



BIG DATA, FINANCIAL PERFORMANCE, AND BUDGET DECISIONS ON PRODUCTS: EVIDENCE FROM SOCIAL MEDIA

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Abstract

The increasing demands of technology and big data tools by the mass population is making it easy for the organization to shield from traditional marketing to technological, marketing, and this has escalated the necessity to identify social media tools affecting budget decisions and performance. We examined the effects of social media uses on budget decisions and performance of companies in Ghana. The sample comprises 390 respondents from sampled organizations using questionnaires to gather the data. However, companies audited annual financial statements were also used. The data collected was analyzed with a statistical package



for social science (SPSS). We find a positive relationship between social media pages and budget decisions. However, we find positive and significant effects of social media on a firm's financial performance. We also find Facebook strongly related to budget decisions and firms performance. Therefore, we established that companies using social media enhance their budget decisions, marketing capabilities on products and services which lead again to increase performance. Several policy recommendations were discussed.

Keywords: Budget decisions, Performance, Marketing, Social media, Facebook, Ghana

INTRODUCTION

Accounting is not just debit or credit but analyzing financial statements and given meaningful information to management to make good decisions. Accounting is about performance measurement and this can be done by the use of big data. Big data is the vast amount or volume of information that businesses gather through both electronic and traditional methods. The information gathers and accumulates to become so huge that normal traditional database software cannot process them. According to Matthew and Stanley (2013), Data are widely considered to be a driver of better decision making and improved profitability and this perception has some data to back it up. Based on their large-scale study, (McAfee & Brynjolfsson, 2012) stated that "the more companies characterized themselves as data-driven, the better they performed on objective measures of financial and operational results. Companies in the top third of their industry in the use of data-driven decision making were on average, 5% more productive and 6% more profitable than their competitors" (p. 64). To make good decisions on company products, managers and accountants need to embrace big data to help make a better decision about a product to maximize the company's profit and to achieve the goal of the company.

The increasing interest in technology and big data tools like Facebook, Ecommerce websites, Twitter, LinkedIn, and Google Plus by the mass population is making it possible and easy for companies to move away from the traditional way of marketing to the modern and technological way of marketing. Almost all companies in the world now are creating pages on these social media websites to help market their products and also get closer to customers to get their comments and reviews about their new and existing products on the market. Most of these social media websites also give the companies opportunities to sell their products to targeted customers who have registered accounts on that particular website whose interest suit that of a product being marketed.

Social media platform like Facebook has a market place buy and sell group which has over a hundred thousand members and also a market place page which has over two million likes. All these members are into marketing products and services. Other companies also have verified accounts on Twitter, Facebook, Instagram and LinkedIn which help boost the sales of the company. Why are all companies creating accounts on social media websites? These companies have realized the positive effects and advantages of social media to companies. A lot of Ghanaian small, medium and large companies are facing problems and difficulties with customers' satisfaction due to bad customer relationships and how to reach and acquire more customers to boost the performance of the companies. This is because there are more competition in the system and the smallest mistake a company does make them lose more customers to other competitors. Many of these companies still rely on the traditional ways of marketing which cost the companies lots of money but yield fewer results. Now with the help of big data tools such as social media, companies can be able to reach out to customers and know what they want and also reach out to new and potential customers through existing ones.

Big data has become the center of most topics by managers, accountants and marketing executives of companies in recent years. Businesses now are using Big Data to help improve operational practices by identifying problems that may exist and to help identify new marketing opportunities by analyzing the data to learn more about who their customers are so they can better target them. Also, many companies are starting to incorporate Big Data analytics into their hiring practices to make sure they are attracting and identifying the top talent.

With technological advancement in the world now, research shows that people spend more their daily lives on social media platforms such as Facebook, Twitter, Instagram, Weibo and many more. Facebook is the largest social media platform in the world. According to the 2018 Second quarter report of Facebook, Facebook has about 2.23 billion and 1.4 billion active users monthly and daily respectively which makes it the most powerful big data tool in the world (Facebook, 2018). Companies or firms should focus much attention on the use of social media as a big data tool for marketing and also knowing and communicating with customers to help boost sales and performance of the firms. This cannot be done unless account managers and budget officers also capture social media marketing in the yearly budgets of the companies. This study, however, focuses on using social media as a big data tool to help account managers make decisions about marketing in the yearly budgets, boost sales and firm performance.

Our paper contributes to the existing literature of social media networking and marketing literature of companies. First, we examined a heterogeneous sample on the effects of social media pages on the firm's financial growth. Most literature focused on only one Business Company when evaluating the effects of social media on the firm's performance. However,

social media marketing is growing significantly in Ghana, but how effective these effects account managers budget decisions to increase profitability is overlooked.

Second, although there have several studies conducted to examine the effects of social media on the firm's performance, very few examined more than four social media uses at one time. Lastly, with most prior studies focusing on social media, none has examined how these media pages affect account managers to make budget decisions. To the best our knowledge, this is the first paper examining the effects of social media pages on budget decisions by account managers in Ghana, West Africa. Therefore, research scholars believed that assessing social media pages on budget decisions would be significant relating to the increase in financial performance. We believed the results of this study will be paramount in accountants, budget officers, and marketers on the proof of the significance of social media use and how to affect performance.

The rest of the manuscript assumes the following structures. The next section reviews the literature and presents the research questions. Section 3 is the research methodology, section 4 addresses the findings, results, and discussions and section 5 concludes and provides several policies implications.

RELATED LITERATURE REVIEW

Social Networking

The concept of social networking is a revolution. The concept did not evolve from informatics but sociology. A social network is a cluster of individuals, groups or organizations connected for some reason. Such a network is, for example, a group of friends who share common interests. These all are social behavior, which every human person has (Ryan, 2011). Preceding the former three eras of social networking, Online social networking is the fourth era which is spreading throughout the internet connecting people and transferring relationship context to every website and application, so technology can finally care more about people and less about technique (Shih-Hsien, 2009). The previous three eras which are mainframes in the 1970s, personal computers in 1980s and World Wide Web in 1990s, were connected with workplaces far more than with our personal life. The online social network is different. It takes care of our personal life than in our work life. Online social networks go beyond technique and media. It is one of the most important socio-cultural phenomena of this decade. They broaden and create new kinds of ordinary interactions, which enable new kinds of relationships with low obligation (Shih-Hsien, 2009). The modern social media era began in early 1997. Facebook, Twitter, MySpace, GooglePlus +, LinkedIn, Orkut, Hi5, and CyWorld are the most popular social media websites who have tens or hundreds of million users.

The figure below shows the top ten most visited social media websites per month.

Figure 1: Top 15 most popular Social Networking sites



Source: (Kallas, 2018) Dreamgrow.com

Social Media as a Big Data Tool

Big Data can be defined as the huge amount or volume of information businesses are gather. This information comes from different sources such as social networks, sensor networks, and customer chat sessions and includes both electronic (online) and traditional (offline) forms of data. For the past 20 years, data has increased on a large scale in different areas. According to a report from International Data Corporation (IDC), in 2011, the overall created and copied data volume in the world was 1.8ZB ($\approx 10^{21}$ B), which increased by nearly nine times within five years (Gantz J, 2011). For information to be classified as big data, it depends on the three Vs. That is Volume; the magnitude of the data generated, Velocity; the relentless rapidity at which data are constantly generated and Variety; the diverse richness of the data is transforming marketing decision making. These three dimensions help define Big Data (IBM, 2012; Lycett, 2013; Oracle, 2012). According to IDC 2014, thirty – two billion objects are expected to be connected online by 2020. The internet of things (IoT) contribution to the ever-increasing of the volume of data is significant. This is because computerization is incorporated into cars, toys, appliances, turbines and dog collars (Erevelles, Fukawa, & Swayne, 2015).

To make better decisions by marketing personnel and accountants using big data, the velocity of relentless rapidity of data creation is very important (Lycett, 2013). Marketing executives with access to rich, insightful, current data can make better decisions based on

evidence at a given time rather than on intuition or laboratory-based consumer research (Erevelles et al., 2015). Big data are derived from different sources which provide diverse richness in data. Most data are collected from social media, e-commerce websites, blogs, and text messages. All these data are classified as unstructured data (Erevelles et al., 2015).

Social media platforms or websites constitute to the huge amount of big data. Social media websites such as Facebook, Twitter, Weibo, Instagram, LinkedIn, Google Plus + and many more are tools that are used to gather big data. Social media platforms gather unstructured data. Individuals share videos, images, text messages and other personal and behavioral information with friends and families (Erevelles et al., 2015). All these data are useful in making decisions by the marketing expert and accountants.

Facebook

In February 2014, Mark Zuckerberg, a 19-year-old Sophomore of Harvard University, launched Facebook. Facebook's mission is to give people the power to build community and bring the world closer together.

As of February 2011, Facebook had become the largest online photo host, being cited by Facebook application and online aggregator Pixable as expecting to have 100 billion photos by summer 2011. As of October 2011, Over 350 million users accessed Facebook through their mobile phones, accounting for 33% of all Facebook traffic. Facebook remains the most powerful and popular social media platform in the world. The following statistics according to Facebook Reports for Second Quarter 2018 attest to it.

- **Daily active users (DAUs)** – DAUs were 1.47 billion on average for June 2018, an increase of 11% year-over-year.
- **Monthly active users (MAUs)** – MAUs were 2.23 billion as of June 30, 2018, an increase of 11% year-over-year.
- **Mobile advertising revenue** – Mobile advertising revenue represented approximately 91% of advertising revenue for the second quarter of 2018, up from approximately 87% of advertising revenue in the second quarter of 2017.
- **Capital expenditures** – Capital expenditures for the second quarter of 2018 were \$3.46 billion.
- **Cash and cash equivalents and marketable securities** – Cash and cash equivalents and marketable securities were \$42.31 billion at the end of the second quarter of 2018.
- **Headcount** – Headcount was 30,275 as of June 30, 2018, an increase of 47% year-over-year (Facebook, 2018 investor.fb.com).

Treadaway (2010) stated that Facebook is a set of tools that can give marketers a chance to attract people excitingly. Facebook marketing is time-consuming and it is not something that happens overnight. Facebook does not do the work for the marketers, Facebook only gives you the platform and the right audiences you need for marketing (Treadaway, 2010).

Instagram

After Instagram was launched in 2010, Instagram became more popular. About one million people registered within two months, 10 million in a year, and 800 million as of September 2017. Facebook bought Instagram in April 2012 for US\$1 billion in cash and stock. As of October 2015, over 40 billion photos had been uploaded to the service.

In September 2017 the monthly active users of Instagram was 800 million. But as of June 2018, Instagram reached one (1) billion active users (Statista, 2018a) Statista.com.

LinkedIn

LinkedIn is one of the most used social networking sites for business professionals. As of December 2018, LinkedIn has over 590 million members worldwide (Gadot, 2018). It is one of the most popular social networks in terms of active users. LinkedIn is available in over 24 languages in more than 200 countries. The website focuses on business connections and industry contacts for employers and working professionals. It allows companies to represent themselves through online pages and for users to find job listings and to enhance their connectedness in their area of expertise (www.Statista.com). LinkedIn profiles are strictly professional and it focusses on the professional information. LinkedIn encourages users to construct an abbreviated CV and to establish connections (Skeels & Grudin, 2009).

YouTube

YouTube started as a video sharing app by three employees of PayPal, Jawed Karim, Steve Chen, and Chad Hurley. It was later launched in 2005 and has now become one of the most visited social media websites in internet history (X, 2016).

YouTube now has over one billion viewers every month (YouTube, 2011). People from all over the world view videos, rate videos, and comments on videos they like or dislike. The workload of YouTube is a moving target (Gill, F. Arlitt, Li, & Mahanti, 2007).

Twitter

Twitter is a social networking and microblogging service (Kwak, Lee, Park, & Moon, 2010) which was created in 2006. Twitter began as an idea by Twitter co-founder Jack Dorsey in 2006. On

March 21, 2006, at 9:50 pm, Jack Dorsey sent the first Twitter message which read, "just setting up my twtr." (MacArthur).

Twitter enables registered users to read and post short messages called tweets. The messages are limited to 280 characters. Users can also upload photos and short videos. As of the third quarter of 2018, Twitter had an average of 336 million monthly active users worldwide (Statista, 2018b). Twitter is one of the biggest social media platforms in the world.

Social Media and Firm Performance

Social media is not just a place to communicate or get in touch with friends and families but it has become an important tool or ingredient in today's marketing mix in general and promotion mix in particular which boast the financial performance of a firm (Abu Bashar Irshad Ahmad, 2012). According to Reto Felix et al (2016), massive empirical research has shown that social media stimulate sales, increase brand awareness, improve brand image, generate traffic to online platforms, reduce marketing cost and create user interactivity on platforms by stimulating users to post or share content (Felix, Rauschnabel, & Hinsch, 2017). To understand how a consumer view a firm, its actions, and its products, firms can monitor and analyze conversations on social media platforms (Schweidel & Moe, 2014). The firm managers, marketing executives can act on this information on social media to check the performances of the firms.

Firms can also use the seven functional building blocks of social media identified by (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011) to help grow and create value for the firm. These seven building blocks are identity, conversation, sharing, presence, relationships, reputation, and groups. Another approach that can help boost the performances and sales of a firm is viral marketing on social media. People are influenced by others. The standard they have in society whether weak or strong, bad or good can influence the decisions actions and opinions of others (Mochalova & Nanopoulos, 2014). This can bring about viral marketing which will boost the performance of the company if companies act on it.

Consumers spend more time every day on social media. The fundamental nature of social media as a platform for consumers to interact with and influence one another has a more direct impact on brand communities and it produces higher response rates and greater customer engagement than traditional marketing methodologies that focuses only on the firm-consumer relationship (Michael Trusov, Randolph E. Bucklin, & Pauwels, 2009). This is true in the sense that firms get to interact with consumers no matter where they are on social media. Facebook, for example, have groups and pages functionality that firms use to interact and communicate with customers and also serves as a platform for strengthening firm-customer relationships. Trasnor et al (2014) indicated that firm performances are not improved by just

investing in hardware and software to support CRM systems, but by deploying CRM technological resources in combination with other complementary resources. That is if firms integrate Social media marketing technologies and CRM systems to facilitate marketing capability development, improve customer relationships and increase customer satisfaction (Wang & Kim, 2017).

In conclusion, it can be seen that with the help of social media customers and business organizations can interact and communicate with each other and has empowered them to take advantage on an active role in co-creating their experiences (Prahalad & Ramaswamy, 2004). This goes a long way to affect the performance of the firms.

Budget Decision and Social Media

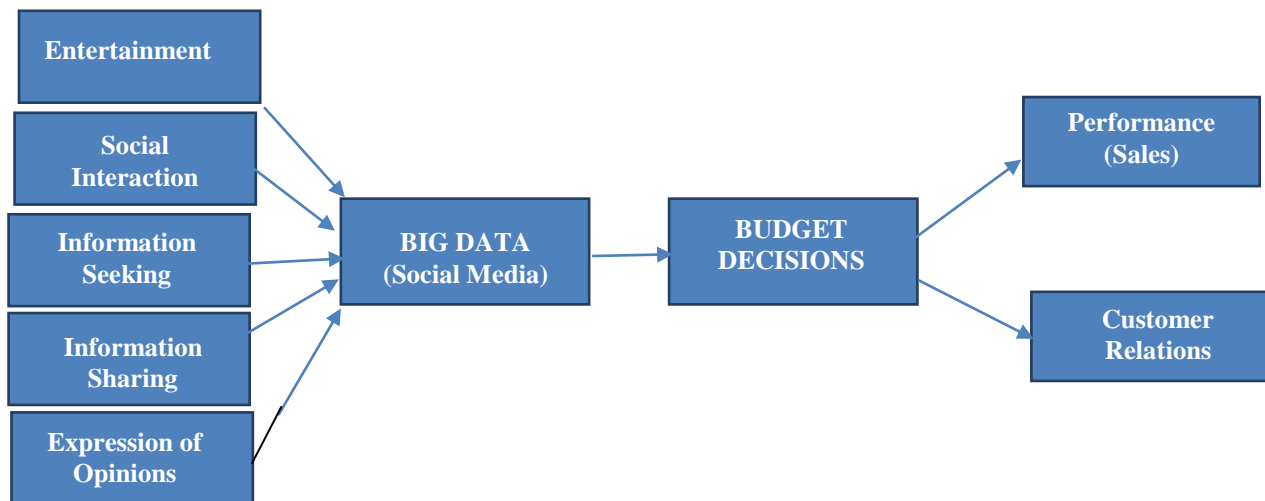
For efficient management of an organization, proper planning and control are vital. Good planning and control involve several tools and devices. The budget is one and most important tool. The budget refers to an inclusive plan that an organization uses to obtain and consume financial as well as non-financial resources during a period (Lu, 2011). According to Kenis as cited in (Lu, 2011), budget describes organizational actions in a quantifiable format. The budget allows managers to put forward the plans of the organizations and communicate these plans to members in the organization. Budgets are very essential to every organization, whether profit or non-profit organization. Budgets are future-oriented financial plans for allocating resources among alternative uses (Peter Van der Hock, 2015). The budget gives out a picture of what the organizations wish to achieve rather than what it brings about (Peter Van der Hock, 2015). Budgets are multi-purpose management tool supporting planning, control, coordination, communicating performance, evaluation, and motivation. Cheng-Tsung (2011) again described the budget as an inclusive plan that an organization uses to obtain and consume financial as well as non-financial resources during a period. A budget is a plan of all expenses and revenue. It is a concept of microeconomics and refers to the monetary organizational plan of an organization. Budgets, by definition, have to be prepared in advance and for this reason, they are often referred to in terms of their being part of a feed-forward system. Feedback is a term frequently heard both in accounting and ordinary use. Feedforward, on the other hand, tends to be less frequently heard, yet this word incorporates the most important aspect of budgeting: looking at situations in advance, thinking about the impact and implications of things in advance, and attempting to take control of situations in advance (Belkaoui, 1990). A budget is a management's plan or blueprint, in a structured form, which projects or anticipates the desired outcome of financial activity for a specific set of resources, for a fixed period, usually one year. Budgeting can be applied to virtually every situation. It does not matter whether one works

in the Public or Private Sector of the Economy. Managers at all levels often resent budgets and budget targets for a variety of reasons. In a business organization, a budget represents an estimate of future costs and revenues. Budgets may be divided into two basic classes: Capital Budgets and Operating Budgets (Davidson et al., 2007). Capital budgets are directed towards proposed expenditures for new projects and often require special financing. The operating budgets are directed towards achieving short-term operational goals of the organization, for instance, production or profit goals in a business firm. Operating budgets may be sub-divided into various departmental or functional budgets (Aicha, 1996). Budgeting is an integral part of the success of every organization. It should be able to help achieve organizational goals. Therefore there is the need to include Social media marketing in the operational budgets of the organization to help boost the performance and sale of the organization.

Conceptual Framework

The conceptualization of the study assumes that there is a relationship between big data (social media) and budget decisions which has a direct effect on the performance of the company through sales and also customer relationship among companies and customers.

Figure 2: Conceptual framework



To validate the findings from the study, a quantitative analysis will be carried through the use of statistical tools for testing the hypothesis such as regression and correlation. To this end, the following hypothesis would be made for testing

H₁: Social media has statistically significant positive effects on budget decisions of Account managers on product and services.

H₂: There is a relationship between Companies' social media pages and financial performance.

RESEARCH METHODOLOGY

Data and Method

We employed a descriptive form of research to examine big data, financial performance and account manager's budget decisions on products and services. Then we survey assisting the collection of information from targeted respondents. We used questionnaires which were prepared, pre-tested and revised comprising five-sections. However, secondary data were used from sampled company annual financial statements. It also adopted the company's financial performance indicator (ROE), and (ROA) over the period over a period from 2015 to 2019.

The population of the Study

The population consists of selected companies in Ghana using social media in marketing. The study employed a purposive sampling with a sample size of (90) professionals comprising of Marketing Executives, Accountants, and Budget officers, and (300) customers considered to consumers of the sample firms. These customers of the surveyed firms were both social media users and non-social media users. The list of the companies is displayed in the appendix.

Questionnaires

With the questionnaires of our study, we conducted a pilot and pretesting of the questionnaire by deploying it to numerous experts known to Authors, experts in the field of media marketing and budget preparation. They were asked to review, correct and recommendations for improvements and modifications of the original draft work of the questionnaire for its significance, content as well as the wordings. With this, we deployed the revised, modified and pre-tested questionnaire to the targeted respondents. The sections of the questionnaires were anchored using the Likert type of scale from five (5) Strongly Agree to one (1) strongly disagree. This helped to prevent biased responses

Model Specification

To examine the effects of companies social media pages on account managers budget decisions on products and services, we estimate regressions of social media pages used by companies. To test hypothesis 1, which predicts the positive effects of social media pages on budget decisions, Eq. (1) using multiple regressions is as follows,

$$BDSc = \beta_0 + \beta_1 FABK_1 + \beta_2 LNKIN_2 + \beta_3 INSGRAM_3 + \beta_4 TWIT_4 + \beta_5 YTUBE_5 + \varepsilon_t \quad \text{Eq.1}$$

Where BDSc is account managers Budget decisions, FABK is a company's Facebook page, LNKIN is a company's use of LinkedIn, INSGRAM is the use of Instagram, TWIT is the companies use of Twitter, YTUBE is Youtube. β_0 Indicates the constant parameter of the

regression model. $(\beta_1 - \beta_5)$, represent the coefficients of the independent variables on the dependent variable and ε_{it} is the stochastic or error term.

To examine the effects of the company's social media pages on financial performance, we estimate regressions social media pages used by companies. To test hypothesis 2, which predicts the relationship between a company's social media and financial performance. We estimate a series of equations using multiple regression model as follows;

$$ROA = \beta_0 + \beta_1 FABK_1 + \beta_2 LNKIN_2 + \beta_3 INSGRAM_3 + \beta_4 TWIT_4 + \beta_5 YTUBE_5 + \varepsilon_t. \text{ Eq.2}$$

$$ROE = \beta_0 + \beta_1 FABK_1 + \beta_2 LNKIN_2 + \beta_3 INSGRAM_3 + \beta_4 TWIT_4 + \beta_5 YTUBE_5 + \varepsilon_t. \text{ Eq.3}$$

Where ROA is Return on Assets, ROE is Return on Equity, FABK is a company's Facebook page, LNKIN is a company's use of LinkedIn, INSGRAM is the use of Instagram, TWIT is the company's use of Twitter, and YTUBE is Youtube. β_0 indicates the constant parameter of the regression model. $(\beta_1 - \beta_5)$, represent the coefficients of the independent variables on the dependent variable and ε_{it} is the stochastic or error term.

Dependent Variables

To test hypothesis 1, we measure budget decisions as respondent's rate its effects based on companies social media pages use. Several scholars (Yang and Teng, 2015), have used this method as a measure of budget decisions. To test hypothesis 2, we follow prior studies such as Chen et al (2005), and Bhabra (2007) by measuring financial performance as return on asset and return equity. Return Assets is measured as computed as the, measured as the ratio of earnings before interest and taxes to total assets, and ROE is measured by dividing net income by shareholders equity.

$$ROA = \frac{PROFIT}{TOTAL ASSETS} \quad (4)$$

$$ROE = \frac{PROFIT}{TOTAL ASSETS} \quad (5)$$

Independent Variable

To examine the effects of social media pages on budget preparations and financial performance of companies in Ghana, we used social media pages utilized by companies which are in line with prior studies (Harris et al, 2012; Xie et al, 2016). They are, Facebook, LinkedIn, Instagram, Twitter, and Youtube. This effect stems from social media usage on the firm's performance literature. They were measured as respondent perceptions were asked about the effects of companies social media pages on budget decisions and financial performance with aid of Likert scale ranges from (1) strongly disagree to strongly agree (5).

Table 1: The study variables and Measurement Scales

Variable	Models	Item	References
Social Media	Online Survey	Facebook Linkedin Twitter Youtube Instagram	Harris et al, 2012, Xie et a, 2016, (Tajvidi & Karami, 2017)
Budget	Budget Decisions	Account manager decision on budget preparation	Agostini, Filippini & Nosella, 2015; Merrilees et al., 2011)
Financial performance	Return on Assets Return on Equity	the ratio of earnings before interest and total assets, Increase in net income by shareholders equity	Watson, 2012: Yu Ramanathan & Nath, 2014

RESULTS AND FINDINGS

The descriptive analysis gives and discusses the data from the structured questionnaires. Ninety (90) professionals and three hundred (300) from customers were contacted for the study. With the usage of 390 respondents for both groups, seventy-two (72) professionals representing 80 percent were males, (n=18, 20 per cent0 were females. On the other hand, 164 customers representing 54 percent were males, and the remaining were females. (N=136, 45%). With regards to educational qualification, the results shows that that, 2 (2.2%), 23 (25.6%), 58 (64.4%), and 7 (7.8%) of professionals had higher national diploma, first degree, masters and PhD respectively, whiles 8 (2.7%), 233 (77.7%), 59 (19.7%) of customers had higher national diploma, first degree, and masters. Finally, the majority of respondents (professionals) hold Institute of Chartered Accountant Ghana (ICAG) certificate, (34, and 37.8), 21 representing 23 percent hold ACCA certificate. The table below shows the summary of demographic findings.

Table 2: Respondent Profile

Description	Professionals (90)		Customers (300)		
	%	Frequency	%	Frequency	
Gender	Male	80	72	54.7	164
	Female	20	18	45.3	136
Age Group	18-28	40	36	56	168
	29-39	55.6	50	29	87
	40-above	4.4	4	15	45

Educ.				2.7	8
Qualification	Higher National Diploma	2.2	2		
	First degree	25.6	23	77.7	233
	Master's degree	64.4	58	19.7	59
	PhD	7.8	7		
Professional Certificate					
	ACCA	23.3	21		
	CFA	5.5	5		
	CIMA	12.2	11		
	ICAG	37.8	34		
	CISA	5.5	5		
	None	10	9		

Table 2...

Respondents' response on social media usage

Table 3 summarizes responses to the questions regarding the usage of social media by both professionals of companies and customers. A majority of both professionals and customers respondents reported increased usage of social media. The difference in responses between respondents (professionals and customers) are statistically significant as a higher percentage of customers 99.3 percent compared to 90%, reported that, social media pages are been used and its usage will continue to increase. The responses further reported that few of both professionals and customers use social media for expression of opinions.

Table 3: Respondents' response on social media usage

	<i>Professionals</i>				<i>Customers</i>			
	Yes	No	Yes	No	Yes	No	Yes	No
Do you use Social media?	90 (100%)	0	298(99.3%)	2(0.7%)				
Reasons why you use Social media?	<i>Entertainment</i>	<i>Social Interaction</i>	<i>Information sharing</i>	<i>Expression of Opinion</i>	<i>Entertainment</i>	<i>Social Interaction</i>	<i>Information sharing</i>	<i>Expression of Opinion</i>
	67.8%	64.4%	85.6%	44.4%	71.3%	81%	58.3%	41.3%

	Daily	Weekly	Monthly	Yearly	Daily	Weekly	Monthly	Yearly
How often do you use Social media?	98.8%	1.1%	0	0	97.3%	2	0	0.7%

	Facebook	Instagram	Youtube	Linkedin	Twitter	Facebook	Instagram	Youtube	Linkedin	Twitter
Your favorite social media site?	76.7%	34.4%	44.4%	11.1%	71.1%	84%	49.7%	23.7%	20.7%	14.7%

Table 3...

Nonetheless, in considering how often respondents do use social media was also statistically significant between two groups of respondents, a higher percentage of professionals of 98% compared to 97% reported that they often use social media daily. Overall, there is increased usage of social media in Ghana. The findings are consistent with Mackinnon et al, (2002). However, both professionals and customers reported that, when asked their favorite social media site, surprisingly, both groups tipped Facebook as their favorite social media site. This result shows that the usage of social media has become one of the dominant tools for marketing for all firms. However, customers are more expectant than professionals regarding usage, and reasons for social media pages.

Descriptive Statistics

A regression model was used to test the direct and indirect relationships between variable. First, we dealt with assessing the validity and reliability of the scale. For evaluating, the reliability Cronbach Alpha was used and all variables were above the threshold level (0.70) which is the accepted rate for study (Nunnally, 1978). The table below gives a summary of the reliability test of variables.

Table 4 Reliability Test of Variables

Construct	Abbreviation	Factor Name	Composite Reliability
Social Media	FABK	Facebook	0.725
	LNKIN	Linkedin	0.825
	INSGRAM	Instagram	0.712

	TWIT	Twitter	0.817
	YTUBE	Youtube	0.723
Budget	BDS _c	Budget Decisions	0.75
Financial	ROA	Return on Assets	0.72
	ROE	Return on Equity	0.73

Table 4...

Empirical Results

We present the empirical results regarding the effects of social media pages on budget decisions of account managers on products and services. From the correlation coefficient table, the correlation of the study variables was tested. In the table (5) illustrated below, it is evident that account managers obtained an average of (4.6) with a minimum of (3.42) and a maximum of (5.56). The positive sign of both maximum and minimum values shows the higher influence of social media pages on budget decisions. However, companies obtained an average of (3.27) of Return on Assets and an average of (3.62). The companies ROA emanates from a range of (1.34) that stems from a minimum of (2.75) and a maximum of (4.35) respectively. On average, companies Facebook page influence the account manager's budget decisions of 41%. The mean value of LinkedIn effects on budget decisions was (3.6) with a minimum of (2.81) and a maximum of (4.6). Nonetheless, the average value for the account manager's influence on budget decisions by Instagram is 51% having a minimum of (3.6) and a maximum of (3.69). Moreover, a percentage of 31% of companies twitter pages influences account managers budget decisions having a minimum and maximum of (2.52), and (3.69) respectively. For Youtube page, it influences account managers budget decisions with a lower value of 26% with a minimum value of (1.70) and a minimum value of (3.97).

Table 5: Descriptive summary

Variable	Mean	Std. Dev.	Min	Max
BDS _c	4.688	0.6596	3.412	5.561
ROA	3.2725	0.5247	2.755	4.354
ROE	3.623	0.7669	2.541	4.551
FABK	4.1703	0.5737	3.221	4.731
LINKIN	3.6153	0.5302	2.813	4.611
INSGRAM	5.1132	0.8783	3.671	3.691
TWIT	3.1945	0.4323	2.527	3.691
YTUBE	2.6845	0.7605	1.709	3.979

Table 6: Correlation matrix

	BDSc	FABK	LNKIN	INST	TWIT	YTUBE
BDSc	1					
FABK	0.5509	1				
LNKIN	0.0864	0.4070	1			
INSTG	0.27252	0.2065	0.1538	1		
TWIT	0.3193	0.4691	0.0994	0.4048	1	
YTUBE	0.0605	0.1553	0.1921	0.4038	0.2886	1

	ROA	FABK	LNKIN	INSGRAM	TWIT	YTUBE
ROA	1.0000					
FABK	0.4874	1.0000				
LNKIN	0.1814	0.4070	1.0000			
INSGRAM	0.3700	0.3065	0.1538	1.0000		
TWIT	0.2303	0.4691	0.0994	0.4048	1.0000	
YTUBE	0.3267	0.1553	0.1921	0.4038	0.2886	1.0000

	ROE	FABK	LNKIN	INSGRAM	TWIT	YTUBE
ROE	1.0000					
FABK	0.1065	1.0000				
LNKIN	0.3656	0.4070	1.0000			
INSGRAM	0.4145	0.3065	0.1538	1.0000		
TWIT	0.0262	0.4691	0.0994	-0.4048	1.0000	
YTUBE	-0.2687	0.1553	0.1921	-0.4038	0.2886	1.0000

The findings show that there is a positive relationship between budget decisions and companies social media pages. From the correlation coefficient table, looking at the correlation coefficients between budget decisions and companies social media pages variables, the results disclose that, the signs are generally consistent with our hypothesis but the magnitude is moderate. Additionally, Facebook is positively and highly correlated which confirms that the company's usage of Facebook is various extents of budget decisions by account managers. Empirically, the findings show that all the discussed social media pages impact budget decisions implying that, it influences account managers on the preparation budget. From table, the results show a positive relationship between ROA and companies social media. The effects consist of our hypothesis and the magnitude is higher. Moreover, the company's social media pages affect firms' performance positively as measured by ROE. There is a negative relationship between ROE and Youtube meaning that companies YouTube does not affect companies ROE but with small magnitude.

Table 7: Results of Regression

Multiple R	R Square	Adjusted R-squared	Std. Error of Estimate	Prob> F
0.558	0.795	0.2825	1.55	0.4365

In testing the relationship between budget decisions and company's social media pages, statistically from the table 7, the explanatory variables contributes a good fit at a significance F value (0.436), since the (F value is less than 0.5). The results further revealed that the processed data that is the population parameters obtained a significant level value of (0.003) since the $prob>F$ is less than 0.5. This implies that the data is perfect for creating a judgment on the population parameters. Thus, the model is statistically significant. Nonetheless, the explanatory variables show 79 percent of variations in budget decisions. This further shows that social media pages discussed in the study positively affect budget decisions, while other marketing social media pages not considered in the study contributes the remaining 21% affecting account managers budget decisions.

Table 8: Regression Model

BDS _c	Coef.	Std. Err.	t Statistics	Prob. Sig
FABK	0.401391	0.030210	1.328669	0.0000*
LNKIN	0.642321	0.035251	18.22135	0.0000*
INSGRAM	0.719778	0.057594	12.49744	0.0000*
TWIT	0.017459	-0.010688	1.63351	0.1013
YTUBE	0.0473	0.41963	0.11271	0.0921**
_cons	3.3827	4.9773	0.68048	0.0567**

*, ** indicates 1%, and 5% significance respectively

From table 8, the findings suggest that Facebook (FABK), LinkedIn (LNKIN), Instagram (INSGRAM) are positively and significantly related to budget decisions. The company's Twitter (TWIT), and Youtube (YTUBE) are positively related to budget decisions. Interestingly, the effect is insignificant.

The findings provide supports for hypothesis (1) that predicts a positive relationship between budget decisions and companies social media pages. Moreover, based on the findings, almost all the social media pages influences account managers on their budget decisions and the tendency of companies experiencing financial growth is exclusive. The

findings are consistent with prior empirical research conducted on social media usage on budget preparations. (Chang et al, 2018). The empirical findings facilitate budget decisions of account managers in companies from Ghana, not only by justifying the effectiveness as well as the budget allocation of social media marketing.

Relationship between Financial Performance and Social Media Pages

From the regression model shown in the above table (10), social media statistically and significantly affects the company's financial performance as measured by return on assets. In effect, they are positively related to firms return on assets, but it is imperative to note that, the positive effect of social media pages on the company's financial performance is consistent with prior studies. Cervellon & Galipienzo (2015). The results of analyzing show that the hypothesis is supported and there is a positive variable between variables. The results in the regression show that in general social media uses by companies positively affects the firm performance as measured by ROA. Therefore, the sampled company's use of social media increases its profitability and growth. In this regard, the effect of Facebook and Twitter pages (0.483, $P < 0.000$; 0.229; $P < 0.001$) on the firm performance (ROA) was stronger than the rest of the social media usage pages.

Table 9: Regression model

ROA	Coef.	Std. Err.	t-statistics	P Value
FABK	0.48353	0.26686	1.8123	0.0000*
LNKIN	0.37529	0.13119	2.8606	0.0301**
INSGRAM	0.01278	0.05061	0.2525	0.0102**
TWIT	0.22916	0.18472	1.2405	0.0001*
YTUBE	0.31822	0.26951	1.1807	0.0361**
_cons	1.41898	0.90281	1.5717	0.0132**

On the other hand, the findings further reveal the positive effects of social media pages on return on equity. The results suggest that Facebook, LinkedIn, Instagram, Twitter, and Youtube are also positively related to firms' financial performance (ROE). These findings provide support for Hypothesis 2 that predicts the relationship between social media uses and the degree of financial performance measured by ROE.

Table 10: Regression model 2

ROA	Coef.	Std. Err.	t-statistics	P Value
FABK	0.007948	0.004626	1.7181	0.0873*
LNKIN	0.01272	0.00637	1.9958	0.0472**
INSGRAM	0.31896	0.05662	5.6327	0.000*
TWIT	0.22916	0.18472	1.2405	0.0001*
YTUBE	0.31822	0.26951	1.1807	0.0361**
_cons	1.41898	0.90281	1.5717	0.0132**

DISCUSSIONS AND CONCLUSIONS

We examined the relationship between social media, financial performance and budget decisions of companies in Ghana. This research aims to contribute to companies from a developing country in Africa. Use of social media has become one of the most dominant tools for marketing and networking for account managers in budget decisions. The findings reveal that both professionals and customers reported increased usage of social media. They, however, tipped Facebook as their favorite social media site. Several interesting findings are highlighted from the results of the data analysis. It has been found that the use of social media has a positive effect on account managers budget decisions. Dealing with social media for bookkeeping and marketing activities has a positive and significant effect on overall budget decisions by account managers of sampled firms.

The other significant findings are supporting the relationship between a company's social media pages and financial performance. The findings show positive and significant effects of social media pages on the company's performance. The company's financial performance as measured by ROA and ROE respectively. The results are consistent with studies such as Cervellon & Galipienzo (2015) and Garrido-Moreno & Lockett (2016) which suggested positive effect of social media for improving companies enhanced performance and success. Moreover, in a study conducted Schniederjans, Cao, and Schniederjans (2013), the positive impact of using social media on the financial performance of the companies has been discussed. Besides, these findings can be compared to findings of Harris et al (2012); Tajvidi & Karami, (2017), who argued that companies especially SMEs are using a coupled social media and online networks for their business activities such as marketing and results of this study bear practical implications. In terms of practical contribution, this research gives insight for companies in Ghana, and the world at large, that employing chosen social media for their networking sales. Finally, our findings further reveal Facebook strongly affects account managers budget decisions and firm's financial performance.

MANAGERIAL RECOMMENDATIONS

The positively effects improves and enhances their business performance. However, we established that companies using social media enhance their budget decisions, marketing capabilities on products and services which lead again to increase performance. The theoretical contribution of our study is to contribute to social media networking and marketing literature of companies with social media pages. In the study, budget decisions and marketing capabilities have been conceptualized in the marketing context. Our study would recommend that, companies should mount by employing social media especially Facebook for their networking sales. A firms Facebook pages enhanced and positively moderates the relationship between company's budget decisions and company performance that is the positive relationship will be stronger when the level of Facebook is higher.

Our study can also aid account managers adjust future marketing, budget decisions and advertising strategies using social media. Our study provides an empirical evidence that investing in social media can fund company's substantial relationship management benefits such as budget preparation. Moreover, our study indicates that, companies are more active on social media pages and can enhance their value more and more.

On the other hand, company's social media website can encourage customers and even visitors to engage with the company by blatantly linking to the company's social media channels. Therefore, companies should, modify their website to complement the social media strategy, identify the actions, wants and demands of customers and prospects to initiate, implement company's conversations, and provide the content visitors want, and finally maintain a consistent communication Style.

LIMITATIONS AND FURTHER RESEARCH

Our study is confined to a single country and needs replication, and concentrating on other economies and other industries. The use of social media varies in another context, other countries, and other industries. Therefore, further studies could explore in emerging economies and other developing countries on the use of social media on marketing and performance.

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