying birds and a consumer is at liberty to purchase either, ceteris paribus. This consumer switching cost give firms (feed producers) a degree of market power over their repeat-purchasers (egg-farmers), and indicates that firms' current market shares are important determinants of their future profits. The study therefore urged the producers whose brands are perceived to have lower switching cost with respect to their NBAB, to evolve sound strategy to lock-in the egg-farmers who are

presently purchasing their brands or look for a way to raise the switching costs to protect their share of the market from being eroded by their competitors. This is because a consumer who perceived high cost of switching may be reluctant to switch to the alternative brand (Keith et al. 2010) since a dissatisfied customer may even remain loyal due to high switching costs (Port, 1980).

Also in view of the various potential switches that have been identified, egg-farmers should endeavour to be informed about the anticipated consequences associated with the possible switches to guide their selection of NBAB as a wrong choice can result to untold losses for the enterprise, whose aftermath may be difficult to correct.

Furthermore, the observed higher costs associated with some switches were suspected to stem from fear of unknown performance that may be associated with the NBAB, the inability of the egg-farmers to carry out independent evaluation. In view of this, producers may seek the endorsement of Nigeria Institute of Animal Scientists (NIAS), Standard Organisation of Nigeria and (SON) or National Agency for Food Drug Administration and Control (NAFDAC). This may be in addition to displaying the composition on the bags of feed or include slip of contents. The feed producer may also popularise their performance through several media that may be available. They may also give promotional samples and present their offerings in smaller packages say 10kg or even 5kg, as against the conventional 25kg, that can allow trial experiences on a minimal scale by the egg-farmers.

Similarly, switching to a greater extent, reflect a consumers' firm belief in the performance of a brand or simply puts the ability of the brand to meet their expectation and because the availability of this is reflected in the perceived switching cost, the regulatory institutions like NIAS, SON and NAFDAC, should regularly carryout survey on the level of satisfaction across the various brands and report same in outlets that are accessible to egg-farmers for their subsequent adoption. Such information can further stimulate healthy competition and promote standards in feed quality which have ripple effect on the quality of eggs and meat made available to the final consumers, thus enhancing their wellbeing and promoting gross national happiness in the economy.

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