Collins Kankam-Kwarteng, Appiah Sarpong, Ofosu Amofah & Stephen Acheampong

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Marketing performance of service firms: Recognizing market sensing capability and customer interaction orientation

Collins Kankam-Kwarteng  
Kumasi Technical University, Ghana

Appiah Sarpong  
Takoradi Technical University, Ghana

Ofosu Amofah  
Ho Technical University, Ghana

Stephen Acheampong  
Ghana Baptist University, Ghana

Abstract:  
Purpose: This study examines the effect of market sensing and interaction orientation capabilities on the marketing performance of service based firms in Ghana. The study particularly explored the moderation effect of interaction orientation capability on the relationship between market sensing and firm performance of the service firms.

Methods: This study adopted the survey approach focusing on a convenient sample of 200 employees of service firms. The hierarchical multiple regression analysis was used to establish the relationship between the variables of interest.

Results: The study revealed that market sensing capability and interaction orientation significantly account for variations in the marketing performance of the service businesses. Furthermore, the findings showed that the interaction of market sensing and interaction orientation capabilities is vital for extracting a higher marketing.

Implications: The research target of service firms limits the generalizability of the findings since the participants were not proportionally participated. In addition to insights on how marketing sensing and interaction orientation should fit the realization of marketing performance, the research offers other ideas to enhance measurement of marketing performance based on customer profits and customer relations.

Keywords: Marketing performance, service firms, market sensing, interaction orientation

JEL Classification: M03, L84, Z33

Biographical note: Collins Kankam-Kwarteng (colkann@gmail.com) lectures in service marketing, and marketing communication at Kumasi Technical University, Ghana. He is a researcher and specializes in SMEs performance, hospitality marketing and services strategy. Appiah Sarpong (sarpongapp@gmail.com) is a senior lecturer at the Takoradi Technical University, Ghana. His research interests include consumer psychology and marketing. Ofosu Amofah (amofahofo@gmail.com) is a lecturer at Ho Technical University, Ghana. He is a consultant for SMEs in Ghana in marketing and business planning, customer care and management. Stephen Acheampong (acheampongst@yahoo.com) is a marketing and entrepreneurship consultant; he currently lectures at the Ghana Baptist University College. He has research interests in SMEs marketing, strategic entrepreneurship and services management. Kankam-Kwarteng is a lecturer in service marketing and marketing communications at the Kumasi Technical University Business School, Ghana.

1 INTRODUCTION

Management researchers (see; Katz,1986; Hindley, 1988; Enderwick, 1991; Yavas et al., 1997) have long recognized that the service sector in many developing countries have been undergoing changes in order to keep up with the environmental competitiveness and world trends. It therefore comes as no surprise that within the last few years, the banking, telecommunication, media, hospitality, transport and insurance sectors for example have seen some tremendous developments in Ghana, and that a lot of new players have entered into the Ghanaian market (Mahmoud et al., 2018; KanKam-Kwarteng et al., 2018; Anning-Dorson, 2018). The consequence of these reforms in the service sector, coupled with political and economic stability,
consistency in implementing political and economic policies, have led to the emergence of diverse types of service institutions in Ghana over the last decade (Owuwu-Frimpong, 2008; Narteh et al., 2011). Due to enormous competitive pressure in the service industry, coupled with dynamic customer expectations, service firms now have to be receptive to what the customers want and need in order to be competitive (Cao et al., 2016), or even survive in some cases. The development of a strong interaction orientation with customers have been acknowledged to be relevant for the survival of firms in competitive markets (Srinivasan et al., 2002; Coviello et al., 2002). The effective and efficient management of interactions and the interfaces at which these interactions transpire are progressively being recognized as sources of competitive advantage (Rayport and Jaworski, 2005).

Meanwhile, developing a strong interaction orientation may also require a strong market sensing capability. The marketing literature views market sensing as the mode firms study about their environment to understand the environmental changes (see, Everett, 2014). Thus, the enterprise ability to envisage environmental change and respond readily is a substantial determi nant of success (Osioma et al., 2016). Lindblom et al. (2008) show that in spite of the numerous studies on marketing capabilities in the literature, researchers exploring market sensing capabilities have been wrought with several challenges and methodological issues. The implication is that the impact of market sensing capabilities is still a grey area in the marketing literature and much research is required to understand its dynamics. More so; focusing on interaction orientation, Ramani and Kumar, (2008) have also observed some gaps concerning how interaction orientation has been conceptualised and investigated in the literature. Besides, while the direct link of market sensing and interaction orientation to marketing performance has been established, literature has not explored how the interaction effect of market sensing capabilities and interaction orientation on marketing performance of service firms; although theoretically the two concepts can complement each other within the context of capabilities literature. Until now, no known study has attempted to investigate this phenomenon. Bearing in mind the above mention, Ngo and O’Cass, (2012) argues that while various contexts of discussions in the literature focusing on resources and capabilities in the service sector, the interaction of firm capabilities couched within the complementarity perspective has not been empirically examined extensively, moreover, they contend that the process through which particular resources contribute to firm performance remain largely “a black box”. It is possible that the interaction of market sensing capabilities and interaction orientation can contribute to the development of higher order capabilities and sustained competitive advantages (Krush et al., 2013); as identified by the resource based view of the firm. However, without adequate empirical support, such a conjecture will remain a conceptual issue. This work attempts to address this gap in the ensuing literature and hypothesizes that firms in the service sector can build strong competitive muscle and extract higher order marketing performance outlays motivated on the strong coalition between their market sensing capabilities and customer interaction orientation.

2 BACKGROUND LITERATURE

2.1 Market sensing capability

Capabilities have generally been considered as composite bundles of abilities and integrative learning, exercised through a firm processes that guarantee superior synchronisation of functional operations (Vanpoucke, et al., 2014; Martin, et al., 2017). One capability is detailed to be essential in managing successful enterprises: the market sensing capability, which is significantly the ability of the enterprise to be aware of change in the industry and to perceive accurately responses to its operations and actions (Feng, et al., 2017). According to current literature, market-sensing capabilities denotes an enterprises’ ability to use market intelligence that can be obtained through formal and informal mechanisms from various personal and public sources (Ardayn, 2016; Bharadwaj, and Dong, 2014; Osakwe, et al., 2016; Lin, and Wang, 2015). Essentially, market sensing capabilities are critical in developing market focus and thus, ultimately, business performance (Murray, et al., 2016). Thus, the management needs to understand customers in all their diversity. Sugiyarti and Ardayn (2017) consider this kind of understanding as ‘market sensing’. Sensing the environment of the business is a skill that needs to be acquired in all firms, regardless of industry sector. Sensing capability contains the logic that in unpredictable, volatile and complex market environment, the capacity to sense market conditions and opportunities before they become reality (Mu, 2015; Celuch, and Murphy, 2010). According to Day, (2002) market sensing is continuous ability to learn through the collection and circulation of information about competitors, customers and relationships in the market (see, Fang et al., 2014). Heusinkveld et al. (2009) has considered such market sensing as the ability of an enterprise to acquire and circulate information, and to use market knowledge for an enterprise change as requested. Therefore market-sensing capability is fundamentally the aptitude of an enterprise organization to be conscious of changes in the market and to predict precisely answers to its marketing strategies (see, Lindblom et al., 2008). Based on Day (2002), it can be presumed that enterprises that have mastered the market sensing operations increase competitive advantage and higher business performance. Essentially, an organization’s ability to learn about its market conditions and use this information accordingly to direct its actions is the core stimulant of the enterprise performance (Vorhies and Morgan, 2005).

According to Day (2002), market sensing can be categorized into three levels: (1) sensing, (2) sensemaking, and (3) response. Sensing has been described as the gathering of information on customers, competitors and channel members. According Wilden, and Gudergan (2015) the element of sensing involves scanning, searching and exploration in dynamic markets, and defined as the acquisition and distribution of information about the consumers, competitors, and formation of relationships in the market. Moreover, Hou (2008) describes sensing as an enterprises’ ability to sense the desire of its consumers and the dynamics of market better than its rival. Sense-making involves the interpretation of acquired information in relation to past experience and knowledge. It involves the mechanism
by which an individual assigns meanings to events (Ivanova and Torkkeli, 2013).

According to Colville and Pye, (2010) sense-making is concerned with the way people make bets on ‘what is going on’ and what to do next by way of (inter)action. Sense-making is also about giving meaning to events and situations (Sharifi and Zhang, 2009; Bonarou, 2021). Responses refer to utilizations of the acquired and interpreted information in making decisions. Essentially, through response, the information and knowledge is converted into marketing action. Day (2002) opines that the processes for marketing-sensing are more logical, thoughtful, and anticipatory in market-oriented enterprises than they are in rival enterprises, in which these processes becomes ad hoc, diffuse, constrained and reactive.

Interaction Orientation

Ramani and Kumar (2008) have described interaction orientations as the ability of an enterprise to interact with its customers and to take advantage of information acquired from them through continuums interactions to obtain profitable customer relationship. Interaction orientations have become a significant source for enterprises to achieve competitive advantage and superior business performance (see; Yuan and Liu, 2013). Kotler et al. (2014) argues that the marketing activities of businesses should be constructively conducted within the premise of efficiency, effectiveness and responsible marketing.

This requires that appropriate marketing systems and frameworks be put in place to ensure that the firm maximizes returns from all its marketing efforts. Interaction orientation is currently the mechanism used by firms to optimise the returns of their marketing activities (Yuan and Liu, 2013). According to Ramani and Kumar (2008) interaction orientation involves four components including customer concept, interaction response capacity, customer value management and customer empowerment (Daskalaki et al., 2020; Prahalad and Ramaswamy, 2004).

Customer concept has been described in literature as the assumptions that prescribes the base of estimations of marketing actions and reaction to be the customers (Öberg, 2011; Koomsap, 2013). According to the authors, interaction responses capacity represent the extent to which the enterprise offers continuous goods, services, (Chen et al., 2012; Liang and Zhang, 2012) and relationship experiences customers by integrating feedback from previous behavioural responses of customers. Significantly, it reflects the ability of an enterprise’s systems to respond to dissimilar consumers differently and also to each specific customer differently at different points in time by sharing information from several sources and points in time (Kumar et al., 2004).

Customer empowerment echoes the rate at which an enterprise provides its consumers the platform to connect with the firm and actively shape the nature of transactions and link and collaborate with others by providing information; praises; criticisms; suggestions; and ideas about its goods, services, and policies (Prahalad and Ramaswamy, 2004; Gretzel et al, 2012). Moreover, customer value management demonstrates the level at which the firm can define and measure individual consumer’s value and implement it as a guiding metric for decisions on allocating resources for marketing operations. (Mulhern, 1999; Reinartz, et al., 2004).

2.2. Marketing performance

Marketing performance is the assessment of the relationship between marketing activities and business performance (Clark and Ambler, 2001; Donkor et al., 2017). Marketing Performance is to demonstrate the value of the marketing operations, which focuses on marketing not only as products, pricing, or customer relationships (Rust et al., 2004) but also as the marketing operations themselves, which includes marketing communication, promotion, and other operations that represent the greater part of marketing budget. Literature recommends that marketing performance can be categorized into measurement of marketing productivity (Morgan, 2002; Rust et al., 2004), identification of metrics (Barwise and Farley, 2003; Winer, 2000), and brand equity measurement (e.g., Ailawadi et al., 2002; Aaker and Jacobson, 2001). Rust et al. (2004) expand the work of Srivastava et al. (1998) to describe a marketing productivity that extends from marketing operations to shareholder value. Marketing operations affect intermediate results (customer thoughts, feelings, knowledge, and, ultimately, behavior), which turn to impact performance of the enterprise (Kamboj et al., 2015).

The marketing performance research evaluates how marketers measure the relationships along the range of marketing productivity; the metrics enterprises use or within this chain, especially financial, nonfinancial, and market-based assets; and contextual factors, especially the enterprise’s market orientation (Mu, 2017; Clark and Ambler, 2001). Marketing performance has therefore been conceptualized in this study based on Srivastava et al. (1998) assessment of the customer. Ramani and Kumar (2008) define marketing performance based on customer profit performance and customer relational performance. A successful business strategy is probably to be one that empowers specific consumers by permitting them to develop experiences with the enterprise on their wishes (Prahalad and Ramaswamy, 2004; Newell, 2003). Enterprises that adopt customer value management practices also understand that emphasizing on the long-term value of consumers, and not simply maximizing either collection or retention, leads to higher efficiencies (Thomas et al., 2004; Kankam-Kwarteng et al., 2019). Using modeling techniques, enterprises that identify profitable consumers also identify variables that produce customer profitability (Reinartz and Kumar, 2003; Chatzigigiou and Christou, 2020a, 2020b).

The conceptual framework developed for this study is explained in this section. The framework specifies the relationship between the variables of interest leading to the rationalization of the research hypotheses. An illustration of the study’s conceptual framework is then depicted by Figure one.

2.3. The relationship between market sensing capabilities and marketing performance

Literature suggests that the ability of an organisation to gain competitive advantage over its rivals does not only depend on its strategic position, but the ability to continually create and develop unique capabilities (Peteraf and Barney, 2003; Zollo and Winter, 2002). For a service oriented firm, it is required that businesses form strong marketing capabilities in the area of market sensing in order to remain competitive and
achieve higher performance thresholds in a competitive a marketing (Harmsen and Jensen, 2004; Noble et al., 2002). Market sensing focus on information about customers, competitors, events and changes in the business environment to gain market intelligence through sense and sense-making to conduct strategic course of action (Rasmussen et al., 2011; Foley and Fahy, 2009). Lin and Wang, (2015) asserted that sensing capabilities in firms’ business ecosystem form the basis for building their dynamic capabilities, including sensing development of technology, customer demand, and market segmentation which are vital ingredient for superior organisational performance and competitive advantages. According to Day (2002) and Cepeda and Vera, (2007), enterprises that apply market-sensing activities obtain competitive advantage and higher business performance. Thus, a firm’s ability to acquire information about its business environment and implement this information accordingly to guide its policies is the core facilitator of enterprise performance (Vorhies and Morgan, 2005; Simon et al., 2007). Lindblom et al. (2008) conclude that market sensing capability of enterprises correlates positively but weakly with the enterprise’s growth, and that it does not impact statistically and significantly on profitability; therefore, they suggested that sensing capability have a moderating rather than a direct effect on performance of enterprises. Morgan et al. (2009) found that market sensing capabilities have no significant direct effect on firm financial performance, but synergistically affect brand management capability in affecting financial performance. Their findings support the assertion that superior market knowledge perhaps resulting from greater market sensing capabilities offers higher value in evaluating enterprise’s performance by indirectly impacting value selection, creation, and delivery processes (Hult et al., 2005; Morgan et al., 2003). The discussion explains market sensing capability's indirect impact on enterprise performance. The nature of the service industry in Ghana and the associated competitive intensity in the sector requires a clearer picture as to the extent to which market sensing can contribute to the strategic option of the firm. Based on the discussion the on the direction of market sensing in determining marketing performance of the service sector, the study hypothesis that:

H1: Market sensing capability has a positive and significant effect on the firm performance of service based firms.

2.4. Interaction orientation and marketing performance

According to Ramani and Kumar (2008) a superior interaction orientation is a vital capability that enables firms to offer successive products, services, and develop relationship experiences. It also affords the firm the opportunity to build a consistent customer empowerment practices which are likely to result in greater customer satisfaction and can consequently lead to higher performance due to associated word of mouth benefits and strong reputational returns (Newell, 2003; Prahalad and Ramaswanny, 2004). With strong interaction orientation, the service based firm can empower it customers who will then reciprocate by developing a greater motive of belonging to the enterprise and are expected to protect the welfare of the enterprise. Significantly, conscious abilities by an enterprise to generate and augment an interaction orientation results in superior customer ownership of the enterprise. Word of mouth demonstrates the spread of information about goods, services, stops, organizations, sales, or customer managers from one client to another (Brown et al., 2005). Customers who make a personal reference must not only believe that an enterprise provides greater economic value but also feel good about their relationship with the organization (Reichheld, 2006). An interaction orientation leads to favourable word of mouth by encouraging and enabling consumers to refer the firm to potential customers to the firm (Gremler et al., 2001; Kumar et al., 2010). Further, it has been acknowledged that strong interaction orientation enables the estimations of transaction data collected from various interfaces and, subsequently, the use of this information to relate individual consumers’ revenues to marketing investments. Measuring customer-oriented profits enables marketing executives’ accountability while facilitating an enterprises’ agility to generate efficient and effective marketing responses to consumer signals. Enterprises that invest in procedures that improve their interaction orientation are in a position to distinguish between the characteristics of profitable consumers and those of unprofitable consumers and to use this information to identify potentially profitable consumers; through customer value management and interaction response capability (e.g., Reinartz and Kumar 2003). Firms with strong interaction orientation also recognise that concentrating on the long-term value of customers, and not merely exploiting either acquisition or retention, results in superior efficiencies (Thomas et al., 2004). Studies have reported that the customer lifetime value metric enables enterprises to plan a suitable marketing and communication channel mixes and facilitate time- and product-based cross-selling and up-selling references for individual consumers (Kumar et al., 2004; Venkatesan and Kumar, 2004). It is based on this premise, that this study hypothesizes that:

H2: Interaction Orientation has a positive and significant effect on the marketing performance of service based firms.

2.5. Moderation hypothesis

Research on marketing capabilities (Rapp et al., 2010) highlights the significance of the interaction impact between various organizational resources on firm-specific operational processes (Krush et al., 2013). Moreover, Kozlenkova et al. (2014) explain that many studies observe synergistic influences among dissimilar resources and abilities for generating and/or capturing customer value. It can be expected that firms with strong interaction orientation have the capacity to develop strong market sensing capabilities (Del Chiappa et al., 2021; Fotiadis, 2018; Fotiadis & Williams, 2018). The capacity to develop strong customer value management and customer empowerment increases firms capacity to learn more about the market; particularly its customers; which becomes critical in developing market focus strategies and thus, ultimately, marketing performance (Day, 1994). Zahra (2008) points that information intelligence comprises procedures to search and circulate information within the firm enables recognition of industry opportunities. According to Morgan et al. (2009) literature suggests that firms require complementary competences to deploy available resources in a manner that is suitable to the
industry conditions to drive organizational capabilities. Marketing researchers stress the significance of continuous interaction with customers (Teece, 2007). This orientation connects a sequence of information processing operations, such as, generating, allocating and interpreting environmental trends, customers’ need and responses (Heusinkveld et al., 2009). Thus interaction orientation covers companies’ routine and operations by gathering and circulating information to recognize industry opportunities through emphasizes on internal customers’ needs, and the capability is likely to reinforce the organization’s market sensing capabilities (Zablah et al., 2004; Christou, 2010; Nazdrol et al., 2011; Krakover and Corsale, 2021). On the other hand market sensing activities facilitate organizations with deeper insights on customer needs and competitor information, enabling companies to discover undeveloped industry niches and potential differentiation opportunities (Cao et al., 2012). According to Demirel and Kesidou (2019) there is a clear link between market sensing, learning theory and organizational learning which is divided into acquiring information, disseminating the information, and shared interpretation. Therefore, market sensing capability is considered not a remote activity, but relevant in each stage of the interaction orientation process (Heusinkveld et al., 2009). Based on the discussions above the study hypothesize that: 

H3: interaction orientation has a positive and significant effect on the relationship between market sensing and marketing performance of service firms

Figure 1: Conceptual framework

3 METHODOLOGY

3.1. Sample size and sampling techniques

Due to the fact that the target population is too large in size, a small but carefully selected services marketing professionals were selected to participate in the study. The sample reflects the characteristics of the population from which it is drawn. The research employed the convenient sampling technique to carry out this study. Convenien sampling is concerned with reaching respondents easily accessible for selection of samples and the process is continued till the required sample size is achieved. Convenience sampling method was used because of the scattered nature of the target population and the fact the researchers did not have a list of service marketing professionals to conduct random sampling on them. Marketing professionals from the service sector were targeted to participate in the study. Considering the nature of the service sector and the firms operating in the industry, industries were not given specific quota of participants. 206 marketing professionals from different service firms participated in the study (see; Table I). The researchers distributed the questionnaires using self-administered approach. The respondents were entreated to complete the survey instruments within a two week period after which the researchers collected all the completed questionnaires for interpretation and analysis of the data. 206 questionnaires that were fully completed and returned, were checked and verified to ensure consistency and exhaustiveness in the information expected. 6 questionnaires were removed because of inconsistencies in the responses. Descriptive statistics such as mean, standard deviation, frequency and percentages were used to describe the basic characteristics of the data gathered. Inferential analysis such as correlation and regression analysis were employed to determine the nexus between the dependent and explanatory variables as well as the control variables. To communicate the research findings, data obtained from the questionnaires were analysed with the help of SPSS.

Table 1: Service sector and participants

<table>
<thead>
<tr>
<th>Service sector</th>
<th>Number participants (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotels</td>
<td>19(9.5)</td>
</tr>
<tr>
<td>Restaurants</td>
<td>17(8.5)</td>
</tr>
<tr>
<td>Commercial Banks</td>
<td>22(11)</td>
</tr>
<tr>
<td>Insurance</td>
<td>9(4.5)</td>
</tr>
<tr>
<td>Rural banks</td>
<td>13(6.5)</td>
</tr>
<tr>
<td>Financial houses</td>
<td>14(7)</td>
</tr>
<tr>
<td>Airlines</td>
<td>5(2.5)</td>
</tr>
<tr>
<td>Education</td>
<td>21(10.5)</td>
</tr>
<tr>
<td>Internet services providers</td>
<td>12(6)</td>
</tr>
<tr>
<td>Mobile telecommunication</td>
<td>11(5.5)</td>
</tr>
<tr>
<td>Automobile services</td>
<td>19(9.5)</td>
</tr>
<tr>
<td>Security services</td>
<td>14(7)</td>
</tr>
<tr>
<td>Media houses</td>
<td>17(8.5)</td>
</tr>
<tr>
<td>Courier services</td>
<td>7(3.5)</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
</tr>
</tbody>
</table>

3.2. Measures and scale development

Market sensing: the measures for market sensing is a conceptualization based on the firms’ capability to gather and use the information required to commercialize patented innovations from markets (Lin et al., 2015; Foley and Fahy, 2009). Four items used to measure market sensing is based on previous studies by Cohen and Levinthal (1990); Day (2002); Teece (2007). The items include; (1) acquire and use market information, (2) anticipate rivals’ actions, (3) predict consumer demand and (4) establish database to serve customers. A 7-point Likert scale (‘1’ strongly disagree to ‘7’ strongly agree) was used, and the respondents were asked to indicate their firms’ interaction orientation in relation to market sensing.

Interaction orientation: interaction orientation was measured using four components; customer concept (3-items) (Blankson, & Kalafatis, 2004); interaction responses capacity (4-items) Prahalad and Ramaswamy 2004; customer empowerment (3-items) customer value management (3-items) (Reinartz et al., 2004). The researchers used composite items of the four dimensions to measure the overall interaction orientation of the service firms. A 7-point Likert scale (‘1’ strongly disagree to ‘7’ strongly agree) was used,
and the respondents were asked to indicate their firms’ interaction orientation in relation to marketing performance. Marketing performance: The measures used in this study were based on Ramani and Kumar (2008) categorization of marketing performance as customer relational performance; (1) customer satisfaction, (2) customer ownership (Newell, 2003), and (3) positive word of mouth (Brown et al., 2005) and customer profit performance; (1) identification of profitable customers, (2) acquisition and retention of profitable customers, and (3) conversion of unprofitable customers to profitable ones. The six items were used after series of further literature support from (Jayachandran et al., 2005; Reimartz and Kumar 2003, Sheth et al., 2000) and discussions with service marketing experts. A 7-point Likert scale (‘1’ strongly disagree to ‘7’ strongly agree) was used, and the respondents were asked to indicate their firms’ marketing performance relative to interaction orientation and market sensing.

Control variable: the study controlled for firm specific variables; firm size, firm age and R&D

The marketing professionals were asked to indicate how the firm specific variables are prevail in their respective organizations. Firm size was measured according to the number of employees (Kartikasari, and Merianti, 2016; Dooley et al., 2016) Firm age was measured on the period the service firm has operated (Kankam-Kwarteng et al., 2020; Coad et al., 2018; Rossi, 2016; Akben-Selcuk, 2016; Mugiob and Mlozi, 2021). R&D was based on a dichotomous question ‘Yes’ or ‘No’ (Lome et al., 2016).

3.3. Reliability and validity test of instruments

The validity and reliability of the research instrument are reported subsequently on Table II. The confirmatory factor analysis was employed to test whether the constructs are robust using the maximum likelihood estimation process. As reported on Table I, the reliability of the measurement scales was assured given the values for composite reliability and Cronbach’s alpha coefficients. It is observed that all the Cronbach’s alpha values were high and above 0.7 which is the statistically recommended value. This imposes that responses obtained for each construct were internally consistent and provide a reliable measure.

To cross examine the reliability of the scales, the composite reliability values are also expected to be high and above 0.7. As observed on Table I, there is no reason to doubt the reliability of the measurement scales; as all the composite reliability coefficients were statistically higher than the recommended value of 0.7. To examine the validity of the scales, the convergent validity was used. Convergent validity was examined by making sure that first, only the items that loaded significantly on their respective constructs were retained. Again, only the items with factor loadings in excess of 0.7 were retained. Secondly, the researchers endeavoured that all items that cross loaded with other items were excluded. These steps were taken to ensure that convergent validity was achieved with satisfactory.

3.4. Demographic attributes of the sample respondents

The demographic characteristics of the respondents and their business unit is reported in this section. Table III provides the results of the demographic analysis of the respondents and the businesses. It can be shown on Table III that the majority of the respondents were males (54%). The majority of the respondents were also observed to be either non-managers of the company (52%) or managers (39%). Again, it was revealed that most of the respondents are between the ages of 20-39 years (176 representing 89%). The attributes of the sampled firms are also reported on Table III. It was identified that the majority of the service based firms are relatively matured firms. The majority of the firms have operated for more than 5 years (81%). It is interesting to note that 43% of the sampled firms had a thriving research and development unit. This is suggestive of the commitment of the majority of the sampled companies to pursue innovative practices; as this holds the potential to increase the level of competitiveness in the industry. Notwithstanding, the number of the firms which do not have a R&D department is also considered significant (57%).

Table III: Respondent profiles

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Loadings</th>
<th>Average Variances Extracted</th>
<th>Maximum Variances Extracted</th>
<th>Average</th>
<th>Maximum</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation Orientation</td>
<td>C303</td>
<td>0.915</td>
<td>0.240</td>
<td>0.022</td>
<td>0.472</td>
<td>0.936</td>
<td>0.387</td>
<td>0.472</td>
</tr>
<tr>
<td></td>
<td>C304</td>
<td>0.406</td>
<td>0.819</td>
<td>0.315</td>
<td>0.516</td>
<td>0.872</td>
<td>0.303</td>
<td>0.516</td>
</tr>
<tr>
<td></td>
<td>C305</td>
<td>0.202</td>
<td>0.977</td>
<td>0.147</td>
<td>0.284</td>
<td>0.206</td>
<td>0.977</td>
<td>0.147</td>
</tr>
<tr>
<td>Marketing Performance</td>
<td>MS12</td>
<td>0.406</td>
<td>0.418</td>
<td>0.106</td>
<td>0.388</td>
<td>0.418</td>
<td>0.106</td>
<td>0.388</td>
</tr>
<tr>
<td></td>
<td>MS13</td>
<td>0.716</td>
<td>0.740</td>
<td>0.425</td>
<td>0.765</td>
<td>0.740</td>
<td>0.425</td>
<td>0.765</td>
</tr>
<tr>
<td></td>
<td>MS14</td>
<td>0.765</td>
<td>0.765</td>
<td>0.765</td>
<td>0.765</td>
<td>0.765</td>
<td>0.765</td>
<td>0.765</td>
</tr>
</tbody>
</table>

Note CA = Cronbach’s Alpha CR = Composite Reliability Ave = Average Variance Extracted, MSV = Maximum Shared Variance

Table IV gives a report of the descriptive statistics and the correlation analysis results. According to the descriptive statistics, it is noted that the pursuit of the level of market sensing capabilities among the sampled firms is high (mean
= 6.000, SD = 0.331). The results also point to the fact that the average service based firm has a strong interaction orientation capability (mean = 6.250, SD = 0.353). The correlation analysis are also reported on Table IV. Generally there is a positive relationship between market sensing capability and the marketing performance of service firm (r = 0.472; p < 1%). The implication is that an increase in market sensing capability corresponds with an increase in business performance. It is also observed that there is a positive and statistically significant relationship between interaction orientation and business performance (r = 0.398; p < 1%).

Table IV Correlation analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Market Sensing</th>
<th>Interaction Orientation</th>
<th>Marketing Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Sensing</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Interaction Orientation</td>
<td>0.516</td>
<td>1.00</td>
<td>0.325</td>
</tr>
<tr>
<td>Marketing Performance</td>
<td>0.472</td>
<td>0.308</td>
<td>1.00</td>
</tr>
<tr>
<td>Mean</td>
<td>6.000</td>
<td>6.250</td>
<td>6.143</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.331</td>
<td>0.333</td>
<td>0.300</td>
</tr>
<tr>
<td>Minimum</td>
<td>4.500</td>
<td>5.270</td>
<td>5.290</td>
</tr>
<tr>
<td>Maximum</td>
<td>6.830</td>
<td>7.000</td>
<td>6.710</td>
</tr>
</tbody>
</table>

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

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

4 RESULTS AND HYPOTHESIS TESTING

The Hierarchical Multiple Regression (HMR) technique was used to explore the causal relationship between the study variables whiles testing the study hypotheses. Market Sensing Capability (MSC), Interaction Orientation (IO) and Marketing Performance (MP) and control variables firm age, Firm size and research and development (R&D). The results of the model 1 (R²= .14, ΔR²= .14) show a statistically significant positive relationship between R&D and marketing performance (β = -0.311, t = 2.459; p < 1%). The results of firm age (β = -0.314, t = 1.235, p = 0.5), firm size (β = -0.023, t = 1.054, p = 0.5), however did not prove to be statistically significant. In model 2 (R²= .216, ΔR²= .102), market sensing has a strong positive effect on the marketing performance of service-based firms (MSC→MP, β = .547, t = 7.220; p < 0.5).

Table V: Hierarchical multiple regression analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1 (R²=.14, ΔR²=.14)</th>
<th>Model 2 (R²=.216, ΔR²=.102)</th>
<th>Model 3 (R²=.263, ΔR²=.102)</th>
<th>Model 4 (R²=.279, ΔR²=.102)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.031 (2.013) **</td>
<td>-0.028 (1.452) **</td>
<td>-0.029 (1.226) **</td>
<td>-0.021 (0.954) **</td>
</tr>
<tr>
<td>Firm Size</td>
<td>-0.021 (1.054) **</td>
<td>-0.022 (1.634) **</td>
<td>-0.021 (1.904) **</td>
<td>-0.021 (0.954) **</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>-0.023 (0.893) **</td>
<td>-0.024 (0.666) **</td>
<td>-0.024 (0.892) **</td>
<td>-0.021 (0.954) **</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.331</td>
<td>0.333</td>
<td>0.300</td>
<td>0.300</td>
</tr>
<tr>
<td>Minimum</td>
<td>4.500</td>
<td>5.270</td>
<td>5.290</td>
<td>5.290</td>
</tr>
<tr>
<td>Maximum</td>
<td>6.830</td>
<td>7.000</td>
<td>6.710</td>
<td>6.710</td>
</tr>
</tbody>
</table>

4.1 Moderation analysis

In model 4, the moderation of market sensing capability and interaction orientation were included in the model (R²=.279). For controlling firm age (β = -0.416, t= 1.564), firm size (β = -0.023, t= 0.893) and R&D (β = -0.021, t= 0.741), the evidence show that the moderation of market sensing capability and interaction orientation has a statistically significant positive effect on marketing performance (MSC x IO→MP, β = 0.478, t= 7.230; p < 0.5), (see; Table V). Thus hypothesis 3 which indicates that interaction orientation moderates the relationship between market sensing and marketing performance was supported. To examine the nature of the interactions, plots of the effects of the market sensing capability on service-based firm performance at various levels of interaction orientation were created following the procedure of Aiken and West (1991). In Figure 2, it is observed that the effect of market sensing on marketing performance is accentuated with a higher level of interaction orientation capability.

Figure 2: The Moderating Role of Interaction Orientation

5 DISCUSSION AND CONCLUSIONS

This study assesses the effects of market sensing capability and interaction orientation capability on the marketing performance of service-based firms in Ghana. The study results suggest that there is a positive relationship between market sensing capability (acquire and use market information, anticipate rivals’ actions, predict consumer demand and establish database to serve customers) and marketing performance as well as interaction orientation capability (customer concept, interaction responses capacity, customer empowerment and customer value management) on marketing performance as well as marketing and customer profit performance (Ramani and Kumar, 2008). This supports the assertion that firms with strong interaction orientation obtain long-term value; from their interaction with their customers which leads to superior overall efficiencies (Thomas et al., 2004). These results provide the support for the resource based view which indicates that variations in firm performance is accounted for by differences in strategic resources. The theory emphasizes that it is the inherent variations in resources and capabilities

Firm age (β = -0.314, t= 1.415), firm size (β = -0.023, t= 1.034) and R&D (β = -0.328, t= 2.460). R&D again shown to be positive and significant. Thus hypothesis 1 which states that market sensing capability has a positive and significant effect on the marketing performance of service firms was supported. Model 3 (R²= .263) captures the incremental effect of interaction orientation on marketing performance (see; Table V). Hypothesis 2 states that there is significant positive of interaction orientation on marketing performance. Controlling for firm age (β = -0.319, t= 1.236), firm size (β = -0.023, t= 1.9134) and R&D (β = -0.124, t= 2.459). It is revealed that there is a significant positive relationship between interaction orientation and marketing performance (IO→MP, β = 0.311, t = 4.150; p < 1%). H2 is therefore supported.

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among firms in the industry that brings about the differences in firm level performance. Morgan et al. (2006) posits that resource based approach hammers on the relevance of resource heterogeneity among organizations in influencing their performance. According to the evidence provided by this work, building strong capabilities in market sensing and interaction orientation with customers is vital for extracting favourable customer responses among service firms. Researchers (see; Kankam-Kwaweng, et al., 2019; Salah and Abou-Shouk, 2019; Sigala and Christou, 2006; Spillan et al., 2013; Pelham, 2000) also identified that service firms can reap significant benefits from their marketing efforts and interactions with customers. Bagheri et al. (2015) also shows that customer oriented firms are generally more likely to obtain superior performance and competitive advantage than their less oriented counterparts. This can be accounted by the fact that a wide majority of the sampled marketing professionals engaged in strong customer-focused activities. Moreover the evidence proves that aside their direct effect, the interaction of interaction orientation capability and market sensing capability are complementary and extracts a higher effect on marketing performance.

5.1. Implication for theory and practice
A detailed review of academic literature shows that the identification of rigorous and complete outcome of marketing performance is a complicated one. Nevertheless, a common trend nowadays takes RBV as a reference to propose a diverse dimensions of market sensing and customer interaction orientation towards marketing performance indicators of service firms (Chen et al., 2012; Menguc and Auh, 2008). This research venue is quite new and there are still few studies testing the combined effects of market sensing and interaction orientation on marketing performance. The study has found that marketing performance of service firms is dependent on the effective application of market sensing and customer interaction orientation. Previous research shows that marketing performance outcome, according to (Morgan, 2002), largely depends on marketing productivity and brand management. However, the current findings suggest that the previous studies were incomplete. For this reason, the study described herein provides a comprehensive contribution of market sensing and customer interaction effect in measuring marketing performance. The findings thus corroborate the findings of previous researchers (see; Nella and Christou, 2021; Rasmussen et al., 2011; Foley and Fahy, 2009; Lindblom et al. (2008) on the relevance of market sensing to marketing performance (Gremler et al., 2001; Kumar et al., 2010). The findings thus provides grounds for the service firms to systematically introduce market sensing activities and promote effective interaction with customers in order to achieve higher marketing performance levels. In the research, the authors designed a reliable tool to measure market sensing, interactive orientation and marketing performance in the service sector, testing its validity and the internal capabilities as the resource based view reference.

5.2. Limitations and future research
The study by Ramani and Kumar (2008) and Nazdrol et al. (2011) on marketing performance calls for a continue research into the dimensionalities of customer relational performance and customer profit based performance of the firm. In spite of the findings and the contribution of the study to both theory and practice, the study wrought with some limitations. First, the study had methodological issues regarding the population and the sampling process. Participants of were drawn from managers of service firms who were willing to participate. This process did not create a proportional representation for all the service sectors in Ghana. The study findings therefore face generalization limitations. Future research on the subject area can improve the rigorousness by enhancing the sampling processes. Second, another area of limitation to the study has to do with the conceptualization of marketing performance. The study limited the concept of marketing performance to only the customer profit oriented performance and customer relational performance (Anderson, et al., 2004; Srinivasan et al., 2002; Venkatesan et al., 2019).
Future researchers can expand the scope of marketing performance by introducing concepts such as the significance of brand image in measuring marketing performance. Third, a study of this nature should have covered industry based analysis to appreciate the significance of the interaction terms of market sensing capability and customer interaction orientation in measuring marketing performance. The study is limited because it proclaim all the service industry to be homogenous and that the study findings can be generalized to the entire sector. Future researchers in the field can concentrate on industry specific such as banking, telecommunication, insurance, hospitality etc. Fourth, this study supports previous theoretical views of market sensing capability and interaction orientation elements that are significant in achieving marketing performance. The primary discovery is that acquire and use market information, anticipating competitor actions, predicting consumer demand and establish database to serve customers contribute to marketing performance. This study also support the argument that interaction orientation is important predictor of marketing performance. Thus, more studies on the relationship between market sensing and interaction orientation are needed to cross validate the findings from different direction.

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