

USE AND USE INTENSITY OF SOCIAL MEDIA NETWORKING SYSTEMS BY NIGERIAN AGRO-ENTREPRENEURS

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Abstract

Agro-entrepreneurs are key to the Nigerian economy as they constitute the majority of the work force, providing food and employment opportunities for more than 60% of the largest black nation on earth. Nigeria's social media networking system which is the largest in Africa has got its usefulness in many conventional and contemporary applications in the recent times. Social media has become the fastest, cheapest and unrestricted communication and marketing tool of this jet age. This study therefore focused on the use and use intensity of social media networking systems by Nigerian agro-entrepreneurs. The study made use of mainly primary data. Primary data were collected with the aid of well-structured questionnaires assisted with interview schedules. Field data collection was conducted between June and September, 2014. Multi-stage sampling technique was used to select three hundred and sixty (360) respondents across the three (3) highly ICT compliant states (Lagos, Ondo and Oyo). Data collected were analysed using descriptive statistics and multiple regression model. The results of the regression model indicate that education, availability of power supply and customer base of the agro-entrepreneurs positively influenced use intensity of social media by the agro-entrepreneurs while age and cost of access data negatively influenced their use intensity of social media.

Key words: ICT, Nigerian agro-entrepreneurs, regression model, use intensity of social media

INTRODUCTION

Social media networking system has by far become one of the grandest benefits of the information and telecommunication (ICT) dispensation. Social media networking system has impacted greatly on the human behaviour both intra-human and inter-human relationship and their interactions with other components of the earth. Social media is redefining human level of activities and interactions across all sectors of the economy. The dynamism, ease, innovativeness, wide coverage, access and customers networking inherent in social media networking system has made social media perhaps, the most powerful tool in terms of speed and cost-effectiveness for information dissemination and marketing to the world's growing population. Social media networking system continues to grow from continent to continent, countries to countries, regions to regions and from of the economy to subsectors as new subscribers or followers continue to join the various social media across the globe.

Social media as defined by [7] is "a group of internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user-generated content". For [8], social media depend on mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content. They introduce substantial and pervasive changes to communication between organisations, communities, and individuals. World's popular social media network sites include Facebook, Twitter, Instagram, Youtube and Skype. The increase in active users' growth of these social media is astronomical. For example, Facebook had 1.35 billion monthly active users as at September, 30 2014, only within a decade of existence [5]. In Nigeria, prominent social media include Facebook, Google, Yahoo, Youtube, Eblogger, LinkedIn, and Twitter, 2go, Whatsapp and Nairaland among others. The number of social media networks

continue to dominate the most visited websites across Africa and the situation is not different in Nigeria. Social media practices have extemporised in unprecedented capacities. They have triggered human right activism and revolutions, encouraged, demanded and monitored best practices during elections and are also contributing to a larger dynamic of promoting growth on the continent through accountability and conversation. In fact, the most visited websites across the continent are social media platforms [2]

Agro-entrepreneurship in Nigeria

Nigeria has one of the most diversified economies in Africa with different sectors of the economy providing great opportunities for survival but not without their varying degrees of challenges as well. Agriculture is at the centre of the economy contributing more than 40% to the GDP [3]. Agriculture remains the lifeline of the rural and peri-urban communities employing more than 70% of them who are engine rooms for the food need of the largest black nation on earth. Agro-entrepreneurs are critical to the economy not only for the nations' food security but also as necessary strategists and agents of economic development and adjustment given its nascent and dynamic nature of a developing agro-economy. For the purpose of this study and in the researcher's view, agro-entrepreneurship is the process of starting new agribusinesses and or expanding the frontiers of existing agribusinesses to incorporate new business ideas and activities aimed at meeting the food and other agricultural needs of the citizenry with return on investment to the entrepreneur. An agro-entrepreneur develops agribusiness model, acquires the human and other required resources, and is fully responsible for the success or failure of the agribusiness. Agro-entrepreneurs are there the individuals who explore agribusiness opportunities, scan the environment, mobilise resources, convert ideas into viable agribusiness proposition and provide new agricultural products and services to the society by bringing together and combining various factors of production. An agro-entrepreneur has a distinct concept, dynamic vision and an achievable dream,

which he/she is able to convert into economic products and services. Such individuals are driven by task, challenge and opportunity with very high achievement orientation.

Social media contributions to agro-entrepreneurship and economy in Nigeria

According to the global ICT, social media network and mobile technology statistics for 2014, there are 2.5 billion internet users of the world's population of 7.1 billion. These internet users accounted for 35% of the world's population with 1.9 billion active social media network users and 6.6 billion mobile subscribers. Meanwhile in Nigeria, according to [2], internet penetration stands at about 30% with 50 million internet users. In the year 2009, 70% were visiting social networking sites, 6% e-mail and 54% entertainment. By the year 2013, 72% were visiting social networking sites, 55% e-mail and 46% entertainment [2]. The increasing number of social media network users and mobile subscribers continue to have multiplier effects on national and global economies and their component sectors.

The use of internet-based social media networking systems have enabled both small and large scale agro-entrepreneurs communicate their products more effectively to their consumers. Marketing agribusinesses explore the global reach and limitless opportunities intrinsic to social media network system to extend their products to different peoples, different economies with multicultural diversities and ensure rapid consumer feedback mechanism to improve and adjust to global best practices thereby enhancing internationalisation of indigenous products across the global.

The use and use intensity of social media networking systems by agro-entrepreneurs is an important, necessary and innovative but almost neglected area of research particularly in a developing country like Nigeria. Although the concept of social media and its applications have enormously been studied in other business activities. Notable among these business activities or aspects are small and medium scale Enterprises (SMEs), large companies and incorporations, financial institutions and retail businesses. There

abound lots of researches on social media and other sectors of the economy. Effects of social media on education is no longer new. According to [9] and [1], social media networking systems do not only make it easy for companies to communicate with their consumers, but also makes it easier for tertiary institutions to communicate related course work to their students, to encourage discussion between and among students, and to address administrative issues [9]; [1].

Agro-entrepreneurs as the commonest entrepreneurs are on the increase in Nigeria with different scales of operation and sophistication. Lagos State is home to the largest number of agro-entrepreneurs in Nigeria. Social media networking is grossly unregulated in Nigeria. Several agro-entrepreneurs now use social media to communicate and market their products. It is against this background that the study is aimed at evaluating the use and use intensity of social media networking system by Nigerian agro-entrepreneurs with the following specific objectives which include to:

- (i) Identify key demographic characteristics of agro-entrepreneurs in Nigeria
- (ii) Investigate the use and types of social media networking systems used by agro-entrepreneurs in Nigeria
- (iii) Examine the factors influencing use intensity of social media by agro-entrepreneurs in Nigeria

MATERIALS AND METHODS

The study area

The study was carried out in Lagos, Ondo and Oyo States, Nigeria. These states were selected for the study because of the high concentrations of agro-entrepreneurs and high level of ICT compliance with the use of social media networking systems.

Sampling technique and size

Multistage sampling technique was used in the selection of the respondents for this study. In the first stage, three (3) States were purposively selected for the study. They were Lagos, Ondo and Edo States. The three (3) states were purposively selected based on the

high concentrations of agro-entrepreneurs and high level of ICT compliance with the use of social media networking systems by agro-entrepreneurs. The second stage also involved purposive sampling of ten (10) agro-entrepreneurs out of the six (6) different categories of agro-entrepreneurs identified for this study from each of the three (3) states. The six (6) categories are agro-input suppliers, farm field producers, agro-processors, agro-marketers/distributors/brokers, professional service providers and others unclassified group. A total of sixty (60) agro-entrepreneurs were selected from each state to make a sample frame of three hundred and sixty (360) respondents for the study.

Data and method of data collection

Primary data were used for the study. Data were collected by means of a well-structured questionnaire, which was pre-tested in order to enhance the reliability of the data. A total of three hundred and sixty (360) copies of the questionnaire were administered, completed and returned. Field data collection was conducted between June and September, 2014.

Data analysis

Descriptive statistics and regression model were used in the data analysis. The descriptive statistics used included means, percentages, frequencies and tables. Multiple regression analysis was used to isolate factors influencing use intensity of social media by agro-entrepreneurs in Nigeria measured by the number of active hours spent on social media in a month by each respondent. The implicit form of the regression model is presented as:

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7 \text{ and } X_8, e)$$

Where, Y= Use intensity of social media (active hours on social media per month)

X₁=Age of agro-entrepreneurs

X₂=Sex of agro-entrepreneurs (male or female)

X₃=Education of agro-entrepreneurs (measured in years of formal schooling)

X₄=Experience in agro-entrepreneurship (in years)

X₅=Cost of ICT device used accessing social media.

RESULTS AND DISCUSSIONS

Distribution of the agro-entrepreneurs by key demographic variables

Table 1 shows the distribution of the agro-entrepreneurs by four (4) key demographic variables which are age, sex, highest level of education and years of working experience in agro-entrepreneurship. The Table reveals that most of the agro-entrepreneurs were aged less than 60 years (86.39%) while only few (13.61%) were older than 60 years. Age is a critical factor in agro-entrepreneurship as it is a function of economic viability as observed by [3].

Table 1. The distribution of the agro-entrepreneurs by key demographic variables

| Age of agro-entrepreneurs (in years) | Frequency | Percentage (%) |
|---|-----------|----------------|
| Less than 30 | 56 | 15.56 |
| 31-40 | 93 | 25.83 |
| 41-50 | 83 | 23.06 |
| 51-60 | 79 | 21.94 |
| Greater than 60 | 49 | 13.61 |
| Total | 360 | 100.00 |
| Sex of agro-entrepreneurs | | |
| Male | 243 | 67.50 |
| Female | 117 | 32.50 |
| Total | 360 | 100.00 |
| Highest level of education of agro-entrepreneurs | | |
| | Frequency | Percentage (%) |
| No formal education | 23 | 06.39 |
| Primary school education not completed | 7 | 01.94 |
| Primary school education completed | 13 | 03.61 |
| Secondary school education not completed | 46 | 12.77 |
| Secondary school education completed | 69 | 19.17 |
| Tertiary school education not completed | 79 | 21.94 |
| Tertiary school education completed | 113 | 31.39 |
| Other forms of education | 10 | 02.78 |
| Total | 360 | 100.0 |
| Experience in Agro-entrepreneurship (in years) | | |
| | Frequency | Percentage (%) |
| less than or equal to 5 | 95 | 26.39 |
| 6 to 10 | 148 | 41.11 |
| 11 to 15 | 68 | 18.89 |
| 16 to 20 | 31 | 08.61 |
| Greater than 20 | 18 | 05.00 |
| Total | 360 | 100.0 |

The implication of this is that the Nigerian economy has got good number of economically viable agro-entrepreneurs to continue to drive the sector. It is even worthy of note that about 65% of the agro-entrepreneurs are either less than 50 years or

are fifty years old. Moreover, agro-entrepreneurship in Nigeria is male-dominated as the percentage of male in the total sample is even more than the double of the percentage of female as shown in Table 1 as well. The implication of this is that, a much-more-not distracted gender group is in the fore front of agro-entrepreneurship in Nigeria as the female folks tend to be distracted by home responsibility of managing house chores, looking after the welfare of the children both in and outside home. This is so because in Nigeria, managing home chores and looking after the welfare of children are still considered primary responsibility of the female folks and this consequently reduces in relative, the attention (in hours per day) devoted to entrepreneurship and more also agro-entrepreneurship. In addition, little more than half of the agro-entrepreneurs were educated to the level attaining tertiary education even when not all of them completed their tertiary education. Table 1 further reveals that most of the agro-entrepreneurs (67.50%) had been in the business for less than 10 years or equal to 10 years while the remaining 35% of them had had the business experience for more than 10 years. In particular, only 5% had been agro-entrepreneurs for more than 20 years. The years of experience in agro-entrepreneurship is relatively large at the upper class and low at the lower class, to give a mean of 15.9 years of experience. Since business success skills many a times, are learnt and acquired over years by learning through practical business experiences, it implies that some of the agro-entrepreneurs may not have acquired enough agro-entrepreneurship experience to shoulder serious business challenges when they arise. However, their persistence and continuity in the business over time will just provide them with the experience and the required business success skills in due course.

Use of social media networking system among agro-entrepreneurs in Nigeria

Figure 1 shows the research findings, which indicate the percentage of the six (6) categories of agro-entrepreneurs that used social media networking systems. The Figure reflects that agro-marketers / distributors /

brokers (82%), professional service providers (75%) and agro-input suppliers (72%) used social media the most while still a good number of agro-processors (65%) used the social media. On the contrary, farm field producers (18%) used social the least. In all, 61% of the total sample used social media. The findings here differentiates from [6] where 81% of the entrepreneurs sampled from SMEs in Nairobi, Kenya used social media. This question was germane for this study in differentiating the social media users from the non-users which provided a quick focus for the study in realizing its set objectives. However Figure 2 reveals that Facebook, Yahoo, Whatsapp, LinkedIn Nairaland and Google are the agro-entrepreneurs' top preferred social media networking systems in Nigeria.

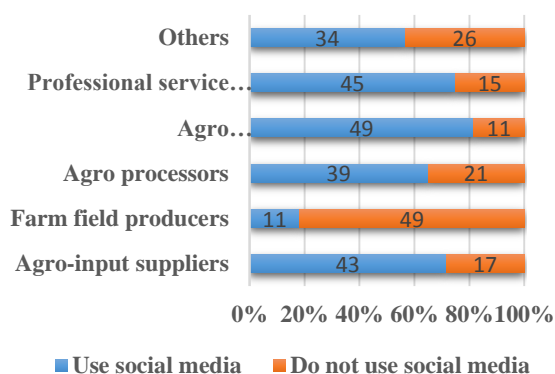


Fig.1. Use of social media networking systems among agro-entrepreneurs in Nigeria
 Source: Computed from field survey, 2014

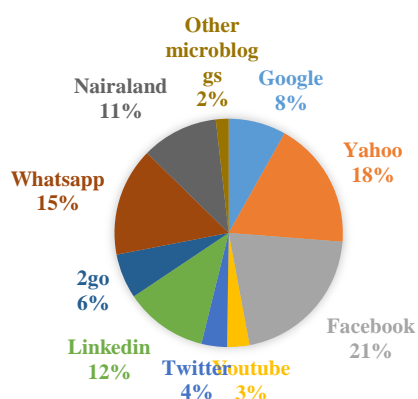


Fig. 2: Type of social media networking systems used among agro-entrepreneurs in Nigeria
 Source: Computed from field survey, 2014

Reasons for using social media networking systems

From research findings as shown in Table 3, customer relationship management (98.19%) ranked first in the list of the reasons advanced for using social media by the agro-entrepreneurs. This finding is consistent with [6] which also discovered that customer relationship management was the major reason why SMEs used social media in Nairobi, Kenya. Many of the agro-entrepreneurs had noted that customer relationship management was the most paramount reason, as they noted that most of their customers had imbibed social media and they must follow them to keep track of their contacts and relationship for continued patronage of their products and services. Other top reasons included price monitoring (2nd), creation of new markets (3rd) e-advertisement (4th) and market survey and research (5th). Agro-entrepreneur in Nigeria rarely used social media for product identification or rating as reflected by its bottom position in the respondents' ranking.

Table 2. Reasons for using social media networking systems

| Variables | Frequency | Percentage (%) | Rank |
|--|-----------|----------------|------|
| Customer relationship management | 217 | 98.19 | 1st |
| Price monitoring | 201 | 90.95 | 2nd |
| Creation of new markets | 167 | 75.57 | 3rd |
| E-advertisement | 156 | 70.59 | 4th |
| Market survey and research | 147 | 66.52 | 5th |
| Feedback mechanism | 145 | 65.61 | 6th |
| Purchase and sales | 92 | 41.62 | 7th |
| Networking with other agro-entrepreneurs | 81 | 36.65 | 8th |
| Product identification/rating | 78 | 35.29 | 9th |
| Others | 56 | 25.34 | 10th |

Source: Computed from Field Survey, 2014

Factors influencing use intensity of social media among agro-entrepreneurs in Nigeria

Table 3 summaries the statistics of the factors influencing use intensity of social media by two hundred and twenty one (221) agro-

entrepreneurs in Nigeria. The mean age of the agro-entrepreneurs was 38.8 years while on the average they have spent 11.2 years in school for formal education. Availability of power supply in hours per month was on the average of 286.9. Agro-entrepreneurs in Nigeria however spent N 1010.41 (an equivalent of USD 5.81 as at 28th of

November, 2014) for data access per month in using social media with 15.61 years of experience in agro-entrepreneurship. They had 30 customers on the average which caused them to spend 30.9 active hours on social media monthly for mainly managing their customer relationship.

Table 3. Statistics of factors influencing social media use intensity among agro-entrepreneurs in Nigeria

| | Intensity of social media use (active hours on social media per month) | Age of agro-entrepreneurs | Education of agro-entrepreneurs (measured in years of formal schooling) | Experience in agro-entrepreneurship (in years) | Cost of ICT device used in accessing social media | Availability of power supply (hours of available power per month) | Cost of access data (in Naira) | Customer base (number of customers on social media) |
|-------------|--|---------------------------|---|--|---|---|--------------------------------|---|
| Valid users | 221 | 221 | 221 | 221 | 221 | 221 | 221 | 221 |
| Mean | 30.85 | 38.82 | 11.21 | 15.91 | 13076.92 | 286.88 | 1010.41 | 29.24 |
| Median | 19.00 | 35.00 | 12.00 | 14.00 | 5000.00 | 240.00 | 1000.00 | 20.00 |
| Mode | 56.00 | 45.00 | 12.00 | 20.00 | 5000.00 | 240.00 | 1000.00 | 20.00 |
| Range | 84.00 | 36.00 | 06.00 | 29.00 | 117700.00 | 280.00 | 4300.00 | 203.00 |
| Minimum | 04.00 | 29.00 | 00.00 | 01.00 | 2300.00 | 240.00 | 200.00 | 02.00 |
| Maximum | 88.00 | 65.00 | 12.00 | 30.00 | 120000.00 | 520.00 | 4500.00 | 205.00 |

Source: Computed from field survey, 2014

Table 4 shows the results of the regression analysis to examine the determinants of use intensity of social media by Nigerian agro-entrepreneurs. The use intensity of social media was measured by the active hours each agro-entrepreneur spent on social media networks in a month.

Table 4. Regression results of factors influencing use intensity of social media

| Variables | Simple Log | | Semi-Log | | Double Log | |
|----------------|-------------------------|-----------------|------------------------------|----------------|-------------------|-----------------|
| | Coefficients | T-value | Coefficients | T-value | Coefficients | T-value |
| Constants | -32.620 (9.295) | - 3.50 9* | 0.183 (0.163) | 1.12 5 | -3.803 (0.719) | - 5.29 0* |
| X ₁ | -0.231 (0.127) | - 1.81 5 | 0.003 (0.002) | 1.25 9 | -0.079 (0.216) | - 0.36 7 |
| X ₂ | -2118 (2.315) | - 0.91 5 | -0.074 (0.0041) | - 1.81 8 | -0.218 (0.122) | - 1797 |
| X ₃ | 0.598 (0.387) | 1.54 4 | 0.038 (0.07) | 5.54 9* | 0.757 (0.133) | 5.70 2* |
| X ₄ | 0.119 (0.157) | 0.75 9 | -0.002 (0.003) | - 0.68 0 | 0.042 (0.062) | 0.68 2 |
| X ₅ | 7.354E- 5 (0.000) | 2.27 6* | - 0.696E- 7 (0.000) | 0.29 9 | 0.038 (0.037) | 1.01 9 |
| X ₆ | 0.225 (0.013) | 16.5 29* | 0.003 (0.000) | 12.1 72* | 1.966 (0.186) | 10.5 59* |
| X ₇ | 0.000 (0.002) | 0.07 2 | 5.289E- 5 (0.007) | - 1.54 2 | 0.202 (0.095) | - 2.13 5* |
| X ₈ | 0.065 (0.028) | 2.35 5* | 0.001 (0.000) | 0.11 0 | 0.107 (0.053) | 2.00 8* |

Source: Computed from field survey, 2014

From Tables 4 and 5, the double-log functional form provided the best fit as shown in the regression model considering the following statistics: the number of significant variables (highest), value of Standard error (least), F-value, value of the R² and value of the Durbin-Watson statistic (> than 1) is a test statistic test used to detect the presence of autocorrelation. Five (5) of the independent variables; X₁, X₃, X₆, X₇, and X₈, were significant at 5% level (i.e. 95% confidence interval). These variables were age and educational attainment of the agro-entrepreneurs, availability of power supply, cost of access data and their customer base. The parameter estimates of each of these variables also carried signs, which are consistent with the *a priori* expectations. The results of the regression model indicate that education, availability of power supply and customer base of the agro-entrepreneurs positively influenced their use intensity of social media. However, age and cost of access data negatively influenced their use intensity of social media. It is succinct therefore, to say that the major factors influencing use intensity of social media by agro-entrepreneurs in Nigeria were these five (5) factors. All the explanatory variables together explained about 89% of the variations observed in use intensity of social media. The 1.001 value of

Durbin-Watson statistic in Table 4 is an indication of no autocorrelation although a higher value would have been better.

Table 5. Key model summary and ANOVA statistics

| | R | R ² | Adjusted R ² | Stan. Error | Durbin Watson | Mean square | F-value |
|------------|-------|----------------|-------------------------|-------------|---------------|-------------|---------|
| Simple Log | 0.932 | 0.869 | 0.864 | 8.3988 | 0.690 | 12397.26 | 175.745 |
| Semi-Log | 0.876 | 0.767 | 0.758 | 0.1473 | 0.701 | 1.89 | 87.255 |
| Double Log | 0.887 | 0.786 | 0.778 | 0.1411 | 1.011 | 1.94 | 97.508 |

Source: Computed from field survey, 2014

CONCLUSIONS

Social media use by agro-entrepreneurs in Nigeria is relatively high at 61%. Facebook remains the most used social media network by the agro-entrepreneurs. The agro-entrepreneurs use social media mostly for customer relationship management. Education, availability of power supply, customer base, age and cost of access data are the factors influencing use intensity of social media in Nigeria. From the research, the study can succinctly conclude that use intensity of social media will improve if agro-entrepreneurs have more education, have increased hours of power supply, and have more social media compliant customers. On the contrary the more aged the entrepreneurs grow and the higher the cost of access data, the less they use social media.

It is therefore on point to recommend that, to enhance social media use and improve use intensity by agro-entrepreneurs in Nigeria, Government and other stakeholders in agro-entrepreneurship must work to ensure continuous and increased education for agro-entrepreneurs, increase power supply and increase the number of their social media-compliant customers in Nigeria.

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