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'Customer Orientation and Customer Knowledge

Management among SMEs in Ghana'.

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1 RESEARCH BACKGROUND AND OBJECTIVES

This sections provides the research background and objectives

1.1 Background of the study

It has been said that Market orientation is a critical strategic orientation of enterprises (Zhao et al., 2023). It is the primary responsibility of every firm to find ways to attract and keep new customers and at the same time remain competitive and profitable (Walter, Edvardsson and Ostrom 2010). This has arisen in the context where customers in recent times have become so sophisticated to the level of having enough information in the market and are able to know and understand the available products in the industry. The significance of customer orientation as a major source of competitive advantage of a firm cannot be overlooked. This is in view of the recent trend in terms of competition and scarcity of resources. Kerekes (2023) in his concluding remarks on his work on sustainable development alluded to the importance of finding solutions to problems; an even better situation is to avoid the solution being seen as wrong. Similarly, it is in the interest of various SMEs to find solutions to their problems arising as a result of several unforeseen macro environmental circumstances. Focusing on the customer in a right manner and adaptable to company's environment could be an important breakthrough in seeking solutions to marketing problems.

Over the previous decades, several studies have been conducted in the marketing literature. Prime among the concepts researched in the marketing literature has been the concept of market orientation. The market orientation theory has been popularized in the works of Kohli & Jaworski, (1990) and Narver & slater (1990). Kohli & Jaworski, 1990) defined market orientation as the process of assembling and distributing information and go on to respond to current or future consumer demand and preference. For Narver & Slater (1990) market orientation represents the ways organizations use in achieving business performance by continuously delivering value to customers. Narver & slater (1990) further advanced the need to conceptualize market orientation into three (3) dimensions; customer orientation, competitor orientation and inter-functional coordination. Customer orientation focuses on the buyer as the target market, competitor orientation suggests the focus on identifying the potency and limitations of the competitor and inter-functional coordination looks at all the processes involved in bringing all the functions of the business environment in a harmonious way.

One of the important elements of success is knowledge creation (Li Sa et al., 2020). Firms have come to appreciate the value of altering fresh knowledge into economic benefits, largely with the application of information technology-related variables such as websites and others (Li Sa et al., 2020). Several authors have recognized the importance of customer knowledge as fundamental to organizational resources (Salojärvi, Saarenketo & Puumalainen, 2013). It has become essential for firms especially in this modern market place to develop customer information for the firm and further use it to augment long-term customer relationships (Jayachandran et al., 2005). Customer knowledge is seen as an important resource for the establishment of a long-term competitive advantage for firms (Hakimi, Triki & Hammami, 2014). Firms obtain customer knowledge through interactions by monitoring how customers make use of products or service with the view to analyzing data on customers' buying behaviour (Wayland & Cole, 1997). Gebert et al. (2002) defined customer knowledge management as the competent usage and management of knowledge gathered at different customer touch-points with the intention of effective and efficient support of business processes.

It could be argued that customers have been the most important source of information for organizations, especially those who have identified themselves as customer focused firms. As alluded to by Mehdibeigi et al., (2016) customers have today become the most imperative source of knowledge for companies. Contacts with the customer occur at every possible customer touch points; online (email, website, social media etc) or offline (e.g. service delivery hall, etc). When customers use these services they come out improved, with lots of knowledge and experience. Customer knowledge subsequently becomes inherently located in the customers' values, experiences, and perceptions, obtained through the firm's involvement with its customers (Gebert, Geib, Kolbe & Riempp, 2002). du Plessis & Boon (2004) assert that customer knowledge management stands the chance of making firms better comprehend their customer needs, wants, demands and behaviours. This knowledge has now turned out to be a strategic source of competitive advantage for firms (Mehdibeigi et al., 2016).

The relationship between market orientation and firm performance is well documented in the marketing literature (e.g. Iyer et al., 2019; Kohli & Jaworski, 1990). However, there has been some form of an unexpected complex relationships as new factors affecting firm performance come up. Whilst quite a lot of studies have found the effect of customer orientation on firm performance (e.g. Tsiotsou and Ratten (2010; Li, Choon-Yin, Chai, and AikJoo (2020), they have mostly done so having customer orientation as construct. This study however looked at elements that make up customer orientation (focus, involvement and communication) and their individual effects on firm performance. Again, the connection between customer orientation and

firm performance is established; however, this study seeks to identify the role of customer knowledge management in the relationship, hence finding out the mediating role of customer knowledge management.

This study is focused on Small and Medium-sized Enterprises in Ghana. It seeks to evaluate the essence of customer orientation and customer knowledge management among the SMEs in the country. There are several SMEs in Ghana that are in the economy and this study seeks to find out how customer focus strategy is helping them attain their long-term firm objectives. The study further seeks to add some relevant constructs like customer knowledge management as well as customer-employee exchange to understand the interplay among them.

1.2   Objectives, research questions and hypothesis of the study

This section looks at the objectives of the study, research questions and the hypotheses. The general objective of the study is to find out the influence of customer orientation on firm performance through customer knowledge management. Furthermore, the study intends to establish the role played by customer employee exchange in the relationship between customer orientation and customer knowledge management

Objectives of the study

1. To investigate how the specific dimensions of customer orientation influence customer knowledge management among SMEs in Ghana

2. To investigate the extent to which customer knowledge management influence firm performance among SMEs in Ghana

3. To determine the mediating role of Customer knowledge management in the relationship between Customer orientation and firm performance among SMEs in Ghana

4. To identify the moderating role of customer-employee exchange in the relationship between customer orientation and customer knowledge among SMEs in Ghana

Research questions

1. To what extent do the dimensions of customer orientation improve customer knowledge management among SMEs in Ghana?
2. To what extent does customer knowledge management influence firm performance among SMEs in Ghana?
3. Does customer knowledge management play a mediating role between the dimensions of customer orientation and firm performance among Ghanaian SME context?
4. Does customer-employee exchange play a moderating role between customer orientation dimensions and customer knowledge management in the Ghanaian SME context?

Research hypotheses

H1: The following dimensions of customer orientation have a positive relationship on customer knowledge management among SMEs in Ghana

a: Customer Focus

b: Customer Involvement

c: Customer Communications

H2: The application of customer knowledge management among SMEs in Ghana is positively associated with firm Performance.

H3: Customer knowledge management plays a mediating role in the positive relationship between the following dimensions of customer orientation and firm performance among SMEs in Ghana.

a: Customer Focus

b: Customer Involvement
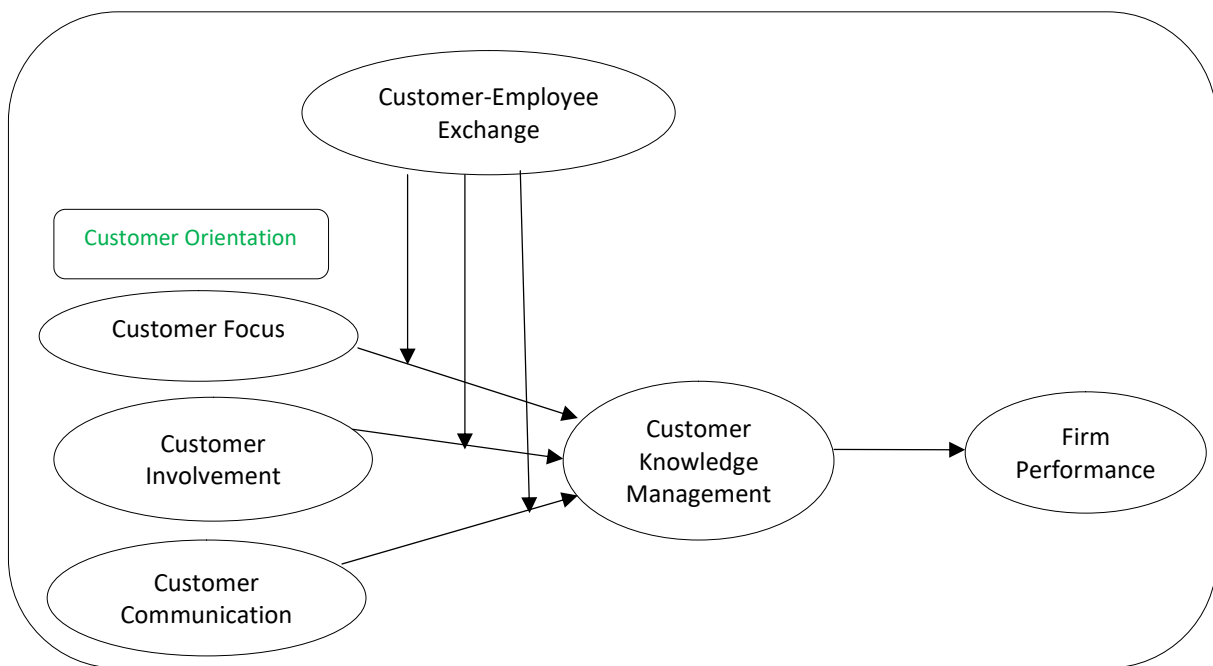
c: Customer Communications

H4: The positive relationship of the following dimensions of customer orientation on customer knowledge management is stronger for SMEs with superior levels of customer-employee exchange compared to those with inferior levels

a: Customer Focus

b: Customer Involvement

c: Customer Communications

1.3   Figure 1: conceptual framework

2. MATERIALS AND METHODS

2.1   Introduction

The study seeks to examine the effect of customer orientation on customer knowledge management. The study also tries to understand the mediating role of customer knowledge management in the relationship between customer orientation and firm performance. It further seeks to understand the moderating role of customer-employee exchange in the relationship between customer orientation and customer knowledge management. To achieve the aforementioned objectives this chapter presents the materials and methods employed in the study. The methodology provides in-depth information from data collection techniques to data analysis.

To address the proposed research questions and hypotheses, the study employed the quantitative research approach to data collection and analysis. Various sections of this chapter will focus on; research methods, research design, sampling technique and sample size, measurement items as well as validity and reliability of the instrumentation.

2.2   Data Source

The study collected data mainly from registered SME's in Ghana. Data was collected from the two most populated cities of the country, Accra and Kumasi. Knowing that these two cities boast of the larger number of SMEs in the country, it was decided that data was to be collected in those cities. These SMEs represent those across different sectors of the economy, ranging from manufacturing, financial service, mining etc. The convenience sampling was used. It was adopted because it enables the researcher to accurately target the right firms/SMEs for data collection. A structured questionnaire was used. A sample size of 296 SMEs was collected over the course of 12 weeks. In the end 283 valid responses were used for the analysis.

2.3   Measurement items

The questionnaire contains two (2) sections. Section A elicits demographic characteristics of the SMEs whilst the second section (B) elicits responses on the proposed constructs. The questionnaire items were adapted from the extant literature. The customer orientation items were adapted from the works of Narver & Slater (1990). The measurement items for customer-employee exchange were adopted from Li & Hsu (2016). To measure customer knowledge management the measurement scale was adapted from Alegre, Sengupta, & Lapiedra (2011). To measure firm performance, the researcher adapted the items from the work of Njinyah (2018). The items were measured on a five-point Likert scale: 1-strongly disagree; 2-disagree; 3-neutral; 4-agree; 5-strongly agree.

2.4   Data analysis technique

The data analysis technique for this study adopted structural equation modelling (SEM) approach to data analysis. This study employs the PLS approach because the model under study is relatively complex. The use of SEM has become important as SPSS and the use of regression analysis is gradually becoming insufficient in describing multi-layer relationships among independent and dependent variables simultaneously (Haenlein & Kaplan, 2004). Structural equation modelling (SEM) is a statistical technique used in the field of Information Systems as well as the social sciences amongst others (Kante and Michel, 2023). The technique has been flexible for researches, reason many have paid attention, and its predictive power is well acknowledged (Kante & Michel (2023). With the SEM method, the hypotheses about the

association between latent and observable variables are examined (MacCallum and Austin, 2000).

2.5 Independent variable

The proposed independent variables in this study are customer knowledge management and customer orientation (customer focus, customer involvement and customer communication)

2.6 Dependent variables

The proposed dependent variables in this study are customer knowledge management and firm performance (expressed in sales, market share and profit)

2.7 Moderating variable

The proposed moderating variable in this study is customer-employee exchange as expressed in solidarity, harmonization and information exchange.

2.8 Mediating variable

The mediating variable for the study is customer knowledge management as expressed in knowledge application, knowledge dissemination and knowledge storage.

3 RESULTS

3.1 Initial data analysis

To have a successful analysis of the data, groundwork for the data analysis is performed. Several steps were taken in trying to make sure the data was good enough for the analysis. Some of the groundwork that was performed involved screening of the data, assessment of the outliers, data normality validity and reliability of the measurement items.
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3.2 Rate of response

A total of 500 questionnaires were printed and circulated to the respondents. After several back-and-forth with the respondents a total of 296 filled questionnaires were returned. A total number of 283 were found to be valid after doing away with 13 incomplete questionnaires earlier

submitted. This means that the rate of response in this particular data collection is 56.6%. The rate is in consonance with the argument put forth by Baruch and Holton (2008) on the fact that when the response rate goes above 50%, it is enough for a survey study to continue

.

3.3 Descriptive statistics and demographic variables

From the data collected, it has been found that the respondents have shown some degree of differences in respect of their demographic description as shown in Table 1. In this study, the researcher applied the descriptive statistics in explaining the demographic information from the data collected from Ghana. The study, through the use of questionnaire has used 7 major demographic variables. This comes in the form of 1. gender, 2. Age groups, 3. position of respondent, 4. Sector the company operates in, 5. Number of years the company has been in existence, 6. Number of full time employees and 7. Level of education. It has also been detected that males (n=166) represented the higher number with 58.66%, whereas females (n=117) represented with 41.34%.

Table 1: Respondents'profile

Demographic Information	Categories	Frequency	Percent
GENDER	MALE	166	58.66
	FEMALE	117	41.34
AGE GROUP	20-29	169	59.72
	30-39	83	29.33
	40-49	23	8.13
	50 OR MORE	8	2.83
POSITION IN THE COMPANY	CEO	27	9.54
	MANAGER	50	17.67
	FRONLINE EMPLOYEE	156	55.12
	OTHER	50	17.70
SECTOR THE COMPANY OPERATE	MANUFACTURING	37	13.17
	WHOLESALING/RETAILING	60	21.35
	AGRICULTURE AND AGRI-BUSINESS	15	5.34
	HOSPITALITY	12	4.27
	FINANCIAL SERVICE	24	8.54
	HEALTH FACILITY/SRVICE	42	14.95
	EXTRACTION, DRILLING &MINING	6	2.14
	SERVICE PROVIDER	57	20.28
	OTHER	28	9.96
NUMBER OF YEARS THE COMPANY HAVE BEEN IN EXISTENCE	0-5	71	25.09
	6-10	48	16.96
	11-15	49	17.31
	16-20	48	16.96
	21 AND ABOVE	67	23.67
NUMER OF FUL-TIME EMPLOYEES IN THE COMPANY	1-20	149	52.65
	21-50	103	36.40
	51-100	31	10.95
LEVEL OF EDUCATION	UP TO DIPLOMA/HND	61	21.55
	UP TO 1ST DEGREE	177	62.54
	UP TO 2ND DEGREE	25	8.83
	UP TO PhD	9	3.18
	UP TO SHS/A LEVEL/O LEVEL	11	3.89

Source: own editing

3.4 Structural Equation Modelling (SEM)

According to Wang & Teo (2024) Structural Equation Modeling (SEM) is used to explain the influence of variables to each other. As MacCallum & Austin (2000) suggested, to apply the SEM approach is to try and examine the hypotheses in respect of the link between observable and latent variables. This was used by Wang and Teo (2024) in their work to estimate the hypotheses of their work. More to this was argued by Weston and Gore (2006) who postulate that SEM is used to estimate the nature of connections among constructs/latent variables, and this has in varying ways differentiate it from other techniques in analysis. Bagozzi and Yi, (2012) adds that SEMs ability to is dependent on the assessment of the latent variables in a model, at the observation level as well as the testing the relationship between the unobservable variables at the theoretical. This makes it the favored analytical strategy to find the effects of each construct on the other at the same time (Kline, 2015).
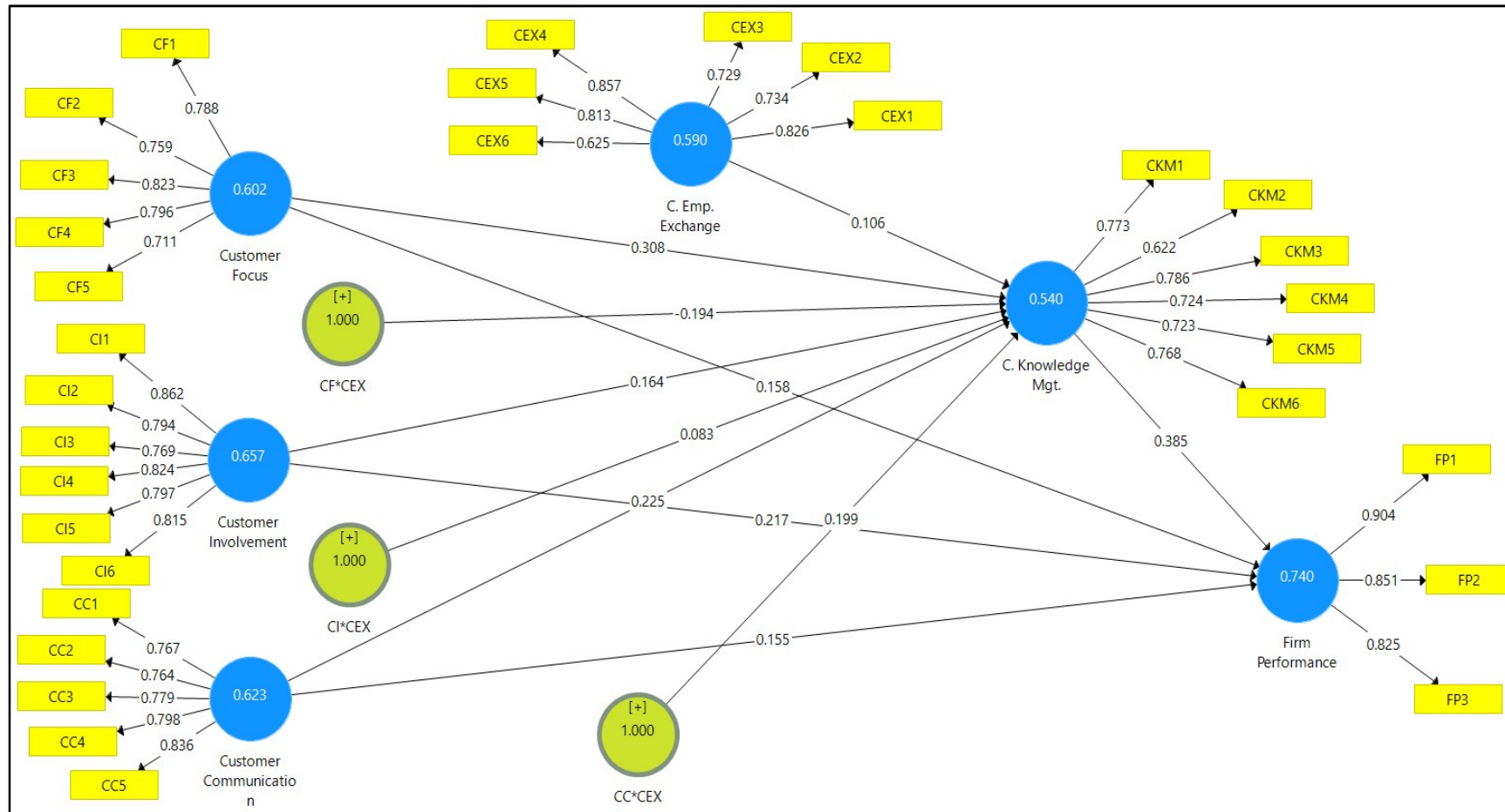
Figure 2: Presented the AVE and factor loadings calculated through PLS-Algorithm   (own editing)

3.5 Discriminant validity (Fornell-Larcker criterion)

One of the most widely-accepted criterion for checking the descriminant validity of measurement models is the Fornell-Larcker (Fornell & Larcker, 1981). It argues that the AVE should be bigger than its association with other variables (Fornell & Larcker, 1981). To argue for convergent validity the AVE should be 0.5 or more to be adequate. When Fornell-Larcker criterion is applied the result of the AVE shows in diagonal forms. Discriminant validity is established when the value of the square root of the AVE in any column is greater than the value beneath it. In Table 5.5 the square root of the AVE is provided, and it shows that (as stated earlier) the square root of the AVE is greater than the numbers beneath them (off-diagonal), hence the constructs meeting the Fornell-Larcker criterion and discriminant validly achieved.

Table 2: Discriminant Validity – Fornell and Larcker Criterion

Constructs	CC	CEX	CF	CI	CKM	FP
CC	**0.789**					
CEX	0.349	**0.768**				
CF	0.636	0.340	**0.776**			
CI	0.158	0.071	0.194	**0.811**		
CKM	0.488	0.281	0.508	0.284	**0.735**	
FP	0.478	0.183	0.494	0.381	0.603	**0.861**

The off-diagonal values are the correlations between latent variables, and the diagonal is the square root of AVE.

Source: own editing based on Fornell and Larcker Criterion

3.6. Assessment of the structural model

The validity of the structural model is essential after assessing the measurement model fit. There are various proposed criteria in assessing the validity of the structural model. These criteria include path coefficient (β), effect size (f^2), coefficient of determination (R^2), predictive relevance (Q^2) and collinearity and examining the structural model (Inner VIF). Once the reliability and validity of the construct measures are established, the next stage is to assess the structural model, revealing the correlations between the independent and the dependent variables. When assessing the path model a sequence of structural model are needed to be done to firstly illustrate the theoretical model, as suggested by (Chin, 2010). In order to arrive at the structural model assessment, the study utilized the following measurements; for endogenous variables, collinearity (inner VIF), coefficient of determination (R^2), whiles prediction relevance

(q^2), effect size (f^2), path coefficient (β) were utilized to observe significance of the proposed hypotheysis as argued by Henseler et al., (2009). The stepwise test for each is presented below.

3.7 Multicollinearity (Inner VIF)

The VIF is used to evaluate how much the variance of the assessed regression coefficient is inflated if the independent variables are correlated (Shrestha, 2020). The variables therefore are assumed not to have problems of multicollinearity if the inner VIF values are less than 5. If the values are identified to be more than 5 the relevant items are expected to be eradicated in order to get rid of collinearity from the data. In a study by Pallant (2007) the author affirmed that if the inner VIF values are more than 10 and less than 0.1, there exist multicollinearity. Illustration is provided in Table 2 to demonstrate that the maximum inner VIF value is 1.842 with the lowest value having 1.080. This proves that there is no problem of multicollinearity.

Table 2: Result of multicollinearity – Inner VIF values

Exogenous Variables	CKM	FP
CC (Customer communication)	1.795	1.790
CEX (customer employee exchange)	1.319	
CF (customer focus)	1.829	1.842
CI (customer involvement)	1.080	1.092
CKM (customer knowledge management)		1.506

Source: own editing

Table 3: R-square result

Endogenous Variables	R Square	Q2
CKM (customer knowledge management)	0.361	0.344
FP (firm performance)	0.467	0.459

Note: Substantial > 0.25; Moderate > 0.12, Weak > 0.02 (Cohen, 1989). Source: own editing

Table 4 : F-square result

Exogenous Variables	CKM	FP
CC (customer communication	0.044	0.025
CEX (customer employee exchange)	0.013	
CF (customer focus)	0.081	0.026
CI (customer involvement)	0.039	0.081
CKM (customer knowledge management)		0.185

Notes: Large: f2 effect size > 0.35; Medium: 0.15 < f2 effect size < 0.35; Small: 0.0 2< f2 effect size <0.15. source: own editing

Table 5: Result of predictive relevance (Q^2)

Endogenous Variables	R Square	R Square Adjusted
CKM (customer knowledge management)	0.361	0.344
FP (firm performance)	0.467	0.459

Source: own editing

3.8 Direct effect analysis

Bollen (1987) suggests that direct effects are those influences that are not mediated by any other variable. Multiple regression analysis normally applies the standardization whereas with the SmartPLS the path coefficient is used in determining the direct effect of path. Hair, Ringle & Sarstedt, (2013) suggest that the path coefficient assessment can be achieved through the use of bootstrapping. Chin (1998) also adds that since the PLS is not known to have a data normality constraint the bootstrapping technique is good to estimate the confidence interval and the t statistics. It is essential to check the existence of significant associations in the structural model. Therefore the bootstrapping technique is used to determine the outcomes of the inner path. There are individual path hypothesis and so the regression coefficient (β) was used to observe them. Hair et al., (2011) in their study conclude that the result of the path coefficient should be at least 0.1 in order to be considered significant.

As illustrated in Table 6 the path coefficient assessment is indicated. Four(4) direct hypotheses were proposed and all were supported. The proposed hypotheses are all significant at 0.05, at

least. Their path coefficient value (β) ranges from 0.158 - 0.385. The first proposed hypothesis (H1a) is in relation to the customer focus (CF) and customer knowledge management (CKM). The result shows statistically significant relationship because the p-value (0.000) less than 0.05 whilst the t-value ((4.468) is higher than 1.96. the relationship is positive, in that, the beta value (β=0.308) is positive. This means that CF has a positive influence on CKM. With respect to the fifth hypothesis (H1b) the relationship between customer involvement (CI) and CKM was determined. The results showed a statistically significant relationship. The p-value (0.009) is less than 0.05 as well as the t-value (2.639) being greater than 1.96. The relationship is also on a positive direction as the beta (β=0.164) value is positive. This means that CI has a positive influence on CKM. The sixth hypothesis (H1c) tests the relationship between customer communication (CC) and CKM. The result indicates a statistical significance in the relationship. This is because the p-value (0.002) is lower than 0.05, and the t-value (3.142) is also bigger than 1.96. The direction of the relationship is positive since the beta (β=0.225) value is positive. Thus CC positively influences CKM.

The final direct hypothesis (H2) is in respect of the relationship between CKM and FP. The result indicates a statistical significance relationship. This is because the p-value (0.000) is less than the 0.05, with the t-value (5.475) being greater than 1.96. Furthermore, the last direct hypothesis (H3) was the relationship between CKM and FP revealed statistically significant due to the p-value (0.000) is less than 0.05 and the t-value (5.475) which is higher than 1.96. The relationship shows a positive direction as since the beta (β= 0.385) value is positive. This suggests that CKM has a positive relationship with FP. The direct path analysed indicate that all the proposed four hypothesis show direct positive relationship. The result is illustrated in Table 6 and figure 3.

Table 6: Path coefficient result indicating significance of the hypotheses

Hypotheses	OS/Beta	SM	SD	95% Confidence Interval Bias Corrected		T	P	Decision
				LL	UL			
H1a: CF -> CKM	0.308	0.303	0.069	0.182	0.456	4.468	0.000	Significant
H1b: CI -> CKM	0.164	0.180	0.062	0.035	0.269	2.639	0.009	Significant
H1c: CC -> CKM	0.225	0.223	0.072	0.081	0.351	3.142	0.002	Significant
H2: CKM -> FP	0.385	0.391	0.070	0.226	0.491	5.475	0.000	Significant

Note:OS=Original Sample/ SM=Sample Mean/SD=Standard Deviation.   Source: own editing
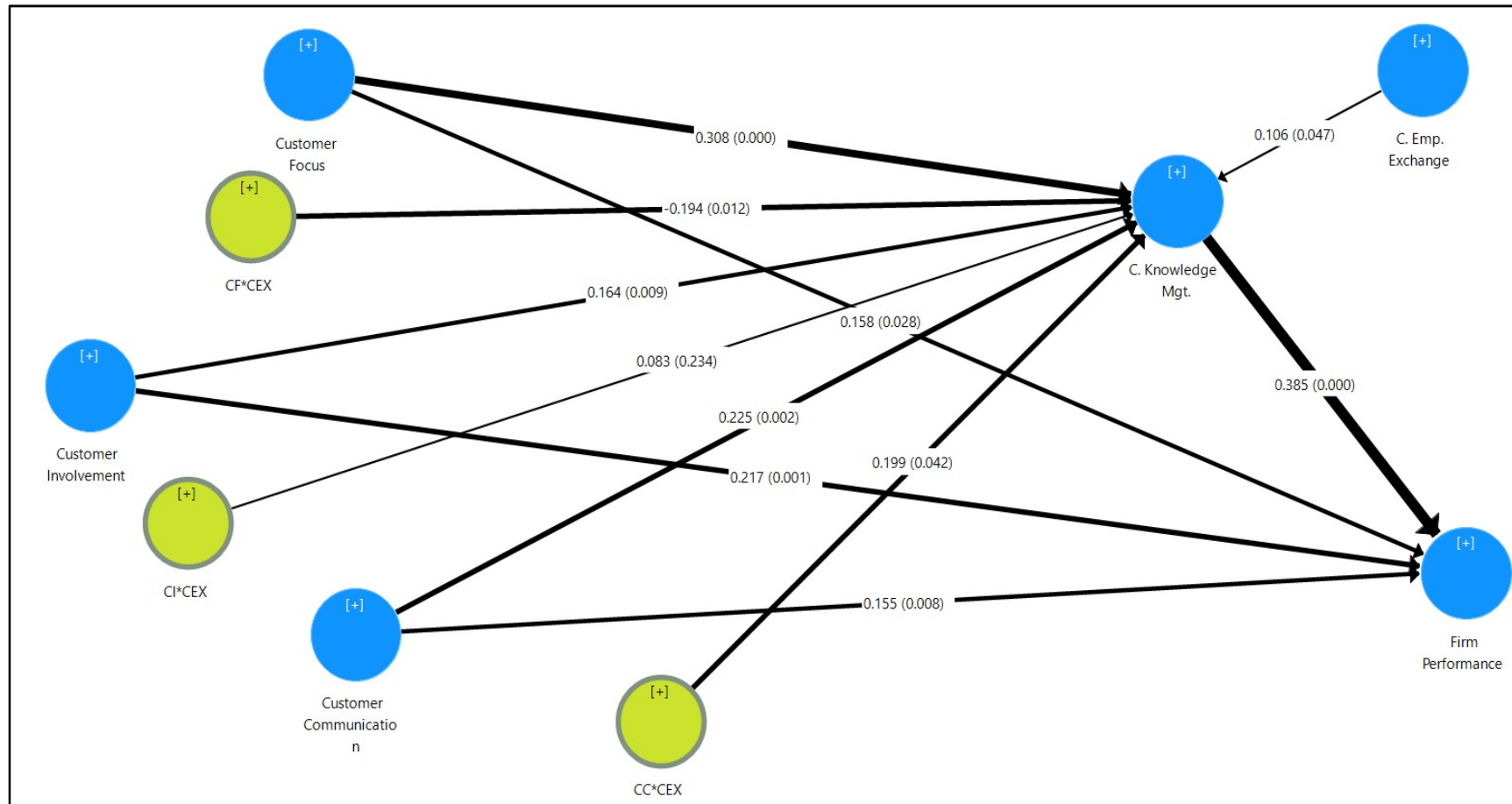
Figure3: structural model with path coefficient beta-value and p-value from bootstrapping test   (source: own editing)

3.9 mediation analysis (Indirect effect)

Indirect effects represent the influences that are mediated by at least a single intervening variable (Bollen, 1987). After applying the bootstrapping procedure for the direct effect analysis, this section (the indirect/mediation effect analysis) will also see the application of the bootstrapping technique. Hair et al. (2013) in their work suggested the application of the bootstrapping method in the mediation analysis. Hair et al., (2011) suggested that the proposed number of bootstrap samples ought to be 5000, and the bootstrap cases be same as the number of valid observations. Wong (2013) adds that a great deal of subsamples are extracted from the original sample with replacement to give the bootstrap a standard error, and this provides approximate t-values for significance testing of the structural path. However, and for the purpose of this study, Nevitt, & Hancock (2001) indicated that a small number of bootstrap of about 250 is enough for analysis. The number of observations used in this study is 283..

Hayes & Darlington, (2016) stated that the most valuable part of assessing the indirect effect is the mediation analysis. Hence the study uses the bootstrapping technique to determine the mediation effect of the structural model. The bootstrapping result is demonstrated in Table 5.11 where the indirect effects are determined. The effect of the independent variable on the dependent variable though the mediation variable was found to be significant, statistically. Meanwhile, the direct effects of CF, CI and CC on FP indicate significance with p-values 0.028, 0.001 and 0.008 respectively.

From Table 7 the results of the mediation analysis are demonstrated there were three (3) proposed mediation hypotheses in the study (H3a, H3b, and H3c). The results indicated that all the three (3) mediation relationships proposed were found to be significant. The relationships were significant because their respective p-values are less than 0.05; the t-value being higher than 1.96. To confirm their significant meditation effect the lower limit (LL) and the upper limit (UL) are all positive.

The initial mediation relationship proposed (H3a) was in relation to CKM in the relationship between CF and FP. The significance of the relationship was shown in the result. The p-value is 0.001 and is less than 0.05, the t-value is 3.267 which is higher than 1.96, this means the relationship is significant. In addition, the values of the LL and UL are 0.062 and 0.202 respectively. Since there is no zero in between it confirms the significant mediation effect of

CKM. The mediation effect can be described as partial since in the direct effect analysis it was found that CF has significant effect on FP.

The next proposed mediation hypothesis (H3b) is in relation to the mediation effect of CKM in the relationship between CI and FP. The result shows significant relationship, in that, the p-value of 0.042 is less than 0.05, with the value of the t 2.039 being higher than 1.96. Moreover, the values of LL and UL are 0.011 and 0.121 respectively, meaning there is no zero in between them, and this confirms the significant mediation effect of CKM. The mediation is also partial one in the sense that the direct effect of CI on FP which was determined earlier was significant. Thus the result can conclude that CKM plays a partial mediation effect in the relationship between CF and FP.

The final proposed mediation hypothesis (H3c) is in relation to the mediation effect of CKM in the association between CC and FP. The result shows statistically significant relationship due to the p-value 0.009 being less than 0.05 and the t-value 2.606 greater than 1.96. Moreover, the values of LL (0.030) and UL (0.156) show no zero in between and this further affirms the significant relationship. However, and similar to the previous mediation effect, this one also proves to be partial relationship. This is because the direct relationship between CC and FP determined earlier is significant, hence this partial relationship. Find below Table 7 which illustrates the indirect (partial) effects of the proposed mediation hypotheses

Table 7. Mediation analysis result indicating significance of the relationships

Hypotheses	OS/Beta	SM	SD	95% Confidence Interval Bias Corrected		T	P	Decision
				LL	UL			
H3a: CF -> CKM -> FP	0.119	0.119	0.036	0.062	0.202	3.267	0.001	Significant
H3b: CI -> CKM -> FP	0.063	0.072	0.031	0.011	0.121	2.039	0.042	Significant
H3c: CC -> CKM -> FP	0.087	0.088	0.033	0.030	0.156	2.606	0.009	Significant

Note: OS=Original Sample/LL=Lower Limit/UL: Upper Limit

3.10   Moderation effect analysis

The initial relationships determined were those of the direct and indirect paths in the structural model. In this section, the moderating effect of the moderating variable, which is customer-employee exchange (CEX) was tested. Baron and Kenny (1986) contend that a moderating variable serves as variable that influences the strength of a direction between a dependent and an independent variable. This study, as with earlier technique, uses the bootstrapping method to assess the moderating effect. Illustration is provided in Table 8 with the three proposed moderating paths (H5c, H5b and H5a). All the proposed paths show that CEX moderated the proposed paths. The initial proposed moderating hypothesis (H5a) was that CEX significantly moderates the relationship between CF and CKM. It shows that CEX has a significant moderating effect between them as the t-value (t=2.515) showed higher than 1.96 and p-value (p=0.012) was found to be lower than 0.05. It suggests CEX takes an active part in moderating role on the association between CF and FP. The beta value (β= -0.194) is negative, so it shows a weaker relationship.

With the next proposed hypothesis (H5b) the study is testing the moderating effect of CEX in the relationship between CI and CKM. The result found that the relationship is insignificant. This is because the p-value 0.234 is greater than 0.05 and the t-value of 1.192 also being greater than 1.96. Thus, CEX does not affect the association between CI and CKM. The final moderating hypothesis (H5c) is in respect of the influence of CEX between CC and CKM. The result indicates that the relationship is significant. This is because the p-value which is (0.042) is less than 0.05, with the t value (2.037) being greater than 1.96. Since the value of beta (β=0.199) is positive, it can be deduced that the existence of CEX in the relationship between CC and CKM is stronger.

Table 8: Moderation effect analysis result

Hypotheses	OS/Beta	SM	SD	95% Confidence Interval Bias Corrected		T	P	Decision
				LL	UL			
H4a: CF*CEX -> CKM	-0.194	-0.180	0.077	-0.364	-0.061	2.515	0.012	Significant
H4b: CI*CEX -> CKM	0.083	0.061	0.070	-0.057	0.195	1.192	0.234	Not Significant
H4c: CC*CEX -> CKM	0.199	0.202	0.098	0.033	0.410	2.037	0.042	Significant

Note: OS=Original Sample/LL=Lower Limit/UL: Upper Limit. Source: own editing

3.11 Objective 1: customer orientation and customer knowledge management

The first objective sought to find out the effect of customer orientation (customer focus, customer involvement and customer communication) on customer knowledge management. Therefore the Customer focus has been found to show positive and considerable relationship with customer knowledge management. Findings also reveal that customer involvement (CI) is found to have an influence on customer knowledge management. As indicated earlier, customer involvement represents the extent to which customers are engaged with by the firm to help provide input at various phases of the service delivery. Customer communication has also been found to have an influence on customer knowledge management. As indicated earlier, regular communication with customers is a vital feature of a firm whose interests are to effectively compete in the market.

3.12 Objective 2: customer orientation and customer knowledge management

Customer knowledge management centers on identifying, organizing, and using customer knowledge (Kakhki et al., 2021). From the results, customer knowledge management has been found to have an effect on firm performance. This indicates the availability of systems to store information collected from the market which help to improve the performance of the firm. As previously indicated, customer knowledge management refers to the management of the procedure an organization uses to acquire, store and analyze customer-related data. It goes one to shows that customer/market knowledge which is relevant to their work is regularly available and accessible.

3.13 Objective 3: Customer Knowledge Management and Firm Performance

Findings of the study reveal that customer knowledge management mediates the relationship between all the dimensions of customer orientation (i.e. customer focus, customer involvement and customer communication) and firm performance. This study suggests that customer orientation has an influence on firm performance; as it is well studied in the literature. In the current objective, it was proposed that, even though customer orientation (customer focus, customer involvement and customer communications) have an influence on firm performance, customer knowledge management is thought to play some form of intermediary role. In this regard the result indicates that there is indeed an intermediary role played by customer knowledge management, even though it shows a partial role.

3.14 Objective 4: The mediating role of customer knowledge management in the relationship between customer orientation and firm performance

The moderating effect CEX for customer orientation (customer focus, customer involvement and customer communication) and customer knowledge management was determined. From the findings, customer-employee exchange has been found to moderate the relationship between customer orientation and customer knowledge management. This means that CEX influences the extent of influence of customer focus on customer knowledge management. The more the interaction between the firm and its customers the more the firm is able to store enough knowledge for strategic decisions. Findings from the second moderation effect means that CEX does not have any form of influence in the relationship between customer involvement and customer knowledge management. In essence, despite the firms' resolve in the preservation of a good relationship with the customer, it does not influence the ability of customers' involvement in information gathering (customer knowledge management) and usage. With regards to the third moderation effect, it was further found that CEX strengthens the association between customer communication and customer knowledge management. Thus the presence of regular interaction with the customer improves the customer communication level to enhance the customer knowledge management capability of the firms

Table 9: Summary of all hypotheses results

No.	Hypotheses	Results
H1a	CF has a significant effect on CKM	Supported
H1b	CI has a significant effect on CKM	Supported
H1c	CC has a significant effect on CKM	Supported
H2	CKM has a significant effect on FP	Supported
H3a	CKM has a significant mediating role in the relationship between CF and FP	Supported
H3b	CKM has a significant mediating role in the relationship between CI and FP	Supported
H3c	CKM has a significant mediating role in the relationship between CC and FP	Supported
H4a	CEX has a significant moderating effect on the relationship between CF and CKM	Supported
H4b	CEX has a significant moderating effect on the relationship between CI and CKM	Not Supported
H4c	CEX has a significant moderating effect on the relationship between CC and CKM	Supported

4. CONCLUSION

In the marketing literature, customer orientation has received much attention. A firm's performance is no doubt a result of persisted strategies centered on customers; customer focus, customer involvement, and customer communication. The study sought to unearth the complex relationships among some important factors in the marketing realm that could affect firm performance directly or indirectly. These factors were customer orientation, customer knowledge management and customer-employee exchange. Thus the study desired to understand effect of customer orientation on customer knowledge management in the Ghanaian SME environment. The mediation role of customer knowledge management in the association between customer orientation and firm performance in the Ghanaian SME context is also ascertained. Furthermore, it also sought to understand the extent of influence of customer-employee exchange in the relationship between customer orientation (customer focus, customer communication and customer involvement) and customer knowledge management.

The findings reveal that customer knowledge management indeed improves business performance among SMEs in Ghana. This is homologous to the findings of some authors such as Narayanan, Nadarajah, Sambasivan & Ho (2020) Imran, Ilyas, Aslam, & Fatima, (2018), Khosravi, Hussin & Nilashi (2018) and among others. The identification and creation of customer knowledge Mehdibeigi et al., (2016) was conceptualized in this study to mediate the relationships between customer orientation (customer focus, customer involvement and customer communication) and firm performance. Findings suggest that customer knowledge management plays a partial role in the influence of customer orientation on firm performance. This means that even though customer orientation improves market, financial and overall performance of the firm, Ghanaian SMEs should pay attention to the method of collection and application of knowledge as the benefit could be immense.

Furthermore, the overall interactions between the employees of the Ghanaian SMEs and the customer; thus customer-employee exchange was also conceptualized to moderate the relationship between customer orientation (customer focus, customer communication and customer involvement) and customer knowledge management. It was found that with the exception of customer involvement, the overall interactions seems to determine the extent to which knowledge is gathered and applied from the application customer orientation (thus customer focus and customer communication) in the context of the SMEs in the Ghanaian environment.

5. NEW SCIENTIFIC RESULTS

The empirical analysis of structured equation modeling (SEM) using the SMART PLS has shown several new scientific findings. Different studies have variously demonstrated the importance of customer orientation on firm performance. Others have also looked into the importance of customer knowledge management in enhancing customer satisfaction

1. The empirical results of the study indicates that customer orientation practices such as customer focus, customer involvement and customer communication when effective strategies are comprehensively implemented can have a significant potential to help in getting better organizational performance, more so from the perspective of Small and Medium-size Enterprises (SMEs) in Ghana.

2. The study also stressed the need for the frequency of the interactions between employees and customers (Customer-employee exchange), so as to be able to generate important customer information. The influence of the interaction cannot be understated, and this is important because SMEs in Ghana do not possess the level of financial resources possessed by several other large corporations or multinational companies. Taking that into consideration the results enabled us understand the extent to which those interactions influences the relationship between customer orientation and customer knowledge management.

3. The interaction effect of customer employee exchange which represents the feeling of care, friendliness and communication (which are common traits of most Ghanaians) between the customer and the organizational service provider seems to improve on the ability to collect better information. This means that, once customers of the Ghanaian decent do not perceive care or friendliness in communication, they are put off from effective communication, especially in the manufacturing where interaction may not necessarily be face-to-face. This is illustrated in figure 5.5

4. Even though customer orientation has been found to influence various performance metrics of business, in this study customer knowledge management has been found to play a major role (thus mediator variable).

5. Presenting the special impact of CEX in Ghana and calling the attention to improve conditions.

6. RECOMMENDATION

The importance of the study cannot be underestimated as various SMEs are still trying to find their feet in the wake of an unhealthy economic climate in Ghana in recent times. To survive, firms need to get decisions right at the first call as they cannot afford to make mistakes strategically, knowing that they are already behind in terms of resources. This means that the firms are already disadvantaged as a result of the seeming economic woes the country is facing. The study therefore recommends that;

1. Managers of SMEs should make it a point to create and implement a customer-orientated culture with enduring values. This involves the commitment to include technologies where necessary.

2. Managers of SMEs must be able to improve on their commitment for knowledge management by way of investment in technology and training programs. The structure of the organization must be designed to enhance collaborations and knowledge sharing among various departments.

3. It is essential to create a team who will be responsible for managing the information gathered from customers and subsequently turn it into an important knowledge. This way, the SME can create partnership with customer-contact employees to enhance customer knowledge management.

4. SMEs can design and implement yet another training program to improve awareness of employees on how to interact with customers to ensure their (customers') regular participation in service/product delivery. This will help give power to employees to make a lot more useful engagement with customers for product improvement, knowledge acquisition and sharing.

5. SMEs should be about to create the relevant platform to enable regular interactions on social media. These interactions can be customer-employee or customer-customer forms interactions and this can promote a host of personal interactions among customers.

6. The study recommends further studies to look into the sectoral differences in terms of customer orientation so as to understand sector-specific adoption of the practices and benefits.

7. PUBLICATIONS AND OTHER SCIENTIFC OUTPUTS

7.1 Publications relating to the topic of the dissertation

Boateng, H., Ampong, G. O. A., Adam, D. R., Ofori, K. S. and Hinson, R. E.(2022). The relationship between social interactions, trust, business network, external knowledge access and performance, V*INE Journal of Information and Knowledge Management Systems*, 52 (5), 633-649. doi.org/10.1108/VJIKMS-05-2020-0088

Ibrahim, M., Yusheng K, and **Adam DR** (2022). Linking Service Innovation to Organisational Performance: Mediating Role of Employee Productivity and Job Satisfaction. International Journal of Service Science, Management, Engineering, and Technology (IJSSMET). vol. 13 (1), pp. 1-16, doi.org/10.4018/IJSSMET.295558

Boateng, H., F.E Amenuvor, Adam, D.R., Agbemabiese GC and Hinson, R. (2022), Exploring Customer Stewardship behaviors in service firms..*European Business Review*. 34 (4): 541-555. doi.org/10.1108/EBR-09-2021-0203

Adam, D. R., & Husseini, S. A. (2023) Customer Employee Exchange and Firm Innovative Behavior Among SMEs in Ghana: The Mediating Role of Customer Knowledge Management. *Regional and Business Studies*. 15 (*2*). https://doi.org/10.33568/rbs.4420

7.2 Publications not relating to the topic of dissertation

Boateng, H., Kosiba, J.P., **Adam, D.R.,** Ofori, K.S. and Okoe, A.F. (2020). Examining brand loyalty from an attachment theory perspective. *Marketing Intelligence & Planning*, Vol. 38 No. 4, pp. 479-494. https://doi.org/10.1108/MIP-03-2019-0161

Nyamekye, M.B., **Adam**, **D.R.,** Boateng, H. and Kosiba J.P (2021). Place attachment and brand loyalty: the moderating role of customer experience in the restaurant setting, DOI 10.1108/IHR-02-2021-0013, *International Hospitality Review*

7.3 Book chapters

Madichie, N. O., Ibrahim, M., **Adam, D. R**. and Ustarz, Y. (2020). Entrepreneurial Intentions Amongst African Students: A Case Study of the University of Education, Winneba, Ghana. In: Adesola, Sola; Datta, Surja (eds.) Entrepreneurial Universities Cham, Switzerland: Springer International Publishing (2020) 200 p. pp. 169-190. Paper: Chapter 8, 22 p.

Adam D. R. (2022). Value chain analysis with an example from school in Ghana. In: Berke S., Szabó K. and Pató B. (2022). Organizational Behaviour and Leadership Theory in Practice. MATE Campus Kaposvár, ISBN: 978-615-5599-92-7