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# Relationship Between Market Orientation and SMEs Innovation Performance: Role of Absorptive Capacity and Openness

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**Abstract**

The study was founded on three main objectives. The study looked at the direct relationship between market orientation and the innovation performance of SMEs. It also assessed how absorptive capacity mediated the direct relationship between market orientation and the innovation performance of SMEs. Lastly, the study assessed the moderating role of openness on the effect of market orientation and absorptive capacity of SMEs. Results were founded on 418 Ghanaian SMEs. The reliability and validity analyses were conducted before the actual path estimations Structural Equation Modelling in Amos (v.23). This study concluded that marketing orientation had a significant positive relationship with the innovation performance of SMEs, and the relationship between market orientation and SMEs' innovation performance was partially mediated by the effect of the absorptive capacity of SMEs. The relationship between market orientation and innovation performance of SMEs could thus be direct or mediated through absorptive capacity. Finally, the study concluded that the effect of market orientation on absorptive capacity was moderated by openness. Market-oriented SMEs with an innovation openness strategy can achieve higher absorptive capacity. It was recommended that SMEs seeking to achieve innovation performance must invest in understanding the market in which they operate. This includes understanding the customers and competitors. The various units in the organization must also integrate to enhance the smooth sharing of innovation knowledge. Organizational performance measures such as innovation are very critical for the survival of firms in this age of COVID-19 pandemic when even giant firms are running into losses and folding up.



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## 1. Introduction

With the coronavirus outbreak, today's business environment has become more volatile and thus requires corporation dynamism. As a decisive factor in allowing businesses to survive in a challenging business market environment and economy, as they currently live globally, innovation has thus become imperatively necessary. Enterprises strive to optimize the revenue and cost efficiencies caused by pandemic price fluctuations and to maximize in addition to new marketplace avenues (Bartik et al., 2020; Papadopoulos et al., 2020). In addition, modern competitive challenges are on the rise and force businesses to re-examine their inner environment to enhance the firm's performance and ensure a competitive edge (Al-Henzab et al., 2018). However, investments, company performance, structure, market relationships, and activities have important implications on a firm's strategy (Martin-Rojas et al., 2019; Ilmudeen et al., 2019).

This approach can assist firms in enhancing the overall performance, resolving problems, and creating new abilities (Popovič et al., 2018). The use of new methods can create room for managers and their firms to combine resources, recognize and communicate valued services and products for higher profitability (Al-Ansaari et al., 2015). To ensure that a firm uses the appropriate approaches, it must organize its strategies in setting up industry pace and building upon its skills, resources, and competencies to fit its inner and external environments and achieve a sustainable competitive benefit and firms' efficiency. Therefore, firms must focus on their strategic orientations to accomplish these objectives (Adewunmi et al., 2017; Al-Ansaari et al., 2015).

This is because the firm's strategic direction creates an opportunity for its strategy to supervise its operations to achieve higher performance (Obeidat, 2016). Since traditional strategies have become outdated, firms are forced to experiment with new approaches to achieve a competitive advantage (Nagy et al., 2018). As a result, strategy is essential to companies' overall success and survival (Dayan et al., 2017; Obeidat et al., 2016). Another part of the strategy to place a focus on is the company's market orientation. Multiple disciplines highlight the significance of market orientation because it highly impacts the types of activities and performances that firms embrace (Dutta et al., 2016; Anning-Dorson, 2018). Corporate performance has been a critical issue for every business, regardless of whether it is a for-profit or not-for-profit.

To improve the results of their businesses, managers have dedicated themselves to identifying factors that influence performance and how to use them (Zollo et al., 2019). To be clear, tangible and natural resources are necessary, but various resources need to be considered, including human and environmental resources (Alaarj et al., 2016). Thus, this study seeks to discover the connection between market orientation and business sector innovation performance and focuses on small and medium-sized enterprises (SMEs). The conceptual framework of the study is presented in Figure 1.

## 2. Literature

### 2.1 Market Orientation

Market orientation is a company culture that emphasizes its style and practices concerning its competitors, clients, and internal functions behaviors. Such behaviors are proposed to be necessary for the company to design high-quality goods that create value for customers (Egberi & Osio, 2019, Yadav & Tripathi, 2018). Additionally, Agrawal et al. (2017) believe that firms that pursue a market-oriented strategy have the advantage of enjoying long-term financial superiority. Market Orientation has been defined as an organizational culture that puts the customer first, thus yields a superior value for customers while also creating outstanding results (Adam & Syahputra, 2016; Aksoy, 2017). Consistently responding to customer needs, providing high-quality goods and services, and responsiveness to market changes is essential for companies' long-term success (Chen, 2019).

It is not uncommon for firms to launch new products and services and enhance innovation capacity in response to changes in the market. The adoption of marketing strategies intended to outperform competitors by meeting customer needs is also called market orientation (Kocak et al., 2017). Although the specific focus of market orientation varies, it generally revolves around three fundamental aspects; 1) focus on the customer, 2) focus on the competitor and 3) inter-functional cooperation (Ladipo et al., 2016). Gathering of Information, dissemination of information, and reacting to the information received are all parts of all conceptualizations (Baker et al., 2020).

Market Orientation has three dimensions that the researchers Kohli and Jaworski (1990) define as acquiring information about the market, making the information available among all the departments, and developing and implementing the necessary



Figure 1 Theoretical Framework

strategies in reaction to the information. Gathering continuous and systematic information on clients and competitors, information sharing across organisational functions, and timely responding to the fluctuations in market needs are among the critical components of market orientation. An organisation's market orientation shows how important it is to adopt a proactive attitude and develop a proactive attitude and competitive advantage (Prifti & Alimehmeti, 2017) and is different from a business proficiency in executing marketing-related action (Aksoy, 2017).

## 2.2 Innovative Performance

Businesses are being faced with the constant competition; as such, there is the need to be proactive in their decision-making to stay ahead of their competitors. Innovations are crucial for companies in hyperconnected and competitive markets to prosper (Lee & Trimi, 2020). There is tension between having knowledge or advanced knowledge in developed economies or having the latest marketing or technological innovation. In developing economies with insufficient investing avenues, that uncertainty turns into innovation or generation of ideas. Innovation is described by Hurley and Hult (1998) as a facet of an organisations culture and the willingness to incorporate new ideas.

They have included innovation capacity in their model, which they defined as "the ability of the organisation to successfully implement or adopt new ideas, processes, or products. An accumulation of knowledge and experience contributes to an individual's innovation capacity. This may be considered an incremental technical change or a new series of technological opportunities (Prifti & Alimehmeti, 2017). Innovation can be seen as developing new goods and services (Claus, 2017,

Janssen et al., 2016): alternative business models and strategies (Evans et al., 2017); new knowledge formation and an alternative delivery method (Joffre et al., 2017). Kahn (2018) asserts that innovation is applying fresh ideas, including all business activities such as developing the new process, product or process.

This study looks at Innovation in three different areas: developing new technology or process, creating new services and creating new products. Product and service innovation develops new products and services to meet customers' demands and market needs (Kahn, 2018). It is seen as the procedure of using new technologies in the production process (Lukas & Ferrell, 2000) which results in a change and an improvement in the final product with the sole purpose of maximizing profits and maintaining its presence in the market (Johne, 1999). Process innovation introduces elements and items such as new tools, machines, and materials (Kahn, 2018). The process alters the production methods of the organisation's products and services (Cooper, 1998).

## 2.3 Market Orientation and Innovation Performance

Market Orientation is more critical for the success of an organization. To understand the market situation, an objective must be established. All business departments and projects serve to meet the customer's expectation and deliver an advanced consumer revel in via way of means of new product (Kohli & Jaworski, 1990; Atuahene-Gima, 1995). The literature generally agrees that a market-oriented company positively impacts overall success (Atuahene-Gima, 1995; Baker & Sinkula, 2005; Laforet, 2009) and innovation (Jimenez-Jimenez et

al., 2008). This is most likely because they can meet the expectations of their customers while also absorbing new knowledge, which can be used to inspire innovation (Monferrer et al., 2013; Jaworski & Kohli, 1993).

Verhees and Muelenberg (2004) found that highly innovative businesses exhibit constraints that inhibit product innovation, whereas less innovative businesses contribute to its creation. Despite the apparent contradictions in this finding, no effort was made to categorize the kind of innovation the firm was embarking on. Tajeddini et al. (2006) studied SMEs in the wristwatch sector of Switzerland and found that performance and innovation are positively influenced by customer orientation. In short, the hypothesis goes like this:

H1: Market orientation has a direct positive effect on the innovation performance of SMEs.

## 2.4 Mediating Effect of Absorptive Capacity

Cohen and Levinthal (1990) originally propounded the concept of absorptive capacity, which was originally defined as the firm's capacity to gain, assimilate and exploit outside knowledge for profits. This has become crucial for companies to secure competitive advantage through increasing manufacturing flexibility or product development (Patel et al., 2012). Absorptive capacity beyond enhancing existing knowledge bases and promoting new knowledge creation activities are crucial in prompting companies to refresh their key technologies or products. It is important to manage their workforce more efficiently stimulating employee creativity. Many researchers have researched the connection between absorptive capacity and business performance and have investigated how it leads to business competitiveness.

Some have suggested that the introduction of new products could be achieved from the innovations drawn from absorptive capacity because it enables companies to both gain access to outside knowledge (Kotabe et al., 2011) and to implement interventions to make use of that outside resources for real benefits (Kostopoulos et al., 2011). The organisation can recognize and absorb new external information, absorb it, and use it for commercial purposes (Ali et al., 2016). Inclusive of acquisition and assimilation, an organisation's ability to utilize information is its absorptive capacity. Direct links with the external environment are not only the component of an organisation's absorptive capacity; other links include the transfer of knowledge among and within subsections also play a vital role. These dimensions

have been adopted from different studies for organisational phenomena (Zahra & George, 2002).

Absorptive Capacity is identified to be critical to organisational learning (Bergh & Lim, 2008). Absorptive capacity is identified to enhance organizational learning for improved innovation processes (Zahra & Hayton, 2008), which positively influences technological capacity attainment for both inner and outer channels (Haro-Domínguez et al., 2007). It also increases organisational innovation and learning (Garcia-Morales et al., 2007), raises the usage of collaborative type in sourcing technology (Ouyang, 2008), and increases the alliance with external businesses (Muscio, 2007). Conversely, since absorption capacity would connect the variables of organisational culture like market orientation and learning orientation to organizational performance measures, it can be said to be a good link between these variable (Li et al., 2020).

Therefore, the second hypothesis states:

H2: Absorptive capacity mediates the relationship between market orientation and innovation performance of SMEs.

## 2.5 Moderating Role of Openness

Some researchers often stressed the importance of acquiring outside knowledge, which links individuals and entities outside organisational and a field's distinct boundaries (Chatterji & Fabrizio, 2014; Cohen & Levinthal, 1990). According to recent research, firms' innovation openness to external knowledge resources is critical for innovation generation (Love et al., 2011; Garriga et al., 2013; Roper et al., 2013). It has now become a key area of interest in open innovation research. When firms open up their boundaries to outside firms for innovation, some researchers argue that it results in complementary effects and values on previous knowledge (Laursen & Salter, 2006; Zhou & Li, 2012; Miller et al., 2007). Firms' openness, as expressed in the study by these researchers, is the result of firms using a conduit approach that allows them to obtain external knowledge, which encourages firms to innovate as a means of remaining competitive.

In addition to this, researchers believe that a firm's openness is a key strategic decision because new and valuable knowledge is frequently located outside the corporation (Fontana et al., 2006; Laursen & Salter, 2004). Firm innovation was regarded as the novel application of skills, concepts, knowledge, and methods which, when used in conjunction with a firms' competitive strengths, creates new capabilities

**Table 1** Confirmatory Factor Analysis (CFA).

<b>Model Fitness:</b> CMIN=2148.57; DF=766; CMIN/DF=2.805; GFI=0.864; PClose=0.083; TLI=0.902; CFI=0.915; RMSEA=0.071; SRMR=0.075	<b>Std. Factor Loadings</b>	<b>C.R.</b>
<b>Market Orientation (MO): CR=0.896; AVE=0.743; CA=0.878</b>		
<b>Customer Orientation (CUST): CR=0.845; AVE=0.578; CA=0.834</b>	<b>.829</b>	
CUO1	.698	
CUO2	.841	16.434**
CUO3	.774	15.512**
CUO4	.719	16.391**
<b>Competitor Orientation (COMP): CR=0.843; AVE=0.574; CA=0.881</b>	<b>.970</b>	<b>18.773**</b>
COO1	.756	
COO2	.736	12.012**
COO3	.708	10.020**
COO4	.826	11.955**
<b>Inter-Functional Coordination (INT_F): CR=0.858; AVE=0.602; CA=0.934</b>	<b>.776</b>	<b>19.278**</b>
IFC1	.748	
IFC2	.862	17.170**
IFC3	.711	16.773**
IFC4	.775	16.289**
<b>Openness (OPP): CR=0.966; AVE=0.803; CA=0.886</b>		
OPN1	.857	
OPN2	.891	16.238**
OPN3	.883	15.650**
OPN4	.820	16.389**
OPN5	.942	13.693**
OPN6	.946	14.816**
OPN7	.928	13.313**
<b>Absorptive Capacity (ABC): CR=0.972; AVE=0.896; CA=0.839</b>		
<b>Acquisition (AC): CR=0.903; AVE=0.651; CA=0.861</b>	<b>.900</b>	
ACQ1	.738	
ACQ2	.803	11.987**
ACQ3	.876	14.950**
ACQ4	.821	14.572**
ACQ5	.790	19.214**
<b>Assimilation (AS): CR=0.897; AVE=0.744; CA=0.817</b>	<b>.887</b>	<b>18.450**</b>
ASS1	.886	
ASS2	.922	10.216**
ASS3	.773	12.009**
<b>Transformation (TC): CR=0.906; AVE=0.708; CA=0.832</b>	<b>1.005</b>	<b>12.034**</b>
TRA1	.791	
TRA2	.810	19.024**
TRA3	.864	18.671**
TRA4	.896	16.292**
<b>Exploitation (EC): CR=0.926; AVE=0.679; CA=0.914</b>	<b>.988</b>	<b>21.431**</b>
EXP1	.865	
EXP2	.850	21.592**
EXP3	.892	20.691**
EXP4	.635	17.152**
EXP5	.839	15.896**
EXP6	.837	16.694**
<b>Innovation Performance (IP): CR=0.920; AVE=0.743; CA=0.876</b>		
INP1	.844	
INP2	.887	12.058**
INP3	.845	12.055**
INP4	.871	12.056**

\*\*Sig. at 1%



and ultimately enables the firm to maximize its profitability (Kim et al., 2012). Pine (1993), Duray et al. (2000), and Ward & Duray (2000) defined mass customization, a competitive production model, as a producer's capability to produce a higher quantity of different products reliably, at low cost, with very short delivery timeframes (Huang et al., 2008; Liu et al., 2006). Thus, the final hypothesis concludes;  
H3: Openness moderates the relationship between market orientation and the absorptive capacity of SMEs.

### 3. Methods

#### 3.1 Research Design

The current study adopted a descriptive cross-sectional survey research design. This is because the study adopted a questionnaire as the data collection instrument. Again, the study adopted this research design because the study intended to examine the effect of market orientation on SMEs' innovation performance in Ghana, with absorptive capacity and openness acting as intervening variables. The descriptive component of the research design selected resulted from the phenomenon, data, and the features of the population being studied. Descriptive research designs attempt to answer questions about what, who, where, when, and how. In addition, this research design permits the collection and analysis of quantitative data using descriptive and inferential statistics.

#### 3.2 Population, Sample, and Sampling Technique of the Study

The population of this study comprises SMEs in Ghana. This comprised both manufacturing and service SMEs, with 6-99, and had operated for at 5 years within Ghana. The SMEs studied were located across the country, and not confined to a specific region, and numbering about 10,000. The current study adopted both probability (which was simple random sampling) and non-probability (which was a purposive/judgmental sampling technique).

The SMEs at least 5 years old were purposively sampled because they had adequate operational knowledge of the firm to offer reliable data for this study. After the SMEs with a minimum of 5 years of working experience were identified, a simple random sampling technique was used to select the SMEs. With this approach, 1000 SMEs were targeted, but only 418 completed the questionnaire within the 8 weeks of data collection.

#### 3.3 Measurement of Variables

The study used four major variables for the study, viz., market orientation, openness, absorptive capacity, and SMEs' innovation performance. Market orientation had three sub-dimensions, which were customer orientation (4 items), inter-functional coordination (5 items), and competitor orientation (4 items). The measurement items under customer orientation were adapted from Dogbe et al. (2020a). Absorptive capacity also had 4 sub-dimensions, which were acquisition (6 items), transformation (6 items), assimilation (3 items), and exploitation (6 items). The measurement items under absorptive capacity were developed by Jansen et al. (2005). Openness had 10 measurement items, which were adapted from Stanko and Henard (2017), and Laursen & Salter (2014). Innovation performance also 4 measurement items, with its measurement items adapted from Dogbe et al. (2020b).

#### 3.4 Reliability and Validity Analysis

Using Amos (v.23) to conduct Confirmatory Factor Analysis (CFA), and the outcome is presented in Table 1 and Figure 2. The standardized factor loadings for measurement variables are expected to be at least 0.5. This was achieved for all the measurement items, indicating the measurement items significantly defined the proposed latent variables. The C.R. for all the items were statistically significant at a 1% level of significance. The results indicated that Cronbach's alpha (CA) for the variables was larger than the minimum expected value of 0.7, indicating high internal consistency among the measurement variables. From the CFA results, the least factor loading under customer orientation was 0.698, competitor orientation was 0.708, inter-functional coordination was 0.711, openness was 0.820, the acquisition was 0.738, assimilation was 0.773, the transformation was 0.791, exploitation was 0.635, and innovation performance was 0.844. These were all higher than 0.5 expected minimum.

As per model fit indices, CMIN/DF was 2.805, GFI was 0.864, CFI was 0.915, TLI was 0.902, RMSEA was 0.071, and SRMR was 0.075. From Hair et al.'s (2010) model fit indices, it was realized that all the scores from this study met the respective thresholds. From Table 1, it was realized that the results met these thresholds, so we conclude that our data appropriately fit the constructed model. To achieve convergent validity, the Average Variance Extracted (Usman Khurram, Hamid, & JaveedUsman Khurram, Hamid, & Javeed) should be greater than

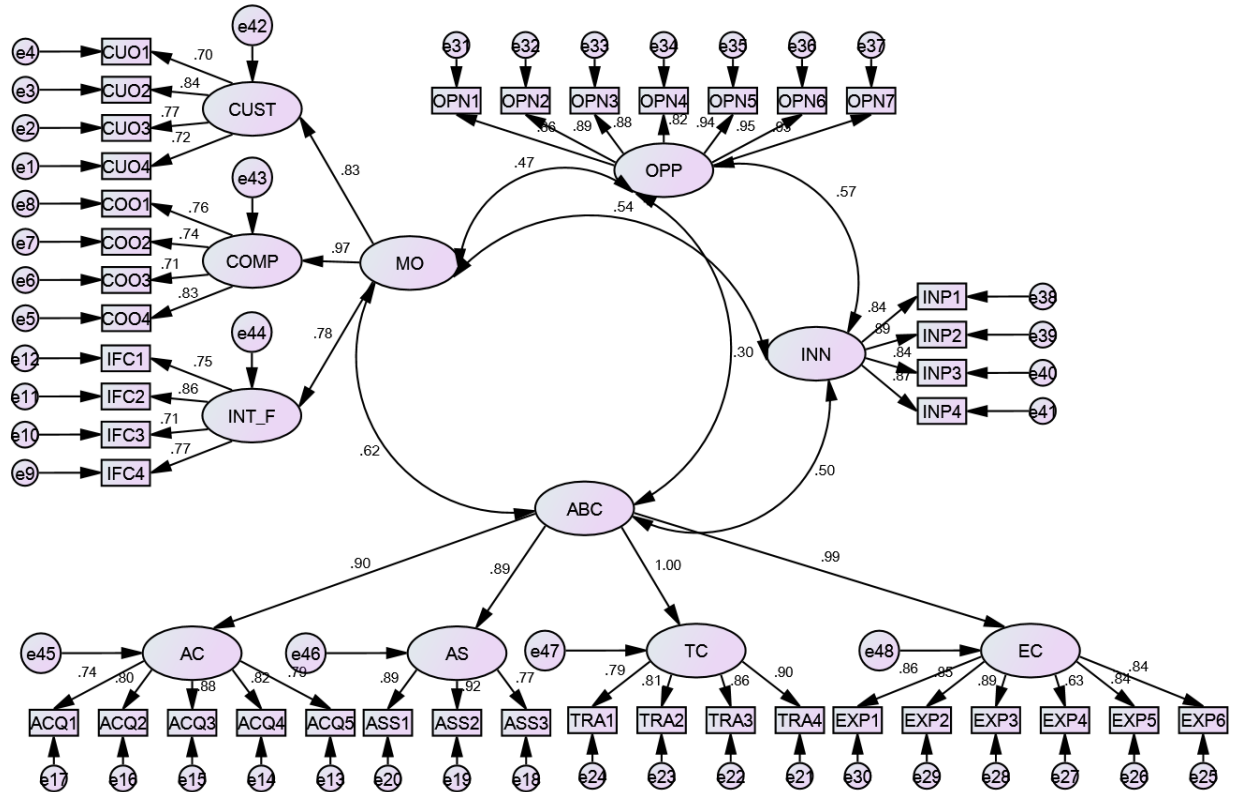


Figure 2 Diagrammatic Presentation of CFA.

0.5 (Fornell & Larcker, 1981). Cronbach’s alpha (CA) and Composite Reliability (CR) were also to be at least 0.7. Figure 2 presents the diagrammatic presentation of the CFA output.

The study assessed discriminant validity by measuring the square root of Average Variance Extracted ( $\sqrt{AVE}$ ) to the respective correlation coefficients. To achieve discriminant validity, the  $\sqrt{AVE}$  should be larger than the inter-correlation coefficients, as was the case in Table 2. The least  $\sqrt{AVE}$  was 0.862, which was greater than the largest correlation score of 0.621. Another concern in model estimation is multicollinearity, that is, high correlation among two predicting variables. Coefficients of 0.8 are usually considered as high, which may cause a confounding effect in the model estimation.

The highest coefficient score of 0.621, however, indicates multicollinearity was not a challenge to the reliability of the model estimated. We, therefore, conclude from the CFA analysis that the data was valid for model estimation. The Likert scale used was 1=strongly disagreed to 5=strongly agree, so the highest possible mean score was 5. The descriptive

statistics indicated that absorptive capacity had the highest mean score of 4.048., which was followed by the openness with a mean score of 3.986, innovation performance had 3.933, and market orientation had 3.852. The mean scores were above 3 (neutral/indifferent), implying that respondents agreed to the measurement items under all these constructs.

#### 4. Results and Discussions

After the reliability and validity checks, the main model was estimated using the SEM approach in Amos. Table 3 and Figure 3 presents the results of the model estimation. The estimation was based on Bootstrap Bias-Corrected confidence interval at 95%, with 5000 bootstrap samples. Variables such as firm age, industry, and firm size (measured by the number of employees), as the control variables for the study. From the analysis, the firm’s age had a significant positive relationship with SMEs’ innovation performance ( $\beta = 0.157$ ; C. R. = 2.181). This implies that older firms were more innovative than younger firms. This may be explained because older SMEs may have developed the innovation experience

**Table 2** Discriminant Validity.

Variables	Mean	Std. Dev.	MO	OPPN	ABC	IP
Market Orientation (MO)	3.852	0.798	<b><u>0.862</u></b>			
Openness (OPPN)	3.986	0.743	0.474**	<b><u>0.896</u></b>		
Absorptive Capacity (ABC)	4.048	0.758	0.621**	0.298*	<b><u>0.947</u></b>	
Innovation Performance (IP)	3.933	0.782	0.544**	0.573**	0.501**	<b><u>0.862</u></b>

\*\*\*Sig. at 1%; \*\*Sig. at 5%

√AVE is bold and underlined

**Table 3** Direct and Moderating Path Estimates.

Direct Effects	UnStd. Estimates	S.E.	C.R.
MO → ABC	0.917	0.091	10.077**
OPP → ABC	0.312	0.101	3.089**
MO_OPN → ABC	0.440	0.093	4.731**
MO → INN	0.529	0.065	8.138**
ABC → INN	0.677	0.089	7.607**
Age → INN	0.157	0.072	2.181*
Size → INN	0.124	0.061	2.033*
Ind → INN	0.045	0.053	0.849
Indirect Effect		Lower BC	Upper BC
MO → ABC → INN	0.557	0.112	0.773

**Model Fitness:** CMIN=2581.31; DF=934; CMIN/DF=2.764; GFI=0.845; PClose=0.085; TLI=0.921; CFI=0.935; RMSEA=0.061; SRMR=0.066

Bootstrap Bias-Corrected Confidence Interval at 95%

\*\*Sig. at 1%; \*Sig. at 5%

and resources over the years of operational experience, which grants them that competitive advantage.

Similarly, the firm's size also had a significant positive relationship with the innovation performance of SMEs ( $\beta = 0.124$ ; C. R. = 2.033). Firms with more employees may have an adequate human resource for innovation conceptualization and implementation, thereby granting them an innovation advantage. The industry was coded 1=manufacturing and 0=service, and industry had an insignificant positive effect on innovation performance of SMEs ( $\beta = 0.045$ ; C. R. = 0.849).

The first hypothesis sought to establish the direct effect of market orientation on the innovation performance of SMEs. Results from Table 3 indicate that market orientation had a significant positive effect on SMEs innovation performance ( $\beta = 0.529$ ; C. R. = 8.138). This indicates that enhancement market orientation activities of SMEs improved their innovation performance by about 52.9% and vice-versa. Hypothesis H1: Market orientation has a direct positive effect on innovation performance of SMEs, was therefore accepted. This implies that when SMEs become market-oriented – by being customer-oriented (focusing on the needs

and wants of customers), understanding its competitors, and having effective coordination within the various functions of the firm –, they have more chance of enhancing their innovation performance (Monferrer et al., 2013).

Customer orientation will help SMEs to identify the needs and wants of customers, to offer them products that will be easily accepted when introduced to the market (Tajeddini et al., 2006). Understanding your competitors and the competition will help firms to know the competitive strategies of their competitors and adopt strategies to outwit them (Laforet, 2009). Knowing more about your competitors helps develop new products with innovations much higher than competitors (Jimenez-Jimenez et al., 2008). Effective inter-functional coordination will also help SMEs to share innovation knowledge among staff, to develop superior new products (Baker & Sinkula, 2005).

The second hypothesis sought to assess the mediating effect of absorptive capacity in the relationship between market orientation and SMEs' innovation performance. To achieve this goal, the effect of market orientation on absorptive capacity was assessed and found to be significantly positive ( $\beta = 0.917$ ; C. R. = 10.077). This indicates that



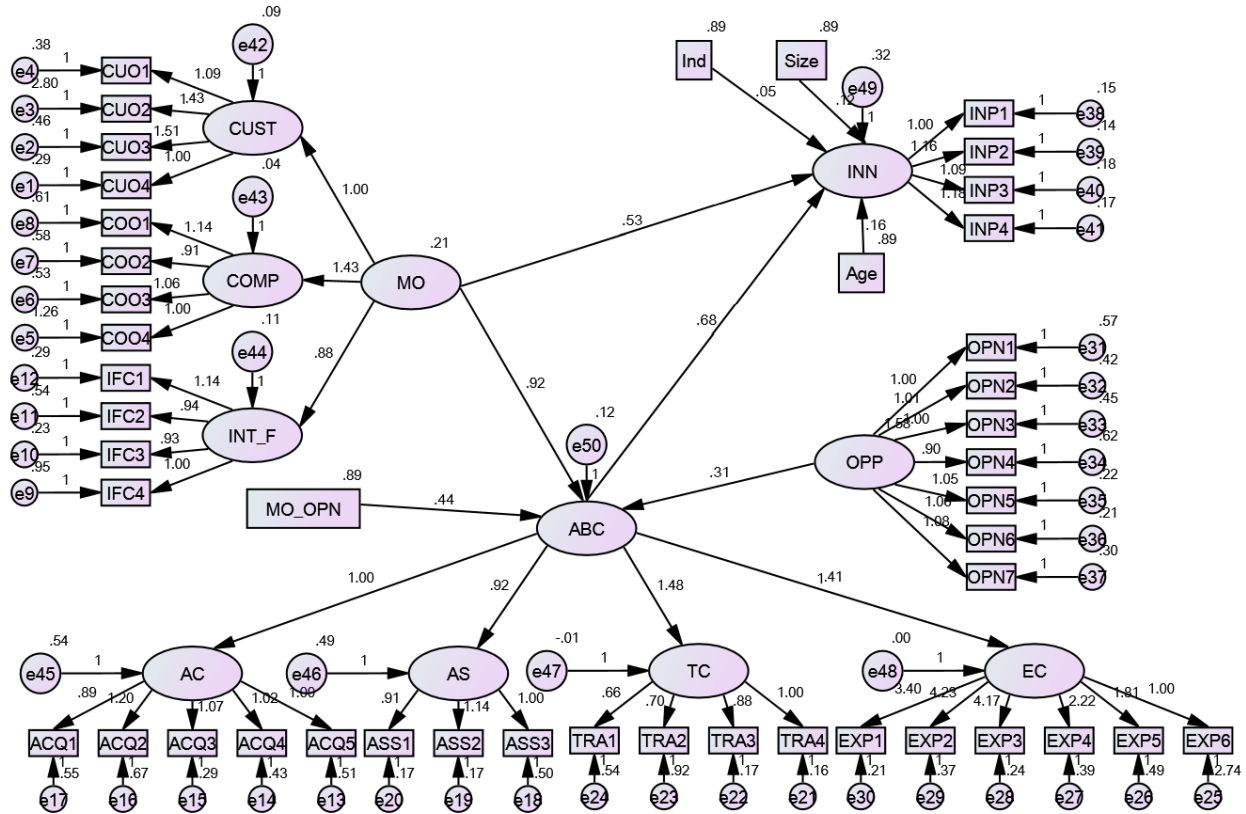


Figure 3 Diagrammatic Presentation of SEM.

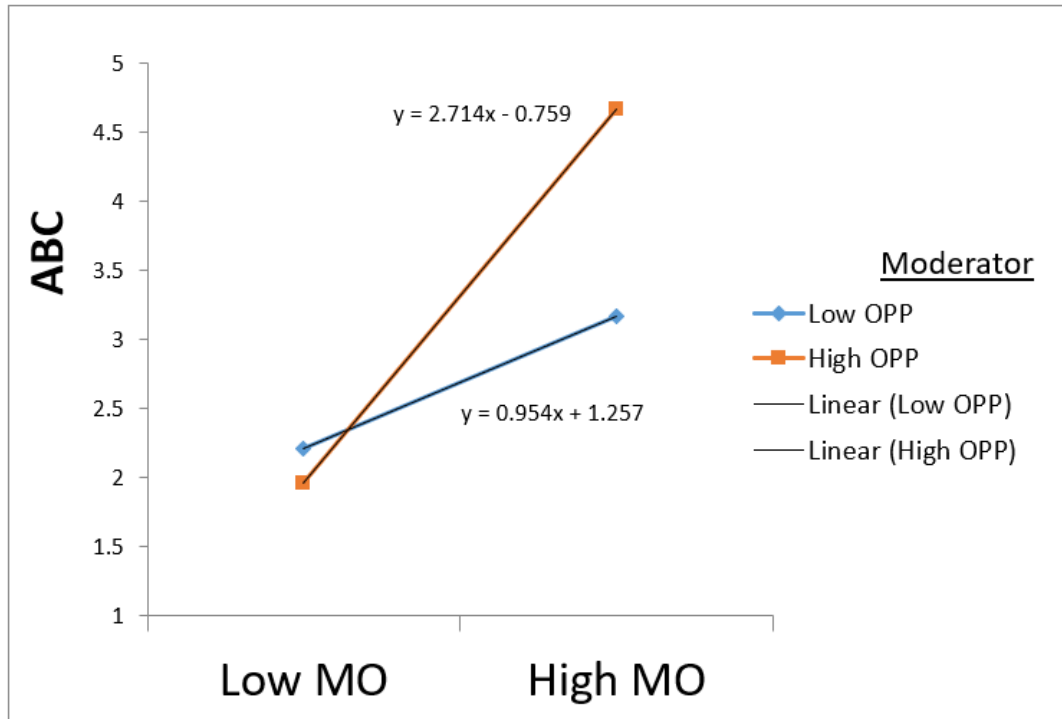
enhancement market orientation activities of SMEs improved their absorptive capacity by about 91.7% and vice-versa. This was the biggest coefficient in the model estimated. The effect of absorptive capacity on the innovation performance of SMEs was also assessed and found to be significantly positive ( $\beta = 0.677$ ; C. R. = 7.607). The indirect effect was 0.557, which was significant, as both lower and upper Bias-Corrected Confidence were positive.

The study found that absorptive capacity mediated the relationship between market orientation and SMEs’ innovation performance. However, since the effect of market orientation was also significant, it was concluded that the mediating effect of absorptive capacity was partial. Hypothesis H2: Absorptive capacity mediates the relationship between market orientation and innovation performance of SMEs, was therefore accepted. Past studies identified absorptive capacity is identified to enhance organizational learning for improved innovation processes (Zahra & Hayton, 2008); positively influence the attainment of technological capacity for both inner and outer channels (Haro-Domínguez et al., 2007). These effects will help improve the relationship between market orientation

and SMEs’ innovation performance. Thus, absorptive capacity is an intervening variable between market orientation and SME innovation performance (Ali et al., 2016; Sarsah et al., 2020).

The last hypothesis looked at the moderating role of openness on the effect of market orientation on SMEs’ absorptive capacity. To achieve this goal, the direct effect of openness on absorptive capacity was assessed, which was significantly positive ( $\beta = 0.312$ ; C. R. = 3.089). The interaction term was calculated using the mean centering approach, where the residuals of the two variables were multiplied to generate another variable. The interaction between market orientation and openness (MO\_ OPN) was significantly positive ( $\beta = 0.440$ ; C. R. = 4.731). This implies that openness positively moderated the effect of market orientation on SMEs’ absorptive capacity. From Figure 4, it was realized that openness strengthened the positive effect of market orientation on SMEs’ absorptive capacity. From the diagram, absorptive capacity was higher when market orientation and openness were all at high levels (orange line).

Still, the absorptive capacity score was lower when firms possessed only a strong market



**Figure 4:** Interaction Between Market Orientation and Openness on Organizational Learning.

orientation with a low level of openness (blue line). This indicates that openness was instrumental in enhancing the relationship between market orientation and SMEs' absorptive capacity. Hypothesis H3: Openness moderates the relationship between market orientation and absorptive capacity of SMEs, was therefore accepted. Although market orientation significantly influenced absorptive capacity (Roper et al., 2013), SMEs with a high level of openness can maximize this effect (Garriga et al., 2013). Openness grants SMEs access to external knowledge, which helps to improve their innovation activities (Dogbe et al., 2020c; Chatterji & Fabrizio, 2014). As firms are willing to exchange knowledge with external actors (Zhou & Li, 2012), their ability to absorb external knowledge increases (Kim et al., 2012). This is people of the wide range of knowledge resources available to firms when they open (Tian et al., 2021; Love et al., 2011).

## 5. Conclusion and Recommendations

The study was founded on three main objectives. Firstly, the research looked at the direct effect of market orientation on the innovation performance of SMEs. Secondly, it assessed the mediating effect of absorptive capacity on the direct effect of market orientation on SMEs' innovation performance. Lastly, the study assessed the moderating role of

openness in the relationship between market orientation and the absorptive capacity of SMEs. The study concluded that marketing orientation had a significant positive effect on SMEs' innovation performance, such that higher levels of market orientation led to higher innovation performance among SMEs.

Further, it was concluded that the effect of market orientation on SMEs' innovation performance was mediated partially by the effect of the absorptive capacity of SMEs. The effect of market orientation on SMEs' innovation performance could thus be direct or mediated through absorptive capacity. Finally, the study concluded that the effect of market orientation on absorptive capacity was moderated by openness. Market-oriented SMEs with an innovation openness strategy can achieve higher absorptive capacity. It was recommended that SMEs seeking to achieve innovation performance must invest in understanding the market in which they operate. This includes understanding the customers and competitors. The various units in the organization must also integrate to enhance the smooth sharing of innovation knowledge.

Organizational performance measures such as innovation are very critical for the survival of firms in this age of COVID-19 pandemic when even giant firms are running into losses and folding up. Firms

must also invest in absorptive capacity to help them acquire, assimilate, translate, transform and exploit external innovation knowledge for enhanced innovation performance. Firms must also adopt open innovation practices by sharing knowledge with external actors. This presents an avenue for SMEs to tap into the rich external knowledge needed for enhanced innovation.

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