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PREFACE

The University of Cape Coast has run business programmes since the 1975/76 academic year, when it introduced the immensely popular Bachelor of Commerce degree programme. In 2003, the Department of Business Studies, then part of the Faculty of Social Sciences, attained Faculty status as the School of Business.

Like other leading Business Schools in the world, it is befitting of the School of Business of the University of Cape Coast to have a scholarly journal of the highest standards, which focuses on business and enterprise development. *Journal of Business and Enterprise Development (JOBED)* aims to stimulate in-depth and rigorous empirical and theoretical research in the business and enterprise development.

This issue features articles touching on entrepreneurship and consumer purchasing behaviour, organisational psychology, health and safety practices in hospital facilities, cross-border e-commerce trade, governance in the banking sector, tax administration, tax incentive and SMEs' growth, HRM practices and innovative work behaviour, and organisational performance, and social media usage in institutional administrative processes. The broad spectrum of articles selected underscores the importance of addressing business issues in a multidisciplinary context. Each article has been subjected to scrutiny not only by the editorial board, but also by seasoned reviewers from within and outside the University of Cape Coast. A double-blind assessment procedure was adopted for the review.

The *Journal of Business and Enterprise Development (JOBED)* is currently published as an annual periodical, but it is hoped that very soon it will be released twice a year and, subsequently, quarterly.

It is our fervent hope that readers will benefit from its contents, and that quality contributions will be forthcoming to sustain it. We welcome all comments aimed at improving the journal.

May I take this opportunity to thank the various reviewers who took time off their busy schedules to review the papers submitted. May I also thank the members of the editorial board in recognition of the role they played, and the quality service rendered towards the production and release of this document.

I wish you enjoyable reading.

F. O. Boachie-Mensah
(Editor-in-Chief)

Factors Influencing Consumers' Purchase Intention of Counterfeit 'Kente' Products in the Kwabre East District

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Abstract

This study examined factors that influence consumers' purchase intentions of counterfeit *kente* products. Employing a quantitative approach and a systematic random sampling technique, self-administered questionnaires were used to collect data from 379 households within the Kwabre-East District. Pearson Correlation and Regression were the statistical tools used to test the postulated hypotheses. The findings indicated that informative susceptibility, as a social factor, has a positive significant effect on consumers' purchase intention. Social characteristics, as a composite variable, has a positive effect on purchase intention towards counterfeit *kente* products. Again, among the personality factors, price consciousness and value consciousness had a direct effect on purchase intention. Personal factors also had a positive effect on purchase intention towards counterfeit *kente* products. The results imply that manufacturers and marketers of original *kente* products should create awareness of the original and authentic *kente* products and their impact on the economy. Sellers should also initiate promotional programmes that would divert the attention of consumers from the counterfeit *kente* to the genuine *kente* cloth. With informative susceptibility having a significant influence on purchase intention, sellers of the original *kente* can also fall on opinion leaders who play important role as points of reference for consumers who may have little or no knowledge about the differences of the *kente* cloth. Thus, since opinion leaders serve as reference groups because they are deemed to have expert knowledge of the differences between original and counterfeit *kente* products, consumers perception are also expected to change in terms of developing positive attitude towards original products and negative attitudes towards counterfeit.

Keywords: Counterfeit, *kente*, purchase intention, value consciousness, personality factor

Introduction

Counterfeiting of original products has become a worldwide canker, especially in the situation that the economic globalization keeps improving (Sheng, Liang, Qiong & Jian, 2012). It has been posing a lot of industrial and social harm (Nguyen & Tran, 2013), but the social benefits of counterfeit motivate consumers to patronize them in spite of their harm (Triandewi and Tjiptono, 2013). Among the numerous reasons why people patronize counterfeits are value for money, opportunity to use much cheaper products without worrying about it being damaged, and hunt for social status attached to the brand (Dhingra & Ambika, 2014). According to Bian and Moutinho (2009), the exchange of counterfeit products has caused a financial loss of approximately \$300 billion. Moreover, literature shows that 5% of all traded goods are counterfeits (De Matos, Ituassu, & Rossi, 2007). Such an act damages brand equity, devalues the image of the original goods, reduce sales for genuine manufacturers, decrease tax revenues, surges unemployment, and deceives consumers (Quartey & Abor, 2011; Riquelme, Sayed Abbas, & Rios, 2012). Because counterfeit products are easy and less costly to produce, they have caused unfair competition in the market (Nguyen & Tran, 2013), which has made investment in research and development very risky. In spite of all the economic and social problems associated with counterfeits, manufacturers find the business lucrative, the reason being that the margins are high and demand is strong (Ang, Chen, Lim, & Tambyah, 2001).

In Ghana, the textile industry, which was very vibrant, has declined for some years now because it has suffered from the cheap textile importation from India and China (Amankwah-Amoah, 2015). The textile industry used to contribute enormously to the manufacturing sector. It employed more than 30,000 workers some years back, but currently the industry has less than 3,000 workers (Quartey & Abor, 2011). This phenomenon has led to high unemployment level in the Ghanaian textile industry (Ghartey & Boachie-Mensah, 2015). Among the Ghanaian textiles, the textile that is highly valued within the Ghanaian culture, and carries prestige, is the locally woven *kente* cloth, which was previously made for royalty and the wealthy (Badoe & Opoku-Asare, 2014). Of late, this locally woven *kente* cloth has become a victim of counterfeiting which is killing the then valuable image of the original *kente* cloth. However, it is very rare to get available statistics to quantify the harm caused, but the rate at which the imported and counterfeit *kente* has gained roots in the Ghanaian market is a clear indication that the local *kente* industry is doomed. On the market, there is counterfeit for almost all the original *kente* designs, which is devaluing the original *kente* cloth. According to Eisend & Schuchert-güler (2006), the sale of counterfeit products does an enormous financial and reputational loss to the original brand manufacturers, in this case, the *kente* weavers. In view of this problem, most of the weavers are no more in business, because they do not find weaving lucrative as it used to be (GNA, 2017). The conventional wisdom is that counterfeiting affects branded goods negatively (Simona, Giacomo, & Stefano, 2012).

Because counterfeit products are easy and less costly to produce, they have caused unfair competition in the market (Nguyen & Tran, 2013), which has made investment in research and development very risky. In spite of all the economic and social problems associated with counterfeits, manufacturers find the business lucrative. The reason being that the margins are high, and demand is strong (Ang et al., 2001). The price sensitivity nature of consumers makes them react to price differences (T. Han & Chung, 2014). One can, therefore, say that price is an obvious reason why consumers buy counterfeit (Wee, Tan, & Cheok, 1995). But there is the need to look beyond price as a motivating factor to purchase counterfeit. Besides, original product manufacturers cannot curb the issue of pricing. The reason being that it does not make economic sense to compare the price of original to counterfeit (Wee et al., 1995). Literature, however, proposes that price is not the only reason behind the purchase of counterfeits, because consumers who can afford the genuine product still buy the counterfeit (Ghartey & Boachie-Mensah, 2015; Hadiwijaya, 2015).

Inasmuch as there are many studies conducted by previous researchers, they have differed in product categories, location and respondents who are of different social and economic background (Park-Poaps & Kang, 2018). Further, Hussain, Kofinas and Win (2017) conducted a study on intention to purchase counterfeit luxury brands and found that well-known brands are liked and, hence, targets for counterfeiting. Morra et al. (2018) also examined the net effect of social media marketing (SMM), user-generated content (UGC), and firm-created content (FCC) on overall brand equity (OBE) and purchase intention towards genuine and counterfeit fashion luxury products, using undergraduate students in Italy. Results showed that OBE and purchase intention towards fashion counterfeit products were positively influenced by UGC. Also, there was significant impact of OBE and FCC on purchase intention towards genuine luxury brands. Because counterfeit products are easy and less costly to produce, they have caused unfair competition in the market (Nguyen & Tran, 2013), which has made investment in research and development very risky. Even though there are studies that looked at counterfeiting from both supply side and demand side, there is much attention on the supply side than the demand side of counterfeit products (Wee, Tan, & Cheok, 1995). Therefore, research addressing counterfeiting from the demand side would be necessary (Wang et al., 2005; Jalalian, Koshksaray, & Jafari, 2013). In fact, almost all the studies on counterfeit are outside the borders of Ghana (Jaiyeoba et al., 2015; Budiman, 2012; Hennings, Wiedmann, Klarmann, & Behrens, 2015; Hadiwijaya, 2015), with different social and economic environment.

Previous studies have revealed that lower prices of counterfeit motivate consumers to choose counterfeits over the original (Ang et al., 2001). It is not brand, quality, or function, but lower prices of pirated products that motivate consumer purchase (Eisend & Schuchert-güler, 2006; Lan, Liu, Fang, & Lin, 2012). Ang and Lim (2006) stated that some consumers are of the view that cheaper counterfeits serve the needs of those who cannot afford the original. Therefore, the purpose of selling counterfeit is to satisfy customers but not to deceive them, because they buy them knowingly (Hyejeong Kim & Karpova, 2010). Consumers see counterfeits as a means of meeting their needs at a very low price (Nia & Zaichkowsky, 2000). Researchers have also called for studies to consider a particular textile or any frequently counterfeited product; study rural areas; as well as consider consumers of different socio-economic statuses. It is against this backdrop that this study seeks to assess the factors that influence consumers' intention to purchase imported counterfeit *kente* products in Kwabre-East District.

In view of this, the paper addresses these gaps by formulating two research objectives in an attempt to close the inherent gap in literature. The first objective is to assess the social factors that influence consumers' purchase intention of counterfeit *kente* products, and the second objective is to examine the effect of personality factors on consumers' purchase intention of counterfeit *kente* product. It is expected that the results from the study would help to find ways to reduce the patronage of such imported *kente* products. Overall, the paper contributes to empirical research on social and personality factors that influence consumers' purchase intention of counterfeit products, particularly textiles, and further deepens our understanding of consumer decision-making with regards to counterfeit textiles.

Literature Review

Theory of Planned Behaviour

The theory of planned behaviour (TPB) posits that behaviour is determined by the intention to engage in such behaviour, which in turn, is determined by the attitude towards the behaviour, the subjective norm and the perceived behavioural control (Ajzen, 1991; Ajzen & Fishbein, 2005). As noted by Phau and Teah (2009), purchase behaviour is determined by the purchase intention, and the purchase intention is also determined by attitude. The TPB goes further to establish that some opportunities and resources must prevail before purchase behaviour can be performed. Among these opportunities and resources is the accessibility of the counterfeit product (Phau et al., 2009). Regardless of how favourable a consumer's purchase intention is, and how he/she wants to conform to the social pressure, if the counterfeit is unavailable, his/her purchase intention cannot be performed. Counterfeits are, therefore, existing because of brands and the value they promise. People usually perform their favourable purchase intention of buying counterfeits as a means of attaining the prestige of the branded product without paying for it (Cordell, Wongtada, & Kieschnick, 1996).

Literature has extensively utilized Fishbein and Ajzen's TPB to predict and fathom motivational influence on behaviour. It is widely known from literature that TPB predicts behavioural intention very well and useful for identifying where and how to target strategies for changing behaviour (Madden et al., 1992). Budiman (2012) used the TPB to analyze consumer attitude toward purchase intentions of counterfeiting bag products in Indonesia. Han, Sheu, and Li-Tzang (2011) applied the TPB in their study of green hotel choices whilst Zheng and Chi, (2014) used the TPB to identify and understand the factors influencing purchasing environmentally friendly apparel among US consumers. Ghartey and Boachie-Mensah (2015), in a similar way, used the TPB to examine the influence of social and personality factors on consumer attitude towards counterfeit textile products. Their study found that consumer attitude plays a major role in consumers purchase decisions. Jalalian et al. (2013) applied the TPB to provide insight on integrity and subjective norms as non-price determinants of intention to purchase counterfeit goods. This study, in a similar way, uses the TPB to investigate how social and personality factors influence consumers' attitude towards the purchase of counterfeit *kente* products.

Counterfeit Products

The act of counterfeiting is a serious canker affecting both less and well-developed countries worldwide (De Matos et al., 2007). According to the International Anticounterfeiting Coalition (as cited in Matos, Ituassu, & Rossi, 2005), approximately 5 percent of all products worldwide are counterfeits. Simona, Giacomo, and Stefano (2012) defined counterfeiting as the unauthorized manufacturing of articles that mimic certain characteristics of genuine goods and that may pass themselves off as legitimate companies' registered products. This definition is of the view that coming out with a product possessing some features of an already registered product by a legitimate company, and to sell that as if it is a registered product, is an act of counterfeiting.

Ang and Lim (2006) looked at counterfeits as reproduced copies that are identical to the legitimate articles, including packaging, trademarks, and even labelling. They emphasized that such products lure consumers into thinking that they are the original products. By inference from these definitions, counterfeits can be defined as unauthorized products that portray some features of a genuine product, making them identical to deceive the public

into thinking that they are genuine products. There are three kinds of consumer goods that are mostly counterfeited – those that are very expensive, those in high demand, and those that can be easily copied (Dhingra & Ambika, 2014).

Purchase Intention

According to Balakrishnan, Dahnil, and Yi (2012), purchase intention is referred to subjective judgment by consumers that is reflected after the buying of a product or service. It entails essential meanings, which include consumers' willingness to consider buying, buying intention in the future, and decision of repurchase (Hadiwijaya, 2015). According to the Theory of Planned Behaviour (TPB), purchase behaviour is determined by the purchase intention, while purchase intention is, in turn, determined by attitude (Phau & Teah, 2011). Wee et al. (1995) concluded that the more favourable consumer attitudes towards counterfeit are, the higher the chances that they will purchase counterfeit brands. Such consumers are more likely to recommend others to purchase counterfeit. When this happens, it becomes a measurement of purchase intention (Lourerio, 2014). Consumers' purchase intention is influenced by numerous factors. Literature is largely in support of two groups of such factors – social factors and personality factors (Phau & Teah, 2009; Hidayat & Diwassari, 2013). The social factors are in two folds – informational susceptibility and normative susceptibility. On the other hand, the personality factors comprise factors such as price consciousness, value consciousness, integrity, novelty seeking, personal gratification and status consumption (Teah & Phau, 2011; Gharthey & Boachie-Mensah, 2015; Hennigs, Wiedmann, Klarmann, & Behrens, 2015).

Social factors that influence purchase intention

The social factors include informational and normative susceptibility. The informational susceptibility is the purchase decision based on an expert's opinion (Wang, Zhang, Zang & Ouyang, 2005) or observing peoples' behaviour (Kim & Karpova, 2010). The opinions from experts could influence a consumer to have a favourable attitude towards imported counterfeit *kente* product, and, in turn, influence the intention to make purchase of such counterfeit *kente* product. This is what the theory of planned behaviour (TPB) says by positing that behaviour is determined by the intention to engage in such behaviour, which, in turn, is determined by the attitude towards the behaviour, the subjective norm (informative and normative susceptibility) and the perceived behavioural control (Ajzen, 1991; Ajzen & Fishbein, 1980).

The normative susceptibility, as a social factor that influences purchase intention, is related to the purchase decision based on the expectation of what would impress others (Hoppe, Vieira, & Barcellos, 2013). When consumers think that significant others of great caliber may not approve the buying of counterfeit, the consumers are likely to have negative attitude towards purchasing counterfeit. Therefore, they would not have a favourable attitude towards counterfeit *kente* product and end up with no intention to make purchase of such products.

Personality factors that influence purchase intention

The personality factors include price-consciousness, value-consciousness, integrity, need for personal gratification and novelty seeking (Ang & Lim, 2006; Gharthey, 2015). Price is an important variable considered when choosing counterfeit product (De Matos et al., 2007). There is a common belief that higher price connotes higher quality, but consumers who are emphatic about low price will choose counterfeit over genuine products. Price consciousness is explained as the extent to which a consumer focuses solely on paying low price. Such consumers are those who cannot afford the original product, yet they want to claim the status associated with it (Kim & Karpova, 2010). Value consciousness is explained as a consumers' concern for the price paid compared to the quality received (Jaiyeoba et al., 2015). That is, an apprehension for paying lesser prices, due to some quality constraint (Ang et al., 2001). Counterfeits are known to perform similar functions as the original but at lower price. Value conscious consumers will opt for counterfeit due to the distinct price advantage counterfeit has over genuine product (Bloch, Bush & Campbell, 1993).

Integrity represents the level of consumers' ethical standards and obedience to the law (Wang et al., 2005), and one of the basic values that affect the judgment of surrendering to unethical activities (Steenhaut & Van Kenhove, 2006). It is determined by individual's ethical standards and adherence to the law (Phau & Teah, 2009). A consumer who perceives integrity as crucial is less likely to buy counterfeit of an original good. Literature depicts that consumers who are more lawfully minded, have unfavourable attitude toward counterfeits and less willing to purchase them (Cordell et al. 1996; Phau et al., 2009). The more integrity is to a consumer, the more negative the consumer will perceive the purchase of imported counterfeit *kente* products.

Personal gratification is concerned with the need for a sense of accomplishment, social recognition, and to enjoy the finer things in life (Ang et al., 2001). Consumers who want to be socially recognized and enjoy finer things in life will buy original products. Novelty implies the curiosity of human to pursue variety and differences (Wang et al., 2005). Such consumers prefer products with low purchase risk. The low cost of counterfeit satisfies this desire

(Jaiyeoba et al., 2015; Wang et al., 2005). It is, therefore, expected that novelty seekers will find counterfeit products favourable.

Research Hypotheses

From the foregoing, it can be hypothesised that:

- H_{1a}: Information susceptibility is positively related to consumers' intention to purchase counterfeit *kente* products.
- H_{1b}: Normative susceptibility is negatively related to consumers' intention to purchase counterfeit *kente* products.
- H_{2a}: Price consciousness has a positive relationship with consumers' intention to purchase counterfeit *kente* products.
- H_{2b}: Value consciousness has a positive relationship on consumers' intention to purchase counterfeit *kente* products.
- H_{2c}: Integrity is negatively related to consumers' intention to purchase counterfeit *kente* products.
- H_{2d}: Personal gratification is negatively related to consumers' intention to purchase counterfeit *kente* products.
- H_{2e}: Novelty seeking has a positive relationship with consumers' intention to purchase counterfeit *kente* products.
- H_{3a}: Social characteristics have a positive effect on purchase intention towards counterfeit *kente* products.
- H_{3b}: Personal characteristics have a positive effect on purchase intention towards counterfeit *kente* products.

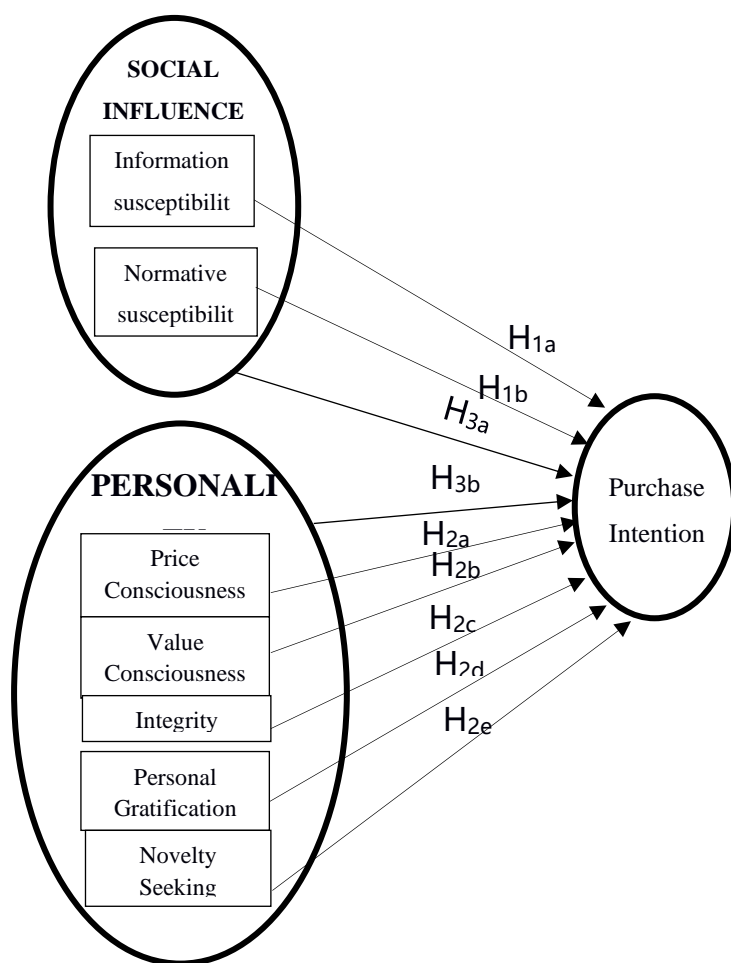


Figure 1: Conceptual Framework on the Relationship between Social and Personal Factors and Consumer Purchase Intentions

The conceptual framework depicts the relationship between the independent variables and the dependent. First, the study proposes that there is a relationship between the individual social factors (informative and normative susceptibility) and consumers purchase intention (H_{1a} and H_{1b}) Second, the figure also depicts a relationship between the individual personality factors (price consciousness, value consciousness, integrity, personal gratification, novelty seeking) and consumers' purchase intention (H_{2a}, H_{2b}, H_{2c}, H_{2d} and H_{2e}). Finally, the figure shows that the composite of social factors and personal factors do influence consumers' purchase intention (H_{3a} and H_{3b}). The next section describes the methods employed.

Methodology

This paper employed the quantitative approach for the research. The reason being that the study assesses the relationship and effect of social and personality factors on purchase intention, and test hypotheses as well. The probability sampling technique was used to ensure generalizability of findings (Saunders, Lewis & Thornhill, 2012). Again, the descriptive research was chosen because it consists of a cross-sectional design with which data are mostly collected using questionnaire (Bryman & Bell, 2007). Besides, survey method of research is quite common due to its merit of allowing collection of large amounts of data from a sizeable population in a highly economical way.

The Kwabre East District has a household population of 113,350 with total number of 27,122 households and 11,217 houses. The district has average household size of 4.2 persons per household (Ghana statistical service, 2012). The district was chosen because it is noted for the weaving of 'kente', which happens to be the main economic activity of the area. A sample size of 379 households were involved in the study. The entire household population of the district was divided into twenty relevant strata based on communities. Proportionate sampling was used to determine the proportion of households that were selected from each community. The proportion for each community was determined by dividing the number of households within each community by the total number of households of all the twenty communities. The proportion (quotient) was multiplied by the sample size of 379 to get the proportionate number of households allotted to each community. To reach the proportionate sample of a community, sampling frame was generated (list of households). From the household list, sampling fraction was determined for each community to know the regular interval at which a household would be selected. The first respondent was chosen at random, but the subsequent ones were chosen at a regular interval based on the sampling fraction. This method of sampling is the systematic random sampling. The respondents of this study comprised the consumers who make purchase decision in the household selected. In a household where both the husband and the wife or even the children make the purchase decision, one of them was permitted to respond to the questionnaire.

The District is bound to the north by Sekyere South District, to the south by Kumasi Metropolis, to the east by Ejisu Juaben District, and to the west by Afigya Kwabre District. Kwabre East has a youthful population; even though 42 percent of the population is rural. Majority of the population is economically active. Some of the major settlement in the District include Meduma, Ahwiaa, Mamponteng, Kenyase, Aboaso, Fawoade, Ntonso, Adanwomase etc. The District has *kente* weaving as its main occupation i.e., home of kente. The weaving industry at Adanwomase, Sakora-Wonoo, Abira, Old Asonomaso, Kasaam and Bamang, and the Adinkra industry at Ntonso enhance tourist visit to familiarize themselves with information about the industry. The Kwabre East District was chosen as a study area because of their in-depth knowledge about the traditional *kente* cloth and their distinctive socioeconomic background. Weaving of original *kente* is also their main occupation.

Survey Instrument

The survey instrument was developed from established scales from previous studies on counterfeit. It consisted of 5 items measuring purchase intention (De Mato et al., 2007; Nuyen & Tran (2013), 5 items measuring information susceptibility, and 7 items to measure normative susceptibility (Phau & Teah, 2009; Bearden, Netemeyer & Teel 1989). Again, it had 4 items to measure price consciousness (Lichtenstein, Netemeyer, & Burton, 1990; Huang, Lee & Ho 2004; De Matos, Ituassu & Rossi, 2007), 5 questions to measure value consciousness (Lichtenstein, Ridgway & Netemeyer, 1993; Nuyen and Tran, 2013), 4 items to measure Integrity (Ang et al., 2001; De Mato et al., 2007), 4 items to measure personal gratification (Ang et al., 2001; Nuyen & Tran, 2013) and 4 items to measure novelty seeking (Wee, Tan & Cheok, 1995).

Reliability Analysis

The reliability test was done, using SPSS Cronbach's alpha technique. For the various fields, values of Cronbach's alpha ranged from 0.706 to 0.877; this range is high and good. The entire questionnaire showed a Cronbach's alpha of 0.872, which indicates good reliability for the entire questionnaire, because it is above 0.7 and closer to 1. Table 1 shows the results of the reliability analysis.

Table 1: Cronbach's Alpha for Reliability Test

Field	Number of items	Cronbach's alpha
Intention	5	0.833
Informative Susceptibility	5	0.839
Normative Susceptibility	7	0.791

Price Consciousness	4	0.877
Value Consciousness	5	0.733
Integrity	4	0.803
Personal Gratification	4	0.869
Novelty Seeking	4	0.706
Total	38	0.872

Results and Discussion

Preliminary tests were done using the appropriate test tools to ensure that all the regression assumptions were not violated.

Table 2: Regression Analysis of Social Characteristics and Intention to Purchase counterfeit *kente* products

Variable	Coefficients	SE	Beta	t-ratio	P-value	95% CI	
						LB	UB
(Constant)	2.381	0.512		2.534	0.001	0.746	3.010
IS	0.195	0.061	0.196	3.224	0.001	0.076	0.314
NS	-0.045	0.082	-0.034	-0.551	0.582	-0.206	0.116

Dependent variable: Purchase intention, CI = Confidence Interval for B; LB = Lower Bound; UB = Upper Bound, SE= Standard error

Hypothesis 1a was formulated to determine the relationship between information susceptibility and purchase intention of consumers. The results from Table 2 shows a significant positive effect of information susceptibility on purchase intention (t-ratio = 3.224, $p = 0.001 < p = 0.05$) such that a unit change in information susceptibility would cause the purchase intention of the consumers towards imported counterfeit *kente* products to change by 0.195. This implies that low or little experience or information about *kente* products has effect on the decision to purchase imported counterfeit *kente* products. Wang et al. (2005) and Jaiyeoba et al. (2015) had similar finding and indicated that little knowledge concerning the product influence the intention to purchase the product. On the contrary Teah and Phau (2011) found that information susceptibility has no significant relationship with purchase intention in that, an expert’s opinion does not influence a consumer’s purchase intention. Hence, the hypothesis that “*Information susceptibility is positively related to consumers’ intention to purchase imported counterfeit kente products*” was accepted by the present study.

Hypothesis 1b was formulated to determine the relationship between normative susceptibility and purchase intention of consumers. The results also indicated a negative insignificant effect of normative susceptibility on purchase intention (t-ratio = -0.551, $p = 0.582 > p = 0.05$). This implies that one-unit increase in normative susceptibility will decrease purchase intention toward imported counterfeit *kente* products by 0.045, indicating that the desire to impress others does not influence the intention to purchase imported counterfeit *kente* products. In contrast, Teah and Phau (2011) found that normative susceptibility has significant relationship with purchase intention, denoting that their desire to impress others does influence a consumer’s purchase intention. Hence, the hypothesis that “*Normative susceptibility is negatively related to consumers’ intention to purchase imported counterfeit kente products*” was rejected by the present study.

Table 3: ANOVA and Regression Coefficients of Social Characteristics and Purchase Intention

R	R Square	Adjusted Square	R	Sum of Squares	df	Mean Square	F	P-value
0.180	0.032	0.027		480.432	2	8.042	6.227	0.002

The result from Table 3 depicts that social characteristics, as a composite variable, significantly affects the consumers' intentions to purchase imported counterfeit *kente* products, and it is key in determining variations in purchase intentions ($F = 6.22$, $R = 0.180$, $P = 0.002$). Hypothesis 3a was formulated to find out whether social characteristics positively affect purchase intention of consumers towards imported *kente* products. From the results in Table 3, hypothesis 3a, that “*Social characteristics have a positive effect on purchase intention towards imported counterfeit kente products,*” was accepted. The results are in line with Jaiyeoba et al.'s (2015), which reported that social factors have significant relationship with purchase intention towards counterfeit fashion products among Botswana college students. These findings also confirm the results of Hadiwijaya (2015), who concluded that social influence has significant impact on consumer's purchase intention.

Table 4: Regression Analysis of Personality Factors and Intention to Purchase Imported counterfeit *kente* products

Variable	Coefficients	SE	Beta	t-ratio	P-value	95% CI	
						LB	UB
(Constant)	2.268	0.662		3.426	0.001	0.966	3.57
PC	0.108	0.05	0.123	2.184	0.030	0.011	0.206
VC	0.154	0.075	0.11	2.058	0.040	0.007	0.302
INT	-0.175	0.092	-0.103	-1.911	0.057	-0.356	0.005
PG	-0.076	0.072	-0.064	-1.061	0.289	-0.218	0.065
NVS	0.061	0.055	0.061	1.116	0.265	-0.047	0.169

Dependent variable; Purchase intention; CI = Confidence Interval; LB = Lower Bound; UB = Upper Bound, SE= Standard error

Presented in Table 4 is the regression analysis of personality factors and intention to purchase counterfeit *kente* products. The relationship between price and value consciousness and purchase intention was significant with t-ratio of 2.184 and 2.058, respectively. This implies that a unit change in price and value consciousness would cause the purchase intention of the consumers toward imported counterfeit *kente* products to change by 0.108 and 0.154, respectively. These direct and significant influence of price and value consciousness on the intention of consumers to purchase counterfeit *kente* products is in line with Ghartey and Boachie-Mensah's (2015) findings, which also reported that price consciousness has a significant positive relationship with attitude towards textile products. De Matos et al.(2007) proposed that consumer's price-quality schema has a positive influence on attitude towards textile products. Contrary to the findings in this study, Huang, Lee, and Ho (2004) revealed that price consciousness is insignificant so far as attitude toward textile purchase is concerned. Furthermore, Turkyilmaz and Uslu (2014) postulated that value consciousness has a positive effect on consumers' intention to purchase fake products. Ang and Lim (2001) also reported a positive influence of value consciousness on attitude towards piracy. On the other hand, Teah and Phau's (2011) findings were contrary to the finding of this study where they found that there is no significant relationship between value consciousness and purchase intention. Hence, the hypotheses H2a and H2b were accepted by this study.

The results from Table 4 also revealed that integrity was negatively related to purchase intention such that a unit increase in integrity of the consumers would result in a decrease in the intention of the consumers to purchase imported counterfeit *kente* products by 0.175 (t-ratio = -1.911, $P = 0.057 > p = 0.05$). This implies that integrity does not influence the intention of consumers to purchase imported counterfeit *kente* products. This is supported by Turkyilmaz and Uslu (2014), who pointed out that as the level of integrity increases, the tendency to purchase counterfeits decreases. The reason may be that those who uphold integrity think that purchasing fake products is unethical and fails to reflect their identities. Phau et al.(2009) also stated that a consumer who perceives integrity as crucial is less likely to buy counterfeit of an original good. Also, in support is De Matos et al.'s (2007) studies on Consumer attitude towards counterfeits, which found that integrity is one of the factors that influences consumer attitude towards counterfeit; the more a person values integrity, the less favourable attitude he/she has towards counterfeits. However, Ghartey and Boachie-Mensah (2015) found out that a unit increase in integrity will improve consumer's attitude towards counterfeit textile product by 0.374 units. This tells us that, the higher integrity level,

the more favourable consumers' attitude towards counterfeits becomes, which is contrary to the findings of the present study. Hence, the hypothesis that “*Integrity is negatively related to consumers' intention to purchase imported counterfeit kente products*” was rejected.

Personal gratification showed a negative influence on the intention to purchase imported counterfeit *kente* products (t-ratio = -1.061, $P = 0.289 > p = 0.05$) such that a unit increase in personal gratification of consumers would result in a decrease in the intention of the consumers to purchase imported counterfeit *kente* products by 0.076 units (Table 4). The outcomes of this study are similar to that of Nguyen and Tran's (2013) and Jaiyeoba et al's. (2015), where they postulated that “Personal gratification has a negative influence on attitude towards non-deceptive counterfeit fashion products”. This means that consumers who yearn for accomplishment, social recognition and desire to enjoy finer things are less prone to purchase counterfeit. In support of the current study's findings is Turkylmaz and Uslu (2014). They pointed out that personal gratification has a negative effect on consumer's intention to purchase counterfeit. Phau and Teah (2009) also stated that consumers with high sense of personal gratification put much emphasis on their appearance. Hence, the hypothesis that “*Personal gratification is negatively related to consumers' intention to purchase imported counterfeit kente products*” was rejected.

Table 4 again revealed that novelty seeking influences the intention to purchase imported counterfeit *kente* products, as indicated by t-ratio of 1.116; however, the influence was not significant. These findings mean that novelty seeking consumers are prone to the purchase of counterfeit, as was established by Hennigs et al (2015). Findings of the current study is also similar to that of Ghartey and Boachie-Mensah's (2015), where they found that there was a positive relationship between novelty seeking and consumers' attitude towards counterfeit products. However, Wee et al. (1995) demonstrated that novelty seeking has no influence on consumer attitude towards fake textile products. Hence, the hypothesis that “*Novelty seeking has a positive relationship with consumers' intention to purchase imported counterfeit kente products*” was, therefore, rejected. This infers that consumers who are inquisitive to seek variety and differences are not prone to counterfeit as the hypothesis postulated, even though such consumers are inclined to products with less purchase risk. This is consistent with the findings of Phau and Teah (2013).

Table 5: ANOVA and Regression Coefficients of Personality Factors and Purchase Intention

R	R Square	Adjusted Square	R Sum of Squares	of Df	Mean Square	F	P-value
0.184	0.034	0.021	479.645	5	3.374	2.596	0.025

Furthermore, the F-statistic of 2.596 at a probability of less than one percent indicates that personality factors have significant ($P = 0.025$) influence in explaining the variations in respondents' intention to purchase counterfeit *kente* products. Hypothesis 3b was formulated to find out whether personal characteristics, as a composite variable, positively affect purchase intention of consumers towards imported *kente* products. From this result, the hypothesis 3b that “*Personal characteristics have a positive effect on purchase intention towards imported counterfeit kente products*” was accepted. The result obtained for this regression is presented in Table 5. An R^2 of 0.034 indicates that 3.4% of the variation in the purchase intention of the consumers results from personality factors.

Conclusion

The purpose of this study is to examine the factors that influence consumers' purchase intentions towards counterfeit *kente* products in the Kwabre-East District. Based on the analysis and findings of this study, the following conclusions are made: With respect to the social factors, it is only information susceptibility that showed a positive significant effect on consumers purchase intention. This implies that consumers in Kwabre-East District consider information susceptibility, and not normative susceptibility, as a determinant of purchase intention. They are of the view that their purchase intention could be determined by experts' opinions, and it is not so important that others would like the *kente* products they buy.

The findings showed that price consciousness and value consciousness have a direct effect on purchase intention. This indicates that consumers, who are price conscious, and are much concerned about the value they would get from the price they are paying, have positive purchase intention towards imported counterfeit *kente* products. All the other variables, that is, integrity, personal gratification and novelty seeking, affect purchase intention directly or indirectly. But per the findings, their effects on purchase intention were not significant. This means that consumers do not consider these variables very important so far as their purchase intention is concerned. Finally, the composite effect of social and personality factors on purchase intention was not significant, which led to the rejection of hypothesis three.

The results have implications for *kente* manufacturers and marketers. Manufacturers and marketers should bring to the notice of consumers the awareness of the original *kente* products, and the benefits such products bring to the

kente industry and the economy, at large. Manufacturers could offer comprehensive educational documentary on how these original *kente* products are made. This could help provide and encourage positive purchase intention that some consumers have towards the original products.

Manufacturers could embark on social events or promotional programmes (for example, *kente* festival) to educate and remind consumers of their rich culture, and the value the original *kente* connotes. By so doing, the purchase intention of those buying the counterfeit *kente* products could be shifted to the original *kente* product. Also, *kente* manufacturers should try all they can to reduce the prices of the original *kente* products. They can do this by introducing different grades according to different customer groups, which would also result in developing different pricing strategies for the different grades. This could encourage those who are interested in the *kente* but cannot afford to patronize the original *kente* cloth. Existing consumers as well as new ones could be motivated to patronize the original *kente* products when new and stylish designs are released more often.

Marketers should educate consumers on the value of the original *kente* through their marketing communications programmes. For example, advertisement on '*kente*', and how different it is from the imported ones, would help to edify consumers about the features of the original *kente* cloth. Policy makers should also put in place measures to check the importation of counterfeit textiles, in general, and the *kente* cloth, in particular. Consumers could be informed and educated by showing adverts that portray the negative economic impacts resulting from imported counterfeit *kente* products in this case. In addition, the *kente* manufacturers should put much emphasis on the prestige, value and status symbol that the original *kente* product conveys.

This paper focused on how social and personality factors influence the purchase of one product, counterfeit '*kente*,' in one district in Ghana. Future research could look at any other products that are frequently counterfeited. Since this study adopted the quantitative research approach, a future research can adopt the qualitative approach and employ a more interactive research instrument, like an interview or focus group discussion. This would help provide further insights into consumer attitudes towards such counterfeit products.

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Perceived Stress and Social Support Among Postgraduate Students: Implications for Well-Being and Engagement

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Abstract

Perceived stress and social support affect student well-being and engagement. Drawing on the Job Demand and Resource (JD-R) theory, this study examined perceived stress and social support on well-being (life satisfaction) and work engagement among postgraduate students in Ghana. Based on a cross-sectional survey and voluntary sampling technique, data were collected from 205 students, using a self-report questionnaire. The PLS-SEM ver3 was used to test the uniqueness of the constructs and to analyse the hypothesised path models. The findings suggest that perceived stress, social support and well-being play a crucial role in predicting student work engagement. Student well-being partially mediated the relationship between social support and engagement but not between perceived stress and engagement. In conclusion, this present study has shown that social support is critical for a student; hence, there is the need to improve support systems in the universities.

Keywords: Perceived stress, social support, well-being, life satisfaction, student engagement, Ghana

Introduction

The significance of Higher education (HE) for individual and societal socio-economic development cannot be overemphasised. HE endows people with cultural competence and ability to work effectively with others from a diverse background (Zhao, Kuh & Carini, 2005). HE provides them with much prospect and opportunities (Rickwood, Telford, O'Sullivan, Crisp, & Magyar, 2016). Nevertheless, the quest for and pursuing HE is associated with stress (Bilgel & Bayram, 2014; Kahu, & Nelson, 2018). In Ghana, for example, a sample from a university student population indicated that 39.2 per cent (scored above the cut-off point of 10 on the CES-D scale) were depressed. That is, 31.1 per cent of the population had mild to moderate depressive symptoms, while 8.1 per cent indicated severe depressive symptoms (Asante & Andoh-Arthur, 2015). More specifically, the stressors associated with pursuing postgraduate studies does not just affect students' academic performance, but also their mental and physical well-being (Zegeye, Mossie, Gebrie & Markos, 2018). Indeed, the Job Demand-Resource model postulates that high 'work demand' leads to stress, which affects well-being and performance; availability of resources does not only improve stress but leads to engagement.

In the stress literature, the two forms of stress are *eustress*- a positive way that people are likely to experience when an external stimulus causes high arousal. In contrast, *distress* form tends to have adverse effects on physical and psychological wellbeing (Gerrig & Zimbardo, 2010). From the distress perspectives, stress denotes "a situation in which a person feels tensed, restless, nervous or anxious, or is unable to sleep because his/her mind is troubled all the time" (Pyhältö, Toom, Stubb, & Lonka, 2012, p. 4). Hence, a person's "inability to cope with a perceived (real or imaginary) threat to one's mental, physical, emotional, and spiritual well-being" (Seaward cited in Oswalt & Riddock, 2007, p. 24). Studies have found a negative association between stress and students' academic performance (Mathew, Sudeep, Jain, & Jain, 2017) due to psychological challenges including depression, anxiety and stress (Kugbey, Osei-Boadi, & Atefoe, 2015).

Given the adverse effect of stress on individuals, there has been considerable trepidation about the mental health of university students globally (Stallman, 2010) due to the substantial vicissitudes and contests that prevail at the university level of education (Rickwood et al., 2016). Therefore, "providing students with access without support is not an opportunity" (Tinto & Engstrom, 2008, p. 6). Thus, lack of resources (e.g., social support) make students become demotivated and feel disconnected from their work (Reeve, Shumaker, Yearwood, Crowell, & Riley, 2013). Supporting students is critical as it influences their affiliation to the institutional culture and work ethics as well as enables them to graduate (Botha, 2017).

The literature on stress and social support and their consequential effect on postgraduate students' well-being and engagement indicate that not much scholarly work has been done, mainly in Ghana. However, the literature on individual well-being and engagement has been well-documented in many western countries, following the call by the positive psychology movement for the applied psychologist to focus on the optimal function of individuals (for a review, see Seligman & Csikszentmihalyi, 2000). The past decades have not only witnessed increasing attention for the concept of well-being and engagement at the workplace (Schaufeli & Taris, 2014), but also in the HE literature (Baron & Corbin, 2012; Trowler, 2010). For instance, previous studies show that engagement is positively associated with student achievement (e.g., Valle et al., 2016). The importance of the concept of engagement cannot be interrogated (Trowler & Trowler, 2010), since stakeholders in education regard student engagement as an essential requirement for student achievement (Baron & Corbin, 2012). Also, the concept aids in dealing with "problems of student boredom, low achievement, and high dropout rates" (Wang & Degol, 2014, p. 137). However, the mechanisms through which students become engaged in their studies have been sparsely examined and communicated, though student engagement is vital as engaged students are likely to complete their education (Kahu & Nelson, 2018). Besides, orienting students on how to manage stress is essential for enhancing life satisfaction (well-being); therefore, it is academically imperative to determine the psychological conditions that relate to life satisfaction of students (Abolghasemia & Varaniyab, 2010).

Literature Review

Several theoretical approaches and models or frameworks have been proposed to explain the causes and effect of stress on individual well-being and engagement (for a review, see Mark & Smith, 2008). The JD-R framework is one of these, which Mark and Smith (2008) claim builds on the criticisms of the initial approaches. Although the JD-R model is a popular framework applied in the work setting research, very little is known in terms of its application in the school context. Thus, the school context presents students with study demands that cause stress and resources, which can affect their well-being and engagement (Salmela-Aro & Upadyaya, 2014).

According to the Job Demand and Resource framework (JD-R; Bakker et al. 2007), every job setting includes demands and resources. The 'work demands' are those aspects of the 'job' that involves persistent physical and psychological efforts, which may cost the individual physically and psychologically. These refer to the adverse factors that sap energy; for example, workload and time pressure (Schaufeli, 2017). Whereas the resources are facets of the work- physical, psychological, social and organisational that abate the adverse effect of 'job' demands on the

individual to function effectively (Schaufeli, 2017). Further, ‘job’ resources play buffering role to ameliorate the adverse effects of the job demands and stress on the individuals at the workplace and serve as a source motivation that, in turn, affect the psychological state of individuals (Schaufeli & Taris, 2014). The framework is a heuristic model that signifies a dual process, which proposes that the high ‘job’ demands to lead to health erosion (e.g., psychological stress, burnout). At the same time, resource availability (e.g., support) enhances individual psychological state, thereby improving their well-being and task engagement.

Social support

Social support is significant in improving individual well-being and engagement. The notion of social support connotes “the function and quality of social relationships, such as perceived availability of help or support received” (Schwarze, Knoll & Rieckmann, 2004, p. 2). This implies that social support can be subjective—the belief that one can obtain support when required, or objective—actual support received. Whichever, social support serves as a resource for coping with stress for the achievement of university obligations (Dupont, Galanda, & Nils, 2015) as it influences the level of student psychological well-being (Kugbey et al., 2015). The significance of social support as an agent for promoting health and wellness has been recognised in the literature because of the buffering role against life stressors (Dollete, Steese, Phillips & Matthews, 2004). Often, family, peers or friends are first the individuals who alert and express concerns and proffer help to a person when they notice something is wrong (Streeter & Franklin, 1992). In this study, perceived social support refers to “one’s overall impressions on whether the social network is supportive enough or not” (Sorias 1988b). In other words, “the perceived social support is the value of a person’s self-estimation” (Sorias 1988a). Thus, social support is operationalised as having friends and other people, including lecturers/supervisors, peers and family, to go to in times of need or challenges to provide you with attention and positive self-image.

Student engagement

The concept of engagement is an essential phenomenon amongst institutions, including the HE sectors. However, there is a lack of consensus concerning the conceptualisation and definition of student engagement (for a review, see Ashwin & Mcvitty, 2015). Trowler’s (2010) analysis of the literature on student engagement indicated that many scholars (e.g., Fredricks, Blumenfeld, & Paris, 2004; Glanville & Wildhagen, 2007) conceptualised student engagement as a multifaceted construct that has three components—cognitive, emotional, and behavioural. The Australian Council of Educational Research (ACER) also describes student engagement as “students’ involvement with activities and conditions likely to generate high-quality learning” (ACER, 2008, p. vi). In this current study, however, student engagement refers to a positive, fulfilling postgraduate studies experience operationalised as students’ vigour, dedication and absorption (Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002). Vigour denotes high levels of energy, vitality, and persistence, whereas dedication refers to a sense of meaning, enthusiasm, inspiration, pride, and challenge. On the other hand, absorption relates to being fully focused and passionately immersed in one’s academic and research work and feeling excited about that work.

Several factors influence student engagement. For instance, Kuh;s (2013) conceptual model of student engagement shows that the antecedent of student engagement can be categorised as structural and psychosocial. The structural (distal) factors include university culture and curriculum; student background, peer relations and community influences, while the psychosocial (proximal) factors are teaching, motivation, personal skills, identity and self-efficacy. Although the conceptual framework does not capture all factors that may predict student engagement, student engagement is a situational phenomenon that develops from the interaction between individual attributes and contextual variables (Kuh, 2013). Thus, individual attributes, such as peer relations, and contextual factors, such as motivation from lecturers and supervisors’ interact to influence student work engagement.

Well-being

Well-being is inherently an exciting concept, but difficult to explicitly define (White, 2008) as there are several varied terms used to depict the idea in the psychological literature (Diener, Pressman, Hunter & Delgado-Chase, 2017). At best, the concept may be regarded as an abstraction used to represent the several well-evaluated facets of life (Travers & Richardson 1993). Thus, the idea involves how individuals experience and evaluate aspects of their lives as positive (Tov, 2018). Therefore, well-being does not just represent the lack of illness or pathology but includes subjective and objective dimensions, which can be measured at the individual or societal levels (McAllister, 2005). Well-being is significant for an individual’s growth and development and outcomes. For this individual-level study, such as subject well-being—how individuals evaluate or appraise their own lives (Diener et al., 2017)—is assessed, since it is a valid construct that can be reliably measured (Waldon, 2010).

Subjective well-being (SBW) is a ‘broad concept that reflects individuals’ emotional responses, domain satisfactions, and judgements of life satisfaction’ (Diener et al., 1999: p. 277). SWB concept refers to “a person’s cognitive and affective evaluations of his or her life” (Diener, Lucas, & Oishi, 2002, p. 63). Conceptually, SWB

comprises two distinctive components—an affective component, which relates to both the presence of positive affect and the absence of negative affect, and a cognitive component (for a review, see Diener, 1994, p. 106). The affective component is a hedonic evaluation driven by one's emotions and feeling. On the contrary, the cognitive component is an information-based judgement of one's life for which individuals judge the extent to which their present life compares to future 'ideal' experience. Research shows that positive SWB precedes varied positive personal, behavioural, psychological, and social outcomes (for a review, see Lyubomirsky et al., 2005).

In this study, SWB is measured as life satisfaction. Life satisfaction is one of the positive adjustment indicators, which can be affected by the stressful lives of college students. Accordingly, Heffner and Antaramian (2016) suggest that when predicting student success and school experiences, life satisfaction should be considered. Life satisfaction enables individuals to carry out long-term evaluations regardless of a particular time length (Eid & Diener, 2004). Based on the JD-R framework, the researcher avers that, like the work setting, the HE environment is also full of demands (e.g., assignments) and resources (e.g., support), which influence students well-being and engagement. Therefore, the influence of psychological stress and social support on postgraduate students' well-being and engagement may be adequately appreciated via the application of the JD-R model. As indicated by Sinclair, Christenson, Lehr, and Anderson (2003), "engagement is not an attribute of the student, but rather a state of being, which is highly influenced by contextual factors" (p. 31). Similarly, Veiga et al. (2012) claim that contextual factors are preferred issues to be explored to enhance engagement. In this research, the context includes the postgraduate students' perception of psychological stress and social support in the HE environment, which, from the JD-R framework perspectives, influences engagement and well-being. Therefore, this study draws on the JD-R framework to predict postgraduate students' engagement in Ghana.

Hence, this paper aimed at predicting postgraduate student work engagement by analysing mediation models. That is, determine whether 1). Perceived stress is negatively related to postgraduate student well-being and engagement. 2). Social support is positively associated with postgraduate student well-being and engagement 3). Well-being is positively associated with student engagement. 4). Well-being mediates the association between social support and student work engagement as well as perceived stress-students engagement models.

This current study is significant in two ways, thereby adding to existing literature. First, it examines the mechanism linking psychological stress and social support for postgraduate students' engagement. More importantly, building on the JD-R framework, the current study seeks to determine whether well-being serves as a mechanism for influencing graduate students' engagement. Student engagement is acknowledged as a 'good thing' by stakeholders (e.g., researchers and policymakers) in HE, because it is a resource for academic resilience that enables students to withstand and adapt to the stressors that stem from the demands and challenges of school work (Skinner & Pitzer, 2012). Secondly, the present study informs practitioners (e.g., student support staff) and faculty of the need to devise interventions to improve stress and promote the well-being to enhance engagement among postgraduate students. This implies the need for setting up effective support services for postgraduate students, since this study seeks to show that social support buffers the effect of perceived stress on student engagement.

Hypotheses development

Psychological stress on student subjective wellbeing and engagement

Theoretically, the JD-R models suggest that stress affects well-being and engagement. As a psychological state, stress occurs when demands exhaust or surpass an individual's adaptive capabilities (Lazarus, 1966). Thus, stress hinders learning ability by impeding attention and memory; functions crucial for achievement (Fisher, 1994). However, when the conditions or situations are right, individuals, including students' innately engagement. In other words, when the learning conditions are suitable, students can direct their attention and energy on mastering a task and endure in times of challenges and difficulties (Wang & Eccles, 2012a, 2012b). Nevertheless, the demands and challenging obligations on students (Offstein, Larson, McNeill, & Mwale, 2004) lead to university students experiencing stress in their daily life (Dusselier, Dunn, Wang, Shelley, & Whalen, 2005). For instance, postgraduate students experience a time of increased demands, expectations, and stress (Nelson, Dell'Oliver, Koch, & Buckler, 2001) that expose students to psychological well-being problems (Roslan, Ahmad, Nabilla and Ghiami, 2017). Extant literature suggests that perceived stress negatively affects students' well-being (e.g., Lee, Kim & Wachholtz, 2016; Sheu, Liu, & Yue, 2017; Yang, Xia, Han & Liang, 2018). More importantly, a recent meta-analysis study indicates that stress is negatively associated with quality of life (i.e., life satisfaction) among students as the stressors worsen conditions related to physical and mental health (Ribeiro et al., 2018). The negative impact of stress on well-being (i.e., life satisfaction) occurs when individuals perceive the situation as stressful and lack resources to deal with the precursors, such as workload and meeting deadlines (Roddenberry, 2007). In line with the JD-R theory, the research anticipated that the perception of stress would lead to strain among postgraduate students, hence, leading to low levels of well-being.

Besides, the goal and mission of postgraduate studies require students to be academically engaged. High-quality engagement ensures that students become academically competent and seek positive discourse (Skinner & Pitzer,

2012). Nonetheless, the engagement literature also indicates that stress adversely affects engagement. Past studies show that perceived stress negatively affects students' academic engagement (e.g., Durán, Extremera, Rey, Fernández-Berrocal, & Montalbán, 2006; Gan, Yang, Zhou, & Zhang, 2007; Pascoe, Hetrick & Parker, 2019; Manikandan, & Neethu, 2018; Raufelder et al., 2014). In parts, the negative association between stress and student engagement may stem from the pressure (e.g., much work, time limitations, tests) to succeed academically to graduate (Alginahi et al., 2009). Individuals who are confronted with high levels of strain are likely to engage in unhealthy behaviours (Hudd et al., 2000). These behaviours could include students not actively engaging in studies, which can lead to unsuccessful completion of the postgraduate programme. Accordingly, the JD-R theory suggests that high demands (stress) and a lack of resources lead to burnout, and for reduced 'work' engagement (Hakanen, Bakker & Schaufeli, 2006). Based on the above theoretical and empirical evidence, it is hypothesised that:

H1a: Perceived stress will be negatively associated with postgraduate student well-being

H1b: Perceived stress will be negatively related to postgraduate student engagement.

Perceived social support on student subjective wellbeing and engagement

Theoretically, the JD-R theory postulates that resource (e.g., social support) availability is critical for individual well-being and functioning. Research shows that one of the significant predictors of SWB is the quality of social support (Lincoln, 2014; Siedlecki, Salthouse, Oishi, & Jeswani, 2014). For instance, Siedlecki et al. (2014) found that life satisfaction was significantly predicted by perceived support. Similarly, another study observed social support (e.g., from friends) was significantly related to SBW (Brajša-Žganec, Lipovčan & Hanzec, 2018). The reason for the positive relationship could be that those with a satisfying relationship can quickly receive support when needed. Similarly, individuals who have fulfilling relationships are happy most of the time and feel satisfied with their lives than those with a less satisfying relationship (Siedlecki et al., 2014). Therefore, the significant relationship between the quality of the social relationship and SWB could be explained by social support (ibid).

Besides, resources (e.g., social support) are inherently significant, because they also play intrinsic and extrinsic motivational roles by fostering growth, learning and development, and for attaining goals (Bakker & Demerouti, 2008, p. 211). Indeed, enough resources lead to positive outcomes such as employee engagement (Law et al. 2011) and performance (Bakker & Demerouti 2007). The Conservation of Resources (COR) theory (Hobfoll, 2001) suggests that individuals will seek to obtain, retain, and protect valuable resources, including, for example, social and personal resources. Thus, the acquisition and amassing of resources are essential to initiate and maintain people's behaviour (Salanova, Schaufeli, Xanthopoulou & Bakker, 2010). Therefore, students are likely to remain actively engaged in school when they have positive learning experiences, such as supportive relationships from adults (e.g., supervisors/lecturers) and peers (Wang & Eccles, 2013). One of the central elements that contribute to the successful completion of postgraduate studies is the supervisory role. As a resource, supervisors can foster self-efficacy belief among graduate students, which will, in turn, influence their level of engagement (Llorens, Schaufeli, Bakker, & Salanova, 2007). In the workplace setting, studies have recognised that job resources, including social support, promote work engagement (Bakker & Demerouti, 2008; Hakanen et al., 2006; Schaufeli & Bakker, 2004; Schaufeli et al., 2009). Similarly, past studies indicate that social support influences student engagement (Bakker, Vergel, & Kuntze, 2015; Fall & Roberts, 2012; Klem & Connell, 2009; Xerri, Radford, & Shacklock, 2018; Zhao & Kuh, 2004). Support structures, thus, "help the individual mobilise psychological resources and master psychological, emotional burdens; skills, and cognitive guidance to improve student handling of his/her situation (Caplan, 1974). In other words, students become engaged because they are emotionally connected to others (e.g., lecturer/supervisor, peers and family) as that enable them to become cognitively alert (Khan, 1990). Social support is a social capital that allows students to handle life stressors and effectively engages in their academic activities as they can draw on their social network in times of stressful moments. On the contrary, lack of social support has the propensity to cause psychological and physical disorders (Link & Phelan, 1995). Therefore, drawing to the JD-R model, the researcher notes that high levels of resources, such as social support, do not only help prevent burnout, but foster engagement (Schaufeli, 2017). Based on the above theoretical and empirical evidence, it is hypothesised that:

H2a: Social support will be positively related to and predict student subjective well-being.

H2b: Social support will be positively associated with and predict student engagement

Student SWB and engagement

In recent times, there has been the need to identify those factors and conditions that influence "students' personal, prosocial and academic maturation and progress" (Neville, 2010, p. 2). Well-being is one of the critical factors for an individual's effective functioning. Students' well-being is vital for success at university since "it enables active learning, critical thought, optimal performance, social engagement and physical and mental health" (Stallman, Ohan & Chiera, 2018, p. 365). However, the number of studies on students' well-being (i.e., life satisfaction) is small in comparison to that of adults, specifically within the school context (Huebner et al., 2011). Ensuring student well-

being involves providing those conditions, which enable students to develop their abilities and flourish (Neville, 2010).

Previous studies show that well-being (i.e., life satisfaction) is positively associated with student engagement (e.g., Çaliskan, & Mercangöz, 2013; Elmore, & Huebner, 2010; Durón-Ramos, Vázquez, & Lagares, 2018). The reason is that well-being encompasses “a framework of values and goals” (Neville, 2010, p.), which motivates students to be engaged in their studies. Indeed, motivation concerns energy and direction, hence, the motive for specific behaviour, such as engagement, which defines power in action; the connection between person and activity” (Ainley, 2004, p. 2). More so, Heffner and Antaramian (2016) concluded in their study that life satisfaction provides “incremental validity over affective states in predicting student engagement and some aspects of academic achievement” (p. 1681). Also, drawing on the workplace literature on engagement, Bakker and Demerouti (2008) point out that the differences in performance among engaged and non-engaged workers are as a result of engaged workers’ positive emotions, including happiness, joy and enthusiasm. Indeed, positive well-being can be related to positive health habits and frugal lifestyles (Demerouti & Bakker, 2011), which allows individuals to engage in an activity. Based on the above argument, it is hypothesised that:

H3: SWB will be positively related to student work engagement

Perceived stress and social support on student work engagement: Mediating role of SWB

Perceived academic stress is a contextual factor that leads to psychological challenges, which affect students’ well-being (Leung, Yeung, & Wong, 2010). Previous studies indicate that perceived stress among students negatively influences their work engagement (e.g., Sheu et al., 2017; Yang et al., 2018). The experience of tension and discomfort among students leads to a deep sense of academic control in their studies due to a lowered sense of well-being, and lack of educational enjoyment and motivation (Zepke & Leach, 2010).

Besides, social support is another significant contextual factor that plays a role in the perception of individuals’ general subjective well-being (Tian, Zhao, & Huebner, 2015). Knowledge of high well-being in school is positively associated with enjoying schoolwork and receiving necessary help, for instance, from teachers (Løhre, Lydersen, & Vatten, 2010), which aids in student work engagement. Past studies indicate that social support positively affects student work engagement (e.g., Bakker, Vergel, & Kuntze, 2015; Xerri, Radford, & Shacklock, 2018). Thus, vigorous and dedicated students become actively absorbed in their studies, which makes them successful (Salanova et al. 2010) due to the support they receive. Nonetheless, the mechanisms through which individual students become engaged in their schoolwork have not been well articulated (Kahu & Nelson, 2018), though the learning environment provides students with an overall SWB, which is influenced by the contextual factors (Tian et al., 2015). SWB is a vital indicator of individual wellbeing (Kahn & Juster, 2002); hence a means for determining the effect of stress on a student’s work outcomes (Diener & Lucas, 2000).

SWB is denoted by the perception of students’ life satisfaction in this study. The literature on life satisfaction suggests that the construct is not just a consequence of various psychological states (e.g., positive affect), but it is also a pointer of psychological states (e.g., work engagement) (Moksnes, Løhre, Lillefjell, Byrne & Haugan, 2016). Many studies have focused on the mediating effect of well-being (e.g., life satisfaction) regarding stress and psychological outcomes. For example, several studies (e.g., Chang, Xing, Ho, & Yip, 2019; McKnight et al., 2002; Suldo & Huebner 2004b) have shown the mediating role of life satisfaction between stress and psychological outcomes. On the other hand, previous studies show that life satisfaction mediates the relationship between social support and psychological effects (e.g., Suldo & Huebner 2004b) as students with a high level of life satisfaction tend to perceive great social support (Suldo & Huebner, 2006).

Theoretically, the JD-R model postulates that contextual factors (e.g., social support) promote well-being by fulfilling students’ psychological needs, which, in turn, lead to a psychological outcome (e.g., Student work engagement). Besides, the theory also proffers reasons that suggest that stress affects well-being (i.e., life satisfaction), which again, in turn, affect engagement. Thus, the JD-R model provides a balanced approach in elucidating negative as well as positive aspects of ‘occupational’ well-being (see Schaufeli & Taris, 2014, for an overview). Therefore, drawing from the above empirical and theoretical propositions, the researcher argues that since contextual issues affect student engagement, there is a probability that student perception of stress will negatively affect their psychological health of students (i.e., well-being), which will, in turn, affect their academic engagement. On the contrary, social support will positively enhance postgraduate students’ well-being, which will, in turn, influence their engagement in school. Based on the above theoretical and empirical evidence, it is hypothesised that:

H4a: Student SWB will mediate the relationship between perceived stress and engagement.

H4b: Student SWB will mediate the relationship between social support and engagement.

Methodology

Sample and data collection

Based on the postpositivism paradigm, this study adopted the quantitative approach, which, according to Creswell (2009), is a method for analysing objective theories by investigating the association among variables. The variables can be usually measured on instruments, so that numerical data can be analysed using statistical procedures. A self-reported questionnaire was employed, since the researcher was interested in students perceived stress, social support, well-being and engagement. Data were collected within October and December 2019 from postgraduate students in two public universities in Ghana. Before the distribution of the questionnaires, the students were informed about the purpose of the study. Also, the students were informed that they could withdraw from taking part in the survey at any point in time, since participation is voluntary. Again, the students were also assured of the confidentiality of their responses. Based on the voluntary sampling technique, 205 completed responses (representing 68 per cent response rate) were returned to the author. Even though the voluntary sampling technique does not lead to generalisation of results, it does not require a sampling frame; involves minimal effort in distributing questionnaires to participants, since they regard participation in the study as worthwhile (International Labour Organisation, 2009). The student sample comprised 52.7 per cent of master's degree, 40.5 per cent postgraduate diploma and 6.8 per cent PhD students. Of the 205 respondents, 56.1 per cent were males, and 42.9 per cent were females. Besides, a majority of the 205 respondents, representing 41.5 per cent, were between the ages of 25 and 30. The researcher used previously validated scales to measure the constructs in the study's path model. SPSS ver21 was used to produce descriptive statistics, and to run exploratory factor analyses. PLS-SEM ver3 was used to test the structural (developed hypotheses) models.

Measures

Perceived stress: The Cohen, Kamarck and Mermelstein (1983) perceived stress scale was adopted to assess students' perceived stress. The nine-item scale was measured on a five-point Likert scale, from '0' = Never to '4' = Very Often. Example of the items include, 'How often during the last month did you feel nervous and stressed?' **Social support:** This study measured social support using a 17-item scale adapted from Zimet, Dahlem, Zimet, and Farley (1988) and Malecki and Demaray (2002). Respondents were asked to specify their agreement with statements related to support received from lecturers, peers and family on a seven-point Likert scale, from '1' = strongly disagree to '7' = strongly agree. Sample items included, 'My lecturer/supervisor is willing to help me when I need a special favour'. 'I have peers with whom I can share my joys and sorrows' and **Life satisfaction:** This study adopted the five-item Satisfaction With Life Scale developed by Diener, Emmons, Larsen, and Griffin (SWLS;1985) to measure postgraduate students' subjective well-being. Respondents were requested to reflect on how they generally feel about their life now on a five-point Likert scale, from '1' = strongly disagree to '5' = strongly agree. Sample items included 'In most ways, my life is close to my ideal.' **Student work engagement:** The study used Schaufeli and Bakker (2003) Utrecht Work Engagement Scale, Student Version (UWES-S) to measure postgraduate students' work engagement. Respondents were asked to reflect on how they felt at school by indicating their agreement with statements on a seven-point Likert scale, from '0' = Never to '6' = Always. The 17-item scale consists of sub-scales items measuring vigour (e.g., When I study, I feel that I am bursting with energy), dedication (e.g., I am enthusiastic about my studies), and absorption (e.g., time flies when I am studying).

Data analysis

Prior to the quantitative analyses, the dataset was examined for accuracy of the data entry and missing values; cases with too few or no responses in the variables of interest were removed from the dataset. In order to examine the hypotheses, this study followed Hair, Risher, Sarstedt and Ringle's (2019) two-step process (an assessment of the measurement model and the structural model) for PLS-SEM analysis. The choice of PLS-SEM was based on the study objective of estimating "the model's indicator variables and the structural path without imposing distributional assumption on the study data" (Hair et al., 2019, p. 2) as well as accounting for the total variance and uses the total variance to estimate parameters unlike the Covariance Based Structural Equation Modelling (CB-SEM) (Hair et al., 2017b).

Measurement model assessment

The first step in a measurement model assessment was the examination of the indicator loadings. Following this was the assessment of internal consistency reliability using composite reliability (CR). The composite reliability is a more appropriate measure of internal consistency than the Cronbach's alpha (CA), since the CA's value is susceptible to the number of items in a scale (Rossiter, 2002). Next, the convergent validity of each construct was assessed, using the Average Variance Extracted (AVE). The final step was the discriminant validity, using the Fornell Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT).

Table 1: Outer loadings

Items	Loadings	CA	CR	AVE
LIFE SATISFACTION		0.815	0.878	0.644
LS2	0.834			
LS3	0.845			
LS4	0.804			
LS5	0.721			
PERCEIVED STRESS		0.643	0.804	0.579
PSS4	0.711			
PSS5	0.772			
PSS8	0.796			
SOCIAL SUPPORT		0.894	0.913	0.513
SS10	0.703			
SS12	0.743			
SS14	0.606			
SS17	0.756			
SS2	0.705			
SS4	0.767			
SS5	0.737			
SS6	0.677			
SS7	0.763			
SS9	0.693			
STUDENT WORK ENGAGEMENT		0.759	0.838	0.510
SED2	0.661			
SED3	0.629			
SEV1	0.765			
SEV2	0.760			
SEV4	0.744			

Table 1 shows that almost all indicators loaded above the threshold of 0.7. The few items that loaded below 0.7 were not deleted because they did not affect the reliability of the constructs. A measurement model is appropriate when its indicators loaded above 0.70 on the latent variables or loaded “between 0.4 and 0.7” in situations where removing the indicators does not lead to an increase in the reliability of the model (Hair et al., 2014). The results in Table 1 indicates that all latent variables in this study are reliable, as they all ranged between 0.838 and 0.913, loading well above the 0.7 thresholds by (Bagozzi & Yi, 1988). The Average Variance Extracted (AVE) was used to measure the convergent validity in the model. The results from Table 1 shows that the AVE values range between 0.510 and 0.644, which according to Hair et al. (2019), AVE value of 0.50 or higher indicates that the construct explains 50 per cent or more of the variance of the items that make up the construct—implying that the constructs in the model have convergent validity. As part of the measurement model assessment, the Fornell-Lacker criterion and the Heterotrait-Monotrait Ratio (HTMT) were employed to establish discriminant validity.

Table 2: Fornell-Larcker Criterion

Constructs	1	2	3	4
1. Life Satisfaction	0.803			
2. Perceived Stress	-0.324	0.761		
3. Social Support	0.553	-0.450	0.716	
4. Student Work Engagement	0.414	-0.495	0.496	0.714

NB: Diagonal values in bold= square root of AVE; Off diagonal elements= correlation between constructs

Discriminant validity shows how a construct is empirically distinct from other constructs in the model (Hair et al., 2019). To establish discriminant validity, the square root of the AVE of each construct must be higher than its highest correlations with other constructs in the model (Fornell & Larcker, 1981). The results show that the AVE values of each construct (latent variable) are higher than the value of the correlation between the constructs (see Table 2), thereby suggesting the requirement of discriminant validity is established. The Fornell-Lacker criterion

does not perform well when indicator loadings are close (Henseler et al.,2015). Given the closeness of the loadings of items in the model, the HTMT was also adopted to ensure the robustness of the model.

Table 3: Heterotrait-Monotrait Ratio (HTMT)

	1	2	3	4
1. Life Satisfaction				
2. Perceived Stress	0.434 [0.027, 0.297]			
3. Social Support	0.639 [0.412, 0.610]	0.567 [-0.555, -0.354]		
4. Student Work Engagement	0.506 [0.027, 0.297]	0.692 [-0.463, -0.198]	0.592 [0.114, 0.403]	

Based on a more conservative threshold, a latent construct has discriminant validity when its HTMT ratio is below 0.850 (Henseler et al., 2015) and the confidence interval, indicating the range into which the actual HTMT population value will fall must not contain the value 1 (Hair et al., 2017). The results in Table 3 shows that all HTMT values are well below the threshold of 0.850. Also, neither the lower nor the upper confidence interval of any construct includes the value 1, indicating that discriminant validity has been established for this study. Based on the measurement model indicators, the structural model was examined.

Results and Discussion

Structural Model Assessment

The standard criteria for structural model assessment in PLS-SEM include Coefficient of determination (R^2), the blindfolding-based cross-validated redundancy measure (Q^2), the effect size (f^2), as well as the statistical significance and relevance of the path coefficients (Hair et al., 2019). The model indicating the various paths is shown in Figure 1. The assessment of the structural model began with an assessment of the lateral collinearity among the constructs. Collinearity among constructs needs to be measured to ensure that it does not bias the regression results (Hair et al., 2019). According to Becker et al. (2015), variance inflation factor (VIF) value of 5 and above are indicative of pathological collinearity problems and values greater than 3.3 may also indicate that the model may be contaminated by common method bias (Kock, 2013). The results in Table 4 suggest that VIF in all cases is less than 2, indicating that lateral multicollinearity is not a problem in this study (Hair et al., 2014).

Table 4: Collinearity statistics (VIF)

	Life Satisfaction	Perceived Stress	Social Support	Student Work Engagement
LS				1.455
PSS	1.254			1.267
SS	1.254	1.000		1.633
SWE				

The assessment of the structural paths (hypotheses) and the explanatory power of the model is presented in Table 5 with reference to Figure 1. The assessment began by evaluating the variance explained by the endogenous variables in the model, using the R^2 , which is a measure of a model’s explanatory power (Shumeli & Koppius, 2011).

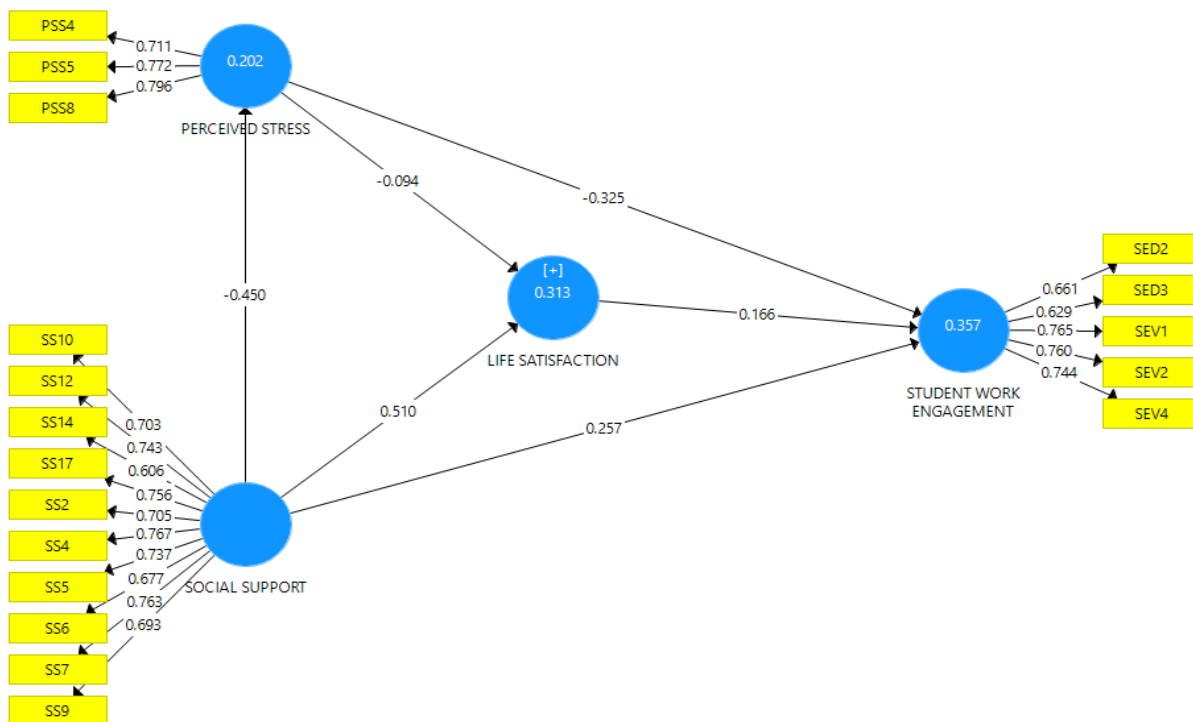


Figure 1: Structural Path Model

The R² values in the structural model (Figure 1) shows that Student Work Engagement (SWE) has an R² value of 0.357, indicating that the entire model accounts for 35.7 per cent of the variance in student work engagement. Hair et al. (2019) indicate that R² values of almost 50 per cent show moderate explanatory power. Figure 1 also shows that Life Satisfaction (LS) has an R² value of 0.313, implying that Perceived Stress and Social Support account for 31.3 per cent of the variance in students Life Satisfaction. The R² value of 0.202 for Perceived Stress indicates that social support accounts for 20.3 per cent of the variance in perceived stress. Based on the criteria proposed by Hair et al. (2019), this indicates substantial predictive power of the model. Besides evaluating the R² of the model, the contribution of each predictor to an endogenous construct’s R² was assessed, using the effect size (*f*²). The *f*² effect sizes indicate a predictor’s relevance in explaining a dependent construct in a model (Hair et al., 2019). Values greater than 0.02, 0.15 and 0.35 indicate small, moderate, and large *f*² effect sizes, respectively (Cohen, 1988). The results from Table 5 show that Social support (SS) has the largest effect on life satisfaction (LS) (*f*²=0.302) and also has a moderate effect on perceived stress (*f*²=0.254) while having a small effect on student work engagement (*f*²=0.302). The results also show that Perceived stress had a moderate effect size on student work engagement (*f*²=0.130) and a small effect on life satisfaction (*f*²=0.010). The results also show that life satisfaction had a small effect on student ‘work engagement’ (*f*²=0.030).

Table 5: Structural model results (Direct effect)

Structural Path	Path Coefficient	T Statistics (O/STDEV)	P-Value	R ²	<i>f</i> ²	Q ²	Conclusion
LS -> SWE	0.166	2.407	0.016	0.357	0.030	0.170	Supported
PSS -> LS	-0.094	1.427	0.154	0.313	0.010	0.192	Not Supported
PSS -> SWE	-0.325	4.842	0.000	0.357	0.130	0.170	Supported
SS -> LS	0.510	10.277	0.000	0.313	0.302	0.192	Supported
SS -> PSS	-0.450	8.817	0.000	0.202	0.254	0.108	Supported
SS -> SWE	0.257	3.466	0.001	0.357	0.063	0.170	Supported

In addition to explanatory power, the predictive accuracy was assessed, using the Q^2 (Geisser, 1974; Stone, 1974). As a guideline, Hair et al. (2019) propose that Q^2 values should be larger than zero for a specific endogenous construct to indicate the predictive accuracy of the structural model for the construct. Specifically, Q^2 values higher than 0, 0.25, and 0.5 show small, medium, and high predictive relevance. The results show Q^2 values of 0.170 for student work engagement, 0.192 for life satisfaction, and 0.108 for perceived stress. The model met the general requirement that Q^2 should be greater than 0, also, except all predictors in the model had close to a medium predictive relevance on the endogenous variables.

The paper examined six direct paths indicating the various hypothesis (Figure 1). The results of the structural model indicate that perceived stress is not significant in predicting a student's life satisfaction ($\beta = -0.094$; $p > 0.05$), even though a negative relationship exists between the two variables; therefore, H1a is rejected. Additionally, the results also support a significant negative relationship between perceived stress and student work engagement ($\beta = -0.325$, $p < 0.05$), H1b is, therefore, supported, that perceived stress is negatively related to postgraduate students' work engagement. Again, the results establish a positive relationship between social support and life satisfaction ($\beta = 0.510$, $p < 0.05$); as a result, H2a is supported. Social support was found to be positively related to postgraduate students' work engagement ($\beta = 0.257$, $p < 0.05$), indicating support for hypothesis 2b. The results also indicate that life satisfaction contributes significantly to explaining and predicting postgraduate students' work engagement ($\beta = 0.166$; $p < 0.05$); therefore, H3 is supported. Social support is, however, found to be negatively related to the level of perceived stress among postgraduate students ($\beta = -0.450$, $p < 0.05$: Table 5: Figure 1), providing support for H5. The results show that all hypothesised direct relationships were statistically significant, except for perceived stress and life satisfaction. The mediation effect of life satisfaction was also analysed, results shown in Table 6.

Table 6: Mediation Analysis

PATH	Path Coefficient	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values	Conclusion
PSS -> LS -> SWE	-0.016	0.013	1.160	0.246	Not Supported
SS -> LS -> SWE	0.085	0.036	2.330	0.020	Supported

This study adopted the procedure developed by Nitzl, Roldán, and Cepeda (2016) to test mediation effects in PLS-SEM in this study. Nitzl et al. (2016) propose that a significant indirect effect is the only prerequisite for establishing a mediation effect, unlike a two-step analysis, as proposed by Baron and Kenny (1986). The significance of the direct effect determines the type of effect and or mediation. There are two different types of mediation, full and partial mediation (Hair et al., 2017). Partial mediation occurs when both the direct and indirect effects are statistically significant; it can be subdivided into complementary and competitive partial mediation. A full mediation occurs when a direct effect is not significant while an indirect is significant. Thus, a situation where the relationship is only possible through the mediating variable (Carrión, Nitzl & Roldán, 2017). A complementary partial mediation occurs when both the direct and indirect effect point in the same direction (+ or -) (Baron & Kenny, 1986), while in a competitive mediation, they point to opposite directions (Carrión et al., 2017). Hypothesis 4a predicted that Student life satisfaction would mediate the relationship between perceived stress and postgraduate student engagement. The results from Table 6 show that the indirect effect (PSS -> LS -> SWE) is not significant ($\beta = -0.016$, $p > 0.05$); therefore, H4a is not supported. Finally, hypothesis 4b predicted that student life satisfaction would mediate the relationship between social support and postgraduate student engagement. Following the procedure defined by Nitzl et al. (2016), the indirect effect (SS -> LS -> SWE) was found to be statistically significant ($\beta = 0.085$, $p < 0.05$), indicating that H4b is supported. Given that the direct effect is significant, the nature of the mediation effect of life satisfaction on the relationship between social support and postgraduate student work engagement is a complimentary mediation (Zhao, Lynch Jr, & Chen, 2010).

Discussion

Drawing on the JD-R theory as the theoretical lens, this study examined the effect of perceived stress and social support (school contextual factors) on students' well-being and engagement. Besides, the study investigated well-being as the underlying mechanism by testing mediation models. This current study has primarily provided empirical evidence, showing the effects of stress and social support on student well-being and engagement in the Ghanaian setting. First, consistent with the JD-R theory and previous studies (e.g., Hetrick & Parker, 2019; Manikandan, & Neethu, 2018; Raufelder et al., 2014), a significant negative relationship was found between perceived stress and

student 'work engagement,' suggesting that perceived stress is a challenging phenomenon, which affects postgraduate student desire to expend energy on academic activities.

However, inconsistent with most studies (e.g., Lee et al., 2016; Sheu et al., 2017; Yang et al., 2018) and theoretical assumptions underpinning this study, a surprising result was found as perceived stress was not a significant predictor of student life satisfaction, though negative relationship exists between the two variables. Perhaps, the data suggest that students may perceive less stress due to the availability of perceived and actual social support. Thus, students perceive the school context factors are positively challenging and controllable (Lee et al., 2016) as social support is significantly and negatively related to perceived stress in this study. Second, the results also show that social support is positively associated with and significantly predicts postgraduate student well-being and work engagement. The result is akin to previous studies (e.g., Brajša-Žganec et al., 2018; Siedlecki et al., 2014) that examined the relationship between social support and students' well-being. More so, the result is also consistent with past studies (Bakker et al., 2015; Fall & Roberts, 2012; Klem & Connell, 2009; Xerri et al. 2018; Zhao & Kuh, 2004), which found that social support is significantly positively related to student work engagement. Like social support results in positive outcomes influencing students, this study echoes the significance of the school environment social support in promoting positive learning behaviours. The findings lend support to the JD-R theory and stress literature, depicting that social support is a vital resource mitigating the negative effect of stress, and a source of motivation.

Fourth, the study found that postgraduate student life satisfaction positively related and significantly predicts their schoolwork engagement. The result is akin to previous studies, such as Çaliskan and Mercangöz (2013), Elmore and Huebner (2010) and Durón-Ramos et al. (2018), that student well-being is essential for their engagement. Hence, prompting the need to promote positive factors in students to enhance their academic performance and personal growth (Ramos et al., 2018). Fifth, in response to the need for more investigations on mechanisms through which individual students become engaged in their schoolwork, this study examined the mediating effect of life satisfaction and found that student life satisfaction is a significant factor in explaining how students become engaged in schoolwork. Theoretically, social support aids a student to mobilise the needed psychological resources to manage the adverse effects of school demands. Hence, life satisfaction as a mechanism for comprehending the relationship between social support and student 'work' engagement is an essential resource for promoting a positive learning attitude and behaviours among postgraduate students. On the contrary, life satisfaction was not a significant mediator between perceived stress and student work engagement. This result contrasts the JD-R theoretical assumption and empirical evidence that suggest that well-being (i.e., life satisfaction) mediates stress-psychological outcome models.

Conclusion

In sum, this present study has provided support for the theoretical assumption of the JD-R model. Again, consistent with past research results, this study affirmed that perceived stress, social support and life satisfaction are 'vital antecedents of student 'work engagement.' Thus, like most past studies around the world, perceived stress, social support and life satisfaction are crucial factors for student work engagement in the Ghanaian context. This implies that HE institutions should not only provide easily accessible academic services, but personal and social support services to improve postgraduate student retention and timely completion.

Like most cross-sectional survey studies, data was limited to postgraduate students in two public universities in Ghana and data collection was cross-sectional; hence, limiting the ability to assess the causal relationship. Further, the sample size is comparatively smaller, but the results were not adversely affected. It is recommended that future research can focus on longitudinal design and use a sampling technique that allows for generalisation. More so, there is a need to focus on the application of Self-Determination Theory in the stress-student engagement model, which assumes that a high level of self-determination buffers the harmful effects of stressors.

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Health and Safety Practices and Work Attendance in a Ghanaian Health Service

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Abstract

This study assesses how health and safety policies and practices are adhered to at the Dunkwa-on-Offin Municipal Hospital in Ghana to enhance quality and sustainable healthcare delivery. The study approach was mainly quantitative and employed a survey design. 123 employees, out of the 167 total population of the hospital, were sampled. Questionnaire was designed to collect quantitative data, which were complemented by a single-source interview data. Data were analysed, using Pearson's Correlation Coefficient (R), multiple regression and narrative analysis. The results showed that although employees were aware of and adhered to health and safety practices, about two-thirds of them had experienced different forms of injuries with significantly negative effect on their work attendance (absenteeism). It was further found that health and safety supervision was weak. We recommend that the Ministry of Health should step up its health and safety supervisory and monitoring roles for improved quality and sustainable healthcare delivery.

Keywords: Health and safety practices, employee attendance, health sector, Ghana.

Introduction

Work plays a major role not only in the life of the employee but, if meaningful, also leads to satisfaction and organisational commitment (Anthem & Innstrand, 2016). Since work is an important aspect of many people, workers should go to and return from work safe and sound. Safety, therefore, is a basic requirement in every aspect of our work lives. It involves the protection of people from physical injury (Hughes & Ferrel, 2008). Amponsah-Tawiah and Dartey-Baah (2011), referring to the International Labour Organisation's (ILO) Convention on Occupational Health Services (No. 161, 1985) state that occupational health and safety services should be available and are the right of each individual taking part in work, irrespective of the sector of the economy, size of the company or type of assignment.

As per the law and other regulations, such as the ILO Conventions, employers are expected to do everything in their power to keep employees away from danger and free from injury while at work. Coming back home in Ghana, Section 10(a) of the Labour Law 2003, Act 651 prescribes the first right of the employee to work under satisfactory, safe and healthy conditions. This implies that the employer should provide healthy and safe working environment for the employee at all times. This is partly because the working time lost during a recovery period after an injury or illness may have adverse implications not only for the employee, but also for the employer. This is because the situation could reduce the stock of human capital that could affect organisational performance and, subsequently, impact on employees' earning capabilities (Woock, 2009).

There is, therefore, the need to create a culture in which health and safety issues at the workplace are prioritized, a move towards reducing accidents and injuries and their resultant impacts on employee attendance, to avert unnecessary costs and improve performance. This gives value to the current study as concerns for and monitoring of employee attendance at work is one of the significant components of human resource activities and could be a strong factor of counter-performance. Work attendance and absenteeism are linked to many factors, with the major, though not sole determinant, being disease-related incapacity. For management, absenteeism is an important concern from the viewpoints of service delivery, efficacy and a concern for their employees. Reducing accidents and improving occupational ill-health have, therefore, been a major concern for organisations today (Guthold, 2011) and many are taking an increasing interest in areas such as managing absenteeism.

It is suggested by Bloom and Canning (2000) that effective health and safety management has negative relationship with workplace accidents and injuries, and this may have adverse effect on employee work behaviour, including attendance with resultant negative effect on organisational performance. In this regard, management should protect employees to ensure health and safety issues are taken seriously. Failure to do so could result in absenteeism emanating from workplace accidents and occupational illnesses, which can lead to permanent occupational disability. Section 120 of the Labour Act of Ghana Act 651 requires employers to report as soon as practicable the occurrence to the appropriate government agency, occupational accidents and diseases which occur in the workplace. However, there is no available data on the impact of health and safety policy implementation on employee work behaviour and/or the impact of accidents and injuries on employee work attendance at the Municipal Hospital, Dunkwa-on-Offin, as no empirical studies have been conducted in this regard. This study, therefore, seeks to investigate how employees adhere to health and safety policies and how the implementation impacts on employee work attendance at Dunkwa-on-Offin Municipal Hospital. This identified problem provides a motivation for our investigation into the influence of health and safety practices on employee attendance in the Ghanaian health sector.

Aside the problem identification, we also found a gap in research in health and safety practices and attendance in Ghana and, more especially, in the health sector. Apart from the Ministry of Health Policy and Guidelines for Infection Prevention and Control in Healthcare Facilities (Ministry of Health, 2009) and other operational reports, there is scanty literature on the topic. Publications on health and safety and employee attendance have focused on the advanced countries with little focus on the health sector. For instance, Pauliakas and Theodossiou (2010) investigated the effect of absenteeism and revealed that the socio-economic costs of (sickness) absence in advanced Western economies account for between 2-3% of their total GDP. Bevan (2010) also found that every year in the United Kingdom, 200 million days are lost through sickness absence – an average of 8.5 days lost per annum – at an estimated cost of £13 billion. In 2013 alone, 131 million days were lost in the United Kingdom due to sickness absence (Office for National Statistics, 2014). Also, the Manufacturers' Organisation's (2015) sickness absence and rehabilitation survey indicates that an average sick pay cost per employee is £374, costing a total of £1 billion for the manufacturing sector (The Manufacturers' Organisation, 2015). If an advanced country, such as United Kingdom, with keen concern for policy implementation and absence management reports these disturbing figures, then the story is expected to be more alarming in developing countries, such as Ghana, hence this study.

The rest of the paper is structured as follows. In the next section we review the literature on health and safety and employee attendance. This is followed by the methodology section, then we present and discuss research data. These are followed by presentation of our key findings, before drawing the conclusion of the study, with our recommendations ending the paper.

Literature Review

In this section we review extant literature on health, safety and attendance. Specifically, we review literature on some health and safety practices in Ghana, occupational diseases and injuries and work attendance, and senior management's commitment to health and safety issues. Also referred to as occupational health and safety, Workplace health and safety involves the rights of the employee to carry out his/her daily duties in a safe environment. In Ghana, workplace health and safety are prescribed by Section 10(a) of the Labour Law 2003, Act 651.

Health and Safety Practices

Knowledge and skills on safety practices among health personnel, especially regarding policy and guidelines in infection prevention and control, have been identified by the Ministry of Health to be inadequate (Ministry of Health, 2009). This should, however, not be the case as compliance with health and safety practices has proved to reduce accidents and injuries at the workplace and its resultant absenteeism (Akpan, 2011). By implication, to mitigate under-performance in organisations, one of the key areas to consider is effective policy and procedures on health and safety. We consider the following forms of health and safety practices in the healthcare system in Ghana.

Injection safety

Injection safety is an injection that is administered using appropriate equipment, ensuring that it does not cause harm to the recipient or exposes the provider to any avoidable risk, and does not result in any waste that is dangerous to other people (Odeyemi, Onifade & Onifade, 2005). Over the last 50 years, scientists have continued to discover new blood borne pathogens associated with unsafe injection use, therefore, giving weight to Odeyemi, Onifade, and Onifade's (2005) concern over injection safety in health facilities.

Injection is one of the most common health care procedures in both the formal and informal healthcare sectors with the associated injury being one of the most common injuries in the sector, particularly among nursing staff. Though in some developing countries, and especially in tertiary health facilities, injection safety practices have been fair, because of provision of injection equipment and training of health workers, the picture is different in most developing countries, like Ghana. As revealed in the study of Medubi, Akande and Osagbemi (2006), injection-related injuries and sicknesses in developing countries far exceeds the world average rate. Equally, the risk of contracting an infection from patients is high in developing countries, and as proved from the study of Niu (2010), this is because the hygienic conditions in hospitals in these countries may be problematic and render infectious diseases very rampant. For instance, a Swaziland study and a similar study in the Dominican Republic revealed around 30% and 23.5% incident rates respectively among nurses (Daly, Nxumalo & Biellik, 2004; Moro et al, 2007). More disturbing figures emanated from cross country surveys in Nigeria and Burkina Faso by Bolarinwa et al. (2012) on needle recapping showed 80% and 58% prevalence, respectively. These show how harmful infections could be if health and safety practices are not adhered to during its administration. Undoubtedly, these will negatively influence attendance as affected personnel will have to take some days off to recuperate.

Hand hygiene

Hand washing is the single most effective method used in transmitting as well as preventing the spread of infections. The aim of hand hygiene practices is to eliminate rapidly, as far as possible, the transient (contaminating) flora and to have persistent antimicrobial activity on the resident flora. In the context of healthcare setting, this means decontaminating the hands of transient flora before the next patient contact. Despite this fact, Ghanaian health workers often do not pay much attention to this practice (Jumaa, 2005). Proper hand hygiene reduces the number of potentially infection-causing microorganisms on the hands and decreases the incidence of infection transmission in health facilities.

According to the Ghanaian Ministry of Health (MoH) policy and guideline on organisational health and safety (see Ministry of Health, 2010), there are three major types of hand hygiene—social/routine hand washing, hygienic hand washing and hand antisepsis and surgical hand wash/scrub. These have proved to be the case during the Coronavirus (Covid-19) pandemic that swept across almost all countries in the world. One of the key World Health Organisation precautionary measures was proper and frequent washing of hands to prevent people from contaminating themselves and others with the virus.

Personal protective equipment (PPE) and clothing

Personal protective equipment/clothing (PPE) are used to prevent blood and other potentially infectious materials from coming into direct contact with clothing and the body of health staff, patients, relatives and friends. There are different types of PPEs and the use of each type depends on the task to be performed and the anticipated exposure. PPEs may include gloves, gowns, laboratory coats, face shields or masks, eye protection, pocket masks, leg protections, such as boots and other protective gear (Occupational Safety and Health Administration, 2011).

Emphasising the importance of PPEs, Pink, Morgan, and Dainty (2014) provide evidence that gloves (one of the PPEs mentioned above) can prevent hands from becoming contaminated with microorganisms both from the patients and inanimate environments.

Gloves, therefore, contribute to prevention of the spread of pathogens if used correctly. The route of transmission while wearing gloves may result from contamination when removing gloves or from small defects in the gloves (Jumaa, 2005). This explains why experts advocate that gloves should be changed between patients and, preferably, should not be washed or re-used. The quality of gloves, therefore, cannot be overemphasised. Studies on the use of gloves have been mainly observational and may be subject to reactive biases because of the presence of the observer (Curtis et al., 2003). However, the use of hand gloves has proved effective in preventing the spread of viruses/diseases.

Face and Eye protections must be worn whenever there is the likelihood of splashes, spray, splatter or droplets of blood or other potentially infectious material getting into the eyes, nose, mouth or other facial areas. The route of infection being the nose, mouth and eyes, face mask/shield has been one of the recommended PPEs to prevent the spread of Covid-19. Headgears, helmets are to be worn by maintenance staff when dealing with heights or where there is potential of objects falling. Drivers of motorbikes are equally expected to wear helmets while riding to reduce the possibility of head injuries during crashes. Staff must wear leg protections whenever there is the potential of the legs coming into contact with blood, body fluids or other contaminated materials, e.g., during surgical operations and deliveries, in the isolation wards and at the mortuary. For personnel working at the x-ray department, protective garments such as lead aprons and dosimeter are needed to minimise the extent of radiation exposures. Personnel are to wear radiation eye protection glasses to prevent posterior sub capsular cataract formation (Chambers et al, 2011).

Healthcare waste management

Healthcare waste carries a higher risk of infection and injury than any type of waste. Between 10% and 25% of hazardous and infectious waste is generated in health facilities and requires special arrangement from the management of the facility. Exposure to dioxins and furans may lead to the impairment of the immune system, nervous system, endocrine system and the reproductive functions. A World Health Organisation assessment conducted in 22 African countries showed that the proportion of health-care facilities that do not use proper waste disposal methods ranges from 18% to 64% (Guthold et al., 2011), disturbing rates that need to be managed. To reduce exposure to toxic pollutants associated with the combustion process, such as dioxins, furans, nitrogen and sulphur oxides as well as particulate matter, and to minimize occupation health risks, best practices for incineration must be promoted.

These practices, as recommended by the Occupational Safety and Health Administration (2011), must include (1) waste reduction and waste segregation ensuring that only appropriate waste are incinerated to prevent emission of hazardous fume; (2) incineration must utilize appropriate start-up and cool-down procedures, achieve (and maintain) a minimum temperature before waste is burned, and ensure the use of appropriate protective equipment to safeguard workers; and (3) periodic maintenance of incinerators to replace or repair defective components through inspection, spare parts replacement, inventory, and record keeping.

Materials containing chlorine, such as polyvinyl chloride products (e.g., some blood bags, IV bags, IV tubes etc.) or heavy metals such as mercury (e.g., broken thermometers), should never be incinerated. Management and operational problems with incinerators, including inadequate training of operators, poor waste segregation methods, and poor maintenance, are issues affecting waste management, and these need critical assessment (Guthold, 2011) and the appropriate healthcare waste management system applied. A healthcare waste management system comprises (1) collection and segregation; (2) transportation; (3) storage; (4) treatment; and (5) final disposal (Robson et al., 2005). According to the MoH Policy and guideline on OHS, collection and segregation of waste requires that each type of waste must be placed immediately in its appropriate colour-coded container. The policy states that black container should be used for general waste (e.g., kitchen waste, paper, sweeping, etc.); yellow container for infectious waste, such as sharps, patient waste; human/animal tissues and culture specimen with the biohazard label and radioactive symbol for radioactive waste; while brown container should be for hazardous waste, e.g., expired drugs, vaccines, chemicals (Pink, Morgan & Dainty, 2014). These need to be adhered to for effective healthcare waste management.

Occupation-related Diseases and Injuries and Work Attendance

Exposure to work-related risk factors is one of the main determinants of health and safety outcomes, such as the absence behaviour of employees; the incidence of work accidents; and the occurrence of occupational diseases. These negatives OHS outcomes are significant as they entail significant direct and indirect economic costs at both individual and national levels. Work-related injuries/illnesses are likely to hamper the ability to work and workers' ex-post productivity following an incident. The working time lost during a recovery period may also have implications for their stock of human capital and their subsequent earning capabilities (Woock, 2009).

Infirmity and ill-health is believed to be a predominant factor underlying workers' propensity to take days off work (EUROFOUND, 1997). In 2011, the United States hospitals recorded 58,860 work-related injuries and illnesses that caused employees to miss work (Occupational Safety and Health Administration, 2013). It is believed that much of the absence, which is a major problem for organisations, is 'short-term' absences, which are attributed to minor illnesses. Joensuu and Lindstrom (2003) provide an extensive review of the role of sickness absence, and report that in Sweden the percentage of long-term absentees due to sicknesses reached 25% in 2001. The effect of sicknesses on employee attendance should be of grave concern to employers. For instance, Opong (2017), assessing attendance factors, revealed that sickness was the most single highest contributor to employee absence. The author advised that organisations should have absent policies that outline employees' rights and obligations when taking time off due to sicknesses. Due to the prevalence of sicknesses and injuries and their impact on employee attendance, Opong (2017) encouraged organisations without absence policies to develop one.

Accidents at work lead to injuries which bring about a significant number of sick leave days. A 2007/2008 survey by the Health and Safety Executive (HSE) on work-related illness estimated 34 million lost workdays; 28 million due to work related illness and 6 million due to workplace injury (Health and Safety Executive, 2009). These lost workdays have economic implications for employers. For instance, Bevan (2010) states that the Royal Mail of the UK experienced issues of long-term absence – especially related to musculoskeletal health – for many years. In 2003, their sickness absence levels were 7% (an average of 16 days per employee per year) and a daily cost of £1m. Boorman's (2009) review of the health and wellbeing of national health insurance scheme (NHIS) employees in the UK calculated that, if absence levels in the NHIS were reduced to the average of the private sector, 15,000 additional staff would be available each day to deliver patient care. This would represent an annual cost saving of around £500 million (Boorman, 2009).

This implies high rate of absence in the public sector facilities, such as the Dunkwa-on-Offin Government Hospital, than in private sector health facilities. The social and economic consequences of injury and illness impact on the workplace, not just primary actors, such as the employer and the affected employee, but also employee representatives, workmates and other staff (Adams et al, 2002). Reducing accidents and mitigating occupational ill-health are, therefore, important for organisations today and many are taking an increasing interest in areas, such as managing absenteeism. Akpan (2011) states that workplace absenteeism could be minimized in a firm with effective health and safety management system, while Opong (2017) recommends a workable absence policy.

Management's Commitment and Employee Adherence to Safety Policies and Practices

Section 118(1) of the Ghana Labour Act 2003 Act 651 gives legal backing to workplace health and safety practices and places a responsibility on employers (in this case management) to ensure that employees are kept away from danger and free of injury while at work. According to Akpan (2011), for a health and safety management system to be effective, management at all levels should demonstrate their support of the health and safety programme. This may be demonstrated through management's participation in health and safety leadership training meetings, facility inspections, incident investigations, and provision of PPEs. A health and safety management system involves the introduction of processes designed to decrease the incidence of injury and illness in the employer's operations (Alberta, 2006). The successful implementation of health and safety policies in Ghanaian hospitals, therefore, requires management commitment for effective allocation of resources to ensure high level of employee participation. However, there seems to be mixed results as, on the average, managers and supervisors seem to have positive attitudes towards health and safety practices than employees (Ma & Yuan, 2009).

To foster cooperation between employers and employees regarding health and safety management, there should be a platform for communication on safety issues. Safety committees have been found to be appropriate means through which employee participation in safety issues can be advanced (Milgate, Innes & O'Loughlin, 2002). Safety committees provide advice on health and safety policies and procedures; helping in conducting risk assessments and safety audits; and making suggestions on improving health and safety performance. Participation by employees supports risk control by encouraging their 'ownership' of health and safety policies (Milgate, Innes & O'Loughlin, 2002). It establishes an understanding that the organisation, and people working in it, benefit from good health and safety performance. According to the Health and Safety Executive (2009), pooling knowledge and experiences through participation, commitment and involvement means that health and safety adherence becomes 'everybody's business.'

Methodology

We adopted mainly a quantitative approach. We decided on this approach as collecting and analysing quantitative data was deemed the appropriate line to tow in investigating the topic.

Population and sampling

The area of study was Dunkwa Municipal Hospital with a population of 167 (157 junior and senior staff, and ten management staff), which was made up of doctors, nurses, pharmacists, laboratory technicians, x-ray technicians, records personnel, laundry personnel, orderlies, labourers, cooks, accounting and administrative staff. Using Gomez and Jones' (2010) formula for sample size determination, the sample size was 123, using a random sampling technique to select the participate in this study (Saunders, Lewis & Thornhill, 2007).

Data collection and analysis

Though questionnaire (using a five-point Likert scale, 1: strongly disagree-5: strongly agree) was the main instrument for data collection, a (single-source) follow-up interview was conducted with the Medical Superintendent of the hospital. The interview questions were based on themes that emerged from our literature, which also informed our data discussion. We, therefore, organised our data results and discussion according to the review headings. The approach also helped us relate the outcomes of previous related studies to our study results. Data were analysed using Pearson's correlation coefficient (R) and multiple regression. The single-source interview data were used to validate the quantitative outcomes. This was to find out how the health and safety policies designed and documented by the Ministry of Health, as narrated by the Medical Superintendent, were adhered to or otherwise by employees of the hospital.

Results and Discussion

In this section, we present and discuss the two datasets – the questionnaire responses and the interview result.

Health and Safety Policies and Practices of the Ghana Health Service

Out of the 123-sample used, (20.0%) of disagreed, (40.0%) were indifferent, (10.0%) agreed and (30.0%) strongly agreed that the Dunkwa-On-Offin Municipal Hospital has a policy on health and safety. Respondents agreed that staff had been notified of health and safety hazards at the hospital (WA=3.9000; StdDev=0.56765). Respondents disagreed (10.0%), were indifferent (10.0%), agreed (70.0%) and strongly agreed (10.0%) with weighted average (3.8000) and standard deviation (0.78881), suggesting overall agreement that new staff are given orientation on health and safety issues, and they expressed agreement that staff are periodically trained on how to protect themselves from workplace hazards (WA=3.6000; StdDev=0.96609).

The result shows that respondents agreed that systems are in place to identify and correct health and safety hazards (WA=3.5000; StdDev=0.84984), staff are encouraged to report work-related injuries (WA=4.5000; StdDev=0.97188), protective equipment is freely supplied to staff (WA=4.0000; StdDev=0.66667), and the use of personal protective equipment by staff are supervised by management (WA=3.7000; StdDev=0.48305). Respondents, however, expressed disagreement that records of injury and related diseases at the workplace are kept (WA=3.4000; StdDev=0.66617); health and safety committee has been set up (WA=3.1000; StdDev=0.87560), and further disagreed that there is a clear policy on injury and illness prevention (WA=2.9000; StdDev=0.87560) and periodic evaluation of the policy (WA=3.0000; StdDev=0.66700).

The Medical Superintendent revealed in an interview that:

...the hospital has been promoting health and safety practises even before the introduction of the Health and Safety Policy, so we are not finding it difficult to implement the policy. We give orientation to staff, train them and encourage them to adhere to these practices. Though we have some challenges like financial and human resource for the implementation of the policy we are doing our best

From the above two datasets, it is clear that Dunkwa-On-Offin Municipal Hospital has in place Health and Safety policies and practices. Management has shown some level of commitment to the Health and Safety policy and practices as the qualitative data corroborate the quantitative outcome. According to Akpan (2011), for a health and safety management system to be effective, management at all levels, should demonstrate their support of the health and safety programme. Management of the Hospital demonstrated their commitment in the form of provision of personal protective clothing and equipment, training and orientation of staff and supervision of health and safety practices adherence. These critical elements (periodic evaluation and health and safety committee) are not incorporated into the health and safety practices.

Table 1: Health and Safety Policies and Practices by Department of Respondents (Staff)

Questions	Departments	Responses		P-value
		YES	NO	
Have you been exposed to occupational and safety policy of MOH/GHS?	ND	47(69.0%)	14(31%)	0.011
	HASS	21(31%)	31(69%)	
	TOTAL	68 (100%)	45(100%)	
	(113)			
Does the policy describe the way to work?	ND	55.82(71.8%)	9.94(28.2%)	0.432
	HASS	21.92(28.2%)	25.32(71.8%)	
	TOTAL	77.74(100%)	35.26(100%)	
	(113)			
Have you been given orientation on health and safety issues?	ND	48.9(70.7%)	12.85(29.3%)	0.009
	HASS	20.26(29.3%)	30.99(70.7%)	
	TOTAL	69.16(100%)	43.84(100%)	
	(113)			
Do you face any hazard during the performance of your duty?	ND	62.8(74.1%)	7.32(25.9%)	0.999
	HASS	21.95(25.9%)	20.93(74.1%)	
	TOTAL	84.75(100%)	28.25(100%)	
	(113)			
Have you been trained in the safe use of hazardous and infectious products?	ND	102.7(98.3%)	0.144(1.7%)	0.005
	HASS	1.8(1.7%)	8.331(98.3%)	
	TOTAL	104.5(100%)	8.475(100%)	
	(113)			
Have you heard of colour-coding techniques for waste segregation?	ND	28.8(55.2%)	27.236(44.8%)	0.012
	HASS	23.406(44.8%)	33.558(55.2%)	
	TOTAL	52.206(100%)	60.794(100%)	
	(113)			
Has management provided adequate resources to ensure health and safety of employees	ND	5.366(22.4%)	69.098(77.6%)	0.769
	HASS	18.59(77.6%)	19.946(22.4%)	
	TOTAL	23.956(100%)	89.044(100%)	
	(113)			

ND= Nursing Department; HASS=Health Administration and Support Services; Chi-square statistic is significant at the 0.05 level (results are based on Fisher's Exact test)

From Table 1, 68 of the respondents had been exposed to occupational health policy of MOH/GHS while 32 had not. Within the nursing department, 47 (69.0%) had been exposed to Health and Safety policies and practices while

21 (31.0%) of the respondents from HASS had been exposed to the policies and practices. The Fishers’ Exact Test indicates that staff exposure to Health and Safety policies and practices significantly depends on their departments ($p=0.011$). Out of the staff who had been exposed to the policy, 78 indicated that the policy described the way they work, but the remaining 35 indicated otherwise.

Also, 69 had been given orientation on health and safety issues, but 44 had not been given such orientation. Out of 62 respondents from the nursing department, 49 (70.7%) had been given orientation on health and safety issues, while 13 (29.3%) had not. With regards to the HASS department, 20 (29.3%) had been given orientation on health and safety issues, while 31 (70.7%) had not been given health and safety orientation. Orientation on health and safety issues significantly depends on the department of staff ($p=0.009$). Training on the safe use of hazardous and infectious products significantly depends on the department of respondents ($P=0.005$) [see Table 1]. From Table 1, 103 (98.3%) of respondents from nursing department attested that they had been trained in the safe use of hazardous and infectious products as compared to 2 (1.7%) of respondents from HASS department.

Again, 85 indicated that they faced hazard when performing their duty, while 28 indicated otherwise. While 24 perceived management as providing adequate resources to ensure health and safety of staff, the majority, 89, attested that management had not been providing adequate resources to ensure health and safety of staff. Hazard in performance of duty ($p=0.999$) and allocating resource to ensure health and safety of employees ($p=0.769$) do not significantly depend on departments of respondents. The respondents from nursing department indicated yes (74.1%) and no (25.9%) while those of HASS indicated ‘yes’ (25.9%) and ‘no’ (74.1%) to the question “do you face hazard in the performance of your duty?”

From the data presented above, employees attested that management had given them orientation and training on health and safety issues, but these depended on departments of the staff. Employees from the nursing department were mostly given orientation on health and safety as compared to those of HASS. This practice contradicts one of the five broad strategies that is adopted in the provision of occupational health services to staff of the health sector: promotional activities (Ministry of Health, 2010). According to the guideline, all employees, no matter their departments and roles, should be educated and oriented on health and safety policies and practices to enhance their safety behaviours and adoption of habits that favour healthy lifestyles.

The study asked both the management and the staff whether or not the health and safety policies adequately address health and safety needs of the employees in the hospital and the responses revealed that 7 (70.0%) and 3 (30.0%) of management members indicated ‘yes’ and ‘no,’ respectively, implying that health and safety policy adequately addresses health and safety needs of employees. However, 26 (32.5%) and 54 (67.5%) of staff indicated ‘yes’ and ‘no,’ respectively, revealing that health and safety policy inadequately addresses health and safety needs of employees. The results indicate the opposing views of the two groups of organisational members on the issue. The Medical Superintendent’s narration below supports the view of the management of the hospital.

“The policy is good for all staff including doctors, nurses, administrators, cleaners and everyone who works at the hospital. The policy is there to protect staff from all forms of accidents or health problems associated with the performance of duty. I have not received any resentment from staff about the policy and its practices, and I want to believe that it is serving their interest. You see, no policy is static, and I know the policy will be reviewed from time to time to meet current health and safety needs of staff”.

From the medical superintendent’s narration, as compared to the views of management and employees, we speculate that though the policy does not adequately address the health and safety issues of staff, this is not known to the medical superintendent. This outcome refutes the finding from the study by Akpan (2011) that health and safety policy implementation should include, at all levels and at all times, the participation supervision for effectiveness. Management’s commitment to the policy implementation is, therefore, questionable.

Staff’s Adherence to Safety Work Procedures and Practices

Data were solicited to evaluate the level of staff adherence to, and practice of health and safety policy. The result is presented in Table 2. A high weighted average score (3.50-5.0) meant overall agreement to a statement while a low weighted average score (1-3.49) meant overall disagreement to a statement.

Table 2: Adherence to safety procedures and practices by Staff

	Statements	SD	D	I	A	SA	WA	P-value
Injection safety	Overall	-	-	-	-	-	4.0420	-

	Label all sharp containers appropriately	0 (0.0%)	5 (6.2%)	8 (10.0%)	47 (58.8%)	20 (25.0%)	4.0250	0.000
	I do not recap when administering an injection	0 (0.0%)	0 (0.0%)	12 (15.0%)	52 (65.0%)	16 (20.0%)	4.0500	0.000
	Dispose of needles and syringes after use	0 (0.0%)	0 (0.0%)	17 (21.3%)	42 (52.5%)	21 (26.2%)	4.0510	0.000
PPEs	Overall	-	-	-	-	-	3.6083	-
	Wearing face protective for every procedure	15 (18.8%)	21 (26.2%)	19 (23.8%)	25 (31.2%)	0 (0.0%)	2.6750	0.001
	Wearing gloves for every procedure	1 (1.2%)	11 (13.8%)	6 (7.5%)	41 (51.2%)	21 (26.2%)	3.8750	0.028
	Wearing a protective gown for every procedure	0 (0.0%)	1 (1.2%)	11 (13.8%)	33 (41.2%)	35 (43.8%)	4.2750	0.029
Hand hygiene	Overall	-	-	-	-	-	3.6625	-
	Washing hands before every procedure	12 (15.0%)	7 (8.8%)	26 (32.5%)	35 (43.7%)	0 (0.0%)	3.0500	0.019
	Washing hands after every procedure	0 (0.0%)	0 (0.0%)	16 (20.0%)	26 (32.5%)	38 (47.5%)	4.2750	0.051
Waste Management	Overall	-	-	-	-	-	3.1458	-
	Disposing of used items into infectious bins for incineration	16 (20.0%)	2 (2.5%)	17 (21.2%)	45 (56.2%)	0 (0.0%)	3.1375	0.175
	Separate bins are used for different waste	4 (5.0%)	19 (23.8%)	27 (33.8%)	30 (37.5%)	0 (0.0%)	3.0375	0.013
	Sorting waste	9 (11.2%)	3 (3.8%)	26 (32.5%)	42 (52.5%)	0 (0.0%)	3.2625	0.000
Putting all Practices together	Grand Total	-	-	-	-	-	3.6147	-

SD=strongly disagree; D=disagree; I=indifferent; A=agree; SA=strongly agree; WA=weighted average; Chi-square statistic is significant at the 0.05 level (*results are based on Fisher's Exact test*)

Respondents disagreed (6.2%), were indifferent (10.0%), agreed (58.8%) and strongly agreed (25.0%) that they label all sharp containers appropriately. The weighted average (WA=4.0250) shows an overall agreement to the statement. Respondents were indifferent (15.0%), agreed (65.0%) and strongly agreed (20.0%) that they do not recap needles when administering an injection to patients. Respondents were indifferent (21.3%), agreed (52.5%) and strongly agreed (26.2%) to the statement "I dispose of needles and syringes after used". Majority of the respondents do not recap when administering injection (WA=4.0500) and dispose of used needles and syringes (WA=4.0510). The staffs' adherence to the labelling of sharp containers ($p<0.01$), posture when administering injection ($p<0.01$) and disposal of used needles and syringes ($p<0.01$) significantly depend on staff orientation on health and safety practices when employed.

Employees strongly disagreed (1.2%), disagreed (13.8%), were indifferent (7.5%), agreed (51.2%) and strongly agreed (26.2%) that they wear gloves for every procedure. With regard to wearing of gowns, 1.2%, 13.8%, 41.2% and 43.8% disagreed, were indifferent, agreed and strongly agreed respectively that they wear gowns for every procedure. The result further shows that 18.8% strongly disagreed, 26.2% disagreed, 23.8% were indifferent, and 31.2% agreed that they wear face protective for every procedure. The result indicates that respondents have not been

wearing face protective (WA=2.6750), but they had been wearing gloves (WA=3.8750) and gowns (WA=4.2750) when attending to patients. The use of personal protective equipment (face protective, gloves and gowns) significantly depends on staff orientation on Health and Safety practices when employed.

From Table 2, 20.0%, 32.5% and 47.5% of the respondents were indifferent, agreed and strongly agreed respectively to the statement "I wash my hands after every procedure". The Respondents strongly disagreed (15.0%), disagreed (8.8%), were indifferent (32.5%) and agreed (43.7%) they washed hands after every procedure. Staff washed hands after every procedure (WA=4.2750) but did not wash hands before every procedure (WA=3.0500). Washing hands before every procedure ($p=0.019$) significantly depends on staff orientation on health and safety practices, but washing hands after every procedure did not significantly depend on staff orientation on health and safety practices ($p=0.051$).

The result also indicates that 20.0% strongly disagreed, 2.5% disagreed, 21.2% were indifferent and 56.2% agreed that they dispose of used items into infectious bins for incineration. The respondents strongly disagreed (5.0%), disagreed (23.8%), were indifferent (33.8%) and agreed (37.5%) that separate bins are used for different waste. Out of 80 respondents, 11.2%, 3.8%, 32.5%, and 52.5% strongly disagreed, disagreed, were indifferent and agreed respectively that they sorted waste into different categories before disposal. The staff did not adhere to waste sorting practice (WA=3.2625) and waste disposal practice (WA=3.1375) and to use separate bins for different wastes (WA=3.0375), and this suggests that the staff do not adhere to waste management practices in the Hospital (Overall WA=3.1458). Waste sorting ($p<0.01$) and using separate bins for different wastes ($p=0.013$) significantly depend on staff orientation on health and safety employed, but waste disposal did not significantly depend on staff orientation on health and safety practices ($p=0.175$). The Medical Superintendent confirmed the employees' adherence to most health and safety practices when he narrated that,

I have observed that staff adhere to practices that they believe they have a direct and immediate effect on them. Staffs are less willing to adhere to health and safety practices like waste disposal, thinking that it is the duty of some group of staff. We are still educating them to see all health and safety practices as something that directly or indirectly affect their health and safety.

From the analysis above, adherence to Health and Safety practices in the Hospital is encouraging (Grand Total WA=3.6147), although final disposal of waste was a challenge – challenge emanating from their belief that it is someone else's duty. Regardless, employees adhere to health and safety practices when performing their normal duties. Our finding contradicts the outcome of Guthold et al.'s (2011) finding that compliance with infection prevention and control (IPC) guidelines by health personnel is not very encouraging. IPC referred to the modes of disinfection and sterilisation in facilities, and practices regarding cleaning, healthcare waste management and other aseptic procedures which, fortunately, are practised at the Dunkwa-on-Offin Municipal Hospital.

Hand hygiene is very important in healthcare delivery, but Jumaa (2005) opined that health workers often do not pay much attention to this practice. This is with hand wash before every procedure in hospital as found in the study. Proper hand hygiene reduces the number of potentially infection-causing microorganisms on the hands and decreases the incidence of infection transmission in the health facility. The study indicates that staff adherence to waste management practices is low, an indication that healthcare facilities do not use proper waste disposal methods. The staff of Dunkwa-on-Offin Municipal Hospital did not adhere to any of the waste management practices considered in the study. The non-adherence to waste management practices by the staff is disturbing as the practices are likely to have serious effects including increasing contamination of the soil or groundwater with chemicals or microorganisms, increasing impairment of the immune system, impairment of the development of the nervous system, endocrine system and the reproductive functions. Improper waste disposal also exposes other staff, like labourers and orderlies, to injuries and other infections. These are pointers to the need for management to take proper and regular waste disposal more seriously.

We then wanted to find out the outcome of employees' non-adherence to health and safety policies and practices in the Dunkwa-on-Offin Municipal Hospital by looking at injuries, sicknesses and absenteeism. It was found that the major causes of injury in the Hospital were needle prick (54.7%), slip (13.2%) and exposure to the chemical (12.6%). Major injuries suffered by the staff were needle stick (54.7%), chemical burns (22.6%) and bruises (15.1%). Most employees had an injury on their fingers (34.0%), hands (17.0%) and feet (15.1%). The findings are consistent with the findings of Odeyemi et al. (2005) and Medubi et al.'s (2006) studies in the healthcare sector. The study further asked the respondents (staff) whether or not the injury led to absenteeism. Out of the 53 staff who experienced an injury, 21 (39.6%) were absent from work, but 32 (60.4%) were able to continue work without absenteeism. Most of the injured were absent for a day per injury (47.6%), and the remaining were absent for between 1-3 days per injury (33.3%) and between 4-14 days per injury (19.1%). The quantitative result was complemented by the following narration by the Medical Superintendent.

The hospital has recorded some minor injuries, and most of the injured staff were nurses and midwives. Some of them asked for leave, and they were granted, but because the injuries were not too severe, most of them were given a maximum of one-week sick leave.

This finding confirms the outcomes of many earlier studies. According to EUROFOUND (1997), Ill-health and infirmity are believed to be a predominant factor underlying workers’ propensity to take days off. Much of the absence is short-term and is attributed to injuries, which are major problems for organisations intending to control absenteeism (Oppong, 2017). The author revealed that such injuries include those resulting from accidents and could bring about many sick leave days.

Impact of Non-Adherence to Health and Safety Practices on Absenteeism

At this stage, we assessed the impact of the outcome of non-adherence on employee work attendance in the Hospital, using Pearson’s correlation Coefficient to establish the significance of the relationship between absenteeism and adherence to health and safety practices (see Table 3) and multiple regression to estimate the relative impact of each health and safety practice on absenteeism (see Table 4).

Table 3: Pearson’s Correlation Coefficient Matrix

	Absenteeism	Injection Safety	Personal Protective Equipment	Handing Hygiene	Waste Management
Absenteeism	1.000	-0.814*	-0.859*	-0.778*	-0.824*
Injection Safety		1.000	0.854*	0.799*	0.790*
Personal Protective Equipment			1.000	0.916*	0.926*
Hand Hygiene				1.000	0.856*
Waste Management					1.000

*Correlation is significant at the 0.05 level.

From Table 3, adherence to injection safety practices ($R = -0.814$), personal protection practices ($R = -0.859$), hand hygiene ($R = -0.778$) and waste management ($R = -0.824$) significantly reduce staff absenteeism. This means, if staff adhere to health and safety practices, absenteeism will significantly reduce to improve productivity in healthcare delivery. On the other hand, non-adherence to health and safety practices would increase absenteeism. From Table 3, with a correlation coefficient of -0.814 , the lower the injection safety in hospitals, the higher the rate of patient absenteeism. Also, a poor or lack of usage of personal protective equipment will lead to a high rate of absenteeism, given the correlation coefficient of -0.859 . Poor hand hygiene (-0.778) and poor waste management (-0.824) will lead to a high rate of absenteeism in the health facilities. However, adequate personal protective equipment (0.854), proper hand hygiene (0.799), and ethical waste management (0.790) will guarantee injection safety to patients. Also, adequate personal protective equipment to medical practitioners means proper hand hygiene (0.916) and ethical waste management (0.926). There is also a significant relationship between waste management and hand hygiene (0.856).

Table 4: Multiple Regression result

Model	Unstandardised Coefficient		Standardized Coefficient	t-statistic	p-value	Decision
	B	Std. Error	β			
Constant	5.374	0.319	-	16.866	0.000	supported
Injection safety	-0.238	0.083	-0.306	-2.880	0.005	supported
Personal protective equipment	-0.489	0.200	-0.502	-2.442	0.017	supported
Hand hygiene	0.094	0.130	0.101	0.728	0.469	Not supported
Waste management	-0.267	0.193	-0.204	-1.389	0.169	Not supported
F(80)=62.691’ p=0.000; R²=0.770, Adj R²=0.757						

Multiple Regression is significant at 0.05 level.

Based on Table 4, injection safety ($\beta = -0.238$, $p = 0.005$), personal protective equipment ($\beta = -0.489$, $p = 0.017$), and waste management ($\beta = -0.267$, $p = 0.169$) were found to negatively influence absenteeism. This means that the

less safe patients feel they are in a health facility, the higher the likelihood of absenteeism in hospitals. Also, when health professionals do not use the appropriate personal protective equipment to assure the safety of patients, the patients are likely not to return to the same hospital again. Finally, when the items that are used in treating patients are not disposed of well, patients might feel unsafe, and this would lead to a high rate of absenteeism. However, hand hygiene ($\beta = 0.094$, $p = 0.130$) was also found to influence absenteeism positively. This means that when there are proper handwashing protocols in place, the rate of absenteeism would also increase, but this is not a significant factor to cause absenteeism.

In conclusion, personal protection practices have the most significant impact on absenteeism in Dunkwa-on-offin Municipal Hospital. However, hand hygiene and waste management practices' adherence did not significantly reduce absenteeism. The following are key findings of the study.

- On health and safety practices, it was observed that information on health and safety hazards and protective clothing had been provided. Relating to this, staff are encouraged to report work-related diseases and injuries. Employees received health and safety orientation, which significantly depended on departments, but health and safety training cut across departments. However, the hospital did not have a health and safety committee to oversee the policy and its implementation.
- With regard to adherence to health and safety practices, staff adhered to injection safety, including hand hygiene, and use of PPEs, but there was a problem with safe disposal of waste. Relatedly, adherence to injection inspection and the wearing of PPEs significantly depended on staff orientation on health and safety, but adherence to hand hygiene and waste disposal did not depend on staff orientation.
- Staff had experienced injuries of varied types and degrees, with the three major causes being needle stick, chemical burns and bruises due to non-adherence of health and safety practices.
- Although injuries caused absenteeism, not all did so. Non-adherence to injection safety practices and personal protection practices significantly increased absenteeism, while non-adherence of hand hygiene and waste management practices did not significantly increase absenteeism.

Conclusion

The study concludes that though there are health and policy guidelines by the Ministry of Health (2010) at the hospital, some employees still sustain injuries, some of which lead to absenteeism; while some practices reduce the absenteeism rate, others do not. So far, the hospital has shown a commitment to the implementation of the policy through supplies of safety equipment, staff orientation, training, and supervision, therefore, revealing a significant level of adherence and implementation of almost all the health and safety practices.

Again, adherence to the Health and Safety policy and practices is crucial to the effective running of a health facility as it does not only prevent sicknesses and injuries and their resultant absenteeism but also improves on the hospital's healthcare delivery and safety of patients and other stakeholders. In this vein, we have succeeded, to a larger extent, in our attempt to evaluate the influence of health and safety practices on employee attendance at the Dunkwa-on-Offin Municipal Hospital in Ghana. The outcomes could serve as a guide for the implementation of, and adherence to health and safety policies and practices in the Ghana Health Service.

Regardless of the level of success of our investigation, we found one major challenge relating to a lack of adequate supervision of the health and safety implementation in the hospital. This is partly attributed to the absence of a safety committee. We, therefore, recommend that the Government of Ghana, through the Ministry of Health and its appropriate agencies, should step up its supervisory and monitoring roles to ensure health and safety compliance in all health facilities in the country for quality and sustainable healthcare delivery, while reducing health and safety-related injuries and deaths. Formation of a safety committee will also help to manage the policy implementation, supervision and evaluation challenges.

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Cross-border E-commerce Trade between China and Africa: Review of the Literature

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Abstract

This article explores the opportunities, challenges, as well as the activities of the Chinese governmental and commercial stakeholders to promote cross-border e-commerce trade between China and Africa, based on the classification and correlation analysis of the literature from 2011 to 2019. The results show that the biggest driver for the development of China-Africa cross-border e-commerce trade is the gap between the rapid growth of the African population, especially the middle class, and the limited local capability to satisfy their demand. The rapid development of the internet and mobile internet is another driving factor. The biggest challenge is the last mile delivery of logistics, and online payment issues in Africa. At the macro-level the Chinese government has promoted measures such as infrastructure investment, e-commerce test zones and the establishment of pilot projects. At the firm level, Chinese companies have focused on solving practical micro-level local operational problems such as logistics, online payment, and talent training. The results also show that the referred literature is still in its infancy, mostly theoretical and less practical, and requires more in-depth domain specific analysis in the future.

Keywords: Africa, China, cross-border trade, e-commerce, literature review, trade

Introduction

With the overall slowdown of global trade growth in past years, the development of China's import and export trade has also decelerated. In contrast, China's cross-border e-commerce has experienced rapid development. From the scale of transaction perspective, it has shown continuous rapid growth, and accounted for 27.5% of the total foreign trade in 2016 (Guo, Ming, Wang, & Zhu, 2018). From the transaction volume perspective, it has exceeded nine trillion RMB from 2014 to the end of 2018, which had doubled in five years (Li, 2020). Therefore, the cross-border e-commerce is becoming an indispensable and important part of China's foreign trade. Cross-border e-commerce refers to international trade in which companies or individuals belonging to different customs areas use the Internet to match supply and demand and conclude a trade contract, with the settlement of funds and the delivery of goods and services following thereafter. Cross-border e-commerce results in the import and export of goods and services. Depending on the type of stakeholders involved on both sides of the trade, it is commonly distinguished between Business to Business trade (B2B), Business to Consumer trade (B2C), and Consumer to Consumer trade (C2C) (Guo *et al.*, 2018).

In the global e-commerce landscape, Africa is generally considered to have a great potential for further development. According to Frost & Sullivan's estimates dating from 2018, the size of the African e-commerce market will have reached US \$ 50 billion in 2018, attracting a large number of investors and entrepreneurs into this market (Liu & Li, 2018). Under such circumstances, China-Africa cross-border e-commerce is expected to thrive. However, as outlined below there are also multiple obstacles and challenges to be mastered (Xu & Qing, 2018).

The purpose of this article is to investigate the opportunities and challenges in the cross-border e-commerce trade between China and Africa, and the related activities of the Chinese government and firms. The analysis will provide a starting point for subsequent theoretical research and practical activities. Enterprises and governments worldwide can benefit from learning about the Chinese experience in order to promote their cross-border e-commerce with Africa.

Methodology

This article is based on a comprehensive theoretical literature review of sources in Chinese and English language. The search period was set from 2011 to 2019. This is the period when African e-commerce began to emerge and gradually develop, and where journals, articles and reports could be obtained easily, and with sufficient scope.

Four steps of research were followed. First, identification of research keywords. The research was started with search terms such as "China-Africa e-commerce", "China-Africa cross-border e-commerce", "Africa e-commerce", "Africa cross-border e-commerce". The search results were evaluated, and references from these sources were used for further investigation ("snowball method").

Second, identification of sources of both Chinese and English languages. Literature retrieval in Chinese: Search articles published on China National Knowledge Infrastructure (CNKI) from 2011 to 2019, as well as articles published on authoritative sources, such as People's Daily Online, Xinhua Daily, Ministry of Foreign Affairs website, Alibaba Research Institute, Economic Daily, etc. Literature retrieval in English: Search articles retrieved through Springer Link and Google Scholar from 2011 to 2019, as well as articles published on authoritative sources, such as the Ecommerce Foundation, United Nations Industrial Development Organization (UNIDO), United Nations Conference on Trade and Development (UNCTAD), Global System for Mobile Communications Alliance (GSMA), etc.

Third, search results filtering. By establishing the correlation between the content of the search results and the theme of this paper, the usefulness of the retrieved literature was determined. Thirty-two sources in Chinese language and 23 sources in English language were finally selected. Fourth, content classification and correlation analysis of selected sources. The main content of the above 55 documents was analyzed; opportunities, challenges and measures described in each source were extracted and summarized, and the results presented in the form of a table (see Appendix I).

Literature Review and Discussion

Opportunities and drivers for cross-border e-commerce trade between China and Africa

As summarized in Figure 1, the rapid development of the China-Africa cross-border e-commerce market is driven by multiple factors, including the rapid development of the Internet and mobile communication, a low level of development of the local e-commerce industry, a large number of emerging new consumers, and support of policies and regulations. These factors indicate a substantial market potential.

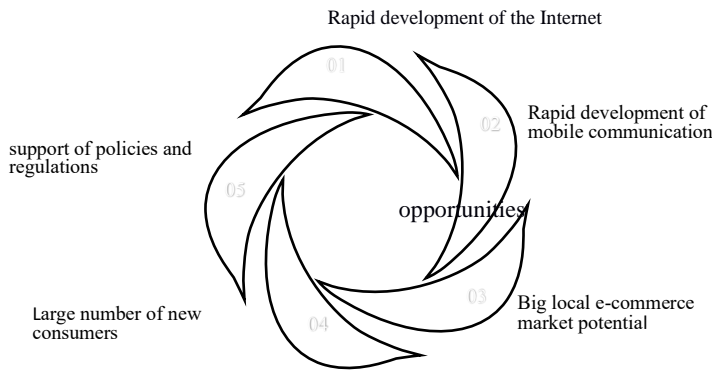


Figure 1: Drivers and opportunities for China-Africa cross-border e-commerce trade

First, rapid development of the Internet. Abundant literature is available in this area. Most researchers mainly analyzed from the perspective of investment in Internet infrastructure construction and network coverage in African countries. They believe that the current popularity and utilization of Internet in African countries have greatly increased, which provides good conditions for the development of e-commerce (Huang, 2019; .Liu & li, 2018; .Xu & Qing, 2018; Zhu & Song, 2018). The Internet penetration rate has continued to increase from 25% in 2015 to 43% (forecast) in 2018, as shown in Figure 2 (Lone, Fávero & Packiarajah, 2018).

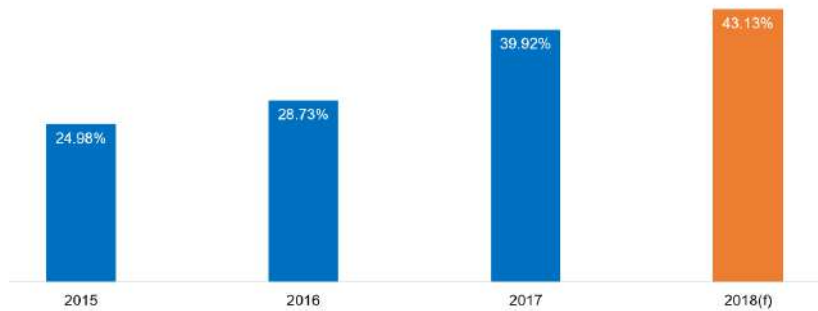


Figure 2 Internet penetration in Africa

Source: Ecommerce Foundation; Worldometers, 2018 *Countries incl: Nigeria, South Africa, Egypt, Algeria, Morocco, Kenya, Angola, Ghana, Ethiopia, Sudan, Tanzania, Tunisia

In Nigeria, the Internet penetration rate reached 70% in 2018, and it also has the most e-commerce sites among Africa’s countries. 40% of African e-commerce companies are headquartered in Nigeria. In Kenya, the Internet penetration rate in 2018 was 79%, and Kenya is the headquarters of M-Pesa, a mobile wallet provider launched by Vodafone in 2007. 85% of Kenyans use electronic payment methods, including bank accounts, mobile prepaid cards or other payment products (Lone et al, 2018). South Africa has the most advanced telecommunications network infrastructure among the emerging markets (Killian & Kabanda, 2017), with an Internet penetration rate of 65%. South Africans have begun shopping on US, UK, and Chinese websites (Lone et al, 2018).

Second, rapid development of mobile communication. From the analysis of the literature, Africa’s e-commerce market is mainly mobile, and mobile e-commerce is the cornerstone of African e-commerce development. The combination of mobile networks and mobile payment has opened up good shopping opportunities for areas with very few physical stores and goods, as well as a favorable environment for cross-border e-commerce. Africa has the fastest growing smartphone market globally (Huang, 2019). According to the research firm Statista, mobile device usage in Africa reached 61% in 2018, which is much higher than the usage of any other device, as shown in Figure 3 (Lone et al, 2018). Global Mobile Communications Alliance (GSMA) data showed that by the end of 2015, 46% of Africans have registered for mobile services (.Xu & Qing, 2018), and the number of mobile users in sub-Saharan Africa is expected to increase from 456 million at the end of 2018 to more than 600 million by 2025, accounting for about half of the region's population (China-Africa Trade Research Center, 2019). Ovum, a telecommunications consulting company, predicts that the number of mobile subscribers in Africa will reach 1.32 billion in 2020 (Xu & Qing, 2018).

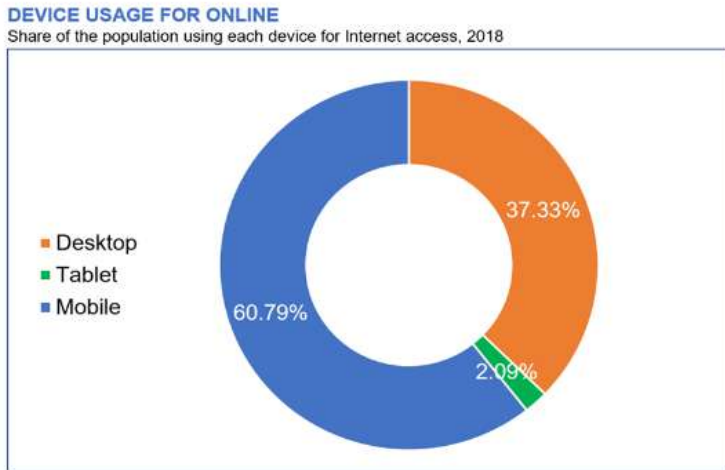


Figure 3 Majority of population (61%) uses mobile devices for internet access

Third, infancy of local e-commerce industry indicating large market potential. According to the literature that the overall African industry is in a low development stage, the productivity is low, and the product availability hardly meets market demand. The early stage of Africa's industrialization is manifested in the low manufacturing output value, the low employment rate of manufacturing workers and the low export volume of high-tech manufactured products (.Li, 2016). Between 1990 and 2011, the proportion of global manufacturing value added in sub-Saharan Africa increased by only 0.13%, making it one of the regions with the smallest increase among the developing regions (United Nations Industrial Development Organization [UNIDO], 2015). African countries, especially those in sub-Saharan Africa, have an unbalanced industrial development and a relatively poor industrial base, resulting in a scarcity of local goods, lagging retail development, and a small number of physical stores. Thus, consumers have a significant demand for overseas products (.Liu & Wang, 2019). The emergence of cross-border e-commerce has changed the pattern of the traditional trade value chain. In contrast to traditional Chinese foreign trade commodities, such as textiles and clothing, electronic products are less difficult to transit to e-commerce, and their products are highly competitive in the African market (.Xu & Qing, 2018). Chinese commodities have enriched the consumption choices of African people, and diversified products have met the needs of consumers at different levels (.Xu & Qing, 2018).

Fourth, large number of new consumers. Most authors believe that the rapid population growth in Africa, especially the rapid growth of the middle class, is an important driving factor for the development of e-commerce. The African demographic dividend will result in a large demand in the African e-commerce market (Zhu & Song, 2018). The population of Africa is growing rapidly, forecast to reach 2.5 billion by 2050 and exceed 4 billion by 2100 (Pison, 2017). The number of households belonging to the middle class has increased by 230% since 2000 among the 11 countries with the best economic performance in sub-Saharan Africa (Economic and Commercial Office of the Embassy in the Republic of Congo, 2014). As disposable income increases, this rapidly growing population, including professionals and business people, will surge in its demand for high-end goods abroad. Research firm Statista estimates that the revenue of African e-commerce industry is \$16.5 billion in 2017 and will reach \$29 billion by 2022 (Kaplan, 2018).

Besides Support of Policies and Regulations

In order to support and regulate the development of the e-commerce industry, many African countries have introduced relevant e-commerce laws and regulations: therefore, rich literature is available in this field. Tanzania's e-commerce legislation issued the “Electronic Transaction Act 2015” in 2015, followed immediately by the “National Information and Communications Technology Policy 2016” in 2016. These laws regulate e-commerce, other digital tools and the digital environment in general. In 2016, Kenya introduced the “Kenya Information and Communications (Electronic Transactions) Regulations 2016,” which provides the regulation of electronic transactions. In 2016, the South African National Information and Communications Technology Policy proposed to set up industry-specific strategies to encourage different industries to adopt and use ICTs and promote local e-commerce (Budree, 2017). In June 2019, the African Free Trade Area Agreement signed by 44 countries in Africa came into effect, and the world's largest single market was born. E-commerce will play an increasingly important role in the implementation of the African Trade Area and the digitalization of the African continent (Economic and Commercial Office of the Embassy in Guinea, 2019; Zhang & Wang, 2019). These are just a few examples of policies

promoting and protecting a beneficial environment for e-commerce, including cross-border e-commerce. They have the potential to provide a conducive environment for investment in that area.

Challenges of Cross-border E-commerce Trade between China and Africa

As summarized in Figure 4, the main challenges are high logistics cost and obstacles for online payments. Further challenges include limited trust in processes and stakeholders, market entry barriers, educational background of population and language barriers. The analysis shows where governments, companies and other stakeholders need to take measures in order to increase e-commerce between China and Africa. Many of the results also apply to e-commerce from other regions to Africa and are, therefore, helpful worldwide.

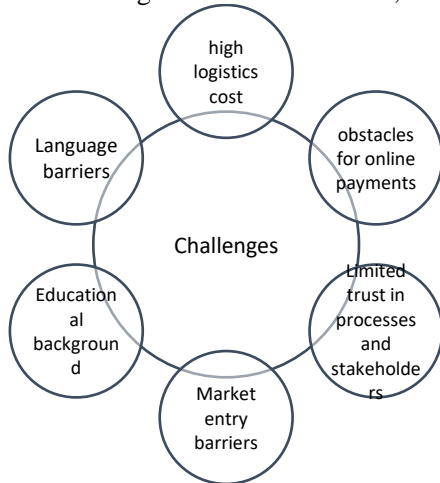


Figure 4 Main challenges for China-Africa cross-border e-commerce development

First, logistics costs are high due to infrastructure under development. From a logistics infrastructure perspective, the infrastructure is still poor in parts of Africa; the roads, ports and air transport are still under development, the power supply and postal services are not reliable (Huang, 2019; Pedroncelli, 2017; Wu & Guo, 2019). The performance of infrastructure sectors and dimensions for most countries in Sub-Saharan Africa is dismal and that infrastructure is a bottleneck to development (Calderón, Cantú, & Chuhan-Pole, 2018), preventing global logistics companies from entering many countries. From a logistics distribution perspective, most African countries lack a street address system (Matthews, 2016), which results in the lack of a domestic delivery service (Li, 2018), and many of its residents live in rural areas (Ibam, Boyinbode, & Afolabi, 2018). Therefore, the cost of the last mile delivery is expensive, the transportation time is long, and it is not easy to track the logistics process. These problems have become a significant obstacle for the development of Africa’s e-commerce (Liu & Wang, 2019).

Second, online payments are not yet widely accepted. Many authors consider the problems of online payment as another important obstacle to wider acceptance of e-commerce in Africa. Cash on delivery is the main payment method that online merchants, like Takealot, Jumia and Konga, must live with (Ibam et al., 2018). In Nigeria, the country with the best e-commerce development in Africa, 67% of users pay by cash on delivery, 23% pay by credit or debit card, of which 10% use mobile payment ("Mobile Report Nigeria 2018," n.d.).

The literature explains the low online payment rate along three factors. First, the penetration rate of payment cards in most African countries is low. There are only about 10 million credit or debit card holders in Egypt, accounting for about 10% of the total population. About 80% of e-commerce transactions are carried out by cash on delivery (Liu & Wang, 2019; Lone et al., 2018). Second, most African countries do not have sufficient mobile commerce telecommunications infrastructure, and they lack appropriate legal frameworks and policies to regulate mobile payment systems (Gutierrez & Choi, 2014); therefore, the security of cross-border banking and financial networks is not guaranteed. Third, because the domestic banking system lacks the necessary international connections, some countries in the region may only be able to collect payments from foreign credit card holders through expensive intermediaries. Although global e-commerce platform providers offer integrated payment solutions, many African companies cannot actually use these solutions, because they lack the necessary foreign bank accounts or subsidiaries (Pedroncelli, 2017). All of these affect the convenient payment and settlement of cross-border e-commerce, making cross-border trade inefficient.

Third, processes and stakeholders enjoy only limited trust. The issue of integrity is also one of the focal points of the literature, with network security and industry environment as the main causes of integrity issues. Africa has a comparatively high rate of online fraud: around 7% of online transactions in Africa were fraudulent in 2012, especially in Nigeria and Ghana (Siwicki, 2013). A survey of South African users showed that most respondents replied that they prefer to touch the product before buying, 36% said they do not trust online payments, and 8% do

not trust websites (United Nations Conference on Trade and Development [UNCTAD], 2015). In Egypt, the biggest obstacle to e-commerce adoption is said to be the issue of insufficient trust in security on the Internet (Zaied, 2012). Second, many African companies often do not have access to electronic trust tools such as digital signatures or certain security standards, so Chinese companies conducting cross-border trade on African e-commerce platforms face the challenge of winning the trust of consumers in these countries (Meltzer, 2014). In addition, the political instability in some African countries (Liu & Li, 2018; Wu & Guo, 2019; Xu & Qing, 2018), immature e-commerce systems (Huang, 2019), insufficient credit mechanisms in the communications industry, and the inappropriate legal and regulatory system (Xu & Qing, 2018) are also prominent reasons that hamper trust in processes and stakeholders.

Fourth, protectionist policies raise market entry barriers. The literature in the field of market entry mainly focuses on customs clearance policies and customs declaration procedures. Most African countries are currently pursuing protectionist policies with strict tariff and non-tariff barriers (Song, 2019), which apparently puts obstacles to international trade, including cross-border e-commerce. According to the South African customs procedures, the South African Taxation Agency (SATS) has about 90,000 product codes, which are strictly applicable to all imported products. Foreign exporters are strongly encouraged to seek local agents with a thorough understanding of South African law for customs clearance ("South Africa", 2019). Similarly, Nigerian customs clearance procedures are lengthy and complicated (Ibani et al., 2018), and cumbersome customs procedures may further hinder the smooth completion of cross-border e-commerce transactions (Lawrence, 2011; Liu & Wang, 2019; Xu & Qing, 2018). Due to the typical characteristics of e-commerce trade with its small and multiple batches, customs clearance through local agents will inevitably increase costs. Especially for small and medium-sized enterprises, there is a possibility that the customs clearance costs are too high and they will give up entering a country.

Fifth, the educational background is comparatively low. A study found that education level is positively correlated with the possibility of EU countries participating in cross-border e-commerce trade, and cross-border e-commerce transactions require a higher level of education (Valarezoa, Pérez-Amaral, Garín-Muñoz, Herguera García & López, 2018). The literature shows that the average education level of the population of most African countries is comparatively low at present (Liu & Li, 2018; Xu & Qing, 2018). This has two side effects; on the one hand, lower workforce qualification in Africa results in a lack of specialized digital talents who are able to develop, maintain and run an e-commerce infrastructure (Huang, 2019; Wu & Guo, 2019). On the other side, Africa's literacy rate lags behind the world: only 64% of Africans can read and write. In the West, literacy rates are generally above 90%, whereas in Asia it is even higher (Wanyonyi, 2018). The illiterate either do not use e-commerce platforms, which limits market size, or they require training, which increases the cost of e-commerce.

Besides, English as the main language in e-commerce creates barriers for large parts of the African population. The literature shows that Africa is the world's most linguistically diverse continent (Xu & Qing, 2018). For example, Nigeria, Africa's largest populous country and the largest economy, has more than 400 languages in 250 tribes. There are 11 official languages in South Africa, and only 9.6% are native English speakers. According to census data collected by the South African government in 2011, isiZulu is the most spoken language with 11.6 million speakers, followed by isiXhosa with 8.15 million and Afrikaans with 6.85 million. Seychelles is the smallest and least populous country in Africa with less than 100,000 people, but still there are three languages in use, i.e., English, French, and a French-based Creole (Wang, 2018). As 53.2% of all websites use English as primary language, they are not accessible to many inhabitants of the continent, especially in countries where English is not a first or second language (Mzuku, 2016). In order to promote the development of e-commerce, it would be helpful to set up a platform in local language. 72% of consumers are more likely to purchase an item if the item is described in their native language, and local language has been found to be an even more important purchasing factor than price (E. Turban, King, Lee, Liang, & Turban, 2015).

Activities of the Governments and Firms

Chinese and African governments and enterprises are exploring and practicing different measures in order to overcome the obstacles discussed in the previous section, and to promote the development of China-Africa cross-border e-commerce trade. The measures are summarized in Table 3 of Appendix I. The governments perform activities on macro level, such as transportation and communication infrastructure investment and construction, policy design and implementation, joint pilot projects. Firms are attempting to solve the obstacles at micro level, such as localization of operations and business websites, development of online payments, overseas warehouse construction, talent training, digital infrastructure construction, establishment of integration platforms. The measures on both levels have effectively supported the sustainable development of China-Africa cross-border e-commerce trade.

Activities of governments

First, the Chinese government invests in transportation and communications infrastructure. According to the literature China and Africa have concluded co-operation plans on the digital economy, combining traditional infrastructure construction of railways, highways, power, bridges, and dams, with the construction of a digital networks infrastructure to realize a coordinated development of both types of infrastructure (Fang, 2019; Hung, 2019). The African Infrastructure Construction Consortium (ICA) released a report stating that from 2011 to 2016, China's investment in the African infrastructure sector averaged \$12 billion per year, which is Africa's largest source of investment in infrastructure (Economic and Commercial Office of the Embassy in Senegal, 2017). Promoted by co-operation agreements dating from 2017, China UnionPay Network has established networks in more than 50 countries in Africa to provide guarantee conditions for cross-border payments. In 2017, the export growth rate of cross-border e-commerce goods inspected and released by China Customs reached 41.3% (Ministry of Commerce of the People's Republic of China, Department of Electronic Commerce and Informatization, 2018). In July 2018, China committed to investing \$14.7 billion in South Africa and providing loans to its national power companies and logistics companies to support the expansion of South Africa's cross-border e-commerce infrastructure (Phoenix Business Daily, 2018).

Second, China has implemented cross-border e-commerce pilot projects, improved policies, regulations, and operating processes. In 2012, China began the construction and operation of "Cross-border E-commerce Pilot Cities", and in 2015 of "Cross-border E-commerce Comprehensive Experimental Zones" (CBECCEZ). The design of CBECCEZ encompasses relevant policy frameworks, including six systems (information sharing, financial services, intelligent logistics, e-commerce credit, statistical monitoring, and risk prevention and control systems) and two platforms (online comprehensive service platform and offline Integrated park), and realizes institutional innovation (Yang, 2017). In the first half of 2017, the combined sales of cross-border e-commerce import and export of 13 CBECCEZs more than doubled over the previous year and exceeded 100 billion RMB. In 2013, the Chinese government started its "Belt and Road" Initiative, a set of large worldwide logistics projects, which has the potential to support the goals of the African "2063 Agenda" (Q. W. Zhang & Zhang, 2016). The new Chinese E-Commerce Law, which came into effect in 2019, establishes and improves customs, taxation, entry-exit inspection and quarantine, payment and settlement management systems aimed to cater to the needs of cross-border e-commerce (Li, 2018).

Activities of firms

This section takes a case-based approach where we highlight activities of individual companies. The case examples have been clustered into six types of firm activities: localization of operations, development of online payments, construction of overseas warehouses and logistics, talent and skill development, construction of digital infrastructure, and the establishment of integration platforms.

First, firms have localized operations, management and language. Kilimall is an e-commerce platform established by a Chinese start up in Africa. It is currently the largest online shopping mall in Kenya. Kilimall has integrated local features into solution design, marketing and after sales services (Jessica, 2017) and established a local operation management team (Zhu & Song, 2018). Alibaba Dharma Institute uses machine translation to help small and medium sellers on the Alibaba AliExpress platform to provide buyers and sellers with machine translation services in more than 20 languages to automatically translate product details and reviews into local languages. Real-time AI language translation of customer service and business consulting is also provided (Li, 2018), improving business and communication efficiency.

Second, companies have developed sophisticated online payment platforms. The most popular payment method for cross-border e-commerce shopping in Africa is cash on delivery, and mobile payment is the second after that. In East Africa, two thirds of adults use mobile payments often (Global Mobile Communications Alliance [GSMA], 2017). Consequently, Kilimall with its e-commerce platform in Kenya cooperates with the largest local mobile phone payment provider to collect payments from customers, and to transfer payments to sellers on the platform (Jessica, 2017). In 2015, Tencent cooperated with local banks in South Africa to launch its WeChat wallet service, which includes user-to-user money transfer, real-time ATM machine withdrawal, and offline code scanning payment services. Tencent's local partners include retailers such as SPAR, SPAR Tops and Cambridge Food Stores (Xu, 2015). In 2017, Alipay, a Chinese mobile payment solution, cooperated with Zapper, a South African payment company, to promote the development of online payment in Africa, further expanding the payment options of African users (Li, 2017).

Third, firms have established overseas warehouses and logistics. To solve the last mile delivery problem and improve delivery efficiency, E-commerce company Kilimall is building its own logistics system in Kenya (Zhu & Song, 2018). In a combination of self-operated logistics and third-party logistics, Kilimall sets up local self-operated intra-city logistics team for the last mile delivery, while inter-city delivery is undertaken by third-party logistics. Kilimall constructed overseas warehouses and stores products in demand in advance, so that customers can receive

goods within 1-3 days after placing orders (Jessica, 2017). In 2015, Yuantong Express Co. Ltd. signed a co-operation agreement with the Zimbabwe Ministry of Posts and Telecommunications. Zimbabwe Post became the partner of Yuantong's parcel service from China to Zimbabwe and other countries and regions in southern Africa. Thus, the transfer time between China and Africa on the Rookie platform, an Alibaba joint venture with Yuantong and other logistic companies, has been shortened from an average of 70 days to 20 days. Diversified logistics solutions, such as Automated guided vehicle (AGV) robots, intelligent express boxes (cabinets), unmanned warehouses, and smart logistics parks are expected to improve Africa's logistics efficiency in the future (State Post Bureau of The People's Republic of China, 2018). The China National Building Materials Corporation has proposed a comprehensive foreign trade operation model of "cross-border digital trade and shared overseas warehouse" for Africa. It integrates e-commerce elements into the traditional international trade model and provides one-stop foreign trade for African countries, such as South Africa, Kenya, and Sudan (Secretariat of the Organizing Committee of the First China-Africa Economic and Trade Fair, 2019).

Fourth, companies successfully developed talent and skills. In their quest to tap the market potential of e-commerce between China and Africa, Chinese companies are engaged in promoting e-commerce awareness and confidence among the African workforce and consumers. They offer IT training of local employees, improve the operational performance and high standard of online systems, aimed at increasing the knowledge of consumers about e-commerce, and attempt to raise confidence in electronic payment systems (Ibam et al., 2018). Huawei has trained more than 30,000 information and communications technology professionals in seven training centres in Africa. The "Seed of the Future" talent development project has been implemented in African countries such as Kenya, Zambia, and Zimbabwe. It is expected that 1,000 African students will benefit within five years (Xu, 2015). Alibaba has launched three training programs: Inviting African entrepreneurs to study in China, "African Internet Entrepreneur Fund," and "Jack Ma Africa Youth Entrepreneurship Fund." E-commerce education and skills training were held at the University of Rwanda in August 2018, attracting 50 university teachers from 9 universities, and aiming to cover 2,500 African students (Guo, 2018; Hou, 2018). In 2019, the Alibaba Group invited entrepreneurs from countries along the Belt and Road region to share knowledge about the digital economy. Of the more than 200 participants 87 were from Africa (AliResearch, 2019).

Fifth, Chinese companies contributed to the digital infrastructure construction. Chinese companies were involved in the construction of digital infrastructures in African countries. Huawei launched Africa's first ICT innovation experience centre in Johannesburg, South Africa, where visitors can experience research and development achievements such as 5G technology, virtual reality, and smart home (Xinhua News Agency, 2017). ZTE, a large Chinese network provider, has supplied products and services to virtually all countries in Africa (Zhang, 2015). As part of its corporate social responsibility (CSR) initiatives, Alibaba Group and the Kenyan Animal Protection Department jointly developed a "Wild Animal Intelligence Protection Project," which aimed to use big data and artificial intelligence technology to form a digital system for the protection of wild animals (AliResearch, 2019). Besides, Chinese companies have strived to establish integration platforms. E-commerce platforms are moving towards intensification, integration of diverse value-added services, and integration with local platforms. All these trends simplify trade and increase usability. In 2017, the "China-Africa Cross-border E-commerce Platform with Comprehensive Supply Chain Integrated Services" was launched to facilitate the "information exchange, smooth trade, and cultural integration" of trade between China and Africa (Liu & Li, 2018). Alibaba's Electronic World Trade Platform (eWTP) was launched in Rwanda. It provides an infrastructure for e-commerce in both directions, from China to Africa and vice-versa (Hou, 2018; Zhang & Wang, 2019).

Conclusion

Based on the classification and correlation analysis of fifty-five documents from 2011 to 2019, this article explores the opportunities, challenges as well as the activities of governments and enterprises to promote cross-border e-commerce between China and Africa. The following conclusions can be drawn:

The potential business opportunities of cross-border e-commerce between China and Africa are large, and on a rapid growth path. The referred literature mostly provides an overall analysis on aspects like trade volume, population growth, Internet and mobile infrastructure development etc., often with a continent-wide horizon. However, the national or regional level analysis is to be strengthened to help understand the real development status of each country. This can help an e-commerce company to find the fine-grained customer requirements and targeted markets in Africa. Cross-border e-commerce between China and Africa still faces many challenges, the most significant ones being high logistics costs, low online payment rates, and complex customs procedures. The resolution of these issues is key for e-commerce development; however, the current literature mostly focuses on theoretical and general analyses of these challenges. Future research should tackle these domain specific issues more in-depth. It must be based on sound theory, but it would be helpful for practical policy and management if it also was clearly application oriented. This can be achieved by joint efforts of organizations (e.g., some e-commerce associations), enterprises and academics; therefore, joint research and publications are expected in the future.

The Chinese government and firms are promoting the development of China-Africa cross-border e-commerce; African governments invest in infrastructure and have started to set up conducive regulations. Some joint pilot activities on governmental and firm level, such as cross-border e-commerce experimental zones, local warehouse and logistics infrastructure setup, online payment development, are good attempts to solve problems, firstly, on a small scale, and then promoting into broader scope. Further attention on how to standardize and promote these activities deserve deep study if they turn out to be valid measures for cross-border e-commerce development. Although this research focuses on e-commerce between China and Africa, we believe that enterprises and governments worldwide can benefit from learning about the Chinese experience in order to promote their cross-border e-commerce with Africa.

Appendixes

Table 1: Major drivers and opportunities for China-Africa cross-border e-commerce

Theme	Drivers and Opportunities	Source
The development of the Internet	-increasing investment in the Internet -increasing Internet coverage	Xu,X.P. ,& Qing.J.(2018) ; Liu, X.C.&Li.M.X.(2018); Huang, Y. P.(2019); Zhu,X.J.,&Song,R.Y.(2018) ; Killian,D.,& Kabanda,S. (2017); Lone,S., Fávero,I.,& Packiarajah,S.(2018)
The development of the mobile communication	-mobile penetration is high -mobile payments are becoming more accessible	Xu,X.P.,& Qing.J(2018); Liu, X.C.,&Li.M.X.(2018); Huang, Y. P.(2019) ; Wu, G. X. ,& Guo,W.G. (2019); Liu,R.Y.,&Wang,Z.(2019); Zhu,X.J.,&Song,R.Y.(2018); China-africa Trade Research Center. (2019)
Low level of development of local e-commerce industry indicating big potential market	-limited offline shops -scarce commodities -product supply relies on imports -goods made in China are abundant	Hou, Y. L. (2018); Li, Z.B. (2016); UNDIO (2015); Liu,R.Y.,&Wang,Z.(2019)
Rapidly increasing market size	-rapid population growth -large demand in the e-commerce market -rapid growth of the middle class and their purchase power	Zhu,X.J.,&Song,R.Y.(2018); Kaplan, M.(2018); Liu, X.C.,&Li.M.X.(2018); Pison,G.(2017); Economic and Commercial Office of the Embassy in the Republic of Congo.(2014); Xu,X.P. ,& Qing.J.(2018); Liu,R.Y.,&Wang,Z.(2019)
Support of e-commerce by policies and regulations	-various national policies support -free trade area agreements	Economic and Commercial Office of the Embassy in Nigeria (2015); Lone,S., Fávero,I.,& Packiarajah,S.(2018); Budree,A.(2017); Huang,Y.P. (2019); Economic and Commercial Office of the Embassy in Guinea, 2019; Zhang, M.,&Wang,X.P.(2019); Xu, X.P.,&Qing,J.(2018)

Table 2: Main challenges facing China-Africa cross-border e-commerce

Theme	Challenges	Source
High logistics costs	-lack of electricity, poor transportation -large proportion of rural population -insufficient broadband networks -limited port construction in inland cities	Xu,X.P. ,& Qing.J.(2018) ; Wu, G. X.,& Guo,W.G. (2019) ; Huang, Y.P.(2019) ; Liu, X.C.,&Li.M.X.(2018) ; Liu,R.Y.,&Wang,Z.(2019) ; Pedroncelli,P.(2017); Ibam, E.O., Boyinbode, O.K.,& Afolabi, M.O. (2018);

	- lack of street address systems - local delivery services not yet well developed	Matthews,C.(2016); Li, Q. (2018) ; Calderón,C., Cantú,C.,& Chuhan-Pole,P.(2018)
Obstacles for online payment	-limited accessibility of banking services, lack of sophisticated banking products -low credit/debit card holding rate, low acceptance of credit card online payment -foreign exchange control -inability to access electronic trust tools -insecure cross-border banks and financial networks -lack of laws and regulations on mobile payment	Song, W. (2019) ; Liu,R.Y.,&Wang,Z.(2019) ; Xu,X.P. ,& Qing.J(2018) ; Li, Q.(2018) ; Ibam et al.(2018); “Mobile Report Nigeria 2018”.(n.d.); Lone,S., Fávero,I.,& Packiarajah,S.(2018); Gutierrez, E. ,& Choi, T. (2014) ; Pedroncelli,P.(2017)
Limited trust in processes and stakeholders	-perceived lack of Internet security -distrust in online networks, online websites, online payments -high online fraud rates -lack of mature e-commerce systems -inadequate laws and regulations -lack of credit mechanisms in the communication industry	Song, W. (2019) ; UNCTAD.(2015) ; Xu,X.P. , & Qing.J.(2018) Liu, X.C.,&Li.M.X.(2018) ; Wu, G. X. ,& Guo,W.G. (2019) ; Siwicki,B.(2013) ; Huang, Y.P.(2019) ; Xu, X.P.,&Wang,Z.(2018) ; Zaied Abdel Nasser H..(2012) ; Meltzer,J.(2014);
Market entry barriers	-complex customs clearance procedures -difficult customs supervision -high tariffs and tariff barriers	"South Africa", (2019); Ibam, E.O., Boyinbode, O.K., Afolabi, M.O. (2018); Xu,X.P. ,& Qing.J.(2018) ; Liu,R.Y.,&Wang,Z.(2019) ; Huang, Y.P.(2019) ; Song, W. (2019) ; Lawrence,J.E. (2011) ;
Educational background of population	-low education level -low literacy rate -lack of specialized digital talent	Xu,X.P. ,& Qing.J.(2018) ; Liu, X.C.,&Li.M.X.(2018) ; Wu, G. X.,& Guo,W.G. (2019) ; Huang, Y. P.(2019) ; Valarezoa,Á.,Pérez-Amaralb,T.,Garín-Muñozc,T.,Herguera Garcíaab,I.,&Lópezb,R.(2018) ; Wanyonyi, P.(2018);
Language barriers	-language diversity, language abilities and competence -limited number of languages available for e-commerce websites	Xu,X.P.,& Qing.J.(2018) ; Wang,H. (2018) ; Mzuku, K.(2016) ; Turban E., King D., Lee J.K., Liang T.-P., & Turban D.C. (2015);

Table 3: Activities of governments and firms

Perspective	Theme	Activities (selected)	Source
Governments	Investment in transportation, communication and other infrastructure	-Railway, highway and Internet infrastructure construction -China UnionPay Network has established networks in more than 50 African countries -China has committed to invest in power and logistics in South Africa	Economic and Commercial Office of the Embassy in Senegal.(2017); Ministry of Commerce of the PRC Department of Electronic Commerce and Informatization .(2018);Phoenix Business Daily.(2018); Fang, F. (2019); Huang, Y. P.(2019)

	-Implementation of cross-border e-commerce pilot projects -Improvement of policies, regulations and operating processes	-Implementation of "cross-border e-commerce pilot city" and "cross-border e-commerce comprehensive experimental zone" -Benefitting from China's "Belt and Road Initiative" to support Africa's "Agenda 2063" -Implementation of the "e-commerce Law"	Yang, J.L.(2017); Zhang, Q.W., & Zhang, M.(2016); Li, Q.(2018)
Firms	Localization of operations	-localized e-commerce website and languages -set up a localized management team	Jessica (2017) ; Zhu, X.J., & Song, R.Y.(2018); Li, W.Y. (2018)
	Development of online payments	-Kilimall cooperates with local mobile payment providers for online payment -Tencent cooperates with Bank of South Africa to develop WeChat wallet service -Alipay cooperates with South African payment company Zappa to develop online payment	GSMA.(n.d); Jessica.(2017); Xu, R.(2015); Li, Z.W.(2017)
	Overseas warehouse construction and logistics	-Kilimall builds its own overseas warehouse in Kenya -Yuantong Express and Zimbabwe Post establish an overseas warehouse operation model -China National Building Materials Group proposes a "cross-border digital trade and shared overseas warehouse", an African-oriented integrated service operation model for foreign trade	Jessica,(2017); State Post Bureau of The People's Republic of China.(2018); Zhu, X.J., & Song, R.Y.(2018); Secretariat of the First China-Africa Economic and Trade Fair.(2019)
	Talent and skill development	-Huawei trains ICT professionals for Africa -Alibaba invites African entrepreneurs to study e-commerce knowledge and experience in China and establishes a fund support plan	Xu, R.(2015) ; Ibam et al. (2018); Hou, Y.L.(2018); GUO, Y.(2018); AliResearch.(2019)
	Digital infrastructure construction	-Huawei builds information and communication technology innovation experience centers -ZTE builds communication networks for African governments and enterprises -Alibaba and the Kenyan Animal Protection Department jointly develop the "Kenya Wildlife Intelligent Protection Project"	Zhang, J.X.(2015); Xinhua News Agency.(2017) ; AliResearch.(2019); Liu, R.Y., & Wang, Z.(2019)
	Establishment of integration platforms	-"China-Africa Comprehensive Supply Chain Integrated Services	Liu, X.C., & Li, M.X.(2018); Hou, Y.L.(2018); Zhang, M., & Wang, X.P. (2019)

		for Cross-border E-commerce Platform" launched -Alibaba's eWTP (Electronic World Trade Platform) Platform established in Rwanda	
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Banks' Governance, Capital Structure and Performance in Ghana

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Abstract

The paper explores the mechanisms through which banks rely on good governance to attract more equity capital towards the improvement of their profitability. The study employed a panel data for twenty-nine commercial banks in Ghana between the years from 2003 to 2015, using the Generalized Method of Moments (GMM), Fixed Effects and Random Effects estimators. The results are robust notwithstanding the estimation method employed, that bank governance affects banks' performance in Ghana. Larger board size improves return on the banks' equity just as large proportion of directors with finance expertise induces bank performance. All estimates also show that equity funding has a negative and significant effect on bank performance. The paper also found evidence that good bank governance attracts equity capital which, in turn, induces greater profitability. The study recommends for managers and policymakers of banks to adopt policies that will position the banks to improve governance structure, to improve managerial expertise to drive bank performance. Admonitions to expand bank capitalisation should not be encouraged without recourse to the improvement in bank governance effectiveness.

Keywords: Bank governance, capitalization, Ghana bank performance

Introduction

The banking sector plays an important role in the financial market of every economy and contributes to the development of economies (Demirgüç-Kunt, Feyen, & Levine, 2012; Paradi & Zhu, 2013). In Ghana, the banking sector contributed 4.7%, 6.5% and 8.4% of GDP in 2012, 2013 and 2014, respectively (Ghana Statistical Service, 2015). Also, the sector expanded by 20.7% in 2014, which made the sector the largest growth within the service sector and the second-largest contribution to the service sector (PriceWaterHouse Cooper, 2014). Given the importance of banks in wealth creation, some studies have assessed bank efficiency and dynamic productivity, especially given the potential impact of competition, diversification, globalisation and technological advancements in the delivery of banking services (Liu, Lu, & Lu, 2016; Amidu & Wolfe, 2013; Casu, Ferrari, & Zhao, 2013; Jaffry, Ghulam, & Cox, 2013; Paradi & Zhu, 2013; Fethi & Pasiouras, 2010).

To better perform their financial intermediation roles, compete favourably in the globally competitive atmosphere, mitigate exposure to risk and drive growth, banks require effective governance mechanisms, which affect bank leverage and reduce agency problem (Berger & Bouwman, 2013; Berger & Di Patti, 2006). This assertion is backed by the recent Ghanaian banking crisis, which was partly due to bad board room decisions. In 2017, GCB Bank took over Capital Bank and UT Bank due to the banks' inability to meet regulatory requirements on non-performing loans (liquidity) and capital requirements. Reports from the Bank of Ghana attributed the situation to unpopular decisions by the boards of the banks to misappropriate Bank of Ghana's facilities meant to resuscitate their respective institutions. In the same token, five other banks were amalgamated into the new Consolidated Bank Ghana Limited due to mismanagement. As expected, people lost their job, families were displaced and the confidence in the banking sector went down momentarily. In the same token, effective December 2018, the Bank of Ghana enforced its new capital requirement threshold of GHS400,000,000. The banks are now more liquid to finance economic activities, but some banks were unable to meet the capital requirement. The increase in the capitalisation of the banks shows that equity capital can improve the performance of the banks by increasing their capital to withstand liquidity shocks. However, mismanagement of banks can reduce the ability of the banks to secure external funding.

Notwithstanding a decent number of studies on the impact of governance structure on performance globally (Min & Bowman, 2015; Bokpin, 2013a; Kader, Adams, Hardwick, & Kwon, 2014; Makokha, 2014; Reddy, Locke, & Fauzi, 2013; Tornyeva & Wereko, 2012), little attention has been given to the joint effect of governance and capital structures on performance, especially in the banking sector. Studies that concentrated on the influence of governance structure on firm performance did not explain how good bank governance structure can influence financing decisions towards the improvement of bank profitability (Bokpin & Isshaq, 2009; Brailsford, Oliver, & Pua, 2002; Öztekin, 2015). Other recent studies on the topic only attempted to identify the determinants of governance and capital structure (Abdullah & Naser, 2015; Alipour, Mohammadi, & Derakhshan, 2015; Köksal & Orman, 2015; Ansari & Bideskan, 2012; Öztekin & Flannery, 2012). Besides, research that linked governance structure with the capital structure only attempted to identify determinants of capital structure and did not deeply explore the interaction of effect of governance structure and equity financing on the performance of banks in developing countries. This study seeks to examine whether good governance structures by the banks can induce them to attract equity financing to improve their performance.

The capital structure reflects the composition of the company's capital and can be expressed either as a ratio between debt and equity, as a ratio between internal and external financing sources, or either as a ratio between short-term and long-term funding (Margaritis & Psillaki, 2010). An optimal capital structure is one that strikes a balance between the degree of risk and the estimated rate of return; and thus maximises the market price of shares (Berger & Bonaccorsi di Patti, 2006; Margaritis & Psillaki, 2010).

Jensen and Meckling (1976) classified governance structure in terms of capital contributions that comprise inside investors (managers) and outside investors (debt holder and equity holder). Governance structure and capital structure are both key factors in research on agency cost theory. Due to the impact of capital structure and governance structure on firm leverage, researchers have developed a heightened interest in assessing their impact on performance. For instance, some researchers (e.g., Yulivan & Hadi, 2016; Zhang, 2016; Wahba, 2014; Adewale & Ajibola, 2013; Fosu, 2013; Salim & Yadav, 2012; Tudose, 2012) investigated the impact of capital structure on firm performance, while others examined the relationship between governance structure and performance (Florackis, Kanas, & Kostakis, 2015; Abor & Biekpe, 2007).

This paper examines whether the governance structure of the banks enable them to attract equity capital to induce the performance of the banks. This study specifically investigates the impact of governance structure and capital structure on bank performance individually and also determines the interaction effect of governance structure and capital structure on the performance of banks in Ghana. We employed various panel regression models to achieve the objectives. The results show that whereas some governance mechanisms are detrimental to the performance of banks in Ghana, the banks can strengthen managerial competence to induce equity financing, which will, in turn, lead to greater shareholder wealth. The subsequent sections include literature review, research methods, discussions of the results and the conclusion of the paper.

Literature Review

Governance Structure and Firm Performance

Corporate governance (CG) simply deals with mechanisms that enable suppliers of finance to the firm protect their interest and assure themselves of getting a reasonable return on their investment (Shleifer & Vishny, 1997; Tomar & Bino, 2012). The principal foundation of corporate governance is agency theory, which indicates divergence of interest between managers and stockholders, hence the need for internal controls to check their opportunistic behaviour (Jensen & Meckling, 1976). CG mechanisms are well addressed in developed countries, but practically non-existent in developing countries (Shleifer & Vishny, 1997).

The economic dimension of corporate governance has sparked considerable research (see survey work by Haan & Vlahu, 2016; Shleifer & Vishny, 1997), intending to find effective governance mechanisms that can mitigate agency problems. Effective corporate governance leads to higher efficiency (Claessens & Yurtoglu, 2013). However, to obtain the best from CG practices, Datar (2004) posits that it must be industry-specific to deal with peculiarities of the industry. Thus, the uniqueness of industry, like banking, warrants a separate CG structure in other to deal with issue peculiar to the industry (Mehran, Morrison, & Shapiro, 2011; De Andres & Vallelado, 2008).

The contemporary trend in corporate governance studies seeks to investigate if CG is significant in improving performance. These studies, in examining the nexus, have focused on different and specific dimensions of CG (Khiari, Karaa, & Omri, 2007), providing interesting, but contrasting, conclusions. Board size is one of the most investigated dimensions of corporate governance in the literature. It is measured by the number of directors on the board (Pathan, 2009). Empirical evidence on the nexus between board size and performance is inconclusive. The argument is on whether large board size is better than a small board size, since it may affect effective monitoring (Singh & Davidson III, 2003). In that regard, Poudel and Hovey (2012) find that larger boards lead to better efficiency among Nepal banks. Similarly, Abor and Fiador (2013) identify that board size has a significantly positive relationship with a high dividend pay-out. Tanna et al. (2011) also find a positive relationship between board size and performance. On the contrary, Naushad and Malik (2015) indicate that smaller boards in the GCC banking sector improve performance by effectively monitoring the management closely. Another interesting finding by Bokpin (2013b) is that while board size increases one aspect of performance (profitability), it reduces another (cost efficiency) among Ghanaian banks. Despite this trend in the literature, Darko, Aribi and Uzonwanne (2016) found no evidence of the impact of board size on the performance of listed firms in Ghana. According to Haan and Vlahu (2016), even though larger board size possesses more expertise and information, the cost associated with decision making increases with the board size, which can attenuate the gains from larger board sizes.

Board diversity is also another proxy of CG which, in this study, is the proportion of female directors on the board. Even though board diversity considers observable factors, such as gender, age, race, or nationality (Haan & Vlahu, 2016), this study considers only gender diversity, particularly female directors on the board. According to Carter, Simkins, and Simpson (2003), board diversity promotes effective decision making and also facilitates innovation in the firm. Studies have provided evidence on the correlation between the proportion of female directors on board and performance. Carter et al. (2003) indicate a significant positive relationship between the fraction of women on the board and firm value. Other studies that found a positive relationship include Ntim, Lindop, and Thomas (2013), Darko et al. (2016), and Gitundu, Kisaka, Kiprop and Kibet (2016).

Agency theory posits that a board of diverse gender can improve board independence and enhance managerial monitoring. Similarly, the resource dependency theory suggests that boards of diverse gender can help associate the firm to its external environment and obtain the vital resource. Existing literature indicates that the diversity of group membership in any field of endeavour increases the exchange of ideas and discussion, and group performance. For example, Abdullah, Ismail and Izah (2017) indicate that a diversified and inclusive board are important to building quality boards in recent times, as affirmed by Davidson and Burke (2000), who contend that diversity is mostly considered because of its direct value-based contribution to an organisation, merit-based and organisational-enhancing values, rather than based on meeting affirmative action quotas or stakeholder representation. From the perspective of the agency theory, a more diversified board creates a balance of board membership, ensures that no individual can dominate the decision-making process. With the resource dependence theory, the presence of diversities of the board is in the interest of any organisation because more diversified boards link their organisations better to the environment, and generates strategic input (including social capital) to the organization (Bilimoria & Wheeler, 2000).

Most prior literature concentrates on the gender perspective of diversity, which has resulted in highlighting the importance of having more women on the board (Sandfort & Reddy, 2013). Gender is seen to be a much-contested diversity issue not only concerning the board of directors but also in areas of politics and other social disciplines (Kang et al., 2007). There have, therefore, been numerous advocacy and emphasis on the need for a more gender-diversified membership of the board. They suggest that women have critical symbolic values, both within and outside the company, indicating their high performance. It has been indicated that women directors can generate a more

productive discourse by being able to question issues more freely than male directors (Bilimoria & Wheeler, 2000). It is worth knowing that the directorship of women is equally based on a similar level of competence as required of male directors because women want to be known as directors (for their competence on board issues) first rather than as having a feminist agenda.

Studies suggest that earnings of companies were significantly higher for organisations with senior female executives (Kang et al., 2007). Therefore, involving women on boards and in top management leads to greater earnings and shareholder wealth (Sandfort & Reddy, 2013). By the propositions of the resource dependency theory, corporate organisations can achieve greater transparency by including more women on the board, and this may, subsequently, translate into the firm's competitive advantage (David & David, 2016). It has been suggested that female directors contribute to an organisation's competitive advantage firstly because they do not partake of the "old boys' network" makes them more independent and secondly because they tend to have a better understanding of the behaviour of customers, their needs, and opportunities for organisations in meeting those consumer needs. Previous studies justified gender-diversified board by suggesting that the direct proportion of women directors in boards induces firm financial performance (Mallin, Farag, & Ow-Yong, 2014; Mersland & Øystein Strøm, 2009). However, they indicate that the enforcement of gender quotas in the boardroom could rather reduce performance for firms with strong governance structure.

Board independence is another measure of CG, usually represented in the literature by the proportion of board that is non-executive (outside directors). It is well considered to effectively monitor managers, hence mitigating possible agency conflicts (Poudel & Hovey, 2012). Pathan (2009) argues that because outside directors are concerned about their reputation, they effectively monitor managers' activities, thus reducing potential agency conflicts. Although Gitundu et al. (2016) and Darko et al. (2016) found a positive relationship between corporate governance and performance, Bhagat and Bolton (2008) in their research observed a negative relationship between board independence and performance. Similarly, Agoraki, Delis, and Staikouras (2010), and Wang, Lu and Lin (2012) identify an inverse relationship. Even though theoretical studies favour a positive relationship between board independence and performance, there exists the need to assess the scenario among universal banks in Ghana. Based on the argument that board independence improves managerial monitoring, which then enhances performance.

The audit committee is observed as an extension of risk management function (Tsorhe, Aboagye, & Kyereboah-Coleman, 2011). Their role is to identify and handle risk issues in complex organisations, like banks. The proper functioning of the committee can be guaranteed if they work independently of management influence, hence the need for an audit committee made up of outside board members. This study, as a result, focuses on the impact of an independent audit committee on performance.

Another variable of corporate governance mostly discussed in the literature is CEO duality. CEO duality describes the CEO (or an executive officer) of the firm being the chairman of the board (Haan & Vlahu, 2016). Agency theory posits that if conflicts arising from agency relationship must be mitigated, then the CEO should not be the chairman of the board. Jensen and Meckling (1976) argue that the independence of the board will be compromised if the same person is CEO and board chairman. Contrary to the argument of agency theorists, stewardship theorists argue that managers being good stewards in the firm have more access to quality information about the firm, thus they will better steer the affairs of the firm if and when an executive manager is the chairman of the board. Several studies have examined the effect of CEO duality on various forms of firm performance. Bhagat and Bolton (2008) find a significant positive relationship between the dual role of the CEO and performance. Pathan (2009), in support of the argument, suggests that CEO duality may reduce any potential bank risk. Similarly, Naushad and Malik (2015) conclude that it is likely to improve bank performance. However, Wang et al. (2012), Carter et al. (2003) and Isik and Hassan (2002) report a negative impact of CEO duality on various aspects of performance. The disparities in the findings show that the relationship between CEO duality and bank performance is inconclusive and, therefore, evidence from different banking environment is required for contextual policy making.

Board diligence is another proxy of CG measures the number of the board meeting held within a year. The board meeting is considered beneficial to shareholders. This is because as the board regularly holds meetings, they are well informed about the performance of the company, which enables them to direct issues appropriately (Abbott, Parker, Peters, & Raghunandan, 2003). Board expertise described as the qualification held by members of the board, particularly outside directors. It is usually measured by the percentage of directors with financial expertise (Aebi, Sabato, & Schmid, 2012; Erkens, Hung, & Matos, 2012). Banking has grown to become more complex and more opaque (Mehran et al., 2011), requiring industry-specific expertise (Haan & Vlahu, 2016). Although outside directors (supervisory directors) possess knowledge from other sectors of the economy when they do not have sufficient knowledge of banking, they cannot effectively monitor the executive board (Haan & Vlahu, 2016). Some studies have assessed the impact of board expertise on performance, with mixed results. Hau and Thum (2009), in their study of German banks, found that banks with boards having less financial expertise have higher losses. However, Aebi et al. (2012) found a negative relationship with performance measured as ROA. Interestingly, Erkens et al. (2012) found

no significant relationship. Considering that when independent directors are well equipped with the right know-how, it will improve their monitoring of firm performance, making them able to take the right action.

The theory of agency emphasises the need for managerial ownership in driving better corporate governance and, consequently, improved performance in firms. For instance, the agency theory posits that through ownership of firms, the interests of managers could be aligned with the interest of shareholders by making managers to gradually become part of the owners. That is, if the directors share in the ownership of a bank, they would provide proper supervisory and monitoring roles to ensure shareholder wealth maximisation.

Institutional ownership refers to shareholders of a company who are firms or corporate bodies rather than individuals. Institutional owners of firms are key in ensuring the overall effectiveness of governance mechanisms in firms, and monitoring of managerial behaviour in a way that minimises agency costs. The agency researchers suggest that the institutional owners or investors of firms result in more effective monitoring than individual shareholders, thereby resulting in better performance of firms with more institutional ownership.

Capital structure (CS) and firm performance

Empirical studies linking CS and bank performance provides mixed and contradictory results, and little attention given to developing economies, like Ghana. While most studies in the developed economies found a positive relationship between capital structure and firm performance (Berger & Udell, 2006; Gill, Biger, & Mathur, 2011; Margaritis & Psillaki, 2010), similar studies in developing and emerging economies find otherwise (Majumdar & Chhibber, 1999; Zeitun & Gang Tian, 2007). They argued that the role of debt as a monitoring channel to improve firm performance is not considered in emerging markets. Thus, large cash flow from debt can lead managers to undertake discretionary behaviour or negatively affect firm performance. Berger and Udell (2006) examine the effect of capital on bank performance and how this effect was influenced by the various crisis in the US banking industry. The study concluded that capital structure helps small banks to increase their chances of survival, and there was a significant positive relationship between capital structure and the performance of the large and medium-sized banks in the US banking industry.

Nikoo (2015) found a positive and significant relationship between capital structure and bank performance by employing the data of 17 banks throughout 2009–2014. Hasan, Ahsan, Rahaman and Alam (2014) used data on 100 listed firms in Bangladesh throughout 2006–2009 and observed a significant positive association between the performance of a firm and capital structure. They used ROA, Earnings per Share (EPS) and net profit margin as proxies to measure the performance and short-term debt obligations to total asset (STD), long-term debt obligations to the total asset (LTDTA), and total debt obligations to total asset (TDTA) as the capital structure variables. The authors claimed, based on exponential generalised least squares approach, that their findings support the trade-off theory. “Salteh, Ghanavati, Khanqah, and Khosroshahi (2012) investigated the influence of capital structure decision on the profitability of 28 firms from the Tehran stock exchange. They, while considering the data for 2005–2009, observed positive impacts of capital structure variables, STD, LTDTA, TDTA, on the performance proxies by ROE and Tobin's Q”. Arbabiyan and Safari (2009), using the data of 100 firms for 2001–2007, reported a significant positive link of STD and TDTA with ROE. However, the authors observed an inverse association of LTDTA with ROE. The main drawback of this study was that they used only a single variable, ROE, to measure the performance.

Some recent studies have found a non-linear relationship between capital structure and firm performance, that is, a capital structure can have both positive and negative effects on firm performance. Abor and Biekpe (2005), for instance, found a positive linear relationship between CS and performance of SMEs in the Ghanaian context. Specifically, at a low level, debt can increase firm performance through the tax shield, reducing agency costs of equity or informing a better prospect. However, when leverage is sufficiently high, an increase of debt ratio can decrease firm performance, because the benefits of debt are overcome by the costs of debt, including financial distress and agency costs of debt (Jensen, 1986; Kraus & Litzenberger, 1973).

Interaction between Governance Structure and Capital Structure

Extensive literature review revealed few studies conducted on capital structure and corporate governance and their interaction on firm performance. The results of these studies have shown mixed results. For instance, Rehman, Rehman and Raoof (2010) investigated the relationship between governance structure and capital structure, using 19 firms in Pakistan from 2005–2006 and found a positive relationship. The study also concluded that firm performance is improved through the interaction of governance and capital structure. A similar positive relation was reported by Rajendran (2012) in his study of Sri-Lanka manufacturing firms. In the African context, Chomba (2013) focused on the effect of corporate governance structure on capital structure and ignored the fact that capital structure may also influence the firm performance in Kenya. Contradictory findings are reported by Saad (2010), who studied 126 Malaysian publicly listed companies, and the results showed a negative relationship. Due to such mixed findings,

there is the need for a Ghana specific study to establish which school of thought is supported by the Ghanaian phenomenon.

The Ghanaian banking industry

Modern banking began in Ghana in the late nineteenth century when the Post Office Savings Bank (POSB) commenced operations in 1888. The POSB conducted its operations, using the facilities of the various post offices dotted around the country. However, full banking activities started in the then Cape Coast in 1896 when the British Bank for West Africa (BBWA), now the Standard Chartered Bank (SCB), opened a branch in Accra to deliver primary banking services. The focus of the bank then was the provision of trade finance mainly to expatriates. The SCB successfully maintained government accounts and introduced cheques for the settlement of Government accounts. In 1917, that is, two decades after the founding of the SCB, Barclays Bank DCO (Dominion Colonial Overseas), now Barclays Bank Ghana (BBG) Limited, was established. These two banks were foreign subsidiaries of Banks registered in the United Kingdom (UK) and mainly provided finance to facilitate trade between Ghana and the UK. In 1921, the West African Currency Board (WACB) was established by the British administration to be responsible for issuing currency of various denominations for colonies such as the then Gold Coast, Gambia, Nigeria and Sierra Leone. The farmers' Co-operatives, in collaboration with the colonial government, launched the Co-operative Bank in 1935. Apart from the normal banking services, the Co-operative Bank devoted attention to strengthening co-operatives and extended financial assistance to the cocoa sector to boost cocoa marketing in the country. Together, these two expatriate banks exclusively provided banking services in the Gold Coast from the 1920s to the early 1950s. They operated commercial banks, provided trade finance to commercial firms, and were used by the colonial government to pay salaries.

In 1953, based on the recommendation of Sir Cecil Trevor, a national, Bank of Gold Coast (BGC) was established with the mandate to serve the local private sector; keep government accounts as well as leading the flotation of government bonds. In the events leading up to independence, the BGC was split into two, one arm became the Central Bank (Bank of Ghana), and the other the Ghana Commercial Bank (GCB). Thus, the Bank of Ghana (BoG hereafter) was established by Bank of Ghana Ordinance (No. 34) of 1957 two days before independence, and charged to take over currency issue and other central banking functions from the WACB. In the same year, July 1957 the BoG issued for the first time the cedi to replace the West Africa currency notes. The newly established Central Bank established branches in the towns it operated in and later extended coverage to the Ashanti and the Northern Regions to hold its own against the expatriate banks. Upon the attainment of independence, the new banks were established to provide large volumes of capital to support the private sector. Banks incorporated between 1957 and 1980 are the National Investment Bank (1964); the Agricultural Development Bank (1965); the Bank for Housing and Construction (1972); the Merchant Bank Ghana Limited (1972); The National Savings and Credit Bank (1975); Social Security Bank (1977); the Bank of Credit and Commerce (1978). Within the period, the state steered the development of the banking sector through the establishment of state banks and intervening directly in the credit market in a bid to ameliorate cost and channel credit to priority sectors.

Reformation of banking in Ghana

The Ghanaian banking industry has undergone regulatory and structural changes since the mid-1980s (Alhassan & Ohene-Asare, 2013). In 1983, as a remedy to the economic crisis the country was experiencing, the government of Ghana, under the assistance of the International Monetary Fund (IMF), introduced the Economic Recovery Programme (Ohene-Asare & Asmild, 2012). This signalled an end to socialism and curbed the various effect on trade and finance, arising from legal restriction. The law also encouraged private investment with the intent of promoting growth and development. The Banking Law also created an environment to promote local institutions to file for licenses to operate as banks (Alhassan & Ohene-Asare, 2013). In particular, the authorisation for the establishment of private banks, following the passage of the Banking Act of 1989, led to the entrance of private banks, such as CAL Merchant Bank (1990); Ecobank Ghana Limited (1990); Meridian Bank (1991); Trust Bank (1995); Metropolitan and Allied Bank (1995); First Atlantic Merchant Bank; Prudential Bank (1996); and International Commercial Bank (1996). Since 2000, new banks have entered the banking scene. To incorporate the diverging trend in the banking industry globally, the Ghana banking sector was revamped in 2004 through the introduction of the Banking Act 2004 (Act 673) (Aboagye, Akoena, Antwi-Asare & Gockel, 2008).

The banking industry has since received several notable developments. Mention can be made of the increase in the minimum capital requirement of universal banks, which gave banks with 70 billion cedis in the capital the authority to undertake all the banking activities, unlike previously where they could only undertake the activities which they were specifically licensed to perform (Bokpin, 2013a). Second is the enactment of the Banking Act 2004 (Act 673) under which banks were required to increase the minimum capital requirement to US\$ 8 million, which was later increased to US\$ 30 million and US\$ 60 million in 2012 and 2013, respectively (Alhassan, 2015). Another development was the change of currency from the cedi to the Ghana cedi in July 2007 (BOG, 2007). Other significant

legislation enacted to drive banking activities were “Foreign Exchange Act 2006 (Act 723), Whistle Blowers Act 2006 (Act 720), Credit Reporting Act 2007 (Act 726), Banking (Amendment) Act 2007 (Act 738), Borrowers and Lenders Act 2008 (Act 773), Non-Banking Financial Institutions Act 2008 (Act 774), Home Mortgage Finance Act 2008 (Act 770), Anti-money Laundering Act 2008 (Act 749)”. During these development stages, there were significant mergers and acquisitions of banks, resulting principally from the increases in the minimum capital requirement (Bokpin, 2013a; Isshaq & Bokpin, 2012). As of 2015, the banking industry of Ghana consisted of 30 universal banks (an increase from 18 in 2003, BoG, 2015). Based on majority ownership (of 60 per cent of ordinary shares), the banks in Ghana can be grouped into 14 locally-owned and 16 foreign-owned. Out of the 30 banks, 7 are listed on the Ghana Stock Exchange. Out of the listed banks, 4 are locally-owned, while 3 are foreign-owned. Out of the 23 non-listed banks, 10 are locally-owned while 13 are foreign-owned.

The reforms in banking also resulted in bringing rural banking, which was neglected. Rural residents had to travel long distances to receive payments, such as salaries and pensions, transfer money and cash cheques for their farm produce. They mainly relied on high interest charging moneylenders and traders for credit. Limiting factors, such as collateral requirements, the need to have an account, and the seasonal high-risk nature of rural occupations (predominantly agriculture), precluded the rural folks from gaining access to formal credit. The concept of rural banking was, therefore, introduced in 1976 to provide banking services to the rural population and address the challenges associated with the accessibility of banking services. The first rural bank, Agona Nyankrom Rural Bank, was established in a farming community in the Central Region. In less than a decade after the establishment of the first Rural Bank, the number of Rural and Community Banks (RCBs) was 106 by 1984. In 1981, the existing Rural Banks collaborated to form an Association of Rural Banks (ARB) called the ARB APEX Bank. The aim was to advance the common course of RCBs. It provided a platform for networking and represented RCBs on key matters at the central bank. By 2010, the number of RCBs reached 135. There was a total of 142 Rural and Community Banks (RCBs) as the end of 2015.

Over the past decade, some reforms have been adopted by Ghana to build, upgrade and modernise the financial system. The principal is the drive towards computerising banking activities, particularly with the influx of automated teller machines (ATMs). For example, the number of ATMs across the country equals 618 as of 2011. “The computerisation process also includes the introduction of mobile banking, SMS banking and internet banking products. Following the introduction of ATMs, the Payment Systems Act 2003 (Act 662) was enacted to regulate the operation and supervision of electronic funds transfer, clearing and settlement systems. This led to the development of a national payment and settlement system called the E-zwich payment system. The E-zwich smart card provides holders and merchants with a nationwide and convenient means of transacting business by reducing the paper-based transactions. Apart from E-zwich, some of the payments and settlement reforms that have been implemented include Real Time Gross Settlement System (RTGSS), Central Security Depository (CSD), Automated Clearing House (ACH), Cheque Codeline Clearing (CCC), and the Ghana Interbank Payments and Settlement System (GHIPSS)” (BOG, 2015).

Some of the reforms geared towards strengthening the supervisory and regulatory framework of the financial sector include Risk-Based Supervision (RBS), Electronic Financial Analysis and Surveillance System (eFASS), etc. “In 2007, the enactment of the Credit Reporting Act 2007 (Act 726) led to the establishment of credit reference bureaus. The relevance of the bureaus is to bridge the information asymmetry in credit markets to ensure efficient allocation of resources to productive sectors in the economy. The intended role of the credit reference bureau is to support the credit risk management functions of banks” (BOG, 2015). The objectives of these reforms are to improve efficiency and ameliorate risk in the payment system, foster financial intermediation, widen the range of financial securities, and build infrastructure that aids interoperability

The financial infrastructure development has led to the introduction of new banking products and has boosted branchless and cashless banking. For example, the introduction of ATMs and E-Zwich, in particular, has made banking more accessible, reliable, convenient, fast, and efficient. The introduction of mobile banking has further enhanced branchless banking. Some of the mobile banking services available include money transfer, airline ticket purchase, cash deposit, balance enquiry, cash withdrawal, credit top-up and payment of utility bills. One needs just a mobile phone, and not a bank account, to undertake mobile banking. This has improved financial inclusion by roping in a large number of the previously unbanked into the banking system. These broad range reforms have strengthened the financial infrastructure, leading to gains in financial deepening in the country. Measures of financial depth, such as deposit/GDP, M2/GDP, and credit to the private sector/GDP, have all improved (Bawumia, 2010). Though these reforms have modernised the national payment and securities payment systems and strengthened the legal and regulatory framework, more reforms on regulatory and supervisory oversight are needed to improve and sustain the gains in financial development in Ghana.

Board diversity issues in Ghana

Unlike jurisdictions such as the US and the UK, Ghana does not have a single comprehensive corporate governance framework. Rather, as with the laws that govern financial reporting in Ghana, the rules that govern the relationship among a business' stakeholders can be found in bits and pieces in different regulatory instruments. However, unlike with financial reporting rules, there is no single overarching set of principles for corporate governance for companies in Ghana.

The Companies Code contains some corporate governance provisions that all companies are required to comply with. These include provisions on the number, appointment, duties, remuneration and removal of directors; shareholder meetings; rights of shareholders; and the appointment, duties, powers, remuneration and removal of auditors. Other corporate governance rules, such as the mix of executive and non-executive directors and the existence of board committees, are not covered by the Code. Provisions on these other corporate governance best practices can, however, be found in other laws. In addition to the Companies Code, listed companies are required to comply with corporate governance principles set out in the Securities Industry Law (1993), the Securities Industries (Amendment) Act 2000, the SEC Regulations (2003) and the GSE Listing Regulations. Companies within the banking, insurance, and minerals and mining industries also have to comply with additional corporate governance contained in the laws regulating these industries. These laws include the Insurance Law (1989), the Banking Law (1989) and the Banking Act (2004).

Voluntary corporate governance codes in Ghana include the Ghana Manual on Corporate Governance issued by the Private Enterprises Foundation (PEF) and the Institute of Directors (IOD); and the SEC Guidelines on Best Corporate Governance Practices. The SEC guidelines are principally based on OECD principles. These voluntary codes, however, have little recognition in Ghana and are mostly not adhered to. The lack of adherence to these voluntary corporate governance codes is hardly surprising given that even statutory laws in Ghana generally suffer from weaknesses in compliance.

As noted by the World Bank (2005), several key aspects of good corporate governance practices are observable in Ghana—protection of basic shareholder rights, basic AGM rules, the equitable treatment of shareholders in the law, and timely disclosures in the annual reports. There is, however, lack of a coherent and comprehensive regulatory framework for corporate governance practices. This has resulted in the following significant weaknesses in corporate governance practices in Ghana – no rules on board diversity, poor enforcement, lack of certain key disclosures, inconsistencies in the provisions relating to mergers in the Companies Code and the SEC regulations, single-tier boards and limited audit committee effectiveness (World Bank, 2005). Consequently, as with the regulatory framework for financial reporting, there is a need for comprehensive corporate governance rules in Ghana to address the weak level of corporate governance. The ability of the regulators to enforce compliance must also be enhanced to ensure a more effective adherence to the existing provisions of corporate governance.

This section explained the governance and capital structure theories and reviewed empirical literature relevant to the study. The literature revealed a significant relationship between governance structure and bank performance in both developed and developing economies. The bank financing decision is also revealed to influence bank performance and the agency theory is in consonance of this finding. Most of the studies reviewed are centred in developed economies with scant attention in developing countries. Notwithstanding these studies, the interaction effect of governance structure and capital structure on bank performance still stands as a gap in the literature, which is closed with the current study. The study investigates the effect of governance structure on bank performance, capital structure on bank performance and the interaction effect of governance structure and capital structure on the performance of the banks in the Ghanaian context.

Methodology

Data Source and Description

Data for the study were derived from the Bank of Ghana covering various variables for the period from 2003 to 2015 for all the universal banks in Ghana. The data is a panel in nature since it involves variables being studied across firms over a period. The use of secondary data source is deemed more appropriate for this research in that, apart from its relatively easy access and preciseness, it is also devoid of subjectivity associated with other modes of data collection, such as interviews and questionnaires. Again, the regulatory framework governing the preparation of company annual reports helps ensure that the annual report is a reliable and attested public document (Ghazali, 2010). Twenty-nine banks out of thirty-four (34) were studied over thirteen years, giving 377 observations, which represent 85 per cent of banks in Ghana as of 2015.

Model Specification

Based on the relationships, as discussed in the literature review section, we specify the following functional form relationship between the indicators for bank performance and the regressors as:

$$ROE = f(LEV, SIZE, AUDTYP, LR) \tag{1}$$

When we introduce the interaction terms for governance structure and capital structure on bank performance, the reduced form of equation (1) is:

$$ROE_{it} = \alpha + \beta_1(BSIZE_{it} + DIV_{it} + BDexp_{it}) * \beta_2(LEV_{it}) + \beta_3SIZE_{it} + \beta_4AUDTYP_{it} + \beta_5LR_{it} + \epsilon_{it} \tag{2}$$

where,

ROE is the return on equity, the measure for bank performance (we also used return on asset as an alternative measure of bank performance);

BSIZE is board size

DIV is board diversity

BDexp is board expertise

AUDTYP is a dummy for audit committee

SIZE is the size of a bank and

LR is the liquidity risk of a bank

Table 1 describes how the variables in this paper are measured.

Table 1: Variables used in the measure of firm performance, capital structure and governance structure

Variables	Measure
ROE	Earnings after interest and tax / Book value of equity
Capital structure (LEV)	Equity/(Book Value of Total Asset)
Board size (BSIZE)	Number of the board of directors
Board gender diversity (DIV)	The proportion of female directors on the Board
Audit Committee (AUDTYP)	Dummy Variables of 1 is bank have an audit committee and 0 otherwise
Board Expertise (BDexp)	The proportion of directors with finance-related qualification
Size (SIZE)	Natural log of total assets
Risk (LR)	A measure of liquidity risk defined as the cash ratio

Source: Authors

Data analysis

To explore the data and to assist in the identification of potential data errors, descriptive statistics were utilised to summarise and describe the firms' variables by industry and in total. Correlation analysis for variables was used to discover the links between governance structure, capital structure and firm performance of the banks. The study then used pooled ordinary least square (OLS), fixed effect (FE) and random effect (RE) estimation methods to investigate the degree and direction of the variables' relationships, after controlling for firm characteristics. The use of the RE model helps to control unobserved effects as well as heteroskedasticity. However, the method does not remove endogeneity issues between the regressors and the innovation term, which can lead to biased and inconsistent estimators. This is usually caused by the inability to ascertain if a simultaneous reverse relation link exists between capital structure and firm performance (i.e., bank performance also affects capital structure decisions). Besides, the capital structure can be considered simply an indicator of unobserved features that influence performance. To address the issue of endogeneity, the paper further used generalized method of moment (GMM) to examine the persistent relationship among the variables. In the GMM estimation, the first-lags of the independent variables were used as instruments, since they are correlated with the independent variables, but are uncorrelated with the innovation term.

Results and Discussion

A discussion of the data used, and the interpretation of the results is presented in this section. Also, variables used as the proxy for corporate governance and capital structure as well as performance is discussed. Consequently, the results are presented logically with the intent of achieving the objectives of this research. Also, a discussion of the results is provided as a means of approving or disproving the various hypotheses and arguments raised.

Summary of Statistics Variables

Table 2 provides the descriptive statistics of the variables adopted for the study for the period 2003 to 2015. From Table 2, the means, standard deviation (Std. Dev.), minimum (Min) and maximum (Max) values of the variables are presented. The table shows that commercial banks in Ghana have an average of 3 per cent return on equity (ROE). From the table, the average board size is 6 members. Considering the presence of an audit committee of commercial banks, the study shows 56.4 per cent of banks in Ghana have audit committees, while 40.4 per cent are locally owned. The capital structure on banks is dominantly made of debt due to the deposit mobilisation functions of Banks. On average, the equity contribution as a percentage of the total asset base is 15.6 per cent.

Table 2: Summary Statistics (2003 – 2015)

Variables	Mean	Median	Max	Min	Std. Dev.
SIZE	19.151	19.683	22.608	0	3.135
ROE	0.247	0.251	2.022	(4.399)	0.398
TLEV	0.156	0.126	1.411	0	0.129
BSIZE	6.165	8.000	15.000	0	4.435
BGDIV	0.090	0.083	0.500	0	0.107
BEXP	-	-	1.000	0	0.296
AUDTYP	0.564	1.000	1.000	0	0.497

Note: ROE = Return on Equity, BSIZE = Board Size, BGDIV = Board Diversity, BEXP = Board Expertise, AUDTYP = Audit committee present, Size = Natural log of total asset, LR = Banks liquidity risk, TLEV = Capital Structure measure with ratio of equity to book value of asset.

Source: Authors (2020) estimated from Bank of Ghana Data (2015).

Correlation Analysis

Correlation analysis is used to measure the strength of a linear association between two variables. The Pearson correlation coefficient, denoted as r , can take values ranging from -1 to +1. According to Cooper and Schindler (2003), a value of -1 indicates a perfect negative correlation, which implies that an increase in one variable is followed by a proportionate decrease in the other variable, while a value less than zero indicates a negative association between the two variables, implying that as the value of one variable increases, the value of the other variable decreases and vice versa. A value of zero indicates no association exists between the two variables. Any value of r greater than 0 indicates a positive association between the variables, implying that as the value of one variable increases, the value of the other variable equally increases.

A value of the correlation coefficient of 1 designates perfect positive correlation, which implies that an increase/decrease in one variable is followed by a proportionate increase/decrease in the other variable. The value of the Pearson correlation Coefficient will be closer to either +1 or -1, the stronger the association between the two variables. Sekaran (2006) states that Pearson's correlation is used if the variables of the study are measured, using either interval or ratio scales. In this study, the correlation results are reported at a significance level of 0.1, 0.05 and 0.01.

The correlation coefficients between variables used in the regression models are presented in Table 3 and it shows that there is a statistically significant positive correlation between Board Size and Firm performance ($r = 0.131$, $p < .01$), meaning that the returns on equity of bank increases as board size increases. There was a positive correlation between Board Size and return on asset ($r = 0.09$, $p < 0.1$). Equity to book value of the total asset used as a proxy for the capital structure was found to be negatively related to performance proxied with return on asset (ROE) because coefficients of pairwise correlation among the variables are negative and significant at the 5% level. Specifically, the correlation coefficients presenting the link of TLEV with ROE is -0.223. This denotes that an increase of 1% in equity to total asset ratio will lead to a decrease of approximately 22% in ROE, holding all other variables constant.

Table 3: Correlation Analysis

Correlation								
Probability	AUDTYP	BEXP	BGDIV	BSIZE	LR	ROE	SIZE	TLEV
AUDTYP	1							
BEXP	0.405	1						
	0.000***							
BGDIV	0.352	0.393	1					

	0.000***	0.000***						
BSIZE	0.422	0.374	0.439	1				
	0.000***	0.000***	0.000***					
LR	-0.069	-0.037	-0.157	0.015	1			
	0.230	0.520	0.006***	0.791				
ROE	0.110	0.253	0.188	0.131	-0.131	1		
	0.056**	0.000***	0.001***	0.022**	0.022**			
SIZE	0.413	0.420	0.548	0.396	-0.179	0.289	1	
	0.000***	0.000***	0.000***	0.000***	0.002***	0.000***		
TLEV	0.090	-0.042	-0.041	-0.037	0.072	-0.223	0.038	1
	0.119	0.469	0.481	0.525	0.209	0.000***	0.509	

Note: ROE = Return on Equity, BSIZE = Board Size, BGDIV = Board Diversity, BEXP = Board Expertise, AUDTYP = Audit committee present, Size = Natural log of total asset, LR= Banks liquidity risk, TLEV = Capital Structure measure with ratio of equity to book value of asset. **significant at 0.05 and *** at 0.01.

Source: Authors (2020) estimated from Bank of Ghana Data (2015).

Effect of Capital Structure on Bank Performance

Table 4 reports the results of examining the relationships between capital structure (CS) and firm performance, which were estimated by pooled OLS estimators. The table also shows the outcomes of FE and RE models. Both models' results provide that the coefficients of leverage ratio are negative, but differ slightly in the significance levels. To select the appropriate model between FE and RE, the Hausman test was performed. The results of the chi-square statistic are 0.66, meaning it is not statistically significant at 1%; therefore, we reject the null hypothesis and conclude that the models favour Random Effect. Hence, the RE estimator was used to investigate the effect of equity finance on the banks' performance. The results of the empirical model, using the RE, confirm that the relationship between capital structure and bank performance is negative. In general, it reveals a negative relationship between capital structure and firm performance, because most estimated coefficients of equity ratio measured by the book value of the asset are negative and statistically significant at the 1%. On average, a 1% increase in equity will lead to a decrease of 0.48% in ROE, holding all other variables constant. This means that just by increases the capitalisation of the banks does not mean that the performance of the banks would increase.

Table 4: Effect of Capital Structure on Bank Performance

Variable	Dependent Variable (ROA)		
	OLS	FE	RE
C	0.186 (0.20)	0.303 (0.044)	0.261 * (0.074)
TLEV	-0.464 *** (0.004)	-0.470 ** (0.017)	-0.475 *** (0.005)
AUDTYP	-0.003 (0.950)	-0.062 (0.313)	-0.032 (0.542)
LR	-0.220 *** (0.002)	-0.220 *** (0.004)	-0.224 *** (0.002)
SIZE	0.010 (0.155)	0.006 (0.398)	0.008 (0.294)
R-squared	0.064	0.247	0.057
Adjusted R-squared	0.052	0.158	0.045
Observation	301	301	301
F-statistic	5.132	2.767	2.767
Prob(F-statistic)	0.001	0.000	0.000

Note: ROE = Return on Equity, TLEV = Capital structure measure with equity to book value of total asset, AUDTYP = Audit committee present, Size = Natural log of total asset, LR= Banks liquidity risk *, **, *** = significance level at 0.1, 0.05 and 0.01 respectively.

Source: Authors (2020) estimated from Bank of Ghana Data (2015).

To strengthen the research outcomes, the two-step system GMM with the adjusted standard error was applied to cope with the endogenous problem. The outcomes of the system GMM are reported in Table 5. It confirms the negative relationship between capital structure and firm performance. This negative relation is mostly statistically significant at the 1% level. A negative relationship between capital structure and firm performance is reported by all models. The consistency of the capital ratio sign under the different methods applied illustrates the robustness of the findings. This could be explained by Harris and Raviv (1991), who suggested that underestimating bankruptcy costs of liquidation or re-organisation may lead firms to have more debt than the appropriate level; therefore, a high debt ratio would decrease firm performance. Besides, large cash flow from debt can lead managers to undertake discretionary behaviour that can negatively affect firm performance.

Table 5: GMM Regression of Capital Structure and Bank Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.261	0.146	1.790	0.074
TLEV	-0.475	0.169	-2.818	0.005
AUDTYP	-0.032	0.052	-0.611	0.542
LR	-0.224	0.072	-3.124	0.002
SIZE	0.008	0.007	1.052	0.294
R-squared	0.057	Mean dependent var		0.140
Adjusted R-squared	0.045	S.D. dependent var		0.357
S.E. of regression	0.350	Sum squared resid		36.437
Durbin-Watson stat	1.616	J-statistic		0.000

Note: ROE = Return on Equity, TLEV = Capital structure measure with equity to book value of total asset, AUDTYP = Audit committee present, Size = Natural log of total asset, LR= Banks liquidity risk *, **, *** = significance level at 0.1, 0.05 and 0.01 respectively

Source: Authors (2020) estimated from Bank of Ghana Data (2015).

Effect of governance structure on bank performance

The analysis in Table 6 shows that the F statistic is 2.87 and is greater than the critical value at one per cent level of significance. Therefore, the variables which are used for governance structure are jointly significant in explaining the variations in return on equity. The overall R² is 26.7 per cent, indicating that the variables considered in the model account for about 27 per cent change in the dependent variables, while about 73 per cent change may be as a result of other variables not addressed by this model. The second column in Table 6 presents the results for the RE estimation. The coefficient of determinations, R-square, shows the within and between values of 0.076 percentage point. A comparison of the post-estimation diagnostics between the fixed and random effects specification reveals that the conclusions are comparable. The overall explanatory powers of the specifications are significantly different. The fixed effect specification explains an overall explanation power of 27 per cent point, while the random effects model has an overall explanation power of 7.6 per cent. However, the consistency in post-estimation diagnostics does not eliminate the need to discriminate between the models.

Table 6) shows the Hausman's test statistic that has a chi statistic of 8.34 and a corresponding p-value of 0.21. This implies that the null hypothesis that the regressors and individual heterogeneity are strictly exogenous cannot be rejected at one per cent level of significance. Thus, the RE specification is preferred to the FE specification. Therefore, in analysing the effect of governance structure on bank performance proxied with return on equity, fixed effects models were interpreted.

Table 6: Regression Result on the Effect of Bank Governance on Bank Performance

Variable	FE	RE	GMM
C	0.196	0.188	0.154
	0.146	0.142	0.142
BSIZE	0.030***	0.021***	0.014**
	0.009	0.007	0.007

BGDIV	-0.351	-0.071	0.178
	0.303	0.252	0.229
BEXP	0.173	0.193**	0.193**
	0.134	0.094	0.078
AUDTYP	-0.191**	-0.151**	-0.118**
	0.075	0.061	0.055
LR	-0.201***	-0.219***	-0.221***
	0.074	0.071	0.072
SIZE	0.001	0.002	0.004
	0.008	0.007	0.007
R-squared	0.267	0.076	0.089
Adjusted R-squared	0.174	0.058	0.071
Sum squared resid	32.439		
Log likelihood	-91.430	0.349	0.369
F-statistic	2.870	4.080	1.446
Prob(F-statistic)	0.000	0.001	0.000
Hausman's test (p-value in parenthesis)	8.34(0.210)		

Note: ROE = Return on Equity, BSIZE = Board Size, LR=Liquidity Risk, BGDIV = Board Diversity, BEXP = Board Expertise, AUDTYP = Audit committee present, Size = Natural log of total asset, *, **, *** = significance level at 10%, 5% and 1% respectively.

Source: Authors (2020) estimated from Bank of Ghana Data (2015).

From Table 6, board size has a significant and positive impact on the bank's return on equity. The implication is that the more people Ghanaian banks put on their board, the more returns they are expected to earn. The findings support the proposition of the resource dependency theory which suggest that a larger board size enables a firm to derive the essential resources for effective and efficient operations (Bilimoria & Wheeler, 2000). A likely reason for the findings is that larger board size draws more resources, expertise and may also provide better decisions geared at improving cost, and hence increasing earnings. The findings are consistent with that of Huang, Lai, McNamara and Wang (2011), who found a positive impact of board size on the performance of US insurers. However, the results contradict the proposition of the agency theory (Jenseng et al., 1976), which indicates that smaller board size increases efficiency. Previous studies have reported board size to impact significantly, but negatively on performance. The findings of Wang et al. (2007) explained that board size negatively affects performance, because as the number of board directors increases, the cost incurred from conflicts and interactions increases correspondingly which, in turn, reduces banks earnings. Some studies also found no significant impact of board size of corporate financial performance (Yeh, Wang, & Chai, 2010). The differences in the findings suggest that the issue of the nexus between board size and bank performance should not be viewed without recourse to banking systems' idiosyncrasies.

Board expertise also has a positive significant impact on the return on equity of banks in Ghana. Thus, the coefficients indicate that all things being equal, when the proportion of the board with finance-related expertise increases, banks performance will increase by 19.3%. The findings imply that when more of the directors have skills or qualification that are finance-related, their experience and expertise help to increase the earnings of their banks (Minton, Taillard, & Williamson, 2010). The study also reports a negative but insignificant impact of board diversity on return on equity of banks in Ghana. Thus, all else being equal, an increase in the proportion of board diversity (female directors on the board) reduces the banks' performance in Ghana. The conclusion is contrary to the proposition from resource dependency theory that a diversified board makes available essential resources for corporate performance (David & David, 2016). Although female presence is promoted in several countries, the empirical result indicates otherwise in practice. Nielsen and Huse (2010) proposed that the impact of female on the board is dependent on the nature of the industry and the task to be performed.

The expertise of the audit committee of the board of directors significantly affects the performance of banks negatively. The estimated regression coefficient shows that increasing the proportion of directors with expertise in accounting and finance had led to an average reduction in returns on equity of banks by 15.2 per cent, *ceteris paribus*. The negative link between audit committee expertise and the performance of banks in Ghana is at variance with the postulations of the agency theory and the resource dependency theory. Also, previous studies suggest that the presence of audit committees and the size and independence of the audit committee of banks enhance performance (Black & Kim, 2012; Hsu & Petchsakulwong, 2010; Huang, Lai, McNamara, & Wang, 2011; Wang et al., 2012; Wei, 2007; Spira & Bender, 2004). Consequently, this result is consistent with studies in the non-banking industry, which suggest that the expertise of the audit committee sometimes impedes financial and market performance (Aldamen, Duncan, Kelly, McNamara, & Nagel, 2012; Chan & Li, 2008; Hsu & Petchsakulwong, 2010).

The interaction effect of capital structure and governance structure on bank performance

From Table 8, the interaction between leverage and board diversity is statistically significant. This implies that interaction of board diversity and leverage enhance positively bank performance proxied with Return on Equity (ROE). It is also imperative to state that, when the model was run in Table 8, board diversity was not having a statistically significant effect on bank performance but, when interacted with leverage in Table 8, the relationship is statistically significant. Concerning the sensitivity of the relationship, the interaction of board diversity and leverage's impact of bank performance is very sensitive. This is evidenced by a positive coefficient of 3.212. Bank performance is also statistically influenced by the interaction of board size and leverage (TLEVBS), showing the coefficient of 0.084 significant at 5 per cent level of significance. However, an interaction of board expertise and leverage is not statistically significant.

Table 8: Interaction Effect of Capital Structure and Governance Structure on Bank Performance

Variable	FE	RE	GMM
C	0.358** (0.155)	0.378** (0.157)	0.279* (0.152)
BEXP	0.158 (0.132)	0.134 (0.133)	0.104 (0.229)
BGDIV	-0.782** (0.383)	-0.270 (0.300)	-0.337 (0.301)
BSIZE	0.029*** (0.009)	0.015 (0.011)	0.030*** (0.009)
SIZE	0.001 (0.008)	0.002 (0.008)	0.002 (0.008)
TLEV	-0.850*** (0.280)	-1.105*** (0.373)	-0.477** (0.195)
TLEVBGDIV	3.212* (1.715)		
TLEVBSIZE		0.083** (0.042)	
TLEVBXP			0.424 (1.317)
LR	-0.242*** (0.075)	-0.234** (0.074)	-0.226*** (0.074)
AUDTYP	-0.189** (0.073)	-0.169** (0.075)**	-0.189** (0.074)**
R-squared	0.292	0.293	0.283
Adjusted R-squared	0.196	0.198	0.186
S.E. of regression	0.343	0.343	0.345
Durbin-Watson stat	1.731	1.739	1.724
Instrument rank	37	37	37

Note: ROE = Return on Equity, BSIZE = Board Size, LR=Liquidity Risk, BGDIV = Board Diversity, BEXP = Board Expertise, AUDTYP = Audit committee present, Size = Natural log of total asset, *, **, *** = significance level at 10%, 5% and 1% respectively.

Source: Authors (2020) estimated from Bank of Ghana Data (2015).

Conclusion

The study concludes that governance structure impacts on bank performance significantly. Larger board size is found to improve banks' financial performance. The results of the study suggest that a diversified board does not necessarily affect bank performance in Ghana. However, the expertise level of the board of directors affects positively bank performance. This implies that the experience and technical skill of the board members is a key determinant of bank

performance. The presence of an audit committee also affects the performance of the bank. However, this impact is negative. This implies that the return on equity of banks with audit committee is not as high as those without audit committee, which can be due to the fees paid to audit committee members, which increases agency cost and minimises shareholder wealth.

The study also concludes that capital structure is also a determinant of bank performance. The gearing position of banks drives their level of performance. This, however, depends on the capital structure composition. It also implies that, while the capital structure affects bank financial performance, the interaction of board size and capital structure does not boost higher bank performance. An increase in the board size does not lead to an increase in shareholders equity that can improve the liquidity position of the banks which in turns can lead to higher bank performance. Finally, governance structure and capital structure jointly predict bank financial performance. Commercial banks with a good governance structure and optimal capital structure perform well financially. The implication is that when the board of directors and bank officials make optimal decisions, the banks tend to perform better.

The findings of this study add to the existing body of knowledge on corporate governance, capital structure and bank financial performance. The major contribution of the study is that governance structure and capital structure predict bank financial performance and that the effectiveness of a bank's management can induce investors to invest equity-capital to induce the financial performance of the bank. In effect, the study suggests that good management induces equity capital to promote shareholder wealth maximisation in Ghanaian banks. The study assists bank management to appreciate the linkages between board activities, management function and bank financial performance. The findings in this study suggest that bank capitalisation cannot insulate the outcome of bad bank governance and, therefore, it is not enough for regulators to increase the capitalisation status of the banks without proper governance structure and quality managerial decisions. The fact that risk management does not intervene in the relationship between corporate governance and banks' financial performance could be an indicator that risk management committees of the board do not have a significant impact on corporate risk management.

Based on the findings, some suggestions can be made for future research. Further research could be conducted by introducing the effect of the related-party transaction, branch diffusion and employing structure on the governance-performance nexus. This could further widen the scope of the current study. The focus of the current study was on universal banks in Ghana. A similar study can be replicated for other financial institutions, like insurance companies and microfinance institutions.

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Tax Administration, Tax Incentive and SMEs' Growth: The Moderating Effect of Firms Size

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Abstract

The study examined the effect of tax administration and tax incentives on the growth of small and medium enterprises in the Kumasi Metropolis of Ghana. Explanatory research design supported by the quantitative research approach was employed. Structured questionnaires were administered for the collection of the primary data from 115 SMEs operating in the metropolis. The multiple regression results revealed that tax administration accounts for a statistically significant positive weak variance in SMEs' growth, whilst tax incentives account for a statistically significant positive moderate variance in SMEs' growth. Firm size moderates the predictive relationship between tax administration and SMEs' growth. Medium enterprises have higher propensity in terms of tax compliance compared to small enterprises. Medium enterprises also have higher growth potential than small enterprises. Ghana Revenue Authority should implement preferential tax policies that support SMEs growth in Ghana with much emphasis on tax incentive packages to small enterprises.

Keywords: Tax administration, tax incentives, compliance, business growth, firm size, small and medium enterprise

Introduction

Most businesses in African, to which Ghana is part, are by size, small and medium-size enterprises (SMEs). These SMEs cover a spectrum of economic sectors and are found in both developed and developing countries (Olawale & Garwe, 2010; Peci, et al., 2012). Globally, SMEs produce around 70% of jobs and account for 35% of GDP in developing countries, while 55% of GDP in developed countries (Xu, Li, Liang & Rahman, 2019). The growth of SMEs has attracted attention from both researchers and governments in developing countries, because of SMEs' potential to address unemployment, stimulate innovation and contribute to local development to promote economic growth (Musamali & Tarus, 2013; Xu et al., 2019). SMEs account for 92% of businesses in Ghana and absorb 60% of Ghana's labour force and contribute 22% to GDP of Ghana (Koranteng, Osei-Bonsu, Ameyaw, Ameyaw, Agyemang & Dankwa, 2017). More so, SMEs provide inputs to large-sized enterprises (Cant & Wiid, 2016) and contribute to governments' revenue through taxation (Amoako, 2013; Swistak, 2016).

The era of progressive taxation is ending globally, morphing towards revenue-neutral taxation and oriented towards internalizing externalities (Kiser & Karceski, 2017). A good tax regime for small firms is a key policy tool to pave their way out of the "informality trap" of low growth, limited access to markets, and exclusion from formal financial services (Masanja, 2019; Kenyon, Thomas & Kapaz, 2005; Akelentera, 2011). Taxation refers to any compulsory transfer of money from citizens of a country to the government as a source of revenue (Ameyaw, Korang, Twum & Asante, 2016; Akolgo, 2012). Taxation is the process whereby a state or government exacts contributions from its citizens or from the residents of its territory for the maintenance of the state machinery (Plehn, 1924; Ali-Nakyea, 2008). However, to effectively and efficiently mobilise as much revenue as desired depends on the level of compliance of the taxpayers to pay tax. Tax compliance refers to taxpayers' willingness to pay their taxes (Kirchler, 2007). It deals with the ability and willingness of taxpayers to comply with tax laws, declare the correct income in each year and pay the right amount of taxes on time (Internal Revenue Service Act, 2000 Act 592; Income Tax Act, 2015 Act 896).

SMEs often face unhealthy competition from, large foreign multinational companies hence threatening their growth and survival of these SMEs (Atawodi & Ojeka, 2012). The use of growth as a measure of firm performance is generally based on the belief that growth is a precursor to the attainment of sustainable competitive advantages and profitability (Markman & Gartner, 2002). Growth is a multi-dimensional measure of performance in that different measures are used for it in different contexts (Fitzsimmons, Steffens & Douglas, 2005). In situations where a country's tax structure is not effectively designed in line with the conditions prevailing in particular environment and economy in which the SMEs operate, it may produce a significant tax burden on the tax paying enterprises and, consequently, its incidence impacting end users, due to changing ability of taxes (Xu, Li, Liang & Rahman, 2019).

Tax is a necessary evil. Unfavourable taxes end up increasing cost of running businesses, slows their growth and increases the cost of production (Xu et al., 2019). Some countries have tax systems that are structured purely towards revenue generation (Kinyua, 2013). Such is the perception of SMEs in Ghana (Ameyaw, Korang & Twum, 2016). Tax policies in developing countries discriminate against SMEs, but rather support larger firms that have higher tax revenue payback returns than SMEs with lower tax revenue payback returns (Bird & Wallace, 2003). Businesses, indeed, complain of paying double taxes along the value chain (Ali-Nakyea, 2008), hence the significant negative inverse relationship between taxes and business survival and sustainability (Atawodi & Ojeka, 2012). In Nigeria, 80% of SMEs wind up before their 5th anniversary because of unfavorable tax system (Atawodi and Ojeka, 2012).

An overly complex regulatory system and tax regime, or one opaque in its administration and enforcement, makes tax compliance unduly burdensome, with frequent distortionary effect on the development of SMEs as they are tempted to transform into forms that offer a lower tax burden or no tax burden at all (Masato, 2009). Tax compliance among SMEs is generally low (Mukhlis & Simanjuntak, 2016; Engelshalk, 2004). A study by Adebisi and Ghegi, (2013) on SMEs in developing countries has revealed the ignorance of research into how taxation affect development, survival and growth of SMEs. Huge taxes imposed on companies affect their profitability ratio, dividend policies, growth and survival (Gravelle, 2012; Huston, 2016). SMEs perceive negative impact of tax policies on their growth in Accra (Tee, Boadi & Opoku, 2016), their tax evasive behaviour (Kraus, 2002), such as passing all profits and losses onto their shareholders (Brealey & Myers, 2000). Moreover, SMEs are known to face the problems of high tax rates, multiple taxation, lack of proper information and complex regulatory policies (Xu, et al., 2019).

Tax incentives in the developing countries are rather limited (Zee & Stotsky, 2002), thereby failing to attract investment in SMEs (James & Van Parys, 2010; Abbas, Klemm, Park & Bedi, 2012). Besides, lack of or minimal tax exemptions to SMEs in Ghana hinder the SMEs' expansion drive and growth potential compared with those in the advanced economies (Ameyaw, Korang & Twum, (2016). Some countries experiencing bad administration, in general, have resorted to partially privatizing their tax administration (Kiser & Karceski, 2017).

Evidence on the association between firm size and firm growth proves to be contradictory (Bigsten & Gebreyesus, 2007). Some studies have produced negative results (Mead & Liedholm, 1998; Gunning & Mengistae, 2001; Sleuwaegen & Goedhuys, 2002), although other similar studies revealed higher growth potential for medium enterprises (Stella, Aggrey & Eseza, 2014) and large enterprises (Van Biesebroeck 2005), but no relationship was

found in other studies, such as that of Harding, Soederbom and Teal (2004). Firm growth is a complex issue as metrics for assessing growth are inherently crucial and there is empirical evidence of slow growth among businesses (Goswami, 2019). Besides, high growth may not imply high productivity (Goswami, 2019). Growth is difficult to achieve and even more difficult to sustain (Lim, Morse & Yu, 2020). Firm size is a significant determinant of tax compliance (Yusof, Ling & Wah, 2014). Medium enterprises pay taxes than small enterprises (Okpeyo, Musah & Gakpetor, 2019). Medium enterprises paid higher taxes compared to small enterprises (Hendricks, Amit & Whistler, 1997). Others also believe small firms bear higher tax compliance costs than larger companies (Lokhande, 2020), hence having higher default risk of non-payment. These findings are contradictory and need further investigation.

In this study, the researchers comprehensively examine how tax system measured by tax administration and tax incentives in Ghana affect growth of SMEs, given the interacting effect of firm size. The study is inherently linked with SDG 8, which seeks to promote decent work and economic growth of all nations by 2030, as championed by the United Nations Agenda. The study believes favourable tax system could foster SMEs' growth and decent work, which would eventually translate into economic growth of Ghana. Tax authorities and agencies could rely on the findings of this study to develop business-friendly tax policies to promote the survival and growth of SMEs whilst amassing revenue to support Ghana's developmental agenda. The remaining sections provide information in respect of literature, research methods, results, discussion, conclusion, implications, limitation and suggestion for further studies.

Literature Review

Tax administration and SMEs' growth

According to Pfister (2009), African governments are challenged as to how to find optimal balance between tax regime that is business and investment friendly and leverage enough revenue for public service delivery. Taxation is the process whereby a state or government exacts contributions from its citizens or from the residents of its territory for the maintenance of the state machinery (Akolgo, 2011). Taxes are also imposed on corporate entities (Plehn, 1924). Tax is any compulsory transfer of money from citizens of a country to the government as a source of revenue (Ameyaw, Korang, Twum & Asante, 2016). Multiple taxes that come in different forms are imposed on businesses in Ghana (PwC Ghana, 2014). Most of these taxes are charged on supply of goods and services that is a taxable supply and is made by a taxable person in the course of its taxable activity. A taxable activity means an activity, whether or not for a pecuniary profit, carried on by a person in Ghana or partly in Ghana that involves the supply of goods or services to another person for consideration (PwC Ghana, Ghana Tax Facts and Figures Report, 2019). Ghana's tax system is characteristically discriminatory and multi-tax system (Ameyaw, Korang & Twum, 2016).

Tax reforms in Ghana seek to create friendly business environment for investors and entrepreneurs (Armah-Attoh & Awal, 2013). Such reforms are intended towards revenue sufficiency, equity simplicity and economic efficiency (Bekoe, Danquah & Senahey, 2016). Recent stride in tax reforms in Ghana is the integration of all the three major tax revenue institutions—Internal Revenue Service (IRS), the VAT Service and the Customs, Excise and Preventive Service (CEPS)—into a single agency, The Ghana Revenue Authority (GRA), to enhance effective tax administration system in Ghana. How well a tax administration works depends, to a considerable extent, on the environment within which it works (Bird & de Jantscher, 1992). The nature of tax structure and the underlying legal system is one factor as is the extent to which taxation is used to achieve objectives other than simply collecting revenue. Good tax system focuses on the collection of information to as to promote transparency, certainty and assurance. Tax administration, therefore, provides means to shaping economic development in an effective manner (Bird & de Jantscher, 1992).

Growth may be volatile and episodic (Grover Goswami, Medvedev & Olafsen, 2019). Firm growth is conceptualized as the expansion of dynamic resource system (Lim, Morse & Yu, 2020). According to Gibrat's law, growth is independent of firm size because each firm is believed to have optimal size given market conditions, management capability and transaction cost (Goswami, Medvedev & Olafsen, 2019). However, from the perspective of the evolutionary competition, insufficient incumbents (firms) are forced out of market and their resources are absorbed by more efficient firms. Firm growth propels firms to create job, generate output of high quality and transforms economic lives of business and economies (Goswami, Medvedev & Olafsen, 2019). Businesses with growth potential generate larger market share, distribute returns to investors, achieve high productivity, generate revenue and withstand fierce competition (Ayyagari, et al., 2018).

From the perspective of the necessity theory, government is the necessity of the state and revenue is the necessity of the government, hence the imposition of tax on the necessity to generate revenue (Stuebs & Whiteaker-Poe, 2018). Supported by the subject and the object theory, governments have jurisdiction control of all its subjects and, therefore, use their power to make subjects the object of taxation based on their sovereign authority (Stuebs & Whiteaker-Poe, 2018). The essence the exercise of the state power is to create a welfare state in which everyone benefits from the exercise of the authority of the state. Therefore, agents responsible for tax administration are to run an efficient tax system. Good tax administration system for SMEs is characteristically simplistic, proportionate, certain, neutral, fair

and trade-offs (Jousten, 2007). It is envisaged that a good tax administration produces better conditions that positively influence the business climate which, in turn, creates the necessary conditions of businesses to flourish. This situation would translate into improved business growth.

For instance, (Adefeso, 2018) discovered that a good corporate tax policy improves firm performance. Tax education induces voluntary tax compliance for SMEs that are educated by tax officials in Ghana, especially on VAT returns than those SMEs that are not educated (Adom, Amakye, Doh & Anku, 2013). Dabla-Norris, et al., (2017) opined strong tax administration exerts significant positive impact on small and young businesses. Tee, Boadi and Opoku (2016) found that tax policies in Ghana have adverse impact on SMEs' growth. This position was also fueled by Nyarku and Oduro (2017) in their empirical study that found that trade regulations, tight monetary and credit policies, corruption, and excessive tax regime negatively hamper SMEs' growth in Ghana. Inferring from these, one can deduce that favorable tax administration contributes favourably to business growth, hence we hypothesise that:

H1 Tax administration significantly predicts positive change in SMEs' growth.

Tax incentives and SMEs' Growth

State agents manage tax systems by exercising authorities conferred on them by the state to collect tax and remit returns and reliefs (Kiser & Karceski, 2017). A decrease in the rate of corporate tax increases the incentives for incorporation (Agbenyo, 2016) and thereby increases after-tax earnings. Tax incentives refers to an exemption or relief granted to an individual or a firm to reduce the effect of taxation and thus encourage savings and investment (Chukwumerije & Akinyomi, 2011). Numerous incentives have been incorporated into the Ghanaian tax system over the years. Notable among such incentives, as claimed by tax authorities, include, but not limited to, tax rebates, reduced tax rates, tax holidays, incomes exempted, capital allowances, fresh graduate incentives, free-zone incentives, double tax treaties, capital gains exempted, import duty exemptions and exempted export duties (PwC Ghana, Ghana Tax Facts and Figures Report, 2019; Ugwu, 2018; Bekoe, Danquah & Senahey, 2016). The creation of some special incentives is based on industry type, number of years of operating, nature of transactions, business size and origin of businesses and so forth (PwC Ghana, Ghana Tax Facts and Figures Report, 2019). Market failures negatively affect SMEs due to their sizes and ages in the business life cycle. Again, tax system disproportionately goes against SMEs. These hard-hit conditions inform collectively call for SME support in terms of preferential treatments (Bozdoğanoglu, 2016).

Tax incentives are underlined by the benefit theory of tax that advances taxes that agents pay should reflect the benefit that they receive from the mix of good and services they enjoy from the state (Neill, 2000). The benefits theory of tax sets the standard lens through which local taxation is based (Scherf & Weinzierl, 2020). It, therefore, posits taxes should be zero or low for entities and individuals who receive no benefits from the state and high for those entities and individuals that derive the most benefits. Infrastructural developments that are initiated by the government provides the greatest benefits to firms (Stewart, 2015). The agency theory of tax incentive posits that tax incentives compensate for other government-created obstacles in the business environment, thus using tax to respond to fiscal failure as much as market failure (Twesige & Gasheja, 2019). Therefore, granting incentive packages in the tax system is to propel the growth of businesses in the country so as to support government's agenda of economic growth, national development, job creation and improved general welfare of the citizenry.

Some empirical studies support this position. Megersa (2019) found that tax incentives in China contribute to predicting GDP growth, has positive effect on research and development expenditure in Taiwan, and causes sizeable increase in employment, output, fixed capital and number of firms in India. Again, Siyanbola, Adedeji, Adegbe and Rahman (2017) also discovered that tax incentives are significant strategic drive for business and industrial growth in Sub-Saharan States including Ghana. Besides, the more governments make revenue, the more they are better positioned to provide incentives to tax payers (Siyanbola, et al., 2017). Empirically, it is found that tax exemptions decrease tax burden of SMEs more than that of tax rates (Liakhoyets, 2014), which positions them to reinvest their capital for their efficient functioning. Government's support such as tax reduction and simplification of tax system also stimulate SMEs' growth (Louis & Macamo, 2011). Tax reduction, lower tax amount payable and tax exemption could support the growth SMEs (Bozdoğanoglu, 2016). In a given empirical comparative study in Uganda, it was discovered that firms with incentives performed better than firms without incentives in terms of gross sales and value added (Mayende, 2013). Better still, streamlining tax incentives was a strong stimulus to improving firm performance (Mayende, 2013). Particularly, Twesige and Gasheja (2019), in their recent study, found that tax incentives are predictors of sustainable SME growth in Rwanda. Hence, it is hypothesised that:

H2 Tax incentives significantly predict positive variance in SMEs' growth.

H3 Tax incentives significantly mediate the predictive relationship between tax administration and SME growth.

Firm size as a moderator

There is lack of definite understanding of SMEs (Gibson & Van Der Vaart, 2008). However, there are various definitions of SMEs, but there exists no universally acceptable or consistent definition for the term SMEs (Beger & Udell, 2002). Irrespective of the variance in such definition, certain variables, such as value of fix assets, number of permanent employees and turnover, are common (Mbizi et al., 2013). The European Union (EU) defines SME as an enterprise with employee capacity of 10 and 250 and a turnover of € 50 million (EC, 2009). The World Bank (2013) defines SMEs as enterprises with a maximum of 300 employees, \$15 million in annual revenue and \$15 million in assets. Kuug (2016) defines SMEs as companies with not more than 500 employees. In lieu of the different definitions proposed by different authors and institutions, this research adopted the definition by the National Board for Small Scale Industries (2015). Small enterprises are operationalized as businesses employing between 6 and 29 and medium enterprises with between 30 and 99 workforce or have fixed assets not exceeding 100,000 USD. Small enterprises are not financially positioned compared to larger firms, especially in the era of global competition in domestic markets (Gamage, et al., 2020).

The ability to pay theory posits that tax burden should differ between taxpayers in proportionate manner such that heavier burden falls on those who are better able to bear it. The ability pay theory further proposes that those who have more should rather pay more, thereby justifying progressive tax system (Kendrick, 1939). From this standpoint, it is expected that medium enterprises are to have higher tax compliance capacity compared to small enterprises, since medium enterprises are better positioned financially in terms of their level of profitability compared to small enterprises. Besides, compliance is justified by the ability to pay, hence firms with more resources are better positioned to pay their taxes on time than those with limited resources. The operational definition of SMEs by the European Commission, the World Bank and the National Board for Small Scale Industries signals the financial strength of medium enterprises over small enterprises.

Stella, Aggrey and Eseza (2014) found that firm size significantly relates with firm growth in Uganda. Medium enterprises grew faster than small enterprises (Stella, et al., 2014). Others found an inverse relationship between firm growth and firm size (Hart & Oulton, 1999; Mata Portugal, 2004). Keating (1974) also discovered that larger firms grow faster than small ones. Singh and Whittington (1975) also found that large firms grow faster. Contrary to these claims, Dunne and Hughes (1994) found that small grow faster than large firms. However, Okpeyo et al. (2019) found that medium enterprises pay taxes more than small enterprises. Hendricks, Amit and Whistler (1997) further disclosed that medium enterprises pay higher taxes compared to small firms. XX Contrary to the above positions, Dabla-Norris, Mish, Cleary and Khawaja (2017) found that tax compliance costs disproportionately higher for small and young businesses compared to large and old firms. Firm size is treated as a moderator in numbers studies, including business strategy and firm performance (Kannadhasan, 2009), functional integration and firm performance (Ali, Mukulu, Kihoro & Nzulwa, 2016), sustainable supply chain management and sustainable performance (Wang, Zhang & Goh, 2018), innovation and firm performance (Kijkasiwat & Phuensane, 2020). These empirical studies and the theoretical positions espoused show that firm size has the capacity to influence the relationship between tax administration and business growth. Thus, firm size is a key determining factor of firm growth in the face of tax administration, hence we hypothesise that:

H4: Firm size significantly moderates positively the effect of tax administration on SME growth

Tax compliance differences for small-sized enterprises and medium-sized enterprises

It is not an easy task to persuade taxpayers to comply with tax requirements, since tax represents unaccounted cost (James & Alley, 2005). Tax evasion is persistent in developing countries (Atawodi & Ojeka, 2012). Tax compliance refers to taxpayers' willingness to pay their taxes (Kirchler, 2007). Contextually, tax compliance captures the ability and willingness of taxpayers to comply with tax laws, declare the correct income in each year and pay the right amount of taxes on time (Internal Revenue Service Act, 2000 Act 592). Tax compliance covers the reporting of all incomes and payment of all taxes by fulfilling the provisions of laws, regulations and court judgments (Alm, 1991; Jackson & Milliron, 1986). Singh (2003) extended this and opines tax compliance is a person's act of filing their tax returns, declaring all taxable income accurately, and disbursing all payable taxes within the stipulated period without having to wait for follow-up actions from the authority. Tax compliance is operationalized as the willingness of taxable entities to act in accordance with the spirit and the letter of tax law and administration without the application of enforcement. Tax non-compliance is taxpayer's failure to remit a proper amount of tax, perhaps on account of the complexity or even contradictions in the tax legislation or tax administration procedure (Kesselman, 1994).

To tackle the issue of non-compliance, most tax regimes integrate punitive measures, such as fines, closure or even jail term, to enforce compliance (Swistak, 2016). Compliance cost, poor internal controls, tax rates (Mwangi, 2014), auditing of account/tax assessment, referral group and tax knowledge (Inasius, 2015), fairness, prompt enforcement (Swistak, 2015), attitude (Nkwe, 2013), high tax rates and complex filing procedure determine SMEs' tax compliance behaviour. Ameyaw et al. (2016) claim that taxes cannot be avoided without attracting punishment. Differences in tax compliance behaviour between small and medium enterprises may again be attributed to the

position of the ability to pay tax theory espoused earlier (Kendrick, 1939). Empirically, in Tanzania, Masanja (2019) found that issues, such as high taxes, multiple taxes unreasonable taxes, unfriendly attitude of tax administrators, difficulty in paying taxes, bureaucracy in paying taxes and changes in taxes, affect tax compliance behaviour for SMEs. Firm size positively related significantly with ability to pay tax (Ocheni & Gemade, 2015). For instance, Mukhlis and Simanjuntak (2016) found low tax compliance behaviour among SMEs. Elsewhere in Greater Accra, Okpeyo, Musah and Gakpetor (2019) found that tax compliance is higher among medium enterprises than small firms. Others also believe small firms bear higher tax compliance costs than larger companies hence having higher default risk of non-payment (Atawodi & Ojeka, 2012; Lokhande, 2020). We, therefore, hypothesise that:

H5: There is a statistically significant difference in likelihood of tax payment for SEs and MEs.

Growth differences for small-sized enterprises and medium-sized enterprises

Gartner (1990) opines that business growth is a major theme of entrepreneurship. Growth is characterized with mixed results in literature (Fitzsimmons, Steffens & Douglas, 2005) partly because different measures are used for its measurement (Delmer, Davidsson & Gartner, 2003). The use of growth as a measure of firm performance is generally based on the belief that growth is a precursor to the attainment of sustainable competitive advantage and profitability (Markman & Gartner, 2002). Growth epitomizes the process of in-depth development and positive improvement that is generally measured through quality, and/or profit improvements (Diabate, Sibiri, Wang & Yu, 2019). Finance, number of workers, quality of labour skills, business expansion/branches, product lines, business innovation, search for improvement, market development, sales revenue, productivity, integration of IT in business processes are key measures of SMEs' growth (Xu et al., 2019). Business growth also connotes some element of sustainability (Fitzsimmons, Steffens & Douglas, 2005), although not static (Delmer, et al., 2003). Firm size matters in several instances when it comes to determining firm growth and development (Nguyen & Ramachandran, 2006).

The transaction cost theory provides a basis for the utilization of non-market modes of organisation. The theory posits that firms reduce transaction costs based on their impact on incentives, monitoring and structure of production (Williamson, 1998). Co-ordination cost incurred on all information processing necessary to co-ordinate the work of tax authorities and that of SMEs are more likely to favour medium size enterprises than small enterprises. Inferring from this analogy, it is envisaged that small businesses that are financially weak comparatively may as well be unwilling to grow as much as medium enterprises, because taxes paid by such firms possibly weaken their production capability, thereby affecting their growth potential negatively (Dagdeviren & Robertson, 2016).

Medium enterprises possess economies of scale; therefore, their production costs are likely to be lower compared to small enterprises, which equally put small enterprises in unfavorable financial position, thereby limiting their growth capacity. Gibrat's Law predicts that all firms have the same likelihood of growth rate. However, Edmiston (2007) found that large firms are more innovative than small enterprises, which eventually positions larger firms to grow faster than small firms. McKenzie and Sakho (2010), in their empirical study, concluded that tax registration appears to improve profitability of mid-sized firms significantly compared to smaller firms, which positions mid-sized firms to grow better than smaller firms. Whittington (1975) found that firm growth is highly dependent of firm size. Similar view was expressed by Stella, Aggrey and Eseza (2014), that medium enterprises grew faster than small enterprises. Based on these assertions, we hypothesise that:

H6: There is a statistically significant difference in SME growth for SES and MEs.

Based on the overall logic overriding the interrelationship among the constructs, which originated from ideas generated through theoretical review, empirical findings and research interest of the researchers, the conceptual framework is presented (see Figure 1).

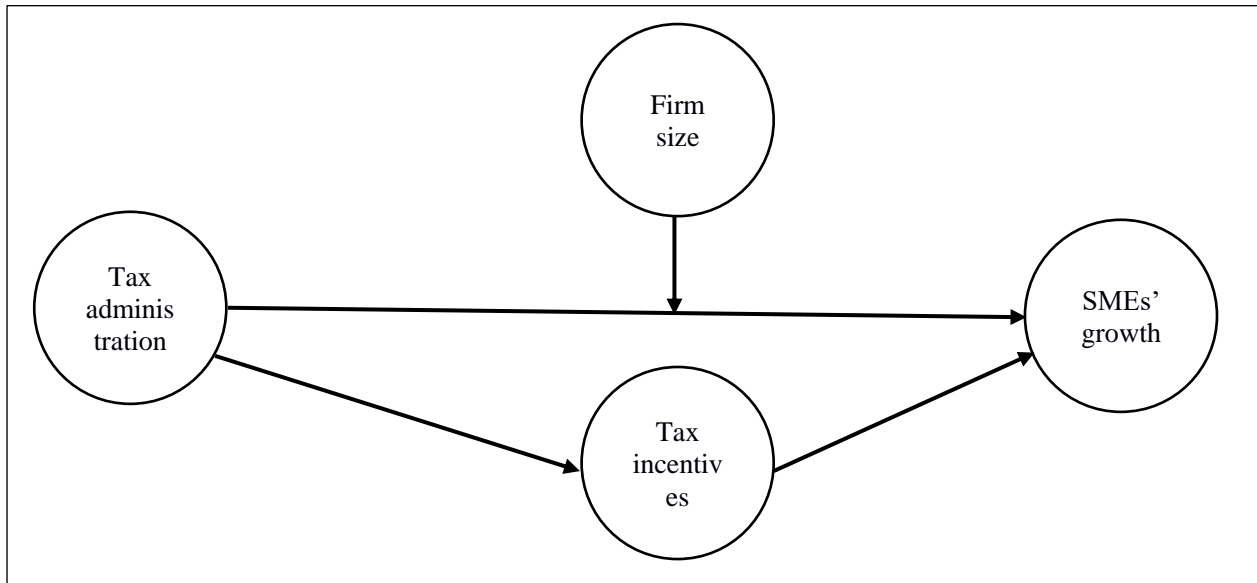


Figure 1: Conceptual Framework

Methodology

The study employed the explanatory research design and quantitatively approached the measurement and analysis of the primary data. The study targeted 153 registered SMEs operating in Kumasi Metropolis. Since the unit of analysis was at the firm level, owners and/or managers of SMEs across many different industries were surveyed through structured questionnaire administration. Kumasi Metropolis is one of the thirty (30) districts in the Ashanti Region. It is located between Latitude 6.35oN and 6.40oS and Longitude 1.30oW and 1.35oE and elevated 250 to 300 meters above sea level. The economic activities sustaining the livelihood of the residents in the Metropolis are categorised into service, industry and agriculture (Kumasi Metropolitan Assembly Composite Budget Report, 2014). Most of these businesses are SMEs (Kumasi Business Advisory Center-Kumasi Metropolitan Assembly, 2017).

The sample size (115) was determined based on a sample size formula propounded by Slovin, (1973). The participants were selected through systematic sampling technique. The registered SMEs were given unique identification number and after the first sample had been selected randomly, the remaining participants were selected next after each one (1) count until all the 115-sample size was obtained. For SMEs' growth, respondents were asked to indicate how their businesses have grown given the current tax administration and incentives on a 5-point Likert scale rated from 1-No improvement-5-Very great improvement (12 items). The items were obtained from empirically validated sources (Nastasia & Mironeasa, 2019; Wiklund, Patzelt & Shepherd, 2009; Dobbs & Hamilton, 2007; Diabate, Sibiri, Wang & Yu, 2019; Dalrymple, 2004). On measuring tax administration, the respondents were asked to indicate their level of satisfaction with the tax administration items (8 items) on a 5-point Likert scale rated as follows: 1=Not at all satisfied to 5-Extremely satisfied. Tax incentive (7 items) was also measured a 5-point Likert scale. The respondents were asked to which they agree that the tax incentive variables promote the growth of their businesses on a 5-point Likert scale rated 1=Not at all in agreement-5=To a very great extent. The indicators of tax administration and tax incentives were also obtained through extant literature review (Masanja, 2019; PwC Ghana, Ghana Tax Facts and Figures Report, 2019; Ugwu, 2018; Bekoe, Danquah & Senahey, 2016; Osei & Quartey, 2005).

Structured questionnaires were administered for the gathering of the primary data. Participants were formed about the purpose of the study. Consents from all participants were formally sought. Ethically, no participant was forced to participate in the study. Confidentiality, anonymity and privacy of the participants were strongly assured throughout the entire research period. No data manipulation was carried out. Primary data collection took 3 months (December, 2017-February, 2018). Drop-and-pick self-administration of the questionnaires was carried out. A 100% response rate was obtained. The data was cleansed, and imputed into the SPSS version 25.0 (configured with SPSS process Macro version 3.4) for data processing and analysis. Data transformations were carried out in respect of constructs after those constructs' validity and reliability had been checked and approved under the lens of statistical techniques so as to support holistic data analysis in the SPSS process macro (Domfeh, Kusi, Nyarku & Hunsaker, 2018; Nyarku et al., 2018). Standard multiple regression (For H1; H2), mediation analysis with process macro (H3), moderation analysis with process macro (For H4), and independent sample t-test (For H5; H6) were employed for the analysis primary data in respect of the formulated hypotheses. These approaches to testing the hypotheses are validated in some previous empirical studies (Domfeh, Kusi, Nyarku & Ofori, 2018).

Common method bias, which represents the amount of spurious correlation among the variables, may be generated by utilising the same method, such as survey, so as to measure each variable, was measured with the Harman's single factor method. Some procedural mechanisms, such as negating some items (reserved coded), using different rating scales for different construct, counter-balancing the order of measurement of the dependent and independent variables, careful construction of the scale items, protecting the anonymity of the participants, separating the measurement of the scales, obtaining the measures of the dependent and independent variables from different validated sources, were followed, as prescribed by Tehseen, Ramayah and Sajilan, (2017). Statistically, Harman's single factor method was employed to detect the presence of common method bias after these procedural techniques were employed to avoid the occurrence this problem. Internal consistency was measured with the Cronbach's Alpha (CA>0.07). The findings are presented in Table 1.

Table 1: Reliability Results

Construct	Cronbach's Alpha	Number of Item
SME growth	0.8954	12
Tax administration	0.828	8
Tax incentive	0.744	7

The subscales were also reliable given the primary data collected, because internal consistency measured by the Cronbach's Alpha was above the minimum thresholds of 0.70 (Kusi, Domfeh & Kim, 2018; Bujang, Omar & Baharum, 2018). Content validity of the scale was ensured since the inclusion of items was subjected to rigorous scrutiny in the light of previous empirical studies. Confirmatory factor analysis was conducted through principal component factor analysis to examine the validity of the subscales considered in this study.

Table 2: MO and Bartlett's Test

	Tax incentives	SMEs' growth	Tax administration
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.675	0.887	0.686
Bartlett's Test of Sphericity	Approx. Chi-Square	308.239	1000.842
	Df	55	45
	Sig.	0.000	0.000

The KMO measure of sample adequacy and Bartlett's test of sphericity shows tax incentives (KMO=mediocre), SMEs' growth (KMO=Meritorious) and tax administration (KMO=Mediocre) the sample size for the factor analysis adequate and spherical (see Table 2).

Validity: Tax Incentives

The component rotated matrix shows that the items measuring tax incentives are valid, because factor scores of more than 0.3 were obtained for all the indicators (see Table 3).

Table 3: Component Matrix^a

	Component 1
Tax rebates	.569
Tax holidays	.421
Reduced tax rates	.484
Incomes exempted	.581
Capital allowances	.356
Fresh graduate incentives	.531
Free-zone incentives	.628
Double tax treaties	.520
Capital gains exempted	.673
Import duty exemptions	.477
Exempted export duties	.568

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Validity: SMEs' growth

The component rotated matrix shows the items measuring SMEs' growth are valid because factor scores of more than 0.3 were obtained for all the indicators (see Table 4).

Table 4: Component Matrix^a

	Component 1
Increased asset acquisition	.803
Increased number of employees	.815
Improved retention of profit	.847
Improved profitability	.869
Better pricing	.690
Increased number of branches	.793
Improved investment funds	.839
Business innovation	.796
Access to loan	.840
Improvement in asset	.850

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Validity: Tax administration

The component rotated matrix shows the items measuring tax administration are valid because factor scores of more than 0.3 were obtained for all the indicators (see Table 5).

Table 5: Component Matrix^a

	Component 1
Modes of tax payment	.686
Timing of corporate tax payment	.655
Corporate tax rates	.808
Corporate tax amounts	.807
Tax administration system efficiency	.792
Corporate tax incentives	.643
Perceived certainty in corporate tax	.592
Tax education by GRA	.422

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Common Method Bias

Harman's single factor method was employed to measure common method bias (Tehseen, Ramayah & Sajilan, 2017). The results proved that there was no threat of common method bias for tax incentives and tax administration because they recorded a % of variance far less than 50% (see Table 6). This was, however, not the case of SMEs' growth.

Table 6: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1 (Tax incentives)	3.150	28.634	28.634	3.150	28.634	28.634
1 (SMEs' growth)	6.654	66.539	66.539	6.654	66.539	66.539
1 (Tax administration)	3.772	47.155	47.155	3.772	47.155	47.155

Test of normality (SMEs' growth)

The z-scores (Statistics/Std. Error) for the positively skewed SMEs' growth (Z-score for skewness=1.8319) and negatively kurtotic SMEs' growth (Z-score for Kurtosis=-1.8658) falls within the range of -1.96 and 1.96 (see Table 7), hence the conclusion that the data in respect of SMEs is approximately normally distributed (Pallant, 2005).

Table 7: Descriptives

		Statistic	Std. Error	
SME growth	Mean	25.8609	1.00159	
	95% Confidence Interval for Mean	Lower Bound	23.8767	
		Upper Bound	27.8450	
	5% Trimmed Mean	25.3865		
	Median	24.0000		
	Variance	115.366		
	Std. Deviation	10.74088		
	Minimum	12.00		
	Maximum	52.00		
	Range	40.00		
	Interquartile Range	20.00		
	Skewness	.414	.226	
	Kurtosis	-.834	.447	

Results

The study surveyed 87 (75.7%) male and 28 (24.3%) female managers/owners of registered SMEs in the Kumasi Metropolis. 69.6% (80) were managers whilst 30.4% (35) were CEOs of the SMEs. 91 (79.1%) were small enterprises whilst 24 (20.9%) were medium enterprises. Most of these SMEs were in the service sector 57 (49.6%), which seemingly confirms the growth of the service sector in Ghana, 35 (30.4%) in manufacturing, 13 (11.3%) in agriculture whilst the remaining 10 (8.7%) in commerce. Most of the SMEs relied on self-financing (49/42.6%), combination of self-financing and debt (loan) financing (46/40.0%), debt financing (13/11.3%) and combination of debt (loans), self-financing and leasing (7/6.1%). Most of the SMEs (105/91.3%) were registered tax payers at the Ghana Revenue Authority. 10/8.7% of the SMEs were not registered taxpayers. Most of the SMEs had been in business between 6-10 years (37/32.2%) followed by those between 1-5 years (35/30.4%). The remaining 26 (22.6%) and 17 (14.8%) had had business experience between 11-15 years and 16 years and above, respectively. 72 (62.6%) were sole proprietorship, 36 (31.3%) were private companies whilst the remaining 7 (6.1%) were into partnership. At least, all respondents have secondary educational background. Majority had First Degree Certificates (54/47%) and then followed by those with HND/Equivalent Certificates (37/32.2%). 13 (11.3%) and 11 (9.6%) of the participants had Masters' Degree and SHS/equivalent certificates respectively.

Test of Hypotheses: H_1

The tested hypotheses results show there is a strong positive significant joint correlation between measures of tax administration and SME growth ($R=0.613$; $p=0.000$; $p<0.05$) (see Table 8). Tax administration accounts for 37.6% positive significant variance in SMEs' growth. This variance in SMEs' growth as accounted for by changes in tax administration is significantly moderate ($R^2>0.33$; $p=0.000$; $p<0.05$). Other factors that have the potential to improve SMEs' growth apart from tax administration but are not captured in the model could account for the remaining 62.4% variance in SMEs' growth. H_1 is thus supported in this study.

Table 8: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig.
1	.613 ^a	.376	.328	8.80190	0.000

Table 9: Coefficient

Model		Unstandardized Coefficients			Sig.
		B	Std. Error	T	
1	(Constant)	13.611	4.380	3.107	.002

Mode of corporate tax payment	.953	1.435	.664	.508
Timing for tax payment	-2.113	1.361	-1.553	.123
Tax rates	-3.459	1.658	-2.086	.039
Tax amounts	2.236	1.627	1.374	.172
Perceived certainty in corporate tax	3.093	1.233	2.509	.014
Tax incentives	2.530	1.081	2.340	.021
Tax administration efficiency	-.296	.938	-.315	.753
Tax education by GRA	2.312	.917	2.523	.013

Observation of the beta coefficient (Unstandardized Coefficients) shows that only four measures of tax administration make a statistically significant positive contribution to the positive change in SME growth (see Table 9). This claim is substantiated by the p values. These indicators include corporate tax rate (Beta=-3.459; $p=0.039$), perceived certainty in corporate tax (3.093; $p=0.014$), corporate tax incentives (Beta=2.530; $p=0.021$) and tax education by GRA (2.312; $p<0.013$). A regression function is therefore deduced as follows:

$$SME\ growth = 13.611 - 3.459 (Corporate\ tax\ rate) + 3.093 (Perceived\ tax\ certainty) + 2.530 (Tax\ incentives) + 2.312 (Tax\ education\ by\ GRA)$$

Test of Hypotheses: H_2

Table 10: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
1	0.658 ^a	0.434	0.373	8.50423	0.000

The joint correlation between tax incentives and SMEs' growth is strong positive moderate and significant ($R=0.658$; $p=0.000$; $p<0.05$) (see Table 10). Tax incentives account for a statistically significant positive variance in SMEs' growth ($R^2=0.434$; $p=0.000$; $p<0.05$). This variance in SMEs' growth as accounted for by changes in tax incentives is significantly moderate ($R^2>0.33$; $p=0.000$; $p<0.05$). Other factors that have the potential to improve SMEs' growth apart from tax incentives but are not captured in the model could account for the remaining 56.6% variance in SMEs' growth. Therefore, H_2 is supported.

Table 11: Coefficient

Model		Unstandardized Coefficients			Sig.
		B	Std. Error	T	
1	(Constant)	11.678	4.094	2.853	.005
	Tax rebates	3.425	.844	4.058	.000
	Tax holidays	2.799	.861	3.252	.002
	Free zones incentives	.402	.994	.405	.687
	Incomes exempted	-.377	.776	-.486	.628
	Capital allowances	-.410	.935	-.439	.662
	Fresh graduate incentives	-.268	.880	-.304	.762
	Reduced tax rates	3.365	.969	3.472	.001
	Double tax treaties	-.811	1.119	-.725	.470
	Capital gains exempted	-.728	1.095	-.664	.508
	Import duty exemptions	.744	.994	.749	.456
	Exempted export duties	-1.779	.866	-2.053	.043

On the individual contributions of the predictive variables to the 43.4% positive variance in SME growth, the study shows tax rebates (Beta=3.425; $p=0.000$), tax holidays (beta=2.799; $p=0.002$), reduced tax rates (Beta=3.365; $p=0.001$) and exempted export duties (Beta=-1.779; $p=0.043$) are significant positive predictors of SMEs' growth (see Table 11). A regression function is therefore deduced as follows:

$$SME\ growth = 11.678 + 3.425 (Tax\ rebates) + 2.799 (Tax\ holidays) + 3.365 (Reduced\ tax\ rates) - 1.779 (Exempted\ export\ duties)$$

Test of Hypotheses: H_3

Table 12: Normal theory tests for indirect effect

Effect	se	Z	p
.2150	.1113	1.9316	.0534

A Sobel test was conducted and found full mediation in the model ($z=0.1113$, $p=0.0534$). The indirect contribution of tax incentive in the model was statistically significant (effect=0.2150; $p<0.05$) (see Table 12). It is, therefore, concluded that tax incentive fully significantly mediates the impact of tax administration on SME growth in the Kumasi Metropolis. Again, to reinforce this mediation claim, a quick observation in changes in the R^2 values for the model that included both predictors (tax administration and tax incentive) and the model that had only tax administration shows a difference of 0.0293 ($R^2: 0.2034-R^2:0.1741$). H_3 is, therefore, supported.

Test of Hypotheses: H_4

Table 13: R-square increase due to interaction(s):

	R2-chng	F	df1	df2	p
int_1	.0273	4.6817	1.0000	111.0000	.0326

A close observation of impact of the interaction effect in the model shows 0.0273 (2.73%) change in SMEs growth is attributed to the interaction between business size and tax administration significantly ($p=0.032$: $p<0.05$) (see Table 13). Therefore, H_4 is supported.

Test of Hypotheses: H_5

Table 14: Independent Sample T-Test

		Levene's Test for Equality of Variances		T	Df	Sig. (2 tailed)	Mean Difference
		F	Sig.				
Tax compliance	Equal variances assumed	.124	.725	-2.672	113	.009	-.84890

The firm-size difference on tax compliance shows medium enterprises ($M=2.7500$; $SD=1.45213$; $N=24$) have greater tendency to comply with payment of taxes than small size enterprises ($M=1.9011$; $SD=1.36671$; $N=91$). This difference is statistically significant t ([113] = -2.672; $p=0.009$: $p<0.05$) with very small effect size (eta squared=0.0594) (see Table 14). This finding shows 5.94% variance in tax compliance is explained by firm size. Therefore, H_5 is supported.

Test of Hypotheses: H_6

Table 15: Independent Sample

		Levene's Test for Equality of Variances		T	Df	Sig. (2 tailed)	Mean Difference
		F	Sig.				
SME growth	Equal variances assumed	.363	.548	-3.158	113	.002	-7.49496

Medium enterprises ($M=31.7917$; $SD=9.37610$; $N=24$) have greater tendency to grow than small size enterprises ($M=10.57407$; $SD=10.57407$; $N=91$) (see Table 15). Difference in SMEs' growth is statistically significant t ([113] = -3.158; $p=0.002$: $p<0.05$) with moderate effect size (eta squared=0.0811). Therefore, 8.11% variance in SME growth is explained by business size. It is conclusive that H_6 is supported.

Discussion

Holistically, the first model shows that tax administration causes a statistically significant positive moderate variance in SME growth. This finding supports H₁. This finding justifies the position of the benefit theory of tax that advances the argument that taxes that agents pay should reflect the benefit that they receive from the mix of good and services they enjoy from the state (Neill, 2000), thereby setting the standard lens through which local taxation is based (Scherf & Weinzierl, 2020). The finding is explained by the logic that since government creates the environment and climate for business growth, SMEs, in turn, comply with the directives regarding tax administration, and this eventually leads to improved business growth among the SMEs. It is important to acknowledge that key aspects of tax administration that strongly and positively predict improvement in SMEs' growth include corporate tax rates, corporate tax incentives and tax education by GRA. The mode of tax payment, tax amount and efficiency of tax administration as measures of tax administration do not have a significant bearing on the growth of SMEs in the Kumasi Metropolis. The joint significant positive correlation between tax administration and SME growth contradicts the position of Atawodi and Ojeka (2012), that there is a negative relation between taxes and business growth. The positive significant impact of tax administration on SMEs' growth in this research contradicts some empirical claims (Ojeka, 2011; Mungaya, et al., 2012; Ameyaw, et al., 2016; Koranteng et al., 2017), which collectively found a negative impact of tax on SMEs' growth, but supports the position of other empirical studies (Adefeso, 2018; Tee, Boadi & Opoku, 2016).

Tax incentives are recognized as a significant positive predictor of SMEs' growth in the Kumasi Metropolis, in particular, and Ghana, as a whole. This impact is justified by the position of the agency theory of tax incentive that indicates that tax incentives compensate for other government-created obstacles in the business environment. Thus, using tax to respond to fiscal failure as much as market failure (Twesige & Gasheja, 2019). Therefore, granting incentive packages in the tax system propels the growth of businesses in the country so as to support government's agenda of economic growth, national development, job creation and improved general welfare of the citizenry. The position of the benefit theory of tax that indicates that tax agents are willing to pay taxes that reflect the benefits they receive from the mix of goods and services they enjoy from the state (Neill, 2000) is also justified, as the study reveals that SMEs in Ghana receive some benefits from the tax system in the country through tax incentive packages. These incentive packages, thus, provide good grounds for SMEs to function effectively. Incentives, thus, support SMEs by lifting their tax burden, encourage savings and boost investment drive (Dai, Verreyne, Wang & He, 2020; Chukwumerije & Akinyomi, 2011; Zee, Zee, Stotsky & Ley, 2002).

The finding echoes the claim collectively held by some previous empirical studies, that tax incentives significantly improve SMEs' growth (Megersa, 2019; Siyanbola et al., 2017; Liakhovets, 2014; Siyanbola, 2017; Adefeso, 2018; Megersa, 2019). Tax incentive packages, having significant influence on SMEs' growth, include tax rebates, reduced tax rates, tax holidays, and exempted tax duties. Free zone incentives, incomes exempted, capital allowances, fresh graduate incentives, double tax treaties, capital gain tax are insignificant predictors of SMEs' growth in the Kumasi Metropolis. Although tax administration contributes to growth of SMEs, this growth is, however, enhanced if SMEs are given business-friendly tax incentives by the tax authorities in Ghana (Liakhovets, 2014; Siyanbola, 2017; Adefeso, 2018; Megersa, 2019). Supporting the ideals of the benefits theory of taxation, it is deduced that SMEs benefit from the government of Ghana through the tax incentive packages that are offered to them. This situation ends up creating the supportive environment for tax administration to better improve the state of growth of SMEs in the Kumasi, in particularly, and Ghana, at large.

Firm size is a significant factor that influences the effect of tax administration's influence on SMEs' growth in Ghana. This supports the position held by a recent empirical study by (Okpeyo, Musah and Gakpetor (2019). Given the significant interactive effect of firm size, the study further proves that medium enterprises have higher likelihood to pay taxes, compared to small-sized enterprises in Ghana. It, therefore, signifies that small enterprises have greater default risk compared to medium enterprises. The magnitude of the difference is very small. This finding justifies the position of the transaction cost theory that firms reduce transaction cost based on its impact on incentives, monitoring and structure of production (Williamson, 1998). Therefore, co-ordination cost incurred on all information processing necessary to co-ordinate the work of tax authorities and that of SMEs are more likely to favour medium-sized enterprises than small enterprises. This position is also championed by some empirical studies (e.g., Okpeyo, Musah & Gakpetor, 2019; Ocheni & Gemade, 2015; Stella, et al., 2014). Comparatively, medium enterprises have greater growth potential within the current tax system operating in Ghana, compared to small enterprises, although the magnitude of the difference is moderate. This position is supported by some previous empirical studies (e.g., Stella, Aggrey & Eseza, 2014; Bourlakis, Maglaras, Aktas, Gallear & Fotopoulos, 2014).

Conclusion

The tax system in Ghana is favourable for SMEs' growth, given the significant positive contributions of tax administration and tax incentives to predicting SMEs' growth. Tax incentives enhance the effect of tax administration on SMEs' performance significantly. Firm size is a significant factor that influences tax compliance and growth of

SMEs in Ghana. Medium enterprises have high growth potential and tax compliance behaviour, compared to small enterprises.

For theoretical purposes, it is believed that the findings of the study support the principles inherent in the benefit theory. The participants disclosed that they pay taxes to the government of Ghana because they receive some benefits from the state and also expect the state to spend the revenue collected by way of taxes to boost the economic outlook and general business environment in Ghana. The agency theory of tax incentive is equally supported as the study unravels the rationale behind tax administration and SMEs' growth, given the intervening effect of tax incentives. Also, the study established some empirical relationships among the constructs considered in the models of the study, especially on how favourable tax administration system and tax incentives positively impact on the growth of SMEs. Firm size seems to be a significant factor that influences how tax system affects SMEs' growth in Ghana.

For practical purposes, Ghana Revenue Authority (GRA) and its allies are encouraged to put in place systems that make tax administration efficient, convenient and business-friendly, so as to promote compliance behaviour among SMEs in the Kumasi Metropolis and Ghana, at large. To fully enhance the effect of tax administration on growth of SMEs in a significant manner, GRA must charge attractive corporate tax rates, ensure SMEs are certain as to the type, amount and time of payment of taxes, provide general tax incentives and also conduct full scale consistent tax education for SMEs.

The study shows tax incentives improve SMEs' growth significantly and on a moderate scale, hence special focus on providing tax incentives to SMEs in Ghana should be the strategic drive of GRA, if the authority is to stimulate SMEs' growth through tax incentives in Ghana. Tax rebates, tax holidays, reduction in tax rates and tax exemption duties are prime drivers of SMEs' growth in the context of the study, hence the government's fiscal policy must focus on these incentive packages for SMEs, to promote their growth. At the moment, tax incentives, such as free zone incentives, income tax exemption, double tax treaties, capital gains exemption and import duties, do not support the growth of SMEs. Hence, there is the need for tax authorities to repack these elements in order to improve their effect significantly on SMEs' growth in the Kumasi Metropolis. Small enterprises need to be given preferential treatment through the government of Ghana's fiscal policies through incentive packages. This is because the small enterprises need more push financially in order to stimulate their growth and tax compliance behaviour as compared to the medium enterprises. This initiative could assist small enterprises to migrate to medium enterprises in the long run, given their growth potential. The government of Ghana can institute fiscal and monetary policies that support the growth of SMEs and refocus high growth SMEs operating in the Kumasi Metropolis.

The moderation and the mediation analyses were done with the composite variables and this made it impossible to observe the contributions of the individual indicators of the constructs used for such analysis. Again, the findings of this study cannot be generalised to cover all sizes of businesses, because it did not target micro enterprises and large enterprises operating in the Kumasi Metropolis. Further studies should be conducted to assess the influence of taxation on growth of micro enterprises and large enterprises in Ghana.

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HRM Practice and Innovative Work Behavior: Organisational Politics as Mediator and Personal Locus of Control as Moderator

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Abstract

The general objective of this study was to examine the effect of organisational politics on the relationship between HR practice and the innovative work behaviours of selected senior staff of the University of Cape Coast in Ghana. A secondary objective was to examine the moderation of personal locus of control on the association between organisational politics and employees innovative work behaviour. The study adopted an explanatory research design, using a purely quantitative approach. The target population comprised of all senior staff of the University of Cape Coast. The G*Power 3.1 software was used to select 119 members into the sample for this study. Data were collected through a self-administered survey questionnaire and analysed, using the Partial Least Square-Structural Equation Modelling (PLS-SEM) technique. The findings of this study suggest that organisational politics has a statistically significant positive influence on the link between human resource management practice and employees' innovative work behaviour. Unexpectedly, the paper also found that the link between organisational politics and personal locus of control, on one hand, and that between personal locus of control and innovative work behaviour, on the other hand, were statistically non-significant and negative. Therefore, we recommend that since organisational politics is an inevitable element in every human institution, any attempt by management to improve the innovative work behaviours of employees must take into account the possible effect of organizational politics on the said intervention.

Keywords: Human resource management practice, innovative work behaviour, organizational politics, personal locus of control, Ghana.

Introduction

In the midst of the constantly changing business environment, characterised by the endless and interminable taste of customers for new products and services, one area that has become so critical to management is how to maximise the innovative potential of their employees (Pukienė, 2016). As noted by Tushman and Nadler (1986), in the 21st Century business, there is perhaps no more pressing managerial problem than the sustained management of the innovative work behaviour of employees. Innovative work behaviour is defined by Janssen (2000) as the behaviour of an individual that is intended to intentionally create, introduce, and apply new ideas, processes, or products. Koednok and Sungsanit (2018) have recently defined innovative work behaviour as an employee's action directed at the generation, application and implementation of novelty ideas, products, processes and methods to develop their job positions, departmental units or the entire organisation. Though these definitions seem to interpret innovation as something new, including new processes, new products, new markets, new practices or a combination of any of these examples, in this study, the concept may also refer to the application of existing products or services in a unique way, as held by De-Jong and Den-Hartog (2010).

Innovative thinking is largely dependent on employee know-how (Bos-Nehles et al., 2017; Koednok & Sungsanit, 2018). As posited by Yusuf (2009), innovation springs from the creative application of employee skills and knowledge, which, in turn, derive from the effective management of employees in the organisation. This is supported by Agarwal (2014), who argued that organisations may be restricted in their ability to innovate if they do not know how to trigger employees in a way that will encourage them to engage in innovative work behaviours. Foss and Laursen (2012) also argued in a similar manner, saying that management can improve the innovative work behaviour of their employees through dedicated training, new rewards, new ways of communicating with and between employees, and increasingly sourcing ideas and knowledge from organisational members. In sum, previous studies have shown that innovative work behaviour is achievable through the effective management of employees (Bos-Nehles & Veenendaal, 2019; Pukienė, 2016). There is a theoretical logic in the preceding empirical studies. The generation and implementation of creative ideas through innovative work behaviour aims at helping a firm to achieve sustainable competitive advantage over rival companies (Saá-Pérez & García-Falcón, 2002).

Among the resources in the organisation, it is only the human resource whose management meets the criteria for achieving sustainable competitive advantage (Wright *et al.*, 1994). This conclusion is based on the resource-based theory, as proposed by Barney (1991). The central proposition of this theory, as held by Barney (1991), Wernerfelt (1984) and Prahalad and Hamel (1990), is that a firm can only achieve sustainable competitive advantage by developing such strategic resources from its own structure and within its own capabilities. It is also held that the most strategic resource of the organisation is the human resource (Prahalad & Hamel, 1990). Consequently, the resource-based theorists believe that human resources can be managed to achieve sustainable competitive advantage since people skills and competencies are valuable, rare, non-substitutable and difficult for competitors to imitate (Saá-Pérez & García-Falcón, 2002). The emphasis on human resources has, therefore, become necessary because people hold the promise of gaining sustainable competitive advantage and innovation (Bos-Nehles et al., 2019). The innovative work behaviour of employees derives from effective HR practice (Bos-Nehles et al., 2019; Pukienė, 2016). Khan et al. (2019) identified recruitment and selection practices, training and development practices, performance appraisal practices, rewards management practices, and health and safety practices as the most common human resource management (HR) practices. The argument in this paper is that when the appropriate practices are identified and effectively implemented, the innovative work behaviour of employees will be improved (Bos-Nehles et al., 2019).

While there is a strong theoretical and empirical support for the significant positive relationship between effective HR practice and innovative work behaviour, the same cannot be said of the relevant contextual factors that mediate this relationship (Riaz & Hussain, 2018). Furthermore, the few studies (Foss & Laursen, 2012; Riaz & Hussain, 2018) that tried in this direction did not consider organisational politics, which is an integral part of every organisational life (Demirel & Goc, 2013; Ullah et al., 2011; Gotsis & Kortezi, 2010). Thus, several questions remain unanswered as to which contextual factors more importantly affect the relationship between human resource management practice and employees' innovative work behaviour. This is the motivation for this study. Vigado-Gadot and Drory (2007) defined organisational politics as an intentional social influence process in which behaviour is strategically designed to maximise self-interests, and therefore, in conflict with the collective organisational goals or the interests of other individuals (Donald, Bertha & Lucia, 2016; Danish, Humayon, Aslam, Usman & Tariq, 2014). Previous studies focused on the negative aspect of organisational politics, arguing that work politics often interferes with normal organisational processes (decision making, promotion and reward) and, therefore, tends to damage productivity and performance on both the individual and organisational levels (Drory, 1993). In recent times, however, most scholars (Fedor, Maslyn, Farmer & Bettenhaasen, 2008; Simmons, 2009) have argued that if political tactics are used appropriately, they can advance an organisational cause that benefits everyone equally, then they are more likely to be seen as purposeful and legitimate.

The argument in this paper is that whereas research has found support for the positive relationship between effective HR practice and innovative work behaviour, acquiring the skills through appropriate HR practice is one

thing, but having the feelings and commitment to put new ideas into practice is another. We suggest that, without appropriate organisational politics, HR practice can only provide the skills for innovation, but cannot assure the organisation of any meaningful innovative work behaviour. The authors are, however, aware that the influence of organisational politics on the link between human resource management practice and innovative work behaviour will not be felt exactly equally by all employees, based on their personal locus of control (Bos-Nehles et al., 2019). Spector (1982) defined personal locus of control as the degree to which individuals perceive themselves to have personal control over their environment (Rotter, 1966). Previous research has shown that the effect of organisational politics depends on the employee's personal locus of control (Spector, 1982). Employees with an internal locus of control perceive their work environments as being controllable (Agarwal, 2016). As a result, if they confront any inconvenience in their work environment, they will only change their behaviour (Ng et al, 2006). Alternatively, individuals with external locus of control are less likely to change their behaviour because they do not believe that doing so would change any inconvenience in their work environment (Agarwal, 2014; Ng et al., 2006).

The main aim of this research is to investigate the effect of organisational politics on the relationship between HR practice and employees' innovative work behaviours among the senior staff of the University of Cape Coast in Ghana. A secondary objective is to examine the moderation of personal locus of control on the association between organisational politics and employees innovative work behaviour. Hence, this paper attempts to answer the following specific questions: Do HR practices directly predict employees' innovative work behaviour? and Does organisational politics significantly mediate the relationship between HR practices and employees' innovative work behaviour? In the remainder of the paper, we present the review of literature, development of hypotheses, the methodology, data presentation, discussion of results, findings and conclusions.

Literature Review

The underpinning theory of the study

The resource-based theory is the main foundation on which this study is built. It is a vital and critical theory underlying the study of strategy and competitive advantage. The theory was originally proposed by Barney (1961) and supported by several scholars, such as Ansoff (1965), Wernerfelt (1984), and Prahalad and Hamel (1990). In recent times, the theory has been refined by Hitt, Xu and Cames (2016), and Kehoe and Collins (2017). The main assumption underlying the resource-based theory is that sustainable competitive advantage derives from the internal resources and capabilities of people. These resources, according to Barney (1961), can help an organisation to achieve competitiveness only when they are rare, valuable, non-substitutable and imperfectly imitable. Among these characteristics, Barney (1961) found) the rarity of resources as the most fundamental element. He argued that a resource may be valuable, non-substitutable and imperfectly imitable during a short-term period but, if it is not rare, another organisation can easily conceive and imitate any strategy it provides, thereby reducing its value and the rate of its non-substitutability in the industry or market. Resources are rare when they are currently controlled by one company or a small number of competing companies. They are valuable when they have the ability to reduce cost or increase the price of a product or service, and they are inimitable if there is no other resource that could be used as an adequate and worthy replacement for them (Prahalad & Hamel, 1990; Wernerfelt, 1984). Finally, resources and capabilities are non-substitutable if they do not have strategic equivalents (Bohlander, Snell & Sherman, 2001). The resource-based theory is relevant for this study because the identification and development of employee competencies, which are part of the internal resources of the organisation, will greatly depend on the type of organisational politics in place.

HR practice

Previous studies have identified a great number of HR practices. Dessler (2005) identified selecting, screening, recruiting, training, rewarding, appraising as well as attending to labour relations, safety and health, and fairness concerns (Saifalislam, Osman & AlQudah, 2014). Khan, Yusoff, Hussain and Binti (2019) reported recruitment and selection practices, training and development practices, performance appraisal practices, rewards management practices, and health and safety practices. Barney (2019) also reported nine practices, including recruiting, workflow, managing proficiency assessment, dismissal, compensation management, learning and development, empowerment and internationalisation, and relationships amid employees, while Theodore (2018) and Zhou (2018) identified creating a pool of suitable applicants, recruiting individuals, selecting, monitoring performance, managing compensation and training employees. Additionally, giving compensations and monitoring performance also increases the productivity of employees. Others (Bach & Della Rocca, 2000; Vera & Crossan 2004) have identified four practices of human resource management, including collection, selection, evolution, and compensation. Following this review, the authors of this paper have observed that there are five common HR practices, including recruitment and selection practices, training and development practices, performance appraisal practices, rewards

management practices, and health and safety practices, as espoused by Khan et al (2019). HR practices in this study, therefore, relates to those identified by Khan et al (2019).

Recruitment and selection function

Recruitment and selection practices are the procedures used by HR managers to attract and place individuals into vacant jobs in the organisation (Khan et al., 2019). Effective recruitment and selection practices enhance the firm's chances of finding the best candidates available for any advertised position (Bartunek & Moch, 1987). To resource an organisation, talents may be recruited internally by rehiring former employees or promoting existing employees (Taylor, 2010). Taylor (2010) believes that internal recruitment practices allow the organisation to experience cost savings in areas such as advertising, induction and training. Regardless of the benefits of internal hiring, a company may resort to external recruitment if the desired skills cannot be sourced from within. Once management has decided on how they will recruit potential candidates for the job, their next task is to select the candidate who will best fit the vacancy (Taylor, 2010). Selecting the right candidate is fundamental to the functioning of an organisation because a well-designed and implemented selection programmes produce concrete benefits, such as a reduction in turnover, and lower levels of employee misconduct (Taylor, 2010). It is for this reason that during the recruitment and selection process, management is required to ensure a better fit between the organisation and the potential employees. In doing so, management must provide job applicant with "all pertinent information (both positive and negative) without distortion." Realistic job previous (RJPs) is an alternative to the traditional "seduction" method where job candidates were only informed about the positive aspect of the organization. The realistic job previous may also be supported with appropriate testing, which are often used to screen out non-fit candidates.

Training and development function

Training and development practices consist of the procedures and methods used to by HR managers to instill learning among members of the organisation (Jacobs, 2003). While training is a short-term learning activity for the acquisition of specific skills required for doing a particular job, development equips employees with general knowledge and competencies required for future responsibilities. There are several types of training an organization can use to instill the requisite skills, knowledge and abilities in the employee. The most common classification ranges from traditional versus contemporary training, orientation versus mentorship, formal versus informal training, technical versus professional, in-house versus external training and so on (Mamoria, 1995). The type chosen depends on the availability of resources, the type of company, and the priority the company places on training. According to Ongori and Nzonzo (2011), training is frequently classified into on-the-job or off-the-job.

On-the-job training allows the trainee to develop skills in the real work situation by actually using the machinery and the materials involved in performing the job (Dessler, 2005). This type of training saves time and cost because the employee engages in the training while performing his or her daily duties concurrently. Off-the-job training occurs when trainees learn their job roles away from the actual work floor or situation, usually in an environment that is duplicated and used for that purpose (Ongori & Nzonzo, 2011). The advantage of this type of training is that the employee does not have a divided attention. The most cited disadvantage of off-the-job training, however, is that trainees usually find it difficult to transfer the skills learnt from training to the workplace. A well-trained employee makes better and economic use of materials and equipment which, in turn, minimize wastages in the system (Mamoria, 1995). Development, on the other hand, aims at enhancing the overall growth of employees for future responsibilities (Khan et al., 2019). Training and development modify not only existing skills; they also help trainees to adapt to new technology.

Performance appraisal function

Performance appraisal practices are the HR practices by which managers evaluate, compare and provide feedback on employee performance (Ahmad & Bujang, 2013; Fletcher, 2001). The appraisal of employee's performance is important because it serves as the basis for performance feedback and validation of selection processes, promotions and transfers (Bartunek & Moch, 1987). Employee performance may be measured in terms of quantity or quality of output, creativity, flexibility or anything else desired by management (Campbell, 1990). The general aim of performance appraisal has always been to improve the performance of employees (Ayomikun, 2017). The term performance appraisal has many labels, including, but not limited to, performance review, employee appraisal, performance evaluation, employee evaluation, employee rating, performance assessment, performance measurement, staff assessment or personnel rating (Ahmad & Bujang, 2013). In an effective performance appraisal system, the performance of individuals over the review period is evaluated; strengths and weaknesses identified, and reasons for any shortfall in performance examined (Bartunek & Moch, 1987). Performance appraisal has become part of a more strategic approach for integrating HR activities and business policies, through which managers evaluate, compare and provide feedback on employee performance. An organisation can derive total benefit from the performance of her employees only when management is able to explore, expand, and appraise the full potential of their employees.

In doing this, management must continuously review its structures and systems, create new roles, and assign new responsibilities. Again, the capability of employees to perform the new roles and responsibilities would have to be assessed.

Reward and compensation function

Reward and compensation practices are the processes and actions taken by HR managers to identify, evaluate and deliver the net monetary payments to their employees (Rana & Malik, 2017). Appropriate compensation practices are important because most employees consider rewards as having direct bearing on their status in the organisation and the society in which the organisation operates (Ahmad & Shahzad, 2011; Sardar et al., 2011). Employees believe that their basic pay reflects how much they fare in the organisation (Bohlander et al., 2001). The design of employee compensation is a delicate and more controversial area in human resource management. Whereas a high level of pay or benefit relative to that paid by competitors can ensure that a company attracts and retains high-quality employees, they are also likely to feel unsatisfied with their pay if what they are receiving does not reflect the time, energy, and effort they contribute to the organisation. This is the overarching reason why pay level decisions are very crucial. Generally, one of three pay policy options may be chosen: lead, lag or match policies. Firms with a lead policy pay higher wages than the average paid in the labour market. Employers who choose a lag policy pay lower than the average wage, while employers with a match policy tend to “match” the market rate. The decision to adopt any one of these strategies must depend on the ability of the firm to pay, the availability of supply of the type of labour at hand in the labour market, and the mission of the organisation.

Health and safety function

Health and safety practices are the procedures and policies taken by HR managers to maintain a safe and healthy workplace for the protection of organisational properties and the welfare of employees at work (Misnan & Mohammed, 2007). A major challenge facing most industries today has been the prevalence of accidents resulting in injuries, diseases and loss of property and lives (Misnan & Mohammed, 2007). According to the ILO report (2011), 160 million workers suffer from occupational diseases; more than 270 million suffer from occupational injuries; and about 2 million workers die prematurely every year from occupational illnesses (Ahmad et al., 2016; Amponsah-Tawiah et al., 2016). Traditionally, workplace accidents were attributed to the engineering aspect of safety. Consequently, increased efforts on engineering safety were the hallmark of the day (Thai & Grewal, 2007; Vredenburgh, 2002).

However, in contemporary business, while accidents in industries, such as the mining, manufacturing, construction and lumber, may be due to engineering malfunctioning, the majority of accidents that occur on site may be blamed on the behavioural and social perspective of the organisation (Stemn et al, 2019; Thai & Grewal, 2007). This implies that health and safety issues would have to be tackled from employee behaviours as well. In this regard, the concept of a safety culture becomes crucial. The U.S. Nuclear Regulatory Commission (2011) defines safety culture as an organisation’s collective commitment, by leaders and individuals, to emphasise safety as an overriding priority to competing goals and other considerations to ensure protection of people and the environment (Thai & Grewal, 2007). Thus, the attempt by management to improve the health and safety of their employees may be achieved by focusing on two aspects of the organisation—the engineering aspect and the behavioural or cognitive aspect.

Organisational politics

Gull et al. (2012) defined organisational politics as activities that permit people in an organisation to achieve goals without going through the appropriate channels. Vigoda-Gadot (2007) also defined organisational politics as behaviour that aims at safeguarding the interest of certain individuals at the expense of others. Organisational politics is also defined by Vredenburgh and Shea-VanFossen (2010) as a system that is exploited by politically skilled individuals to hasten their self-interest at the cost of another. While there are several other definitions, the fundamental tenet of organisational politics is the placement of an individual interest ahead of the interest of others, including, sometimes, the organisation itself (Aidoo et al., 2018). Again, these definitions imply that organisational politics could be detrimental to everyone except the perpetrators, thereby supporting the traditional view that organisational politics is generally characterised by destructive opportunism and dysfunctional game playing (Drory, 1993; Ferris & Kacmar, 1992). This is often described as the dark side of organisational politics which has adverse implications for several employee outcomes, such as commitment (Donald, Bertha & Lucia, 2016), stress (Danish, Humayon, Aslam, Usman & Tariq, 2014), job satisfaction (Vigoda-Gadot, 2007), work performance (Bodla & Danish, 2009) and innovative work behaviour (Elkhalil, 2017). Consequently, the attempt to improve employee innovations cannot be achieved unless it is weighed against the type of organisational politics at hand. Thus, organisational politics represents a significant aspect of human resource management (Perna, Nikhat & Srabasti, 2014).

Organisational politics has taken various perspectives, largely from a behaviourist and cognitive points of view (Ferris & Kacmar, 1992). Proponents of the behaviourist perspective believe that the propensity to engage in organisational politics is a natural characteristic of human beings, and a consequent of human evolution (Vredenburg & Shea-VanFossen, 2010). To the behaviourists, organisational politics is best studied from the standpoint of the nature of actual political behaviour, which often conflicts with official goals and policies (Aidoo et al., 2018; Schneider, 2016). Actual political behaviour occurs when the employee has been involved in organisational politics (Leslie & Gelfand, 2012). The cognitive theorists hold a different view about organisational politics. According to them, organisational politics derives from the perceptions held by employees, the antecedents of such perceptions, and their consequences (Aidoo et al., 2018). Thus, the cognitive theorists believe that organisational politics is best examined by asking employees about their perceptions of politics in the work environment (Ferris & Kacmar, 1992).

Personal locus of control

Rotter (1966) defined personal locus of control as the degree to which individuals perceive themselves to have personal control over their environment. Aldag and Stearns (1987) also defined personal locus of control as the degree to which individuals feel that the things which happen to them are the results of their own actions or others. According to them, people who feel that such things are within their own control are described as having an internal locus of control, whereas those who see them as happening as a result of fate, circumstance or chance are described as having external locus of control. Agarwal (2016) posited that internals are likely to believe that they can do better if they put much effort, since they think the rewards and punishments they receive depend on how well they perform and not how others behave towards them. As such, internals may be more highly motivated than externals when they both face adverse organisational politics, and this can have effect on how well they would embrace innovation from their superiors (Agarwal, 2016). Thus, the inclusion of personal locus of control stem from the view that employees' response to organisational politics would greatly depend on whether they have internal or external locus of control (Agarwal, 2016).

Concept of innovative work behaviour

Farr and West (1990) defined innovative work behaviour as behaviour that aims at achieving the initiation and intentional introduction of new and useful ideas, processes, products or procedures. Innovative work behaviour is also defined by Janssen (2000) as the intentional creation, introduction and application of new ideas within a work role, group or organization, in order to benefit role performance, the group or organization. Traditionally, innovative work behaviour was used interchangeably with creativity (De Jong & Den Hartog, 2010). However, in contemporary literature, the concept has been differentiated from creativity. This difference was highlighted by Xerri and Brunetto (2013), who stated that whereas innovative work behaviour involves the generation and implementation of ideas, creativity is limited to the generation of ideas only, and could be considered simply as a component of innovative work behaviour. Janssen (2000) identified three stages of innovative work behaviour, including (1) idea generation, (2) idea promotion and (3) idea realisations.

Idea generation involves understanding problems and identifying solutions that depart from the firms' conventional routines. In the idea promotion stage, the employee or innovator tries to promote an idea and builds a relationship with colleagues to support it. Finally, idea realisation is the ability to create a team in order to convert the innovative idea into a working and concrete object (Janssen, 2000). These stages suggest that, in contemporary business, innovative work behaviour perceived as a broad set of behaviours that are related to the generation of ideas, creating support for them and helping their implementation. Idea generation, even in the midst of the requisite support, cannot be innovative behaviour unless the idea is successfully implemented. In other words, individual innovative behaviour is not only creative; it also includes adequate promotion and the implementation of creative ideas. Creativity therefore is a necessary but not sufficient condition for innovation.

A review of the literature has shown that most studies focus on innovation at the organisational level where HR practices or systems tend to affect innovative outcomes (Koednok & Sungsanit, 2018). However, there is the need to also focus more on how innovation can be fostered at the individual level because individuals, logically, are the holders and processors of ideas (Xerri & Brunetto, 2013). Furthermore, individual employees can initiate innovations, because they are in frequent contact with processes and products and can detect potential improvements and opportunities for new developments (Bos-Nehles, Renkema & Janssen, 2017).

Development of hypotheses

HR practice and innovative work behaviour

The relationship between HR practice and innovative work behaviour has received the attention of several scholars (Bos-Nehles et al, 2019; Polat, 2018; Pukienė, 2016). Pukienė (2016) investigated the role of human resource

management in leveraging the innovative work behaviour of employees in Pakistan and found that although innovative work behaviour can be fostered by applying selective HR practices separately, it is fostered more when managers adopt a combination of HR practices. Similarly, following a desktop review of literature on human resource management and innovative work behaviour, Bos-Nehles et al. (2019) found that a combination of ability-enhancing and opportunity-enhancing HR practices helps organisations to foster the innovative work behaviour of targeted employees. The findings of other scholars (Polat, Bal, Paul & Jansen, 2017; Bos-Nehles & Veenedaal, 2019) produced the same or similar results. On the basis of this review, it is hypothesised that:

H₁: There is no significant positive relationship between HR practice and innovative work behaviour.

HR practice and organisational politics

Decades of research in the humanities have shown that organisational politics exerts some influence on HR practice (Rehana et al., 2019). For instance, Drory and Vigoda-Gadot (2010) found that while organisational politics can harm the HR function, HR managers can profit from organisational politics, if they balance the negative and positive effects during selection, training, promotion and performance appraisal. In a similar study, Rehana et al. (2019) investigated the impact of nepotism and favouritism on HR practice in the public-sector hospitals in Pakistan and found that whereas nepotistic political practices affect HR practices negatively, favourable political practices affect HR practices positively. Gakure et al. (2012), however, established a weak relationship between organisational politics and management development. On this basis, it is hypothesised that:

H₂: There is no significant positive relationship between HR practice and organisational politics.

Organisational politics and innovative work behaviour

It has been established that a conducive work environment encourages the innovative work behaviour of employees (Amabile, 1988). It is also reported that a workplace that is full of adverse experiences of organisational politics, in which case employees turn to focus on ways of coping and managing the strain associated with such politics, which usually impedes the motivation to learn and acquire innovative skills and behaviours (Agarwal, 2016; Boswell, Olson-Buchanan & LePine, 2004; Podsakoff, LePine & LePine, 2007). For instance, Elkhilil (2017) found that the potentially destructive aspects of organisational politics have negative effect on employee innovative work behaviour among employees in the US and Lebanon. Vigoda-Gadot and Vashdi (2012) have also indicated that a work environment that is characterized by fairness, trust and openness usually enhances innovative work behaviours, but because adverse organisational politics turn to impair these attributes, they equally can impede the innovative behaviour of employees. Put differently, in the opinion of Vigoda-Gadot and Vashdi (2012), the acquisition of skills and competencies that promote innovative abilities and behaviours can be hindered amid adverse organisational politics. Based on these reviews, it is hypothesised that:

H₃: There is no significant positive relationship between organisational politics and innovative work behaviour.

The mediation of organisational politics on the relationship between HR practice and innovative work behaviour

Previous studies (Agarwal, 2016; Bos-Nehles et al., 2019; Fedor et al., 2008) suggest that organisational politics is not experienced universally by employees as a negative or threatening aspect of the workplace. Whereas the same set of employees may face the same organisational politics, the effect of those politics on the individuals may differ according to whether they have external or internal locus of control (Bos-Nehles et al., 2019). As noted by Agarwal (2016, p. 420), the ambiguity inherent in political environments leaves the situation open to interpretation by individual employees. Individuals with internal locus of control turn to interpret their work environments positively even in the midst of adverse politics, and are adept at evaluating and responding to adverse political work environments in almost the same way as if those political adversities do not exist (Erez & Judge, 2001). These group of employees view political adversities as controllable, and they would continue to exhibit individual job attitudes and innovative work behaviours (Rotter, 1966). Alternatively, employees with external locus of control find it very stressful in coping with political adversities and innovative work behaviours (Agarwal, 2016; Ng & Sorensen, 2008). Thus, it is hypothesised that:

H₄: Organisational politics does not mediate the relationship between HR practice and innovative work behaviour.

The moderation of personal locus of control on the relationship between organisational politics and innovative work behaviour

Locus of control is an important variable for the explanation of organisational politics (Spector, 1982). In a study that examined the relationship between locus of control and various organisational variables, Spector (1982) found that political behaviour is a function of an employee's locus of control. Agarwal (2016) also found that because organisational politics is a social influence in which human behaviour is paramount; one cannot study organisational politics without linking it to an employee's locus of control. According to Agarwal (2016), depending on their

personality profiles, employees do not universally respond to organisational politics. On this basis, the following hypothesis is formulated:

H₅: Personal locus of control does not moderate the relationship between organisational politics and innovative work behaviour.

Methodology

Two corresponding methodologies, the quantitative methodology and qualitative methodology, have often been used in social science research. Quantitative research techniques gather numerical data and use statistical analysis to draw meaningful conclusions (Punch, 2005). According to Leedy and Ormrod (2010), researchers who use the quantitative research methodologies usually develop a theory by inductive reasoning, engage in a theory-building process, and try to support the theory by drawing and testing the conclusions that follow logically from the theory. Contrarily, the qualitative methodology essentially builds on interpretivism, gathering information through the use of variables measured on nominal or ordinal scale (qualitative measurement scales), and analysing data by establishing the variation in the situation, phenomenon or problem being studied without quantifying it (Kumar, 2014). The qualitative research allows the researcher to explore phenomenon by deeply relying on an interactive investigation. There is also a mixed methodology, which combines both quantitative and qualitative methodologies in a single study. It emerged from the need to conduct a research, especially in studies of human behaviour, that would provide a more complete picture of a particular phenomenon than either approach could do alone.

As the main goal of this research was to test the relationship between human resource management, organisational politics and innovative work behaviour, the authors adopted a purely quantitative approach for data collection. According to Babbie (2007), quantitative research is most appropriate when the emphasis is on measuring variables and testing hypotheses that are linked to general causal explanations.

Research design

Creswell and Clarke (2007) have identified the three primary research designs which have typically characterised social science research: exploratory, descriptive and explanatory designs. In the exploratory design, the main emphasis is on gaining ideas and insights into social reality. The exploratory design allows a researcher to identify key issues and variables in a real-world situation. The descriptive design seeks to provide accurate description of observations about a particular phenomenon, thereby helping researchers to provide similarities, comparisons and contrast between phenomena (Babbie, 2007). The explanatory design focuses on “why questions” in an attempt to understand the relationships that exist between variables (Babbie, 2007; Creswell & Clarke, 2007). Considering the objectives and hypotheses in this study, the researchers chose the explanatory research design. This type of design provides a functional explanation of casual relationships, such as phenomenon *Y* (e.g., income level) is affected by phenomenon *X* (e.g., gender). It is, therefore, fit for this study.

Target population and sampling procedures

The target population for this study comprised all senior staff of the University of Cape Coast. As at the time of data collection, there were one thousand five hundred and eighteen (1,518) senior staff, 931 males (61.33%) and 587 females (28.81%) (Directorate of Human Resource, UCC, 2017). The G*Power 3.1 software (Faul, Erdfelder & Buchner, 2009) was used to calculate the sample size for the study. Determining the sample size for a linear multiple regression: fixed model (R^2 deviation from zero and a number of predictors equals to 3), 119 senior staff of the University of Cape Coast were required based on a medium effect size of 0.25 with an alpha of 0.05 and a power of 0.95 (Faul, Erdfelder & Buchner, 2009; Faul, Erdfelder & Lang, 2007). The G*Power is an excellent freeware program that allows high-precision power and sample size analyses. It computes power values for given sample sizes, effect sizes, and alpha levels for both post hoc and priori power analyses.

Data collection and analysis

The survey questionnaire was used to collect data for this study. The survey method was adopted because it is most appropriate for explanatory research (Yin, 2014). The anonymous nature of questionnaires allows respondents to express their inner beliefs, attitudes and perceptions freely (Cozby, 2001; Leedy & Ormrod, 2010). Again, the method is best suited for studies that have individuals, groups and organisations as unit of analysis (Yin, 2003). Thus, considering the research approach and design of this study, the survey method was the most appropriate for achieving the study objectives. One hundred and nineteen (119) survey questionnaires were self-administered to a randomly selected senior staff of the University of Cape Coast between October 2020 and November 2020. Given the effort of the researchers and co-operation from the respondents, all the questionnaires were validly filled out and retrieved. The available data were analysed, using the structural equation modelling, which allows for simultaneous estimation of co-variation between all variables in a model (Haenlein & Kaplan, 2004). The technique was chosen because it combines several traditional multivariate procedures and complex path models with latent variables. Again, using

the structural equation modelling, the researcher can specify various models, such as the regression model, the confirmatory factor model, the complex path models, discriminant analysis and canonical correlation (Kim, 2016; Haenlein & Kaplan, 2004).

Measurement of constructs

Four main constructs were measured in this study. They include HR practice, perceptions of organisational politics, personal locus of control and innovative work behaviour. For HR practice, the scales used by Demo et al. (2012) were adapted. Organisational politics were measured, using the 6-item-scale of Kacmar and Carlson (1997). Previous studies by Karadal and Arasli (2009) have demonstrated that the scales have satisfactory psychometric properties. Personal locus of control was measured by using the 23-item scale of Engelbrecht (2012). Innovative work behaviour was measured, using the 4-item scale of Radaelli et al. (2014). All the items were scored on a Five-Point Likert Scale with anchors 1 = Least Agreement, and 5 = highest Agreement.

Results of the Study

Measurement model assessment

The study assessed item loadings, construct reliability and validity, average variance extracted and discriminant validity in order to determine the appropriateness of the measurement model for the structural model to ensue. According to Henseler et al. (2015), the assessment of the aforementioned is to provide clear meaning of the structural model results.

Item Loading

The item loadings assessed the quality of the indicators, measuring each construct within the context of the study. In its determination, the indicator loadings of each construct were examined. Based on the rule of thumb, items with loadings ≥ 0.70 or between 0.4 and 0.7 indicated a quality measure of their respective constructs (Henseler et al., 2015). In this regard, only items that met the set criteria were retained in the model, as depicted in Table 1.

Table 1: Outer loadings

OUTER LOADINGS	HRMP	IWB	LOC	OP
<i>hrmppp</i>	0.734			
<i>hrmpr</i>	0.889			
<i>hrmprc</i>	0.810			
<i>hrmptd</i>	0.708			
<i>iwb1</i>		0.752		
<i>iwb2</i>		0.830		
<i>iwb3</i>		0.690		
<i>iwb4</i>		0.534		
<i>loc1</i>			0.798	
<i>loc11</i>			0.747	
<i>loc12</i>			0.814	
<i>loc2</i>			0.841	
<i>loc3</i>			0.811	
<i>loc4</i>			0.728	
<i>loc6</i>			0.726	
<i>loc7</i>			0.738	
<i>loc8</i>			0.782	
<i>loc9</i>			0.781	
<i>pop1</i>				0.763
<i>pop2</i>				0.809

Construct reliability

The indicator reliability of the model was measured, using Cronbach’s alpha and Joreskog’s rho-A (ρ) scores. According to Hair et al. (2019), the scores of the two measures should be > 0.70 in order to ensure satisfactory and acceptable results. As shown in Table 2, the requirements of the two measures have been met for all constructs except

organisational politics which had a score less than 0.7. The Composite Reliability (CR) values were also presented in Table 2. The CR values show that all indicators when put together had a score of 0.6 to 0.7 (Hair et al., 2019). Thus, the constructs were sufficiently measured by their indicators when put together. Also presented in Table 2 are the results of the Average Variance Extracted (AVE). The AVE values show that the measurement model is best for the structural analysis to ensue, as all the latent variables were not less than 0.5 (Hair et al., 2019).

Table 2: Construct Reliability

Constructs	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
HRMP				
IWB	0.667	0.701	0.799	0.504
LOC	0.928	0.943	0.938	0.605
OP	0.383	0.385	0.764	0.618

Discriminant validity

Discriminant validity indicates how the constructs are distinct from each other. According to Sarstedt et al. (2014), discriminant validity is appropriate for a measurement model when the Heterotrait-Monotrait (HTMT) ratio of the model is < 0.85. The results of HTMT, as depicted in Table 3, show that the constructs are distinct from each other.

Table 3: Discriminant Validity (Heterotrait-Monotrait Ratio)

HRMP	Original Sample (O)	Sample Mean (M)	5.0%	95.0%
LOC -> IWB	0.261	0.288	0.203	0.383
OP -> IWB	0.673	0.716	0.498	0.936
OP -> LOC	0.154	0.219	0.122	0.358

Assessment of the structural model

The significance level of path coefficients (β) was examined, using t-statistics and P-values obtained through 5000 bootstraps, as recommended by Hair et al. (2019). The results are shown in Table 4. The results revealed that HR practices had a positive and significant relationship with both innovative work behaviour (β :0.544; P-value:0.005) and organisational politics (β :0.380; P-value:0.027). However, the relationship between HR practices and innovative work behaviour (β :0.544; P-value:0.005) is greater compared with the relationship between HR practice and organisational politics (β :0.380; P-value:0.027). Furthermore, significant positive relationship was established between organisational politics and innovative work behaviour (β :0.144; P-value:0.024). Conversely, the relationships between locus of control and innovative work behaviour (β : -0.044; P-value:0.362) and organisational politics and locus of control (β : -0.068; P-value:0.389) were negative and non-significant.

Table 4: Structural model assessment

	Paths (Beta)	T Statistics	P Values	F ²
HRMP -> IWB	0.544	2.834	0.005	0.384
HRMP -> OP	0.380	2.213	0.027	0.169
LOC -> IWB	-0.044	0.913	0.362	0.003
OP -> IWB	0.144	2.260	0.024	0.029
OP -> LOC	-0.068	0.861	0.389	0.005
			R²	Q²
Innovative Work Behaviour			0.392	0.187
Organisational Politics			0.144	0.083
Locus of Control			0.005	0.002

The results in Table 4 further indicated that HR practice contributes 39.2% of the changes in the innovative work behaviour. With this result, it can be concluded that 60.8% of the variations in the innovative work behaviour is accounted by extraneous variables. Also, 14.4% of the changes in organisational politics is accounted by HR practices. Similarly, 0.5% of the variations in the locus of control is explained by organisational politics. In the view

of Hair et al. (2019), the effect size (f^2) and predictive relevance (Q^2) values of each exogenous variable of 0.35, 0.15 and 0.02 indicate large, medium and small, respectively. In line with this criterion, HR practice was established to have large and medium effect sizes on innovative work behaviour and organisational politics, respectively. However, the remaining nexuses of the study (Table 4) only established small effect sizes. This indicates that HR practice is a major determinant of changes in innovative work behaviour. In addition, the predictive relevance values shown in Table 4 reiterates the position that HR practice best explains the variations in innovative work behaviour. The results are also shown in Figure 1.

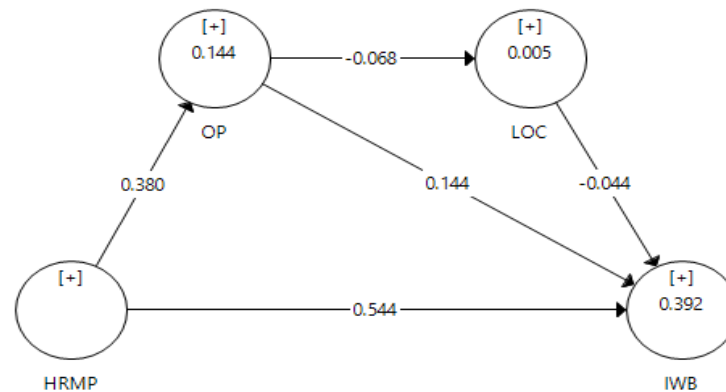


Figure 1: The structural equation model for the study

Discussion of Results

Previous studies have shown that HR practice has significant positive influence on employees' innovative work behaviour (Bos-Nehles et al., 2019; Foss & Laursen, 2012; Koednok & Sungsanit, 2018; Polat, 2018). While research seems to abound in this area of study, there are only few studies (Foss and Laursen, 2012; Riaz & Hussain, 2018) that attempted to investigate the effect of contextual factors on the relationship between HR practice and employees' innovative work behaviour. Thus, questions remain as to which contextual factors more importantly affect the relationship between HR practice and employees' innovative work behaviour. This paper examines the effect of organisational politics on the relationship between HR practice and employees' innovative work behaviour. A further look at the mediation of personal locus of control on the relationship between organisational politics and employees' innovative work behaviour was considered. The discussion of results is based on five headings, reflecting the five hypotheses in the study.

HR practice and Innovative work behaviour

The results in Table 4 and Figure 1 show that HR practice has a significant positive influence on employees' innovative work behaviour ($\beta:0.544$; P-value:0.005). The positive coefficient ($\beta:0.544$) implies that as HR practices improve, the innovative work behaviour of employees also improves in the same direction. Five HR practices were important in this study—recruitment and selection practices, employee attraction and retention practices, training and development practices, performance appraisal practices, rewards and compensation practices, as well as health and safety practices. By extension, the results in Table 4 show that a positive change in these practices would lead to a positive change in employees' innovative work behaviour. As the p-value (0.005) is less than 0.05, the relationship between HR practice and employees' innovative work behaviour is declared significant, meaning that the hypothesis, “*There is no significant positive relationship between HR practice and innovative work behaviour,*” is rejected in this study.

The preceding results are in line with previous studies (Koednok & Sungsanit, 2018; Polat, 2018; Pukienė, 2016), which reported that innovative work behaviour of employees can be fostered both by adopting selective HR practices and/or combining such practices. The results also support the findings of Bos-Nehles et al. (2019) and Bos-Nehles and Veenedaal (2017) that employees' innovative work behaviour is largely dependent on a combination of ability-enhancing HR practice (the use of recruitment and selection, training and development practices to increase the competencies of employees to achieve organisational goals), motivation-enhancing HR practice (the use of contingent rewards such as performance-based-pay, piece rate systems, profit sharing systems and performance management practices to increase the employees' motivation to perform) and opportunity-enhancing HR practices (practices that delegate decision making authority and responsibility from top level hierarchy to lower level hierarchy through information sharing). These results also imply that, in order to improve the innovative work behaviours of employees through HR practice, the HR manager has the responsibility of ensuring that the HR function comprises ability-enhancing, motivation-enhancing and opportunity-enhancing components.

HR practice and organizational politics

The study further examined the relationship between HR practice and organizational politics. As in Table 4 and Figure 1, the results show that there is a statistically significant positive relationship between HR practice and perceptions of organisational politics (β :0.380; P-value:0.027; R^2 :0.144). The positive coefficient (β :0.380) implies that as management engages in effective HR practices; there would be improvement in the positive aspect of workplace politics. Again, as the p-value (0.027) is less than 0.05, the relationship between HR practice and organisational politics is declared significant, meaning that the null hypothesis, “*There is no significant positive relationship between HR practice and organisational politics,*” is rejected. By implication, the results indicate that managers who intend to improve the skills, Knowledge and abilities of their employees through HR practices, such as recruitment and selection, employee attraction and retention, training and development, performance appraisal, compensation and health and safety practices, must ensure that the existing organisational politics can support those interventions, otherwise the employees may acquire all the skills and knowledge, but fail to apply them, because they think the existing organisational politics does not favour them. These results are consistent with earlier studies (e.g., Drory & Vigoda-Gadot, 2010; Rehana et al., 2019), that perceptions of organisational politics have both positive and negative influence on HR practices, depending on how HR managers handle the situation. Thus, whereas organisational politics can harm the HR function, HR managers can profit from it, if they strategically manage the negative and positive effects of organizational politics during employee recruitment, selection, training, promotion and performance appraisal. The results, however, are not consistent with the findings of Gakure et al. (2012), who found a very weak relationship between HR practice and organisational politics.

Organisational politics and innovative work behaviour

This study further examined the relationship between organisational politics and employees' innovative work behaviour. The results in Table 4 (β :0.144; P-value:0.024) show that organisational politics has a statistically significant positive influence on employees' innovative work behaviour (see Figure 1 and Table 4). The positive coefficient (β :0.144) implies that as the existing organisational politics favours the employees, they would not have to worry about negative political setbacks, which, in turn, would eliminate any adverse effect of organisational politics on their innovative work behaviour. As the p-value (0.024) is less than 0.05, the relationship between organisational politics and employees' innovative work behaviour is declared significant, meaning that the null hypothesis, “*There is no significant positive relationship between organizational politics and innovative work behaviour,*” is rejected. These results imply that organisations that are able to adopt appropriate work politics can ensure improvements in the innovative work behaviour of their employees. As a result, HR managers must ensure that their HR practices work towards curtailing any adverse political behaviour or the subjective perception of the dark side of work politics among members in the organisation. These results corroborate the findings of previous studies (Agarwal, 2016; Boswell, Olson-Buchanan & LePine, 2004; Baxter, 2004; Clarke & Higg, 2019; Elkhailil, 2017; Podsakoff, LePine & LePine, 2007), that negative organisational politics can curtail employee innovativeness as it can impede the motivation to learn new skills and ideas. Thus, in practice, any attempt to improve the innovativeness of employees must be checked against the prevailing workplace politics.

HR practice, organisational politics and innovative work behaviour

The main focus of this study was to assess the effect of organisational politics as a contextual factor in the relationship between HR practice and innovative work behaviour. As a result, the authors examined the mediation of organisational politics on the relationship between HR practice and innovative work behaviour. It was found that the links between HR practice and organisational politics (β : 0.380; P-value: 0.027), on one hand, and organisational politics and innovative work behaviour (β : 0.144; P-value: 0.024), on the other hand, were statistically significant and positive (see Figure 1 and Table 4). The positive coefficients (β :0.380) and (β :0.144) imply that organisational politics has significant influence on the link between HR practice and innovative work behaviour of employees. Again, as each of the p-values (P-value: 0.027) and (P-value: 0.024) is less than 0.05, the relationship among HR practice, organisational politics and innovative work behaviour is declared significant, meaning that the null hypothesis, “*Organizational politics mediates the relationship between HR practice and innovative work behaviour,*” is rejected. In other words, organisational politics has a significant positive influence on the relationship between HR practice and employees' innovative work behaviour. These results are in line with previous studies (Bos-Nehles et al., 2019; Erez & Judge, 2001), that in the midst of adverse organisational politics, employees who have external locus of control are demotivated from learning and demonstrating innovative skills and behaviours. Alternatively, those with internal locus of control do not exhibit similar behaviours (Agarwal, 2016; Ng & Sorensen, 2008).

Organisational politics, personal locus of control and innovative work behaviour

The study also sought to examine whether personal locus of control moderates the relationship between organisational politics and innovative work behaviour. Unexpectedly, it was found that the links between organisational politics and personal locus of control (β : -0.068; P-value: 0.389), on one hand, and personal locus of control and innovative work behaviour (β : -0.044; P-value: 0.362), on the other hand, were statistically non-significant and negative (see Figure 1 and Table 4). In other words, personal locus of control does not moderate relationship between organisational politics and employees' innovative work behaviours. As a result, the null hypothesis that "*Personal locus of control does not moderate the relationship between organisational politics and innovative work behaviour*" is supported. There is, therefore, a contradiction between the results of this study and previous studies (Agarwal, 2016; Spector, 1982), that political behaviour is a function of an employee's locus of control. In other words, internals and externals universally respond to organisational politics in the same way and in the same direction. Perhaps, this may be due to cultural variations between the western and developing countries. The instruments might have contained some cultural elements, which could not have been interpreted the same way in different cultures. The contradiction between the results of this study and previous studies may also be attributed to the fact that most of the respondents had external locus of control, which this study could not assess before their selection into the sample.

Conclusion

This study was conducted to investigate the effect of organisational politics on the relationship between HR practice and innovative work behaviour of employees. Organisational politics is an inevitable element in both public and private sector organisations. It is an inherent part of people and organisational management, and, therefore, cannot be left out in any study about employee behaviour at the workplace. The extant literature and findings of this study support the fact that organisational politics mediates the link between HR practice and innovative work behaviour. The results of this study also support previous studies, that organisational politics has a strong effect on employees' innovative work behaviours. These revelations confirm the idea that management cannot improve the innovative work behaviour of employees, unless they diligently assess the effect of organisational politics on their HR practices, and the effects of any adversities of workplace politics on employee innovativeness. In this way, this study has answered the question of whether there are contextual factors, mitigating the positive effect of HR practice on the innovative work behaviour of employees, as consistently found in previous studies. These results have important managerial implications. Management of higher educational institutions, including universities and colleges, must lay more emphasis on the link among HR practice, organisational politics and innovative work behaviour. The ability of management to use effective HR practices for leveraging the innovative work behaviours of their employees may be impeded unless the appropriate work politics is in place.

On whether personal locus of control has significant effect on the link between organisational politics and employees' innovative work behaviour, the results of this study were in contrast with previous findings. Unlike previous studies, the study found that personal locus of control is equally experienced by both externals and internals and, therefore, has no effect on the link between organisational politics and employees' innovative work behaviour. Thus, future research may assess the state of respondents' locus of control, then compare the behavioural effect of each of the two groups (internals and externals) on the link between organisational politics and employees' innovative work behaviour. Future studies may also examine the effect of personal locus of control on the relationship between organisational politics and the innovative work behaviour of employees in other sectors of the economy, since this study was conducted among staff of higher educational institutions.

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Influence of Human Resource Management Practices on Organisational Performance at Atwima Mponua Rural Bank Limited

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Abstract

This study examined the effect of human management practices on organisational performance at Atwima Mponua Rural Bank Limited in Ghana. The study adopted a descriptive survey design from the quantitative approach. A census technique was deployed to sample all the 120 staff from all branches of the bank. Data were collected through a self-administered questionnaire and data were analysed with mean and standard deviation, Pearson correlation matrix and multiple standard regression. The study found that the three most important variables/factors under human resource practices that strongly influenced the organisational performance of banks were recruitment and selection, performance appraisal and employee participation. Therefore, it is recommended that the management of Atwima Mponua Rural Bank Limited in Ghana should establish a dedicated human resource management department to formulate, implement and monitor a proper recruitment and selection methods, modern appraisal system and involve employees in decisions that affect workers to enhance organisational performance of the bank.

Keyword: Human resource practices, recruitment and selection, appraisal, employee participation, organisational performance.

Introduction

Human resource practices relate to set of organisational activities that aim at managing a pool of human capital and ensuring that this capital is employed towards the achievement of its objectives (Bailey, Mankin, Kelliher, & Garavan, 2018). Human resource management (HRM) is seen as a tool used to manage the human resources of every organisation. Studies have shown that organisations can create and sustain a competitive position through the management of non-substitutable, rare, valuable, and inimitable internal resources (Asumpta, 2019). In recent times, organisations have turned attention on achieving superior performance and competitive advantage through the best use of talented human resources as a strategic asset (Wagar & Rondeau, 2006). Thus, human resource practices must now be aligned to business strategies for organisational success. No matter the amount of technology being adopted by companies to cut down cost, human resource still remains the most important resource of any success-oriented and profitable organisation.

The adoption of certain bundles of human resource management practices can positively influence organisational performance by creating powerful connections or detracting from performance when certain combinations of practices are inadvertently placed in the mix (Wagar & Rondeau, 2006). Research has recorded a positive relationship between human resource management practices and corporate Performance (Asumpta, 2019; Bandari, 2020). Thus, to stimulate corporate performance, management is required to develop skilled and talented employees who are capable of successfully performing their jobs (Boohene, & Asuinura, 2011).

HRM policies on selection, training and development, performance appraisal, compensation, promotion, incentives, work design, participation, involvement, communication, employment security, etc. must be formulated and implemented by HRM specialist with the help of line managers to achieve competence, cooperation with management, cooperation among employees, motivation, commitment, satisfaction, retention, presence, etc.

Over the last three decades, human resource management in Ghana can best be described as human resource administration or traditional human resource management, which focuses attention on administering benefits, policies, and operational functions (Ansah, 2018). Human resource administration delivers stand-alone activities, such as recruitment, training, career development, performance appraisal and compensation. These stand-alone activities are most at times not aligned with corporate vision and strategy (Ansah, 2018).

The banking sector has experienced growth over time with associated competition among both private and public banks (Segbenya, 2012). One of the growing banks competing with other commercial, savings, and development banks, among others, in Ghana in recent times is Atwima Mponua Rural Bank Limited (Ansah, 2018). Atwima Mponua Rural Bank Limited is a rural bank in the Ashanti Region located at Toase, off the Kumasi Bibiani Road in the Atwima Nwabiagya Municipal Assembly. The role of the bank as a rural bank serving clients in the rural and peri-urban areas in Ghana with products, such as savings and current accounts, fixed deposits, 'Susu' accounts, salary loans, overdraft, funeral loans, commercial loans, transport loans, agricultural loans and foreign remittances, cannot, therefore, be underestimated.

The bank currently contends with employee dissatisfaction with pay, which has slowed down productivity and could hinder organisational performance ((Ansah, 2018). Another challenge with the bank is low morale and motivation among staff (Atwima Mponua Rural Bank, 2015). Staffs are not motivated to work hard because when positions become vacant, external recruitment is done to fill these vacancies, which could influence commitment and organisational performance (Ansah, 2018).

There could be several human resource management related issues responsible for the low level of staff motivation of staff of the bank. Poor recruitment and selection process, unfair compensation system, discriminatory performance appraisal system, and the limited involvement of employees in decisions that affect them have the propensity of causing a low level of motivation among workers. The bank's ability to compete with other public and private banks will largely depend on the proper management of human resource-related issues herein termed as human resource practices (Asumpta, 2019). Thus, the need to examine how human resource practices (in terms of recruitment and selection, compensation, training and development, performance appraisal, employee involvement) affect organisational performance at the bank has become more urgent than before. In terms of gap in literature, earlier studies in Ghana on human resource practices by Asiedu-Appiah, Kontor and Asamoah (2013) were in the mining sector of Ghana; Bandari (2020) focused on Sustainability of Ghanaian Small and Medium Enterprises, Asumpta (2019) centred on private and public banks in the Tamale Metropolis of Ghana, and Segbenya, Aggrey and Peniana (2019) only looked at academic and non-academic staff with College of Distance Education. A similar study by Antwi, Opoku and Osei-Boateng (2016) also considered only selected Ghana Commercial Bank branches in Kumasi. Thus, these earlier studies have failed to consider the rural bank subsector, which also plays a key role in the financial landscape and the country's socio-economic development.

This gap, therefore, necessitated this study. Three research objectives, therefore, guided the study and these were to: Examine the perceptions of staff on human resource practices at Atwima Mponua Rural Bank Limited; Determine the relationship between human resource practices and organisational performance at Atwima Mponua Rural Bank Limited; and Assess how human resource management practices affect organisational performance. The study

contributes to the literature on human resource management practices in the banking industry. Human resource management occupies a unique and sensitive position in the banking industry; therefore, a study of this nature helps Atwima Mponua Rural Bank Limited and the research society to appreciate the impact of human resource practices on organisational performance (Dwumah, 2014)

This study proposes appropriate human resource practices and the possible outcomes in rural bank settings. It also provides insights into the adoption of the “best fit” practices as a strategic response for Atwima Mponua Rural Bank in the near future. The larger community stands to benefit, since the improved performance of Atwima Mponua Rural Bank will enhance the living standard of most of the informal sector that deals with it and contributes significantly to the growth of the Ghanaian economy. The outcome of this study also prompts policymakers and implementers to pay due attention to HRM practices and the role it plays in achieving organisational performance. The findings and recommendations of this study provide a solid basis for rural banks to properly manage their human resources and serve as an opportunity for Atwima Mponua Rural Bank Limited to improve performance with the existing workforce. The rest of the paper focuses on the theoretical and conceptual perspective of human resource practices, methodology, results and discussion, and recommendations.

Literature Review

The strategic contingency theory, propounded by D.J. Hickson in 1971, guided this study. The strategic contingency theory, unlike other theories, does not seek to give a prescriptive, normative, nor descriptive view of what HRM practices ought to be. However, it argues that the HRM process does not take place in a vacuum, but rather within the context of the organisation's internal and external environment. As such, definitions of aims, strategies and policies activities, and the analyses of the role of the HR department are only valid in relation to organisational circumstances. This acknowledges the role of certain contextual factors, such as technology, competitive pressures, goals, culture, company size, and strategy employed, to create a distinctive management practice suitable for the organisation and serve as a source on distinction from others. Several studies have been conducted to identify the predictors of HRM practices in companies (Antwi, Opoku & Osei-Boateng, 2016; Segbenya, Aggrey & Peniana, 2019; Bandari, 2020).

Conceptual Review on Human Resources Practices

The resource-based view theory by Barney in 1961 on best practices suggests that universally, certain HRM practices either separately or in combination yield improved organisational performance (Saxena & Tiwari, 2009). Several lists of “best practices” linked to the human resource functions include recruitment and selection, training and development, compensation, performance appraisal, and employee participation. Other best practices identified in the literature are also linked to total quality recruitment, zero defects recruitment team working and flexible job design selective hiring, employment security, self-managed teams, high compensation contingent on performance, extensive training, reduction in status differences and sharing information (Saxena & Tiwari, 2009). Therefore, the next section explains the key elements or construct of human resource practices and how they influence organisational performance.

Recruitment and selection and organisational performance

Recruitment is the process of generating a pool of capable people to apply for employment. Selection is the process by which managers and others use specific instruments to choose from a pool of applicants who are more likely to succeed on the job(s) (Bratton & Gold 2007). Recruitment and selection can play a pivotal role in shaping an organisation's effectiveness and performance. The process of recruiting and selecting may come in four stages: defining requirement, planning recruitment campaign, attracting candidates and selecting candidates (Armstrong, 2010).

Performance improvement is not only a result of a well-functioning system, but also depends on effective human resource strategies that succeed in recruiting and maintaining a committed and motivated workforce (Al-Ahmadi, 2009). Recruitment and selection have become ever more important as organisations increasingly regard their workforce as a source of competitive advantage. It is often claimed that the selection of workers occurs not just to replace departing employees or add to the number but rather to put in place workers who can perform at a higher level and demonstrate commitment (Armstrong, 2010). Recruitment and selection can be said to be grounded in organisation life cycle theory that suggests that the right calibre of human resource is needed at the formation, growth, maturity and decline stages of every organisation to remain competitive and to enhance performance.

Training and development and organisational performance

Training and development (T & D) are associated with an organisational attempt to improve workers' competency/skills and aptitude for their present or future work. Training and development are underpinned by the human capital theory that argues that training and development are “returnable investment” in workers. While

training is seen to impart specific skills, development is said to be the learning opportunities designed to help employees grow. However, the two concepts are used in this study as one variable or meaning the same thing. For T & D to have a better effect on performance, its design and delivery should be well executed. Segbenya and Titus (2020) indicate that adequate training improves employee communication and proficiency of performances as well as extending retention time. Poor performance due to inadequate job training can produce employee dissatisfaction and high labour turnover.

Compensation and organisational performance

Compensation relates to rewarding workers for the efforts and time used for the organisation's activities. Compensation management is not just about money, but with non-financial compensation (Segbenya, Aggrey & Peniana, 2020). Compensation processes are based on compensation philosophies and strategies contained in the form of policies, guiding principles, structures, and procedures devised and managed to provide and maintain appropriate types and levels of pay, benefits and other forms of compensation. This constitutes measuring job values, designing and maintaining pay structure, paying for performance, competence and skill, and providing employee benefit.

However, compensation has a motivational effect and implies that having a compensation structure in which the employees who perform better are paid more than the average-performing employees is vital to enhancing organisational performance (Hewitt, 2009). The growing recognition and consensus that compensation promotes productivity is consistent with Drucker's early work that "happy workers are productive workers" (Hewitt, 2009). The importance of compensation for employee performance is supported by the equity theory that posits that every individual worker compares or evaluates the fairness of his compensation by comparing his/her input and output with that of others. Thus, perceived inequalities affect subsequent input and performance, affecting productivity and growth (Segbenya, Aggrey & Peniana, 2020).

Appraisal/performance management and organisational performance

Performance appraisal of employees is the systematic evaluation of employees' performance and potential for development during a certain period of time by supervisors or others who are familiar with their performance (Pareek & Rao, 2006). It is one of the oldest and widely used management practices and backed by the human capital theory suggesting that appraisal gives feedback for training and development considered an investment by the organisation for a return in the future in terms of increased performance. Performance appraisal is an indispensable tool for an organisation because its information is useful in decision making regarding promotion, merit increases, transfer, discharge, training and development. Not only is performance appraisal useful for the above issues, but it may also increase employee's commitment and satisfaction (Segbenya & Bonsu, 2019). The increased competitive nature of the economy and rapid changes in the external environment have forced many organisations to shift from reactive performance appraisals to proactive performance management to boost productivity and improve organisational performance (Nayaab et al, 2011). Proactive performance management relates to the process of planning performance, appraising performance, giving its feedback, and counselling an employee or teams to improve performance (Armstrong, 2006).

Employee participation and organisational performance

The direct participation of staff to help an organisation fulfil its mission and meet its objectives by applying their own ideas, expertise and efforts towards solving problems and making decisions is termed as employee involvement. Research has shown that organisations that tap their people's strength are stronger and more aggressive than those that cannot (Segbenya & Bonsu, 2019). Studies have shown that employee participation impacted on decision-making capability, reduced costs through the elimination of waste and reduced product cycle times and improved attitude regarding work (Jones, Kalmi, & Kauhanen, 2010, Segbenya & Bonsu, 2019). Other areas of importance in terms of the impact of employee involvement are empowerment, job satisfaction, creativity, commitment and motivation as well as intent to stay (Jones, Kalmi, & Kauhanen, 2010). Thus, the organisational cycle theory's position, that workers' involvement at all stages of organisational growth (that is formation, growth, maturity, decline and death) is required for every organisation to remain competitive, is upheld.

Organisational performance

Researchers have different opinions on performance. Organisational performance continues to be a contentious issue in management research circles. Performance can be equated to the famous 3Es: economy, efficiency and effectiveness of a certain programme of activity. According to Richard, Devinney, Yip and Johnson (2009), organisational performance encompasses three specific areas of firm outcomes; financial performance (profits, return on assets, return on investment, etc), product market performance (sales, market share, etc), and shareholder return (total shareholder return, economic value-added among others). Organisational performance is the organisation's ability to attain its goals by using resources effectively and efficiently (Boohene, & Asuinura, 2011). Boohene and Asuinura (2011) suggest that performance should not be confused with productivity. Productivity is a ratio depicting the volume

of work completed in a given amount of time. Performance is a broader indicator that could include productivity as well as quality, consistency, effectiveness, efficiency and other factors. These later definition and indicators are, therefore, adopted as the definition for performance in this study.

The review on the various HRM practices variables shows how important they are in determining organisational performance. More so, their inclusion in this study has been entrenched by the position of Boohene and Asuinura (2011), who found a positive influence of human resource management practices (extensive training, selective hiring, compensation and incentives, employment security among others) on organisational performance (quality, cost reduction, flexibility, deliverability and commitment). In furtherance of this assertion, Delery and Gupta (2016) also found a positive influence of human resource management practices (namely human resource planning, staffing, incentives, appraisal, training, teamwork, employee participation, status difference, employment security) on organisation performance.

Methodology

The positivist epistemic approach from the quantitative perspective was adopted for this study. Specifically, the descriptive research design was adopted for this study. The descriptive design was adopted for this study because of its high degree of representativeness and the ease at which data can be gathered from a large population (Segbenya, Oduro, Peniana & Ghansah, 2019). The design affords the researchers to collect a large pool of data from large respondents at a time through the cross-sectional design. The study population comprised the permanent staff population of Atwima Mponua Rural Bank Limited of one hundred and twenty (120) from eight Bank of the Bank in the Ashanti Region of Ghana. The census technique was adopted to sample all the population elements for the study, since the total population was on the lower side.

The study used a self-administered questionnaire as the data collection instrument. The questionnaire is comprised of 33 items for six variables of the study. The questionnaire was divided into two main parts. The first part focused on the demographic characteristics of respondents, such as age, sex, educational qualification, marital status and years of stay with organisation. Part two was divided into six sections according to the research objectives and the six variables guiding the study. These six variables were recruitment and selection, training and development, compensation, performance appraisal, employee participation and the organisational performance. All items forming each variable of the study were close-ended items due to the research design adopted for the study. All items of the questionnaire were measured on a four-point Likert scale with 1=Strongly Agree (SA), 2=Agree (A), 3=Disagree (D), and 4=Strongly Disagree (SD). The summary of the number of items for each variable and their corresponding reliability value can be seen in Table 1. The overall Cronbach alpha of .874 confirms that the instrument was good for the data collection.

Table 1: Reliability Values for Variables of the Study

Variable	No of items	Cronbach alpha
Recruitment and selection	06	.810
Compensation and rewards	06	.821
Training and development	06	.729
Performance Appraisal	06	.834
Employee participation	05	.631
Organisational performance	04	.821
All variables	33	.874

Source: Field data (2018)

The questionnaire was adopted as an instrument for data collection because it can secure relevant information effectively about phenomena that is not directly observable. It is also an efficient and effective method in reaching

a larger group. Data was collected in 2018 adhering to all ethical requirements, such as confidentiality, anonymity, freedom to participate and withdraw, and no harm to research participants. Data were analysed with descriptive statistics, such as means and standard deviations, and inferential statistics, such as Pearson correlation and standard multiple regression.

Before data analysis was conducted, a test of normality of the data was done, and the results can be seen from Table 2. Normal distribution of the data requires the skewness values should range from -1.5 to 1.5 and the value of the skewness should not be more than twice the value of the standard error. Arithmetic Log 10 was used to ensure that both negative and positive skewed values were brought to normalcy and the results, as shown in Table 2, means that the data met the normality test. This is because all values for the skewness for all the variables were between the -1.5 to 1.5 thresholds.

Table 2: Test for normality of data

	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Recruitment and selection	84	.283	.263	-1.106	.520
Training and development	84	.381	.263	-1.511	.520
Organisational performance	84	-.328	.263	-1.121	.520
Compensation and reward	84	-.162	.263	1.165	.520
Performance Appraisal	84	.209	.263	-1.052	.520
Employee Participation	84	.012	.263	-.962	.520

Source: Field data (2018)

Results and Discussion

The presentation for this section is based on the objectives guiding the study, and the presentation begins with the first objective, followed by the others.

Perceptions of Staff on Human Resource Practices at Atwima Mponua Rural Bank Limited

The results on perceptions of staff on human resource practices at the bank can be seen from Table 3. It is clear from Table 3 that respondents perceived only one factor—compensation or reward ($M=3.1310$, $SD=.50966$)—to be very high. All the remaining five factors of the study were rated high with mean values ranging between $M=2.5$ - 2.9 threshold. The least perceived factor, however, among all the six factors was organisational performance ($M= 2.6310$, $SD=1.26852$). (It must be noted that the significance of the mean values was based on the scale generated for the table).

Table 3: Perceptions of Staff on Human Resource Practices

	N	Minimum	Maximum	Mean	Std. Deviation
Compensation or reward	84	1.00	4.00	3.1310	.50966
Training and development	84	2.20	3.80	2.9357	.55810
recruitment and selection	84	2.00	4.40	2.8500	.71734
Performance Appraisal	84	2.00	5.00	2.7310	.68336
Employee Participation	84	1.75	5.00	2.6786	.83285
Organisational performance	84	1.00	5.00	2.6310	1.26852
Valid N (listwise)	84				

Source: Field survey (2018)

Scale: 2.0-2.4= low; 2.5-2.9 = high and 3.0 -3.5= very high.

Respondents rating of compensation very high ahead of the remaining factors of variables of the study suggest that compensation remains an important variable for workers in the banking industry. The results mean that both tangible and intangible components of total reward are essential for workers in the banking industry. The results, thus, agrees with the findings of Segbenya, Aggrey and Peniana (2019), that employee compensation is essential for workers.

The Relationship between Human Resource Practices and Organisational Performance

The research question two was to determine the relationship between human resource practices and organisational performance at Atwima Mponua Rural Bank Limited. The relationship was determined, using five dependent variables/constructs of human resource practices (such as recruitment and selection, compensation and reward, training and development, performance appraisal and employee participation) and the dependent variable—organisational performance. The Pearson Correlation was used to determine the relationship. Table 4 presents the correlation results of the various constructs of human resource practice and the relationship with organisational performance.

The results show that out of the five constructs of human resource practices, only three had a statistical significance relation with employee performance. These constructs were variables Recruitment and Selection ($R=.775^{**}$; $p=.000$); Employee Participation ($R=.727^{**}$; $p=.000$); and Performance Appraisal ($R=.690^{**}$; $p=.000$). The positive and significance of the correlation coefficients mean that any percentage increase in these constructs will result in the same percentage increase in organisational performance of the bank. Compensation ($R=0.66$, $p=.549$), and training and development ($R=.153$, $p=.153$), however, had a weak relationship with organisational performance, respectively. They were all not significant despite recording positive correlation coefficient values.

The results that there was a statistically significant relationship exists between three independent variables, such as recruitment and selection, performance appraisal and employee participation, and the dependent variable, which was organisational performance, has several implications. The result suggests that rural banks' organisational performance is keenly linked to the calibre of employees and how these employees are employed. Thus, the wrong person for the wrong/right job termed as “square pegs in round holes” is very much linked to poor performance.

Table 4: Relationship between Human Resource Practice and Organisational Performance

Human Resource Practices	Organisational Performance	
	Correlation Coefficient	Sig
Recruitment and Selection	.775**	.000
Compensation and Reward	.066	.549
Training and Development	.153	.164
Performance Appraisal	.690**	.000
Employee Participation	.727**	.000

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Source: Field survey (2018), N=84

Additionally, the kind of target set for bank workers and how, and the regularity of appraisal (performance appraisal) is strongly linked to organisational performance. The results mean that when targets for workers are clear and are challenging to workers, it could spur high performance among rural bank workers in Ghana. Also, the involvement of workers in decisions that affect them as well as participation in the organisation's activities and its fortunes is directly linked to organisational performance in the banking industry. The results agree with that of Saxena and Tiwari (2009), that human resource practices, such as employee participation in decision making, recruitment and selection, and performance appraisal, are directly linked to organisational performance.

Effects of Human Resource Management practices on organisational performance

The third research question of the study was to assess how human resource practices affect the performance of the banks. Human resource practices were constituted with five constructs: recruitment and selection, compensation and reward, training and development, performance appraisal and employee participation. The dependent variable for the analysis of the third objective was organisational performance. The objective was analysed with standard multiple regression, and the results can be seen in Table 5.

Table 5: How Human Resource Practices affect Organisational Performance

Coefficients^a

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.152	.507		2.272	.026
Recruitment and Selection		.213	.544	4.504	.000
Compensation and Reward	.097	.125	.039	.778	.439
Training and development	1.475	.157	.649	9.397	.000
Performance Appraisal	.013	.277	.007	.046	.964
Employee Participation	1.019	.266	.669	3.830	.000
R			.903		
R square			.816		

a. Dependent Variable: organisational performance

Source: Field survey (2018)

In terms of individual contribution of the independent variables (construct of human resource practices), it can be seen that the variable with the highest contribution in the explanation of the variance to organisational performance was the employee's participation with ($\beta = .669$, $t = 3.830$, $p < 0.05$); followed by training and development ($\beta = .649$, $t = 9.397$, $p < 0.05$); recruitment and selection with ($\beta = .544$, $t = 4.504$, $p < 0.05$); compensation and reward ($\beta = .039$, $t = .778$, $p > 0.05$); and performance appraisal with ($\beta = .007$, $t = .046$, $p > 0.05$). In terms of the overall contribution of all the independent variables to the explanation of the variance in organisational performance, all the variables explain about 81.6 percent of organisational performance, as can be seen with R square value of .816. This means that there are other variables that this research did not consider to obtain 100% contribution of human resource practices and how it affects organisational performance.

The findings for objective three prove that good human resource practices, such as proper recruitment and selection, training and development, and employee engagement, directly affect organisational performance. Thus, if banks pay attention to these three significant variables, the possibility of increasing their performance is very high. This result is in tandem with what was found by Soomro et al. (2011), that HRM practices positively affect the performance of an organisation. Additionally, Nayaab et al. (2011) found that HRM practices, like recruitment and selection, training and development, and employee participation, significantly affect banks' performance is upheld in this study.

Conclusion

It can be concluded that human resource practices in the banking industry greatly influence organisational performance in the industry. The three most important variables/factors under the human resource practices that strongly influence banks' performance are recruitment and selection, performance appraisal, and employee participation. Thus, the proper management of human resource practices can significantly influence organisational performance in the banking industry. Therefore, incorporating human resource practices into business strategies and making the HR function "strategically proactive" is essential for the banks to be able to influence performance.

The proper management of human resource practices in the banking industry could create and sustain competitive advantage for the banks and improve organisational performance in the banking industry. Proper management of human resource practices is premised on dedicated human resource department and commitment from the management of the bank to ensure that it is strategically linked to the bank's overall goal. Unfortunately, Atwima Mponua Rural Bank Limited does not have a dedicated human resource management department for implementing and policing these human resource practices.

Based on the conclusion, it is, therefore, recommended that the management of Atwima Mponua Rural Bank (AMRB) should: establish a human resource department dedicated to human resource practices in the bank to deliver good human resources practices. This could start with Human Resource Practice Implementation Committee who will implement it and make sure that the activities are aligned to conform to national and international best practices, to ensure that irregularities and non-conformities are minimised, if not eliminated completely. Human resource experts should be employed to plan, implement and manage these HR functions.

The bank should introduce proper recruitment and selection methods to ensure that the right skills and talents are brought on board to serve its stakeholders and enhance the organisational performance among its competitors. Input from exit interview could be valuable information in determining who to be hired as a worker for the bank. The bank should introduce the 360-degree modern performance appraisal method where all key stakeholders could get the opportunity to appraise staff. The feedback from the 360-degree could be very instrumental for improving employee and organisational performance of the bank.

This research also revealed that employee participation is a must for organisational performance. Thus, it is recommended that, in order to bring out the best in employees, employees' contributions should be regarded as important and taken in good faith. HR managers should understand team dynamics and find ways to bring disparate personalities together and make it a point to encourage teamwork and team spirit.

This research is limited to Atwima Mponua Rural Bank. Further research conducted into the HR practices of rural banks in Ghana will enable the better generalisation of the findings. Research into the other variables that could have a positive impact on organisational performance is also highly recommended.

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WhatsApp Usage in Administrative Processes of College of Distance Education, University of Cape Coast, Ghana

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Abstract

In Ghana, little is known about the educational values of WhatsApp usage as a multidimensional communication tool. WhatsApp usage is unguided and generally left in the hands of the juvenile for exploration. This article established how WhatsApp application could promote administrative processes and support for the College of Distance Education (CoDE), University of Cape Coast, Ghana. The theories informing this study were adopted from the synthetic model of motivation (Turner, 1987) and Activity Theory by Vygotsky (1978). The descriptive cross-sectional survey design was used for the study. Data collection was quantitatively done with a questionnaire as the research instrument. Census technique was employed to gather data from all the 72 Study Centre Co-ordinators of CoDE. The two objectives and four hypotheses that guided the study were analysed with frequencies and percentages, ANOVA, independent sample t-test, and multiple standard regression. The study found that most of the respondents were satisfied with WhatsApp's use to facilitate communication among stakeholders at CoDE. It further emerged that WhatsApp messaging enables rapid feedback among the key stakeholders (administrators, course tutors and students) of CoDE. However, few co-ordinators expressed disappointment regarding members sending irrelevant information and heavy videos sometimes in ungodly hours. It was recommended that enforceable user-guidelines and policies be made explicit for members to adhere to WhatsApp platforms' use. Also, WhatsApp groups should be organised based on homogeneous interests while usage should be supported, regulated and promoted by the management of CoDE.

Keywords: Administrative processes, distance education, WhatsApp platform.

Introduction

Education of citizens has become a top priority of most countries in the world. In the light of this, governments over the years have been exploring other alternatives to ensure that all manner of persons regardless of social, economic, cultural and geographical circumstances are not denied access to formal education. In Africa, owing to the constraints of providing formal education, many governments have resorted to the Distance Education (DE) model as an alternative to expanding access to formal education. Poley (2001) referred to DE as an educational model in which the student and instructor are separated by time and place. Brady (2004) also came up with different modes of interactions in DE delivery: 1. student-teacher, 2. student-student and 3. student-content. Karadeniz (2018) also opined that flexibility in time and space, efforts to support lifelong learning, and eliminating hurdles between learners and learning sources characterise distance education's administrative processes. In effect, the learner's interest and satisfaction should be paramount. Therefore, it stands to reason that the underpinning of any form of distance education relates to the geographical separation of learners from the instructors.

Ghana, like many other African countries, has over the years, been promoting access to formal education through the distance mode. In Ghana, all leading public universities have embarked on one form of DE or the other as a complementary mode of higher education delivery. Akanson (2015) indicated that the University of Cape Coast set up the College of Distance Education (CoDE) in 1997 to increase access, show quality, cost-effective tertiary education for highly trained calibre of people for national development. Akanson's (2015) study revealed that the College of Distance Education in the University of Cape Coast had over 15 years established 98 study centres and recruited more than 2000 course tutors to facilitate the University's academic programmes at the various study centres. Akanson further indicated that there are 17 different programmes with over 180 courses run on a distance basis. Each study centre has a Co-ordinator to assist the Regional Resident Tutors (RRTs) to solve centre-based problems. The total population of the students on the distance programmes, as of 2015, stood at 56,000 (Akanson, 2015). However, as of the 2019/2020 academic year, the number reduced to 36,642.

Social media has come to stay with us. According to Ralph and Ralph (2013, p. 451), social media relates to "a group of internet-based applications interactive platforms built on the ideological and technological foundations of Web 2.0, which allows for the creation and exchange of user-generated content." Social media involve using and exchanging podcasts audio, video, text, images and other multimedia communications. There is no doubt that the wind of technological revolution has caught up with the rest of the world, including Africa, whose population is relatively youthful and pre-disposed to use social media. Many of these youthful populations engaged in distance education programmes wish to get information and feedback from their institutions through their mobile devices (Saleh, 2014). King and Sen (2013) argued that social connections affect so many aspects of our lives and can be applied in education. The increasing popularity of handheld smartphones and social media use radically influence the delivery of distance education worldwide. Saleh (2014) observed that social networks are becoming less complex and more accessible, where young and older people can create and share content and interact easily through social networks. One of the applications that appear to have gained popularity among the users, especially in the tertiary institutions, is WhatsApp applications. WhatsApp offers instant asynchronous or synchronous communication within a cross-platform smartphone messenger. To facilitate communication, WhatsApp messenger relies on the Smartphone's active internet data with operating systems, such as Apple iOS, Google Android, Blackberry OS and Microsoft Windows, to send and receive various media, including text, images, videos and audio media messages. One of WhatsApp application's main features is using the application to create a mutually inclusive WhatsApp group and communicate within the group. The platform's creator becomes the group administrator, who can add and remove participants without approval from the group members. Aside from this, all group participants enjoy equal rights, including the right to leave the group without the group administrator's permission.

The WhatsApp application enables the participants to receive an alert for a message or mute the incoming alerts. According to Pande (2015), such apps allow closed group communication, and intended users can be selected to suit the purpose. Communication in such regulated domains is most often effective. In his study in the United States of America, Clement (2019), regarding age and social media usage, found that 18% of mobile messaging services users were between the age ranges of 26 to 35 years. On the 28th of February, 2014, the Provost of CoDE, as part of his strategies to fast-track the dissemination of information among management of CoDE and students, initiated the use of WhatsApp messenger to facilitate communication among the Units, Departments as well as the 124 Study Centre Co-ordinators across Ghana.

Effective communication provides a pivot that organisations revolve. Provision of a two-way communication is key in the delivery process of quality distance education. WhatsApp application is one of the effective tools for effective two-way communication in recent times. WhatsApp usage to deliver teaching and learning has well been documented in the literature. Widiasih and Permanasari (2018) made a case for WhatsApp usage and indicated that a two-way communication flow works well through WhatsApp, because it is to be accessed anywhere, anytime. Aicha, (2014) also found that cost efficiency, quick and easier mode of communication, confidentiality and

convenience are some of the major factors that influence the decision to adopt WhatsApp to ensure communication flow.

Additionally, Chinwe and Ngozi (2018) and Roblyer (2010) indicated that WhatsApp network is a platform that is used for social interaction and the sharing of instructional and educational materials. A study by Naifa, Nasser and Aysha (2018), on the reality of the use of WhatsApp as a tool for teaching and learning in the context of distance education at Sultan Qaboos University Oman, revealed that three out of nine faculty members were using WhatsApp in teaching and learning and communicate general educational information to students. The study also proved that students used WhatsApp as an open source of information.

The burgeoning literature at the global and a study by Yeboah, Horsu and Abdulai (2014) at national levels on WhatsApp usage in academia have focused on the use of WhatsApp application for teaching and learning. However, studies on how WhatsApp usage as an administrative tool to enhance official communication or sharing of information in delivering distance education is hard to find, especially in Ghana. Meanwhile, all educational institutions perform administrative roles as support services to ensure effective teaching and learning. Thus, there is a lacuna in the literature on WhatsApp's role in enhancing the administrative responsibilities in delivering distance education in Ghana. Additionally, CoDE launched an official WhatsApp application platform in February 2014 to resolve the huge communication gap between CoDE, study centre co-ordinators, students and course tutors. However, six years after implementing the CoDE WhatsApp platform, there has not been any study to evaluate the effectiveness of the WhatsApp platform to minimise the communication gap among stakeholders to discharge administrative responsibilities. Therefore, the crux of the study is to examine how the WhatsApp usage has enhanced the administrative communication processes at CoDE in the University of Cape Coast, Ghana. To achieve this research task, the study was guided by two objectives and four hypotheses.

Research Objectives and Hypotheses

This study specifically sought to ascertain the regularity of the usage of WhatsApp application as compared to other social media applications among co-ordinators of CoDE study centres and to examine the regularity of the usage of WhatsApp application for CoDE study centre co-ordinators for the various administrative activities. The research hypotheses were:

1. H_0 : There is no statistically significant difference in WhatsApp usage in terms of age of Coordinators at CoDE study Centres.
2. H_0 : There is no statistically significant difference between male and female coordinators at CoDE in terms of membership, the regularity of use, appreciation and WhatsApp usage inconveniences.
3. H_0 : WhatsApp usage does not statistically significantly facilitate effective communication among the various stakeholders of the College of Distance Education.
4. H_0 : Perceptions about WhatsApp Application do not significantly influence its usage among the College of Distance Education coordinators.

The rest of the study focuses on the theoretical perspective, empirical review of the study's variables, methodology, results, discussion, and policy implication.

Literature Review

Theoretical Perspective

The theory informing this study was adapted from the synthetic model of motivation (Turner, (1991) and Activity Theory by Vygotsky (1978). The synthetic model of motivation theory stipulated that the degree to which an individual will seek to maintain an interaction or renew and reproduce it at subsequent points in time is an additive function of the extent to which group inclusion needs and self-confirmation are being met. This implies that successful implementation of WhatsApp groupings is a function of an individual's need to belong to a common interest group. This theory affirmed what Rovai (2002) asserted, that individuals engaged in a working group believe that their needs can be satisfied by working co-operatively and collaboratively as a community. Therefore, in forming the WhatsApp groupings, homogeneity of interest groups should be of prime concern for the administrator. The Activity Theory refers to "who is doing what, why and how" (Vygotsky, as cited in Hasan & Kazlauskas, 2014, p. 2). The Activity Theory further asserted that human activity is collective and human behaviour originates within the social realm (Cole & Engestrom, 1993). In this context, Hasan, and Kazlauskas explained that the social realm includes the environment, history of the person, culture, role of the artefact, motivations and complexity of the real-

life activity. Briefly, this refers to a group of people, or a community, who share a common problem and who use common tools to solve the problem.

Activity theory is also used to describe and analyse the factors that influence user participation in online discussions mediated by computers or other devices. According to Barhoumi (2015), many researchers frequently use activity theory to analyse human-computer interactions. They use it as a conceptual framework in computer and mobile technologies to describe and analyse the structure, development, and context of interactions mediated by computers and mobile technologies. Activity Theory gives insights into why people use WhatsApp. This is relevant to this study as it helps guide the design of a conceptual model (Figure 1) needed to assess the factors influencing WhatsApp's use for administrative purposes. Activity theory helped the researchers to find factors that influence Co-ordinators of CoDE to participate in WhatsApp groups.

Empirical review on Age, Gender, Perception and WhatsApp usage

In Ghana, Yeboah, Horsu and Abdulai (2014) found that polytechnic students were more likely to rely on WhatsApp application for their day-to-day communications than mobile voice calls (phone calls). Additionally, Yeboah and Ewur (2014) studied the impact of WhatsApp messenger usage on students' performance in tertiary institutions in Ghana. The study used a mixed method (qualitative and quantitative approach) to collect data from 550 students in various tertiary institutions in Ghana. The study found that WhatsApp usage negatively impacted tertiary students' academic performance in Ghana instead of enhancing the effective flow of information and idea-sharing among students. In the view of Yeboah and Ewur, most students focused on social media at the expense of their academic activities.

Furthermore, Appiah (2016) examined WhatsApp's influence on university students' study habit in Ghana. The study employed descriptive design to sample 200 students from two public and private universities in the Kumasi Metropolis, Ghana. The study's findings were that students WhatsApp deliberately for group discussion, sharing course contents, studying, networking, politics and boredom/loneliness. Over 60 per cent of the respondents (students) also revealed that WhatsApp usage negatively affected their academic studies, because they spent more time using the application for social purposes than educational purposes. Based on the theoretical and conceptual review, the study's conceptual framework can be seen in Figure 1. As depicted in Figure 1, the main factors considered for this study are age, gender and perception of the WhatsApp users as these independent variables could determine the extent to which one uses the WhatsApp messenger for administrative purposes.

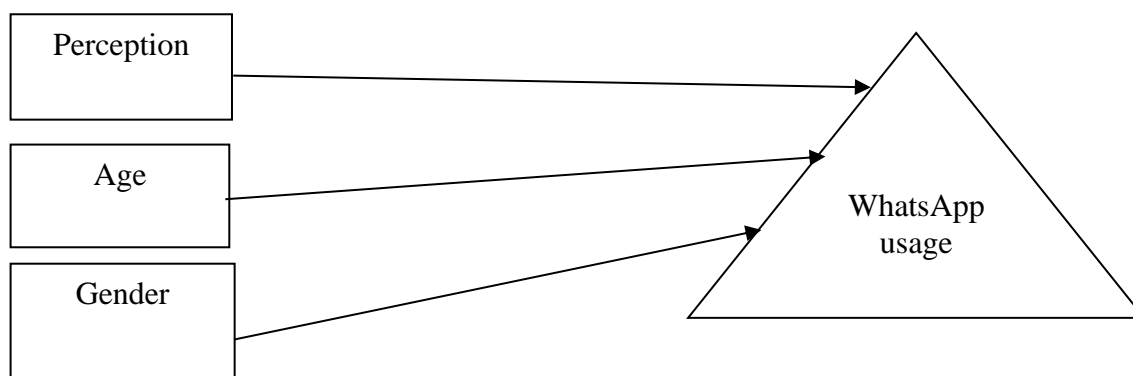


Figure 1. Conceptual framework showing the connection between the dependent and independent variables of the study.

Methodology

This study adopted the positivist paradigm because of its ability to examine social reality based on the idea that only objective, observable facts can be the basis for science. The study used a descriptive cross-sectional survey design which, according to Creswell and Clark (2007), is a systematic measurement and or description of a situation, phenomenon, attitude, behaviour, opinions, beliefs and characteristics. Thus, descriptive cross-sectional survey design describes the background or context of a situation and create typology; it concerned itself with questions such as who, what, why, how, when and where. However, this type of design is based on a timeline or snap short data collection. This sort of data is collected at one particular point in time from respondents and mostly used in the social sciences where longitudinal data collection from the same respondents at different times are usually not the researcher's focus. Thus, data for this study were collected from respondents at one point in time, hence the cross-sectional.

The study participants were drawn from the College of Distance Education, University of Cape Coast, Ghana. However, the study focused on the Centre Co-ordinators who receive and share information with Senior Staff at CoDE and other stakeholders. The rationale behind the choice of study centre co-ordinators for this study was based on the pivotal role in receiving and disseminating information among the college's stakeholders. Coordinators are interconnected among themselves and other stakeholders, such as students, tutors, Regional Resident Tutors (RRTs), department heads, and management heads. Thus, co-ordinators receive communication directly from management for onward distribution to all other stakeholders.

A census technique was employed to sample all the 98 respondents who also constituted the study population. To achieve the study objectives, a self-administered questionnaire was adapted to determine the platform's administrative usage level by the College of Distance Education staff and Co-ordinators. The questionnaire was made up of close-ended items. The questionnaire was divided into two parts. Part one of the questionnaire focused on respondents' demographic characteristics used to answer the first two hypotheses. Part two of the questionnaire also addressed issues on the regularity of WhatsApp usage, perception of WhatsApp usage used to capture issues on the two research objectives and the last two hypotheses of the study.

The study used an adapted questionnaire with modified items from previous studies by Chinwe and Ngozi (2018), Naifa, Nasser and Aysha (2018), and Widiasih and Permanasari (2018). Items used to measure the regularity of WhatsApp usage among the co-ordinators included the regularity of using WhatsApp for: sending feedback to CoDE students; receiving enquiry from CoDE students, sharing files with course tutors; receiving instruction from HoDs and Unit Heads; sending information to and RRTs, and disseminating timely information to the other staff and Centre Co-ordinators. Additionally, perception of WhatsApp usage was also measured with items such as "I am interested in using WhatsApp for social purposes rather than administrative purposes"; "I use WhatsApp just because friends are using it but not for administrative reasons"; "I send more messages with WhatsApp than SMS"; "WhatsApp allows sharing unnecessary messages"; "WhatsApp groups waist time" "There is less privacy with WhatsApp usage in terms of one's last time access" and "poor network connectivity decreases my usage of WhatsApp."

The questionnaire was measured on a four-point Likert scale with 1 representing the least agreement and 4 representing a high agreement. Reliability and validity of the instrument was checked. A Cronbach alpha of .821 was recorded for regularity of WhatsApp usage variable with seven items; and .840 for the perception of WhatsApp usage with eight items. The Cronbach values suggest that the instrument was good to be used for the data collection. In all, 72 out of 98 respondents, representing 73.5%, were valid responses and used for the analysis. Preparation of data for analysis focused on checking for normality of data. This was done with regard to the closeness of the mode, mean and median values, and whether the skewness value was between +.05 and -.05 threshold. All values obtained for the study's variables were within the acceptable threshold as indicated and used for both descriptive and inferential analysis.

Preliminary analysis conducted includes descriptive analysis, comparing the mode, mean and median, and skewness of the variables. Besides, checking for collinearity among the variables, using Tolerance and VIF, was done. Tolerance is calculated by $1-R^2$ for each variable. The threshold is that collinearity exists if the Tolerance value is less than .10 and if the VIF (Variance Inflation Factor) is above 10. The preliminary analysis results of a Tolerance value of 1.00 was above the .10 threshold and a VIF value of 1.000 was also below the 10. Threshold, implying that there was no collinearity and the data could be used for regression analysis among others. Correlation results of .622 also confirm that there was no collinearity among the variables.

Primary data were collected and analysed quantitatively to validate the findings and conclusions drawn from the research to achieve the research objectives. The College of Distance Education (CoDE), University of Cape Coast was selected as the context of this study because it is the leading provider of distance education in Ghana in terms of students' enrolment, course tutors and study centres, and study centre co-ordinators (Segbenya, Oduro, Peniana & Ghansah, 2019). The study results for the two objectives were analysed, using descriptive statistics, such as frequencies and percentages. In contrast, that of the four hypotheses were analysed with standard multiple regression, independent sample t-test and One-Way Analysis of Variance (ANOVA). In each case, the assumptions underpinning these inferential statistical tools' usage were checked and met before they were employed for the analysis.

Results and Discussion

The results are presented in two parts. These are respondents' background characteristics, such as age, gender, and WhatsApp usage status (active and passive usage). The main results are based on the two objectives and the four hypotheses that guided the study. Table 1 shows the results for respondents' age and gender, and it is clear that most of the respondents were male (84%) and were 50- 60 years old (41.7%).

Table 1: Demographic Characteristics of the Respondents

Characteristics	Frequency	Percentage (%)
Male	60	84.0
Female	12	16.0
Total	72	100.0
<i>Age (years)</i>		
30-39	3	4.2
40-49	24	33.3
50-59	30	41.7
60 and Above	15	20.8
Total	72	100.0

Source: Field data (2020)

Table 2 shows the results for the last demographic variable on the coordinators' status, and it is clear from the table that most of the co-ordinators were active members (77.8 %). The remaining were not active (22.2%) on CoDE WhatsApp platform. The results also show that most of the respondents (45 out of 72 respondents, representing 62.5%) agreed that the WhatsApp platform served the purpose for which it was formed.

Table 2: Status and Whether the WhatsApp Platform is Achieving its Purpose

Status	Yes		No		Count	Percent (%)
	Freq.	Percent (%)	Freq.	Freq.		
Active Member	36	80	20	74.1	56	77.8
Passive Member	9	20	7	25.9	16	22.2
Total	45	100	27	100	72	100

Source: Field data (2020)

The regularity of the Usage of WhatsApp as Compared to Other Social Media Applications

Table 3 presents results for objective one of the study, which sought to examine WhatsApp usage's regularity compared to other social media applications by CoDE study centre Co-ordinators. The results show that most co-ordinators (70.8%) used WhatsApp application very often (more than five times a day) to send and receive information from the college more than email, SMS and Voice mails. The results also mean that all study centre co-ordinators used WhatsApp application.

Table 3: Regularity of Using Voice Mail, Email, SMS and WhatsApp to Communicate

The regularity of using:	Never used (%)	Not often (Once a day) (%)	Often (2 to 5 times a day) (%)	Very often (more than 5 times a day) (%)	Total (%)
<i>Voice mail</i> to send or receive information	3(4.5)	15(22.7)	15(22.7)	33(50.0)	66(100.0)
<i>SMS</i> to send or receive information	3(4.3)	15(21.7)	30(43.5)	21(30.4)	69(100.0)
<i>Email</i> to send or receive information	9(12.5)	36(50.0)	15(20.8)	12(16.7)	72(100)
<i>WhatsApp</i> messaging apps to send or receive information	0(0.0)	15(20.8)	6(8.3)	51(70.8)	72(100)

Source: Field data (2020)

The regularity of the Usage of WhatsApp for the Various Administrative Activities

Table 4 reveals the six main administrative activities by which study centre coordinators use WhatsApp application to facilitate their work. The results showed that study centre coordinators have various WhatsApp platform with students, tutors, RRTs and management of CoDE, including Head of Department (HOD).

Table 4: Regularity of usage of WhatsApp group platform for administrative activities

Administrative activity	Often (%)	Not often (%)	Never used (%)	Total (%)
Sending information to CoDE’s students	75.0	10	15.0	100.0
Receiving information from CoDE’s students	73.7	10.5	15.8	100.0
Sharing information with other centre coordinators	53.0	17.6	11.8	100.0
Receiving instruction from management & HOD’s	52.6	21.1	26.3	100.0
Sharing information with RRT’s	62.5	12.5	25.0	100.0
Sharing timely information to tutors	58.8	17.6	23.5	100.0

Source: Field data (2020)

Co-ordinators used group WhatsApp most often for six main activities: receiving and sending information from and to students dominating the usage. The least item, scoring 52.6% for “often usage,” was receiving instruction from HoDs and management. This means that Study Centre Co-ordinators do not interact with the HoDs than students (75.0%) and other co-ordinators (53.0%). This can best be explained by the fact that centre co-ordinators worked directly under RRT’s and with students; hence, there was more usage of the WhatsApp group platform with these constituents than heads of department heads.

Testing of Hypotheses

Hypothesis One

The study hypothesised that: H_0 : There is no statistically significant difference in WhatsApp usage in terms of age of coordinators. One-way Analysis of Variance was conducted to determine the statistically significant differences in WhatsApp usage depending on respondents' age. The results are presented in Table 5.

Table 5: Effects of Age on WhatsApp Usage among the CoDE Coordinators

Age	N	Mean	Std. Deviation	F	Sig	(η^2)
30-39 years	3	1.83	.000	7.031	.000	.24
40 -49	24	1.65	.227			
50-60	30	1.67	.247			
61 and above	15	2.02	.379			
Total	72	1.74	.303			

Source: Field data (2020)

From Table 5, the data clearly showed that there was a statistically significant difference at the $p < .05$ level in LOT scores for age and usage of group WhatsApp platform at CoDE [$F(3, 72) = 1.74, p = .000$]. However, it can also be seen from the eta squared (η^2) column showing the effect size that 0.24 represent a small effect size is consistent with Cohen’s (1988) criterion for interpreting effects size. The multiple comparisons results in Table 6 show significant differences within the various age groupings. From Table 6, it can be seen that the actual statistically

significant differences exist between aged bracket of 61 years and above (M= .350* & Sig= .001); 40 – 49 (.370* & .001) and coordinators within the age bracket of 50-60 (.350* & Sig = .001).

Table 6: Multiple Comparisons of age and WhatsApp usage

(I) age	(J) age	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
30-39 years	40 -49	.183	.166	.686	-.25	.62
	50-60	.163	.164	.751	-.27	.59
	61 and above	-.187	.171	.696	-.64	.26
40 -49	30-39 years	-.183	.166	.686	-.62	.25
	50-60	-.020	.074	.993	-.22	.18
	61 and above	-.370*	.089	.001	-.60	-.14
50-60	30-39 years	-.163	.164	.751	-.59	.27
	40 -49	.020	.074	.993	-.18	.22
	61 and above	-.350*	.086	.001	-.58	-.12
61 and above	30-39 years	.187	.171	.696	-.26	.64
	40 -49	.370*	.089	.001	.14	.60
	50-60	.350*	.086	.001	.12	.58

*. The mean difference is significant at the 0.05 level.

Source: Field data (2020)

Based on the results in Tables 5 and 6, the study rejected the null hypothesis that there is no statistically significant difference between age and group WhatsApp platform usage. This finding implies that when composing a WhatsApp group, age as a variable should be considered. This will ensure the group’s sustainability and cohesion. This finding corroborates that of Hasan and Kazlauskas (2014), who asserted that group dynamics should hinge on the individual social realm; the social realm includes the environment, history of the person, culture, role of the artefact, motivations and complexity of real-life activity concerning a group of people, or a community, who share a common problem and who use common tools to solve the problem. The finding supports that of Clement (2019) that as social media users advanced in age, their interest in using WhatsApp diminishes. On the contrary, in CoDE, the users were put together to solve a common problem, thus facilitating information dissemination. This study shows that even though age could be a factor to consider when setting group WhatsApp application, its effect on group cohesion is minimal as indicated by the effect size (0.24) shown in Table 6.

Hypothesis Two

The study hypothesised that: *H₀: There is no statistically significant difference between male and female coordinators in terms of membership, the regularity of use, appreciation and inconveniences associated with WhatsApp usage.* Hypothesis two was analysed with an independent sample t-test conducted to compare scores for male and female respondents, and the results are presented in Table 7.

Table 7: Independent Sample T-Test Result on Gender and WhatsApp Usage among Coordinators

	Gender	No.	Mean	Std. Deviation	Std. Error Mean	t value	Sig.	η ²
Group Membership	Male	63	1.73	0.309	0.039	1.154	0.252	0.019
	Female	9	1.85	0.242	0.081			
Regularity of Usage	Male	51	2.69	0.916	0.128	1.657	0.103	0.045
	Female	9	3.21	0.417	0.139			
Appreciation for messaging	Male	60	2.36	0.734	0.095	2.668	0.010	0.097
	Female	9	3.04	0.484	0.161			
Tolerance for group inconveniences	Male	57	2.61	0.568	0.075	2.883	0.005	0.115
	Female	9	2.01	0.670	0.223			

Source: Field data (2020)

The results presented in Table 7 indicated that female respondents perceived three out of four dimensions of WhatsApp group platform usage higher and more positive than their male counterparts did due to the higher mean score, as indicated in Table 7. It can also be seen that there was a statistically significant difference between scores for males in terms of appreciation of WhatsApp group platform [M= 2.36, SD=0.734; t (67) = 2.668, p=0.010] and WhatsApp group inconveniences (such as large files, unnecessary materials and videos sent at odd hours) [M=2.61, SD= 0.568; t (64) =2.883, p =0.005] as against their females’ counterparts. Meanwhile, there was no statistically significant difference between male and female in terms of regularity of WhatsApp usage. Based on this result, the study refuted the null hypothesis and accepted the alternate hypothesis that there is a statistically significant difference between male and female at CoDE in terms of WhatsApp membership, the regularity of usage, and appreciation of inconveniences associated with WhatsApp usage.

The findings in Table 7 revealed that females prefer to belong to WhatsApp platforms as compared to their male counterparts. This suggests that males on WhatsApp platforms are less likely to use the application for sending messages. The findings further show that females contribute to WhatsApp group discussions than male members on WhatsApp platforms. It has been reported that while females tend to use the internet for communication with family and friends and for research and academic purposes, male, on the other hand, tend to use the internet for leisure and entertainment (Jackson, et al., 2008). Thus, female aptness in using the internet for educational and other purposes with their male counterparts using it for entertainment affirms their effectiveness and appreciation in using the WhatsApp platform for communication. Furthermore, the result supports Jebreil, Azizifar and Gowhary’s (2015) findings that males in WhatsApp groups tend to apprehend platform tolerance than their female counterparts.

Hypothesis Three

The study hypothesised that: *H₀: WhatsApp usage does not significantly facilitate effective communication among the College of Distance Education study centre coordinators.* Hypothesis three was analysed with an independent t-test employed. The result for the statistically significant effects of usage (a Categorical variable) on effective communication (continuous variable) can be seen in Table 8.

Table 8: Usage of WhatsApp messaging Facilitates Effective Communication

	Usage	No.	Mean	Std. Deviation	Std. Error	t value	Sig.	η ²
Effective Communication	Yes	56	3.1719	0.54453	0.07860	5.738	0.004	
	No	15	1.7500	1.35680	0.39167			0.36

Source: Field data (2020)

The results in Table 8 indicate that there was statistically significant effect of WhatsApp usage on effective communication with usage (yes) (Mean = 3.17, SD = 0.0786) and (no) (Mean = 1.750, SD = .391); (t=5.738; p=0.004). The eta square of 0.36 indicates that the effect size was small, according to Cohen’s (1988) interpretation of small, moderate and large effects size. To determine the influence of group WhatsApp platform on effective formal communication, a simple multiple regression was run to test for that, and the results can be found in Table 9.

Table 9: The influence of group WhatsApp usage on communication

Model	Unstandardised Coefficients		Standardised Coefficients	T	F	R ²	Adjusted R ²	Sig.
	B	Std. Error	Beta					
(Constant)	-0.090	0.314		-0.285				0.777
Regularity of Usage	1.027	0.112	0.795	9.179	84.260	.632	0.625	0.000

a. Dependent Variable: communication to stakeholders, Effect size=0.109

Source: Field data (2020)

The regression results indicated in Table 9 show that Group WhatsApp Platform usage explains about 63 per cent of variance (R²=.632, F(2,70)= 84.260, p=0.000). It was found that regularity of the usage of WhatsApp significantly predicted effective communication (β =0.795; p<.005). The individual contribution of Group WhatsApp Platform usage towards effective formal communication was approximately 80%. The overall contribution of adjusted R-square of 0.625 shows that the WhatsApp usage in the model explains approximately 63% of the variance in explaining effective communication. It also means that about 37% variance in effective communication can be explained by other variables not considered in this study. The effect size of .109 determined suggests a moderate

effect size based on the Cohen (1988) threshold. This result further supports why the null hypothesis four stated that “WhatsApp usage does not significantly facilitate effective communication among the various study centre co-ordinators of the College of Distance Education” was therefore rejected.

The study findings revealed that the study centre co-ordinators are highly interested in using WhatsApp to communicate with the headquarters at CoDE and other key stakeholders. The enthusiasm with which study centres co-ordinators appreciate WhatsApp could be attributed to WhatsApp’s capability to transmit information to wider stakeholders with just a click of a button. This implies that information shared on WhatsApp platforms are delivered instantaneously. Therefore, the centre co-ordinators can immediately receive and act on them and give feedback to other relevant stakeholders at the headquarters (CoDE). Given the nature of their duties, all stakeholders are required to act with speed, especially in resolving students’ challenges. Therefore, the platform becomes attractive as they are made aware of the issues through the platform and can share feedback with others through the same platform. Although the study centre co-ordinators agreed that WhatsApp application mode of communication is informal, other staff, including study centre co-ordinators, gratify the use of WhatsApp platforms to be accepted as a legitimate means for transmitting official information. Even though WhatsApp mode of communication is informal, is it acknowledged because it is more efficient and effective means of communication. WhatsApp is also relevant to study centre co-ordinators for the dissemination of information concerning distance education at CoDE. Furthermore, those at the grassroots, especially the study centre co-ordinators, feel actively involved with what is happening at the headquarters. The study, therefore, concludes that WhatsApp usage as a communication tool among the various stakeholders of the College of Distance Education is very useful. Thus, the study centre co-ordinators of CoDE found WhatsApp as an efficient tool for reducing communication barriers between senior and junior colleagues (Jafari & Ansari, 2012).

Hypothesis Four

The study hypothesised that: *H₀: Perceptions about WhatsApp Application does not significantly influence usage among study centre coordinators at the College of Distance Education.* Perception plays a key role in accepting or rejecting an innovation. When users perceived an application to be useful, they are interested in using it. It is based on this that the study formulated the fourth hypothesis. The hypothesis was tested with simple standard regression, and the results are shown in Table 10.

Table 10: Perception about WhatsApp messenger and influence on the rate of its usage

Model	Unstandardised Coefficients		Standardised Coefficients	t	F	R ²	Adjusted R ²	Sig.
	B	Std. Error	Beta					
(Constant)	0.136	0.561		0.307				.294
WhatsApp perception	1.504	0.305	0.554	4.931	24.317	.307	0.294	.000

a. Dependent Variable: regularity of usage; Effect size= 0.07

Source: Field data (2020)

The regression results in Table 10 show that WhatsApp perception explains about 31 per cent of variance (R²=.307, F(2,70)= 24.317, p =0.000). It was found that WhatsApp perception significantly predicted WhatsApp usage (β =0,554; p<.005). Therefore, other variables not captured in this model constitute about approximately 70% in explaining the WhatsApp usage variance. Based on this result, the null hypothesis that perceptions about WhatsApp application do not significantly influence its usage at the College of Distance Education was rejected. The effect size of 0.07 suggests a small effect size, according to Cohen (1988) threshold.

The findings revealed that most of the study centre co-ordinators’ perception of WhatsApp as a legitimate means of communication at the CoDE significantly affects their use of WhatsApp application. This implies that if the motive for creating a WhatsApp group is to share work-related information, give feedback to and from the headquarters, and resolve students’ related issues, the platform is likely to be patronised by members. Also, various study centre co-ordinators of CoDE reported in Table 10 indicate that WhatsApp is very influential in that its high usage could be attributed to the convenience offered by this medium than other communication tools. In their view, WhatsApp messages are instantaneous, and users can give feedback in any geographic location covered by a mobile network or an internet. This supports Salem and Soliman’s (2014) findings, which postulates that perceived usefulness and ease of use of mobile instant messenger, sociability, perceived self-expressiveness, and the enjoyment established by using mobile instant messenger can be considered as predictors of the use of mobile instant messenger.

Conclusion

Several theoretical and practical applications came out from the research findings. Although WhatsApp usage has been developed to fasten the traditional mode of communication among the various study centre co-ordinators of the College of Distance Education, some still have mild concerns and negative perception about its usage and influence in transmitting official information. Besides, the major implications, the researchers succeeded in coming up with some motivations behind its usage in the CoDE's organisational setup. The research findings established that study centre co-ordinators regularly used the WhatsApp platform to communicate to their audiences more than any other social media platform or available communication tool. Study centre co-ordinators were also found to have used the WhatsApp platform for discharging some administrative responsibilities, such as communicating with students and course tutors, sharing information and receiving instructions from superiors. Age was found to have significantly influenced WhatsApp usage. Gender, however, had a significant effect on the inconvenience associated with WhatsApp usage and appreciation for WhatsApp usage. Additionally, WhatsApp was found to have a significant effect on effective communication and perception of the relevance of the WhatsApp usage had a significant influence on the regularity of the platform's usage among study centre co-ordinators for CoDE administrative activities.

Thus, the overarching reason justifying the use of the WhatsApp application among study centre co-ordinators was that WhatsApp platforms facilitate communication and bridge the structural lacuna between the headquarters and the sub-units at the regional study centres with respect to information dissemination. Regardless of the shareholder's preference for WhatsApp platforms as a useful communication tool at CoDE, it can also serve as a channel for leaking classified information relating to the activities of CoDE. Notwithstanding, the use of WhatsApp communication appears to be a(n) easier and quicker mode of communication with the various stakeholders of CoDE.

Based on the above conclusion, it is, therefore, recommended that enforceable user-guidelines and policies should be made clear and members compelled to adhere to the WhatsApp platforms' tenet. Also, WhatsApp groups should be organised based on homogeneous interests while usage should be supported, regulated and promoted by the management of the CoDE. Furthermore, the management of CoDE should encourage creating a separate group WhatsApp platform among study centre co-ordinators, students, and course tutors with the College to share timely and relevant academic and administrative communication between all stakeholders.

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