Social Media Marketing and Economic Development in Sub-Saharan Africa

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Abstract

The recent upsurge in internet usage has resulted in the diversification of marketing strategies into the use of social media. This has encouraged general trading (domestic and foreign). However, concerns are now channeled to the growth and developmental impact of the general use of social media and particularly in marketing across the globe and Sub-Saharan Africa (SSA) especially. Hence, this study investigated the impact of the use of social media marketing on economic development in SSA. The study used a Generalized Method of Moment method of estimation on panel data on fifteen (15) countries over the period 2014–2019. Outcomes revealed that social media marketing substantially increases economic development. Fixed broadband subscriptions were also found to have a substantial developmental impact and education captured by gross tertiary enrollment significantly impacted development. We, therefore, recommend the increase in the availability of the internet and encourage the usage of social media for marketing.

Keywords: Economic, development, Marketing, Panel data, Social, Media, Sub-Saharan, Africa, Method, General.

JEL Classification: O15, M31, C33, M37

Conflict of interest: There is no conflict of interest among the researchers.

Introduction

Sub-Saharan Africa has undergone remarkable achievements in internet usage in the modern years. Currently, about 3.8 billion mobile internet customers exist worldwide, this amounted to about 49% of the total population in the entire world. However, mobile internet users stood at about 26% in Sub-Saharan Africa towards the end of 2019 (Mobile Internet Connectivity, 2020). The upsurge in internet usage has facilitated the need to engage social media marketing by businesses as this is already trending for most businesses in Africa and the world at large because it facilitates business prospect that goes beyond the outmoded intermediary in communication by linking firms straight with their clienteles (Afolabi, 2015; Ogbeide-Osaretin and Ebhote, 2020). The advent of the internet has modernized our ways of interactions with one another as well as in the procedure of distributing information and knowledge (Sobowale, Amodu, Aritiguzoh, and Ekanem, 2015). Oyero (2007) asserts that the internet has immensely wedged society, businesses, and the government. In recent times, social media marketing is becoming a persuasive marketing outlet used as a platform to display goods and services by most businesses and organizations across the world with Nigeria inclusive. Over 100 million Nigerians use the internet, with more than 250,000 novel subscribers surfing the internet towards the end of 2019 (Russon, 2020). With this advancement, Nigeria has perceived a fundamental improvement in the ICT sector. In the past years, countries in Sub-Saharan Africa have witnessed implausible growth in ICT. For instance, just in Nigeria alone about twenty-eight million are connected by one means or the other to the internet with many relying on mobile phone devices (Agwu, 2012).

As observed by Stelzner, (2014), about 64% of marketers that use social media employ up to six hours a week while about 19% spend more than 20 hours a week on social media. Social media has already occupied a crucial aspect of small and medium scale businesses by facilitating consumer purchasing decisions. Gushing the message via these social media channels makes it striking because the customer gets the messages in the ordinary course of surfing the net or streaming through social media pages. Evans (2018) opined that the era of social media started in 1978 when Bulletin Board System (BBS briefly) bartered data via phone lines to other
clienteles, while the speedy expansion took another dimension in the last 13 years ago, where one of the options to the working and the social media creation was the LinkedIn network, which was designed in 2003, accompanied by Facebook in 2004, Youtube came in 2005 while the Instagram came in 2010.

Even if 90% of 18-25 Internet subscribers utilize social networking via any device say once in a month, social media influences every age bracket at an increasing rate, specifically age bracket of 35 years and above (Hubspot, 2012). Social media can be the greatest channel for marketing companies’ brands. A lot of customers buy products after seeing them on social networking sites. Social media encompasses actions that involve socialization and interacting electronically via word, pictures, and videos. Kaplan and Haenlein (2010) opined that social media is a group of internet-based appliances that encourage philosophical and high-tech basics of Web2.0, and that permit the formation and exchange of user-engendered content. It relies on mobile and web-based expertise to generate exceedingly collaborative platforms where individuals and societies allot, co-create, discuss, and adapt user-generated content. Peters in Ezenwafor (2012) opines that hence technology is dominant in the world in every specialties and activities, the contemporary office ranks uppermost in invention development and use of the dynamic technologies demanding satisfactory integration of ICT in business endeavour.

Social media marketing has a lot to offer in terms of economic development in Sub-Saharan Africa. A vital ingredient in social media economics is the ability of social media marketing to create job possibilities as job prospects available on social media are numerous. Trading and advertising and all dispersal of services occur in the social media platform (Barnes, Hood, and Gallardo, 2013). Accessibility of these virtual services indicates that marketing on social media can create employment. Social media marketing also generates small capital investments for the economy. This is primarily because it proffers a very low-cost opportunity for accessing a vast customer base. The appropriateness of social media marketing for little businesses remains in its small amount of money needed to bring it to reality, as social media can circulate information amidst many people in numerous nations at the same time with little cost (Akasike, 2008). Therefore, it became essential to carry out exhaustive research to underline the effect of social media marketing and economic development in Sub-Saharan Africa. This paper is anticipated to tender any evidence on major policy perceptions on social media marketing and its impacts on economic development in Sub-Saharan Africa.

The above contextual highlights underscore the importance of this research paper that attempts to offer knowledge in three dimensions: first, to determine the extent to which social media marketing has impacted the economic development of Sub-Saharan Africa. Second, to determine the effect of social media marketing on the market access business in Sub-Saharan Africa. Third, to establish the effect of social media marketing economic growth businesses in Sub-Saharan Africa. In line with the above introduction, section 2 presents conceptual and empirical literature; section 3 presents the study’s methodology; data presentssation and findings were presented in the fourth section, while the fifth section addresses vital policy implication of the paper and inference.

2. LITERATURE REVIEW
2.1 Conceptual literature
According to Warren Jolly the CEO of adQuadrant firm, among the hundreds of various marketing strategies of businesses, social media marketing or advertising can promote consistent sales from the first day such business is marketed via social media platforms. Though some social media channels can yield a significant return of investment on businesses but perhaps not day-in and day-out, it is cost-effective and with a low effort approach (Jolly, 2017). Different types of social media marketing are used by business companies to carry out various marketing approaches. Among the very enormous social media networks or platforms that are created and launched now and then, most of them will never be of any attraction to the populated online community, thereby causing heavy traffic as some are right now.

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Those social media platforms that make huge waves and perhaps some of them have multiple functions are classified thus: Social Networking (e.g. Facebook, Google, WhatsApp, Friendster, Telegram, LinkedIn, Myspace, WeChat) ii. Social Bookmarking or Tagging (e.g. Reddit, Delicious, Digg) iii. Wikis (e.g. TWiki, Wikipedia, Wetpaint). iv Video Sharing (e.g. Facebook Live, YouTube, Periscope, Skype, Viber, Kyte) v. Microblogging (e.g. Tumblr, Boing Boing, Xanga, Twitter, Dosh Dosh), vi. Business Networking (LinkedIn, eAcademy, XING) vii. Photo Sharing (e.g. Snapchat, Flickr, Viber, WhatsApp, Facebook, Instagram, zoom, Pinterest), viii. Dating-based networking (e.g. Badoo, Tagged), ix. Audio Sharing (e.g. Facebook, Blog Talk Radio, Line), x. Collaborative Tools (e.g. Google).

For the social media marketing platforms that are used by businesses to market their products and services, and perhaps considered as a consistent return of investment sites where it is best to invest in business marketing or advertisement, we have below as the best according to Jolly (2017) among the numerous platforms that are in existence: Facebook, Twitter, LinkedIn, Snapchat, Instagram, Pinterest. As a wildfire spread, social media has gained demanding popularity in recent years and is now generally established as a new marketing medium for different companies to use in making their products and services promotion. According to Hassan, Nadzim & Shiratuddin (2015), social media is a tool that fits into both large businesses as well as small businesses where effective marketing activities are handled. It is opined that there are more marketing opportunities for the small businesses (SMEs) to promote their businesses globally – products and services, brands and operations through social media because of the economic growth they contribute (Huang, 2012; Erdoğançu & Çiçek, 2012; Bulearca & Bulearca, 2010; Kanchanataane, Suwanno & Jarernvongrayab, 2014; Sin, Nor, and Al-Agaga, 2012).

According to Öztamura & Karakadilarb (2014), social media is not just a communication medium; it is as well regarded as a vital tool for strategic marketing in a business environment. It is imperative to note that, social media as a significant strategic marketing tool opens a modernized path for small businesses to access the market and gain a reputable performance perspective. There is a unique method that social media offer which is known as marketing communication (Eagleman, 2013). Social media as relating to small businesses helps to even prospectively offer valuable marketing skills and intellect to bridge the resource gap of SMEs thereby reducing the uncertainty and influence real-time market capabilities and knowledge, learning, and resource-matching abilities. This, however, relates SMEs with social media as early adopters of Web 2.0 technologies (De Saulltes, 2008; Harris & Rae, 2009).

Furthermore, for a small business to be successfully promoted, social media marketing is viewed significantly as a medium through which ideas and information, goods and services as well as business practices are carried out. It makes use of social media applications like Facebook, Twitter, YouTube, etc. to enhance its brand popularity with the attraction of new customers, brand loyalty, increase product sales, and building awareness (Michaelidou et al., 2011). Social media can be operated from different approaches and technologies which provides specific platforms for information dissemination, co-creation, collaboration, and dialogue, which uses the following medium such as social blogs, podcasts, weblogs, internet forums, microblogging, social bookmarking and wikis (Hamburg, 2012).

Consequently, different types and sizes of companies use social media increasingly and incorporate their marketing activities to meet the ever-competitive business environment and create a sustainable business relationship with various shareholders and stakeholders, build suitable networking and relationships within the SMEs’ system. There is no advanced or sophisticated technical knowledge required to operate in social media, it is low-cost, and the maintenance approach is remarkable (Chui, Miller, & Roberts, 2009; Zeiller & Schauer, 2011). Businesses are empowered through social media to surmount restrictions, geographical locale, and limited partners, and is very cost-effective (Barnes, Clear, Dyerson, Harindranath, Harris & Rae, 2012; Adebajno & Michaelides, 2010). Also, there is a significant increase in social media usage to promote business activities, and according to Choudhury & Harrigan (2014); Harrigan (2013), and Harrigan & Miles (2014), customer relationship management is one of the approaches, with marketing research and product branding part
of the approach (Kim, Lee, & Lee, 2011). There is also open innovation, knowledge sharing, and management, as well as organizational learning to aid the relationship betwixt social media and small businesses (Panahi, Watson, & Partridge, H. (2012). 2012; Razmerita & Kirchner, 2011; Hamburg & Hall, 2009; Hamburg, 2012; Wong & Aspinwall, 2005; Chesbrough, Vanhaverbeke, & West, 2006; Lindermann, Valcárcel, Schaarschmidt, & Kotzfleisch, 2009).

The Nexus between Social Media and Economic Development in Sub-Saharan Africa.

Economic development connotes various things to several people. Comprehensively, whatever society does to promote and generate a healthy economy can be likened to mean economic development. Economic growth is multidimensional and visible to restrictions like undue upsurge in population, derisory resources, insufficient infrastructure, incompetent usage of resources, excessive governmental involvement, organized and cultural patterns that make the upsurge problematic, etc. Economic growth is attained by a well-organized application of accessible funds and by growing the volume of productivity of a country. It enables the redeployment of incomes between the population and the social order. The collective impact, the small discrepancy of the surge rates, become enormous for ages of one decade or additional.

The argument on the connotation of economic development in Information Communication Technology is concentrated on three major issues, viz.: reconstruction, dependency, and human development (Sein & Harindranath, 2004). The fundamental postulation in reconstruction is that development is linked to the insertion in a market economy, and the basic worth is that this enclosure offers people more than mere survival e.g to have plenty to eat and dwell in a shantytown. Dependency postulates that economic growth in advanced nations results in less development of poorer nations, typically nations who are economically and technologically attached to their industrial colonial masters. Human development addresses building competencies and grasping distinctly probable with people at the epicenter of the development progression economically, ecologically, collectively, and even politically.

Similarly, two schools of thought correlate to the relationship between social media and economic growth. The first school of thought presumes that the cancellation of obstacles to entry to enable users of social media to circulate and publicize information without any restrictions with the backing of appropriate and well-organized internet and broadband source will be inimical to the economy. (Czernich, Falck, Kretschmer, & Woesmann, 2011). In other words, avenues should be created for all and sundry to have access to social media platforms, because it is believed that social media could influence economic growth. After all, the diversity of media such as wikis, blogs, pictures, videos, etc. to great extent influence the capability of social media concerning the distribution of information and knowledge while warranting a multi-channel transmission and systematization of knowledge is important (Rayna & Striukova, 2010). Therefore, there exists a positive relationship between social media and economic growth of any nation. The second proponent advocates that there is an opposing effect of social media on economic growth in the sense that colossal substances are available on social media platforms, this may increase the quantum of money expended in searching for information by way of data usage. Again, there is the negative effect of social media activities been swap for recreational activities instead of using for the productive activity that will impact the economy. (Dell'Anno, Rayna and Solomon 2016; Rayna & Striukova, 2010).

2.2 Theoretical literature

This article is rooted in the Social Exchange Theory, hence social media users rely on content made available by the platform. Therefore, a thoughtful reasons why users of social media platforms get involved appears essential. Social exchange theory was brought to bear by sociology studies discovering exchange between persons or minor groups (Emerson 1976). The theory principally uses cost-benefit configuration and assessment of substitutes to examine how people interconnect with one another, how they enter relationships and ties, and how societies are fashioned via communication exchanges (Homans 1958). For a person involved in an exchange, what he offers may be viewed as a cost to him, similarly what gets maybe a reward, and his behavior

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is influenced by the difference of the two-preceding statement. Hence, the motive for social exchange has been posited as a) an estimated reward in repute and effect on others; b) projected mutuality on the part of others; c) altruism; and d) direct reward.

2.3 Empirical literature
Prince (2020) researched on influence of social media on economic growth: empirical evidence of Facebook, Youtube, Twitter, and Pinterest. The research focused on the effect of social media on economic growth from a global perspective. 198 countries formed the sample for the study which was carried out between 2009 and 2017. The research employed panel data. The paper remarked that social media influence the economy of a country positively and negatively. The research realized that Facebook and Pinterest negatively influence economic growth. The positive influence ratify the first hypothesis that the cancellation of barriers to entry to permit users of social media to circulate info devoid of any restrictions with the backing efficient internet and broadband supply will influence economic growth because the array of media available to a great extent boost the potential of social media concerning broadcasting of info and knowledge.

Timothy, Chinelo, and Ngozi (2015) observed in their study titled “The economic potentials of social media and the Nigerian developing society: An appraisal” that while economic activities are progressively be influenced by technology (social media technology inclusive), this technological advanced should be restrained by the veracities of the social framework, just as the partakers in the technology will immensely gain from this effect only as resolved by their purposes (satisfactions) for engaging the technology. It is suggested, among others, that coaching of the economic capacities of the ICTs comprising the social media be unified in the education prospectus in Nigeria as a way of formulating and marshaling young people for utilizing social media economic possibilities.

Dieu, Paul, and Fourier (2019) researched how social media affect economic growth using 29 African countries between 2010 and 2017. The researchers conclude that social media has an undesirable influence on economic growth. Nevertheless, this impression of social media on economic growth is incidental, with labor efficiency being a conduit for communicating the impact of social media on economic growth. Afolabi (2015) analyzing the relevance of Social media marketing through the relationship between customer management conclude that the application of social media is a suitable marketing approach to encourage less advanced nations due to its participative, collaborative, open, and understandable nature.

Roberto, Thierry, and Offiong (2015) studied the impact of social media on economic growth using data collated from affiliations to social networks, the researchers observed that social media has a negative and substantial influence on economic growth. The above assertion supports the hypothesis raised by the researcher that social media surges the exploration expenses for data and rises the swap influence from labour to relaxation thereby bringing a negative effect on economic growth.

3. Methodological Aspects
The econometric model was adopted in determining the connectivity between social medial marketing and economic development in Sub-Saharan Africa.

3.1 Econometric model specification
The study adopted a panel data framework. This enables us to take account of and isolate the countries’ specific effects as well as the time-unchanging characteristics with particular reference to development level. In addition to the above, it was observed by Cihak, Demirguc-Kunt, Feyen, and Levine (2012) that combining cross-sectional and time-series data for different countries is recommended to avoid wrong over-generalizations. In the general form, the panel data framework is given as:

\[ y_{it} = a_{it} + \beta_i X_{it} + \mu_{it} \]  \hspace{1cm} (1)

\[ \mu_{it} = \mu_i + \nu_i + \epsilon_{i,t} \]  \hspace{1cm} (2)
where \( y_{it} \) is the response variable, \( a_{it} \), \( \beta_i \) and \( X_{it} \) are k-vectors of regressors that are not constant and parameters for \( i = 1, 2, \ldots, n \) cross-sectional constituents (countries); \( t = 1, 2 \ldots T \) is time series part; \( \mu_{it} \) is the accustomed disturbance, with \( \mu_i \), the country’s, unobservable weight, \( \nu_t \) is a time specific factor and \( e_{it} \) an idiosyncratic disturbance.

We employed the endogenous growth model following the studies of Dell’Anno et al. (2016), Fokam, Ningaye & Koyeu (2019), and Vitenu-Sackey (2020). This is justified on the ground that growth is a pre-requisite for development and the model acknowledges the role of technological advancement which gave birth to social medial platforms. To get our goal of this study of which is the determination of the impact of social media in marketing on the economic development at large where economic development is measured using real household final consumption expenditure per capita (RHCEpc) we have:

\[
\text{RHCEpc} = f (\text{SM}, \text{FBS}, \text{Int}, \text{GFCF}, \text{TER}, \text{LPR}) \] ..................................................(1)

Adopting a linear panel model, our model is defined as:

\[
\text{RHCEpc}_i = \beta_0 + \beta_1 \text{SM}_i + \beta_2 \text{FBS}_i + \beta_3 \text{Int}_i + \beta_4 \text{GFCF}_i + \beta_5 \text{TER}_i + \beta_6 \text{LPR}_i + \mu_i + \epsilon_i \] ........................................(2)

In Equation 2, economic development depends on expalatory variables. Here, the \( A_i \) in the endogenous growth model represents technology advancement (social media, fixed broadband subscription, and internet users), \( K \) represents investment (gross fixed capital formation) and \( L \) represents labour participation while \( \text{TER} \), is a control variable.

Where:

\[
\text{RHCEpc} = \text{Real household consumption expenditure per capita} \\
\text{SM} = \text{Social Media (Facebook (FB) which is the highest penetration rates of all social media platform)} \]

\[
\text{FBS} = \text{Fixed Broadband Subscribers (captured with Fixed broadband subscriptions (per 100 people).} \]

\[
\text{Int} = \text{Internet (individuals use of the internet as a \% of the population)} \]

\[
\text{GFCF} = \text{Gross fixed Capital Formation} \]

\[
\text{TER} = \text{School enrolment rate in tertiary education capturing human capital (Education)} \]

\[
\text{LPR} = \text{Labour (Labour force participation rate)} \]

\[
\beta_0-\beta_6 \text{ parameters} \]

### 3.2 Estimation Procedure

The above model was estimated using the single equation linear Generalized Method of Moment (GMM) which is ratified by Hansen (1982). In comparison with some other methods of estimations, the GMM is widely used because of its ability to correct for endogeneity, cross-sectional dependency, and heteroscedasticity problems associated with panel data framework (Sarafidis, Yamagata, and Robertson, 2008). However, the GMM estimator is consistent if the instruments are found valid. This is determined by the over-identifying restrictions test of Sargen/Hansen.

### 3.3 Data

The data was gotten from the World Development Indicators of the World Bank, (2020) as well as the Internet World Stats database for the various years used for the study for top 15 countries in SSA in terms of their magnitude of the usage of social media (Ethiopia, Kenya, Tanzania, Uganda, Angola, Botswana, Mozambique, South Africa, Ghana, Guinea, Nigeria, Sudan, Senegal, Zambia, and Zimbabwe) The countries were selected based on the availability of data as well as ensuring that all the parts of Sub-Saharan Africa (Central, Eastern, Southern and Western). The period 2014 -2019 was covered by the study using a two-time series panel as a result of data limitation for Facebook users. According to, Wooldridge, (2002), the use of two round panels is valid provided many cross-sectional as available.

#### 4. OUTCOME

### 4.1 Descriptive Statistics

The variables’s descriptive statistics are as shown in Table 1. Economic development (RHCEPc) possesses a mean of 1275, 1220 standard deviation, 0.0000 minimum value, and a maximum of 4572, experienced in South Africa in 2012. Social media (FB) had a min of 0.000 and a maximum of 27120000, in Nigeria in 2019.
Looking at the rate of internet usage, the descriptive statistics revealed that the maximum was 56.16740 and that was in South Africa in 2019. Examining the data, it is shown that internet usage and social media tends to go together with South Africa having relatively higher values and this corresponds to a high amount of gross fixed capital formation and even education captured by tertiary gross enrollment and eventually high level of development. On the other hand, Mozambique was found to have the lowest value of internet usage, social medial usage, gross tertiary enrollment, and eventually low economic development. The conclusion may be drawn that the higher availability of the internet and social media contributed to the higher rate of economic development. Nevertheless, empirical conclusions were drawn using the regression analysis. Diagnostics outcome of the variables revealed all to be normally distributed as shown from their Jarque-Bera values in table 4.1.

### Table 4.1 Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>RHCEPC</th>
<th>FB</th>
<th>FBS</th>
<th>INT</th>
<th>GFCF</th>
<th>LPR</th>
<th>TGENR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1275.052</td>
<td>3630971</td>
<td>0.648025</td>
<td>20.64401</td>
<td>5.45E+10</td>
<td>69.18160</td>
<td>10.70559</td>
</tr>
<tr>
<td>Median</td>
<td>997.3547</td>
<td>1819210</td>
<td>0.292022</td>
<td>16.05000</td>
<td>8.01E+09</td>
<td>72.10300</td>
<td>9.789275</td>
</tr>
<tr>
<td>Maximum</td>
<td>4571.683</td>
<td>27120000</td>
<td>2.300010</td>
<td>56.16740</td>
<td>8.55E+11</td>
<td>88.65600</td>
<td>25.08139</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.004104</td>
<td>2.680000</td>
<td>0.000000</td>
<td>45.68400</td>
<td>3.092500</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>1220.460</td>
<td>6028935.</td>
<td>0.766003</td>
<td>14.53312</td>
<td>1.62E+11</td>
<td>12.71737</td>
<td>6.169665</td>
</tr>
<tr>
<td>Skewness</td>
<td>1.708180</td>
<td>2.893078</td>
<td>1.053325</td>
<td>0.854000</td>
<td>4.342637</td>
<td>-0.470055</td>
<td>0.870091</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>5.018265</td>
<td>10.88826</td>
<td>2.580482</td>
<td>2.772750</td>
<td>21.47308</td>
<td>2.017633</td>
<td>2.920505</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>19.68113</td>
<td>119.6303</td>
<td>5.767462</td>
<td>3.711190</td>
<td>520.8606</td>
<td>2.311065</td>
<td>3.793192</td>
</tr>
<tr>
<td>Probability</td>
<td>0.000053</td>
<td>0.000000</td>
<td>0.055926</td>
<td>0.156360</td>
<td>0.000000</td>
<td>0.314890</td>
<td>0.150079</td>
</tr>
<tr>
<td>Sum</td>
<td>38251.55</td>
<td>1.09E+08</td>
<td>19.44074</td>
<td>619.3202</td>
<td>1.63E+12</td>
<td>2075.448</td>
<td>321.1677</td>
</tr>
<tr>
<td>Sum Sq. Dev.</td>
<td>43196170</td>
<td>1.05E+15</td>
<td>17.01605</td>
<td>6125.135</td>
<td>7.61E+23</td>
<td>4690.210</td>
<td>1103.878</td>
</tr>
<tr>
<td>Observations</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

### 4.2 Correlation

Degree of multi-collinearity that was investigated using correlation matrix. submitted in Table 4.2, that there is no perfect multicollinearity amidst the variables. The result shows that all dependent variables tend to be positively correlated to development except GFCF and LPR which is however contrary to expectation. The result of the positive correlation between SM (FB, FBS& INT) related variables showed that social media increase which can be effectively channeled into marketing in these countries will increase the rate of economic development of these countries.

### Table 4.2 Correlation matrix

<table>
<thead>
<tr>
<th></th>
<th>RHCEPC</th>
<th>FB</th>
<th>FBS</th>
<th>INT</th>
<th>GFCF</th>
<th>LPR</th>
<th>TGENR</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHCEPC</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FB</td>
<td>0.348980</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FBS</td>
<td>0.612423</td>
<td>0.080418</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INT</td>
<td>0.659089</td>
<td>0.602694</td>
<td>0.503047</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GFCF</td>
<td>-0.168593</td>
<td>0.161888</td>
<td>-0.154246</td>
<td>-0.022302</td>
<td>1.000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LPR</td>
<td>-0.365112</td>
<td>-0.328647</td>
<td>-0.070223</td>
<td>-0.489526</td>
<td>0.145667</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>TGENR</td>
<td>0.828210</td>
<td>0.242160</td>
<td>0.451421</td>
<td>0.656369</td>
<td>-0.054156</td>
<td>-0.511839</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

### 4.2 GMM Result.

The model passed the Hansen valid instrument test and we accepted the null hypothesis of valid instruments with a Hansen/J statistics of 5.287458 (0.051480). The fitness of the model was examined and outcome showed the model to be well fitted with an R² of 0.894920 pointing out that 89% of the changes in the explained variable is accorded to the independent variables. The DW statistics was 1.256956. This nevertheless does not jeopardize the model since GMM estimation method also corrects the problem of heteroscedasticity and serial correlation which may occur in the model.
On the connectivity and impact of independent variables on the dependent variable, result revealed that FB, FBS, INT, LPR, and TGENR were positively related to economic development which is in line with theoretical literature and our expectation. The result also showed that FB, FBS, and TGENR had a significant impact on development as expected while LPR had no significant impact on development. This could be attributed to the high unemployment rate in most of these African countries. For instance, data showed that unemployment in Nigeria was as high as 25% in 2019 (National Bureau of Statistics, 2020). On the other hand, GFCF showed negative connectivity with development which was against our expectation but had a significant impact on economic development. The capital formula has been identified as a booster of economic development as it provides the basis for effective investment with its several spillover effects.

The substantial impact of social media marketing captured by Facebook (FB) users points to the fact that internet marketing is a very useful tool especially to small and medium scale businesses who cannot afford the cost of expensive adverts to market their products. The substantial impact of FB was also strengthened by the significant impact of fixed broadband subscribers and all these indicating the role and use of the internet and technology for marketing on economic development. The significant impact of TGENR on economic development points to the relevance of enhancing tertiary education as this will give more opportunity for the technological development of the people in addition to the opportunity of effectively use the internet and social media platforms towards enhancing economic development.

Specifically, the results revealed that an increase in the number of people using social media (FB), per 100 users of fixed broadband subscribers and a 1% surge in the population of people using the internet results in 0.00577, 571, 0.12% increase respectively in economic development. Also, a 1% increase in LPR and 1% rise in the TGENR, lead 0.14 % and 1.74% increase in economic development while on the opposite, one unit increase in GFCF result in a 0.00065 fall in economic development. The outcome of this study is supported by some empirical findings. For instance, Afolabi (2015) found that social media usage is a perfect marketing approach particularly, the developing countries. This is expected to positively increase economic growth and development through an increase in trade from the open trade created by the use of social media. Small and Medium Scale Businesses are also built up unemployment reduced and economic development. However, the outcome of the study was found contrary to the outcome of Dieu, et al (2019) and Roberto, et al (2015) who found that the use of social media negatively impacts economic growth.

5.0 POLICY IMPLICATION AND CONCLUSION

5.1 Implication of the result and policy.

i) Result of the study revealed a positive and significant impact of social media marketing tool towards development. The implication of this is that the productive channeling of social media, especially in marketing is a booster of development that can go through the channel of reduction in unemployment and increase in global trade. Therefore, this study advocate for the upsurge in social media marketing which will increase economic development.
ii) The findings from the study also revealed that internet and fixed broadband subscription (FBS) had a positive relationship with economic development although only FBS had a significant impact on economic development. Thus, we recommend the increase in the availability of the internet to help the marketing of businesses through the various social media platform.

iii) The results also showed that gross tertiary enrollment had a positive and substantial impact on economic development. This is also recommended that the policy of enhancing the gross tertiary education be highly pursued for higher development.

5.2 Conclusion
There has been a remarkable global growth in the usage of the internet recently. One of the major areas internets have been found much useful is social media marketing which is becoming a persuasive marketing outlet for most businesses. Hence, recent concern has been on advancement in the availability of internet. The upshot of this study showed that social media platforms have a substantial positive impact on the development of developing countries. However, there is no significant impact on internet access. This is also supported by the fact that only 26% of the population in Sub-Saharan Africa have access to the internet (Mobile Internet Connectivity, 2020). The study thus, recommends increasing internet availability as well as encouragement in social media usage marketing.

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