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Enhancing Entrepreneurial Awareness through the Application of Electronic Marketing in Agribusiness Entrepreneurship among Farmers in the Rural Areas

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Abstract: ***Electronic retailing has received increased attention from entrepreneurship management and marketing researchers lately. However, its application in electronic marketing of agricultural products in Nigeria is under- researched. In this paper, empirical analysis of e-retailing application by agribusiness entrepreneurs was carried out. The study was carried out in Lekki/Epe free-trade zone in Lagos State. Therefore, the study investigated the level of awareness and reception of e-retailing among livestock products farmers, the extent of application of e-retailing platforms, the challenges and limitations of application, and whether or not e-retailing has any significant benefits for livestock farming and agribusiness enterprises in Nigeria. The research adopted the survey descriptive design with target population of over 500 rural farmers involved in processed poultry products. A random sample of 160 respondents participated in the study, and relevant data was collected by administering structured questionnaire on participants. The Results showed that e-retailing application among rural agribusiness entrepreneurial farmers is still at its infancy despite the attendant benefits. Various factors are responsible for this situation, namely: insufficient online product and pricing information; high cost of accessing internet broadband; fear of internet insecurity and cyber fraud; fluctuating power, and lack of government support. As part of the recommendations, there is need to raise agribusiness entrepreneurial awareness to the huge potentials of e-retailing.***
Keywords: ***Entrepreneurial Awareness, E-retailing, Agribusiness Entrepreneurship, Processed livestock product***

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1. INTRODUCTION

In recent years, the global fluctuation in oil prices, its dwindling demand, and inflationary exchange rate have combined to force governments to introduce measures geared towards revamping the economy and putting agriculture as the driving force. Needless to emphasize that agriculture provides primary means of employment for Nigeria and agricultural entrepreneurship is considered a sure way out of rural poverty (Olukosi and Isitor, 2000). As rural agriculture is given a boost by the governments, the need to get agri-business inputs to reach farmers even in the remotest areas has become highly essential. On the other hand, while ways of communicating farm products availability are improving daily, the need to promptly device strategies for marketing agricultural produce to all categories of users has also become very vital.

Marketing has economic value because it gives form, time, place, utility to products and services (Kotler, 2010). The entrepreneurial marketing of agricultural products begins at the farm when the farmer harvests his products. The product when harvested is likely to be located some distance from the place of consumption. Storage is required to adjust supply to meet demand, so products must be sorted, processed, communicated, and presented to the consumer in convenient quality and quantities for sale. One way to rapidly facilitate the marketing process highlighted above is the application of electronic communication and marketing process generally referred to as E-retailing.

2. Literature Review

E-retailing; a short form of "electronic retailing" is a subset of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser (Esfahani and Asadiyeh, 2009). E-retailing is synonymous with business-to-consumer (B2C) transaction, and online shopping or online retailing. An online retailing evokes the physical analogy of buying products or services at a “brick-and-mortar” retailer or shopping center. E-retailing revenue can come from the sale of products and services, through subscriptions to website content, or through advertising. With the growth of online shopping, comes a wealth of new market footprint coverage opportunities for stores that can appropriately cater to offshore market demands and service requirements (Lin and Zhongwei, 2010).

A considerable number of studies have shown that e-retailing has great deal of advantages to farmers and consumers over "brick and mortar" stores **(**Adeyemo, 2013**;** Esfahani and Asadiyeh, 2009; Shehata, Cox, and O’Connell, 2006). For example, instead of visiting a market or farm shop on a weekly basis, Shehata, *et al*., (2006) argued that transportation costs could be restricted to when a sale or purchase is made and labour costs from market visited restricted to online time. Online access to product and price information will allow comparison of products and increase price transparency. Price differentials resulting from geographic location are also likely to diminish because of increased competition (Aladwani, 2003).

In addition, the exchange of information about agricultural products, their characteristics, advantages, disadvantages, among others can be greatly enhanced through the information highways of the Internet during e-commerce transactions (Mueller, 2000). Moreover, Internet technology provides the opportunity to link individual actors in the food production chain

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together, irrespective of geographic location (Chong and Baver, 2013). This has the potential to improve market access through online transactions and by reducing geographic obstacles to market reach, such as time and distance.

In recent years, e-retailing has found its way into agriculture and has received widespread attention from agribusiness researchers (Chukwunonso, and Aisha, 2012; Delone and McLean, 2004). However, little research has discussed its application in marketing of agricultural products in Nigeria (Chukwunonso, and Aisha, 2012; Esfahani and Asadiyeh, 2009; Aladwani, 2003). With the advent of online shopping malls in Nigeria such as Konga, Jumia, Kaymu, Dealdey to mention a few, online penetration of retail sales appears much higher in categories such as books, CDs, DVDs, clothing, cosmetics, and toys to mention a few, but much lower for agricultural products that provides the mainstay of the Nigerian economy.
In addition, participation in online retailing requires that both buyers and sellers have access to the Internet, and the ability to effectively use the required hardware and software is a basic condition. Given the increasing cost of internet access and weak network connectivity in most rural areas, it may not be readily known whether Nigerian farmers often resort to embracing e-retailing and e-commerce platforms when pushed by the increasingly dynamic and less predictable environmental realities.

Even in situations where the e-models are utilized, the unimpressive performance of Nigerian agricultural sector, occasioned by poor quality farm produce; low yield; uncivilized marketing strategy and increasing wastages (Asogwa and Okwoche, 2012) casts heavy doubt as to the extent to which Nigerian farmers actually embrace online marketing resources, and what potential benefits are likely to accrue to farmers for their adoption. This paper investigates the application of e-retailing in processed livestock business by examining the knowledge and extent of application of e-retailing platforms among agribusiness managers, the challenges and limitations of e-retailing application, the perceived benefits of e-retailing to livestock farming and agribusiness managers, and the ways of surmounting the challenges.

3. METHODOLOGY

The study was carried out at the Lekki free trade zone in Lagos State. The Free trade zone is in Lekki/Epe area; a sub- urban region in Lagos, South-Western Nigeria. There are four subunits in the trade zone, 25 agribusiness farmers were randomly selected from each sub zone to comprise the 160 estimated sample size. Estimate of the sample size was calculated using the Kish formula for survey studies, using 95% level of confidence, and precision of 0.05 (Ndiyo, 2005).The study employed a structured questionnaire to realize its objectives, Likert scale structure was employed. The respondents answered each statement based on scales that most described the current situation in their business. Consistent with Udensi (2012), group arithmetic mean (GAM) and mean weight values (MWV) were adopted in analyzing quantitative data, and data presentation employed tables, percentages, and Chart.

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4. RESULTS AND DISCUSSION

4.1 Level of e-retailing knowledge among livestock farmers

The level of farmer's knowledge about e-retailing model was determined through careful computation and analysis as shown in Table 1. Results showed that awareness of electronic retailing was high in three out of the nine key areas measured. These include: knowledge of social media (73.8%), proficiency in computer appreciation (62.5%), and having dedicated mobile phones for their businesses (88.8%). On the other hand, knowledge of e-retailing application is low in terms of application software(93.8%) possessing a functional website (88.8%), possessing internet connectivity broadband (88.8%), possession of a computer(60%), internet server (98.1%), and having electronic payment mechanism (92.5%). Generally, the result indicated low level of knowledge in e-retaining application among rural farmers. This finding is consistent with Chukwunonso and Aisha, (2012) that also reported current low level of knowledge in ICT application in agriculture.

Table 1. Respondents' Knowledge of E-retailing among Farmers (N=160)

Measures of Awareness	**Aware**		**Not Aware**		
	Frequency	**Percent (%)**	**Frequency**	**Percent (%)**	**Remark**
Possession of a computer	64	40.0	96	60.0	Low Knowledge
Access to Internet connectivity	18	11.3	142	88.8	Low Knowledge
Possession of functioning Website	18	11.3	142	88.8	Low Knowledge
Knowledge of application software	10	6.25	150	93.8	Low Knowledge
Knowledge of social media	118	73.8	42	26.3	High Knowledge
Proficiency in Computer application	100	62.5	60	37.5	High Knowledge
Having dedicated mobile phone lines	142	88.8	18	11.3	High Knowledge
Application server with Internet broadband.	3	1.88	157	98.13	Low Knowledge
Payment mechanism for e-commerce transaction (POS, e-transact etc)	12	7.5	148	92.5	Low Knowledge

Source: Field Survey, 2019

4.2 Extent of e-retailing application by agribusiness managers

Table 2 showed respondents' opinion on extent of application of e-retailing platforms to marketing of agricultural products. On the basis of difference between mean weighted value (MWV) and group arithmetic mean(GAM), it is clear that extent of e retailing application is high in three of the measures- membership of producers forum online (11.57), regularly sending e-mail messages(21.14), and owing a social media network account(0.86). Owing an

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online account with available social media network was moderately high in application compared to other measures. On the other hand, respondents scored low in applying four other e-retailing models such as using social media to advertise products and services (-7.00), solving customers' complaints online(-13.00), having facility to enable customers shop and place order online (online shopping) (-2.43), and frequent use of internet to upgrade product information(-11.14). Therefore, from the findings, it was concluded that the extent of e-retailing application in agribusiness marketing is relatively low.

Table 2. Extent of e-retailing application to marketing of agricultural products (N=160)

Construct	SA 5	A 4	U 3	A 2	SD 1	MWV	GAM	D	Remark
Social media is used to advertise products	27 (17)	13 (8)	44 (28)	49 (30)	27 (17)	63.43	70.43	-7.00	Low
Customer complaints are solved online	24 (15)	18 (11)	20 (13)	52 (33)	46 (28)	57.43	70.43	-13.00	Low
There is facility that enable customer place order online	42 (27)	67 (41)	12 (8)	13 (8)	26 (16)	68.00	70.43	-2.43	Low
Product and service information is upgraded on the website	24 (15)	29 (18)	19 (12)	34 (21)	54 (34)	59.29	70.43	-11.14	Low
Joining producers forum online	54 (34)	52 (33)	15 (9)	12 (7)	27 (17)	82.00	70.43	11.57	High
E-mail messages are regularly sent to customers	56 (35)	61 (38)	34 (21)	3 (2)	6 (4)	91.57	70.43	21.14	High
Ownership of social network account	37 (23)	36 (23)	26 (16)	31 (19)	30 (19)	71.29	70.43	0.86	High
	∑					493.0			

Source: *Field Survey, 2019*
MWV=Mean Weighted Value
GAM=Group Arithmetic Mean
D=Difference
NB: Extent of application is high if there is positive difference between MWV and GAM and vice versa
Figures in parenthesis are approximated percentage

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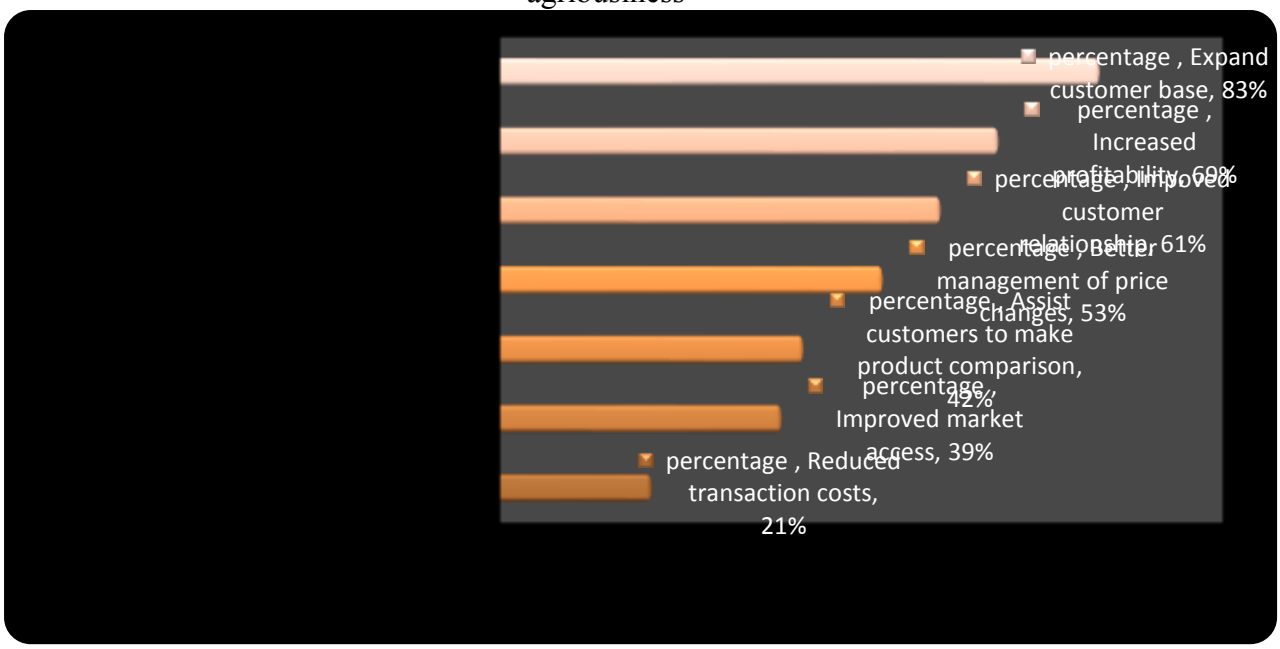
4.3 Perceived benefits of e-retailing to livestock farming and entrepreneurship agribusiness.

Certain benefits accrue to entrepreneurship agribusiness farmers in using e-commerce. Figure 1 shows distribution of respondents on the perceived benefits of e-retailing to livestock farming and agribusiness. From the results, 83% of the respondents agreed that adoption of e-retailing is capable of expanding customer base. In the same vein, e-retailing leads to increased profitability (69%), facilitate improved customer relationship (61%), ensure better management of price changes (53%). Similarly, 42% of respondents claimed that online access enables customers make comparison between the company's products and price with those of competitors, 39% opined that online retailing has potential to improve market access for many customers, and 21% asserted that electronic marketing can reduce transactions costs. From the result, it implies that e-retailing has huge potential to farmers and businesses wishing to adopt and embrace it. Thus, an increase in e-retailing practices can lead to increased customer base, reduced operating costs and increased profit, increased bottom line, better management of product information, increase customer access, and enhanced product differentiation. This finding is akin to that of (Yang, 2009); (Wise and Morrison 2000); and Hardaker and Graham (2001).

Fig. 1 Respondents perceived benefits to be accrued from e-retailing in livestock farming and agribusiness



Source: Field Survey, 2019

4.4 Challenges on successful adoption of E-retailing models by agribusiness firms in Nigeria

Several factors may have hindered thrive of e –retailing processes in agricultural sector in Nigeria. As shown on Table 4, the most important of the challenges perceived by respondents include, fluctuating power supply (4.31) ranked first, high cost of accessing the net (4.08)

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ranked second; Internet insecurity and cyber-crime (4.07) ranked third; slow pace of internet network ranked fourth (4.03); computer illiteracy ranked fifth (4.04); lack of government support (0.83) ranked sixth, and insufficient online information (3.75) ranked least by respondents. This implies that improvement in electrical energy supply by government, drastic reduction in cost of accessing the net, increased computer and Internet literacy are some of the necessary measures to address the challenges in the sector.

Table 4 Respondent's opinion on Hindrances to effective usage of E-retailing in agric produce marketing (N=160)

Constraints	SA	A	U	D	SD	M	S.D	Rank
Inability to use computer and Internet resources	21 (29.2)	35 (48.6)	13 (18.1)	3 (4.2)	-	4.02	0.80	5th
High cost of accessing the net	22(30.6)	40(55.6)	5(4.2)	3(4.2)	2(2.8)	4.08	0.89	2nd
Insufficient online product and pricing information	17(23.6)	32(44.4)	13(18.1)	8(11.1)	2(2.8)	3.75	1.03	7th
Fluctuating power supply	34(47.2)	31(43.1)	3(4.2)	4(5.6)	-	4.32	0.80	1st
Slow pace of internet connectivity	18(25.0)	41(56.9)	10(13.9)	3(4.2)	-	4.03	0.75	4th
Fear of internet insecurity and cyber crime	20(27.8)	33(45.8)	14(19.4)	5(6.9)	-	4.07	0.87	3rd
Lack of government support	15(20.8)	43(59.7)	7(9.7)	7(9.7)	-	3.92	0.83	6th

Source: Field Survey, 2019
NB: SA= *Strongly Agree; A= Agreed; U= Undecided; D=Disagreed; SD=Strongly Disagreed, M= Mean; S.D= Standard Deviation; Figures in parenthesis are in percent.*

5. CONCLUSIONS AND RECOMMENDATIONS

The commercialization of the Internet (e-commerce) has caused agribusiness firms worldwide to rethink their distribution channel and processes. E-commerce provides firms with the ability to reach new customers and old customers in new ways. In addition, e-commerce allows firms to tap new and old suppliers through new and innovative channels. These possibilities have raised the expectations of improved efficiency and substantial cost savings. The ability of the Internet to reduce transaction costs through improvements in customer transaction, information delivery, and negotiation function is associated with higher probabilities of e-retailing adoption among agribusiness firms.

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The application of e-retailing in agricultural sector in Nigeria is slow but there is prospect of picking up the pace. What is to be seen is how the agricultural sector organizes itself to overcome the hurdles and barriers that have been identified in this study. However, there is conclusive evidence that the use of internet and other electronic devices in marketing of agricultural products in Nigeria is still at its infancy. The knowledge and acceptability of e-retailing in marketing of agribusiness products particularly among livestock farmers in Nigeria is low and needs to be encouraged.

As a way forward, there is therefore the need to increase the general level of awareness of livestock and agribusiness farmers to the huge potentials of internet marketing and e-retailing. Interest in the application of e-tailing platforms in agribusiness sector can be stimulated by having extensive internet coverage to ensure customers' reach and access, training farmers in the usage of the various internet platforms for prompt delivery of agric products to consumers.
Entrepreneurship development centers in academic institutions should come to the rescue by taking entrepreneurship education, training, seminars, and workshop to the doorsteps of rural farmers. They can act as the one time popular "Agricultural Extension Agents" to train rural farmers on internet usage and e-commerce application. Entrepreneurship faculties can also embark on training farmers in building solar panels to generate alternative power supply for e-retailing purpose. This would boost growth of rural agribusiness firms and promote sustainable economic development.

In addition, the Technology Incubation Centers (TIC), established by the federal government in several parts of the country should be upgraded and staffed with requisite personnel to train rural farmers on e-retailing and related on-line transactions. This is another opportunity to put these outfits which have been inactive for years to use.
Government must ensure that cost of accessing internet services is minimally reduced, and rural farmers could liaise with established internet service providers to influence the cost of access to online services. It is necessary that government sets up computer appreciation and e-learning centers in most rural areas to train farmers on commercial usage of e-retailing.
Generally, farmers can press for government support to online marketing services through advocacy, forming and joining pressure groups and associations to press home their demands. Electronic shoppers must also be guaranteed of the security of information they pass through the net. Thus, agribusiness firms using e-retailing must be conscious of security in information processing, and online payment. The use of highly personalized pass code and internet security protocol (ISP) would be very important in this respect.

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