Market orientation and market sensing capabilities in a digital world: Relationships and impact on market performance

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ABSTRACT

The paper seeks to understand from a digital world perspective the impact of market orientation and market sensing capabilities on market performance. This is important because market orientation and market sensing capabilities are widely researched and accepted marketing resources. However, their impact in the digital marketing environment remains blurred. A cross sectional survey was therefore conducted from a sample of 298 small to medium enterprise agro-processors in Harare, Zimbabwe. A PLS-SEM was conducted using SmartPLS3. Results of this study provide statistically significant evidence to support the influence of market orientation on market sensing capabilities and market performance. The results further revealed that market orientation indirectly influenced market performance through market sensing capabilities. However, the direct linkage between market orientation and market performance was weak, whilst a strong relationship existed between market orientation and market sensing capability. On the other hand, there was a moderate relationship between market sensing capability and market performance. These results imply that marketers must go beyond market orientation to develop market-sensing capabilities for improved market performance. Market orientation, as an asset, requires marketing capabilities and activities to convert it into profitable market performance outcomes. This study contributes to literature on market orientation, market sensing, market performance and digital marketing.

Keywords: market orientation, digital marketing environment, market performance

INTRODUCTION

The study investigated the influence of market orientation and market sensing capabilities in a digital marketing environment on market performance variables of sales volume, market share and profitability. This topic was selected because digital marketing technology has transformed the way marketing is conducted, yet existing knowledge fails to fully address digital marketing needs (Foltean, 2019). Market orientation and market sensing capabilities are widely researched and accepted marketing resources. However, their impact in the digital marketing environment remains blurred.

Digital marketing technology has changed human lives and consumer interactions, ushering in new digital consumer behaviour (Alrwashdeh, Emeagwali & Aljuhmani, 2019:514; Dey, Yen & Samuel, 2020; Langan, Cowley & Nguyen, 2019:32; Quinton, Canhoto, Molinillo, Pera & Budhathoki, 2018:427). Consumers now live an inextricably

interwoven online and offline life (Kumar, 2018:6). In a digital marketing world, consumers are empowered, have a proactive voice, and seem to challenge anyone and anything.

The Covid-19 pandemic has further shifted consumers to online platforms. African e-commerce received a significant boost from the Covid-19 pandemic lockdowns (Kazeem, 2020). According to Watson (2020), the Internet and social media usage grew significantly during the lockdown period with more than 40 percent of consumers spending more time on messaging services and social media. These market developments require managers who deploy digital marketing technologies to create value in a technological marketing environment (Andotra & Gupta, 2016:806). Therefore, knowledge of digital marketing technology is required to continuously satisfy consumer needs (Gotteland, Shock & Sarin, 2020) and constantly deliver superior market performance in the long run (Gotteland et al., 2020).

Although no single marketing approach exists to deliver market performance, market orientation has been identified as one of the key drivers of market performance (Andotra & Gupta, 2016:807; Narver & Slater, 1990; Kholi & Jaworski, 1990). Market orientation entails a commitment to understand customers' growing needs and satisfying these needs, while outsmarting competitors, to attain a long lasting competitive advantage and increase market performance (Andreou et al, 2020:1). However, despite wide research, there is no agreement on the linkage between market orientation and market performance (Amangala & Wali, 2020). For example, Narver, Slater and Tietje (1998:242) argued, "market orientation is positively associated to market performance in all types of markets". This is notwithstanding that market orientation is contextual (Amangala & Wali, 2020; Andotra & Gupta, 2016:810; Takata, 2016; Kholi & Jaworski, 1990). Therefore, a positive relationship between market orientation and performance is not obvious (Foley & Fahy, 2009). Empirical evidence must be obtained from a particular sector, industry, culture and setting to ensure relevance (Amangala & Wali, 2020; Foley & Fahy, 2009).

Further, Frosen, Luoma, Jaakkola, Tikkanen and Aspara (2016) argued that market orientation does not determine superior market performance although a necessity in all businesses. This suggests that other marketing resources and capabilities are required to attain superior market performance. Thus, market orientation is dependent on other constructs to explain its role in market performance (Foley & Fahy, 2009; Menguc & Auh, 2006). Andotra and Gupta (2016:809) supports this when they argue that although market orientation contributes to competitive advantage, competitive advantage can still be acquired through other means like novel technological advances compounded with effective knowledge integration. Therefore, ideal contexts and contributions of market orientation remain elusive.

Although, the capabilities approach offers an alternative explanation of the attainment and sustenance of market orientation (Day, 1994) different marketing capabilities have different effects on market performance (Hernández-Linares et al, 2020:1; Morgan, Slotegraaf & Vorhies 2009). Therefore, a model of market orientation grounded in market-sensing capabilities could advance understanding of the market orientation construct (Foley & Fahy, 2009).

According to Foley and Fahy (2009:16), market-sensing capability captures the essence of market orientation and better explains the association between market orientation and market performance. Market sensing is a superior market learning capability, which has beneficial effects on market orientation (Day 1999:85). Market learning entails a wider abstraction of market orientation (Slater & Narver, 1995). A distinguished capability to sense the market and capture intelligence is critical, given today's acceleration of markets and digital marketing technological changes, the data deluge, and the importance of proactive and/or preemptive moves in the marketplace. It is therefore important to maintain regularly an awareness of customers' demands and competitors' product offerings (Andotra & Gupta, 2016:808). Market orientation combined with good market-sensing capabilities allow firms to construe the "voice of the market" accurately consequently delivering quality services (Amangala & Wali, 2020: 14; Olavarrieta & Friedmann, 2008).

However, despite the lack of widely accepted empirical evidence of these relationships from a digital marketing perspective, there is no agreement on the linkage between market orientation and market sensing. For example,

Foley and Fahy (2004) consider market sensing to be an antecedent of market orientation whilst Day (1994) and Narver and Slater (1990) consider market orientation as the foundation to market sensing. Thus, the relationship between market orientation and market sensing capabilities from a digital marketing environment needs to be explored.

The relationship between market orientation and market sensing from a digital marketing perspective is important because small to medium enterprise (SME) agro-processors in a digital marketing environment must remain relevant to their customers by constantly assessing how to stay market oriented. However, the influence of the digital marketing environment on market orientation is not well understood (Haapio et al, 2019:289). Market orientation in the digital age is the firm's ability to offer a unified and valuable customer experience across all service channels (Haapio et al., 2019:289).

Whilst researchers (Haapio et al., 2019:301; Kholi, 2017; Habibi, Hamilton, Valos, John & Brendan, 2015) agree on the need to review or apply digital marketing technology on the market orientation concept of Kholi and Jaworski (1990) and Narver and Slater (1990), no clear guide exists on the level of review. This leaves a gap in the conceptualisation and empirical application of the concept in a digital marketing environment. This gap widens in Africa because of the limited understanding on the relevance of market orientation in emerging markets (Menguc & Auh, 2006). This is because of a dearth of application of the market orientation concept in the African context, except for a few studies in Ghana and South Africa (Amangala & Wali, 2020). The majority of studies are from large-scale manufacturing, service sector firms and developed markets (Andotra & Gupta, 2016:810).

In Zimbabwe, agriculture is the main pillar of the economy. Therefore, agro-processors are central to connecting farmers and markets, and in the process improving economic growth and livelihoods. The closure of multinational agro-processors left a vacuum closed by SME agro-processors that have close linkages with indigenous farmers and urban markets (Chinakidzwa & Phiri, 2020). This means SME agro-processors are central to the country's economic activities. However, SMEs in Zimbabwe are not immune to challenges generally faced by SMEs in developing countries.

According to Sołek-Borowska (2017:72), SMEs lack resources such as finance, digital infrastructure, skills and the general use of information systems. In Zimbabwe, agro-processors were found to have strong informal linkages with farmers and markets. At the same time, they have poor market access. However, research is mostly limited to general SMEs' challenges such as lack of finance, informality, lack of planning and government policy (Bomani, 2016; Matsongoni & Mutambara, 2018). Whilst market-sensing capabilities remains important for SMEs' improved performance (Alshanty, et al. 2019:734), research in this area remains elusive. From a Zimbabwean perspective, research on SME agro-processors' application of market orientation and market sensing capabilities in a digital marketing environment, remains scarce.

This paper interrogates the relationship between market orientation, market sensing capability and market performance in a digital marketing environment. This objective was achieved through a cross-sectional survey of SME agro-processors in Harare, Zimbabwe. Measurement items used in the study were adapted from previous market orientation and market sensing capability studies to fit the digital marketing environment. The survey questionnaire was distributed to managers and owners of the agro-processors who were knowledgeable about marketing and performance issues. This study contributes to literature on market orientation, market sensing and market performance. The study brings new knowledge on the applicability of market orientation in a digital marketing environment and a developing country perspective. This contributes to the generalisability of knowledge on market orientation, market sensing and market performance. This is important because this kind of research is scarce, and is non-existent in the Zimbabwean context.

The following sections are organized as follows: section 2, theoretical and conceptual framework, section 3 methodology, section 4 data analysis and results, section 5 discussions, section 6 conclusions and implications, and section 7 limitations and further research.

THEORETICAL AND CONCEPTUAL DEVELOPMENT

The theoretical and conceptual sections contribute by discussing market orientation, market sensing capability, the linkage between market orientation and market sensing capabilities, market orientation and market performance, and finally, market sensing capability and market performance. These discussions centre on exploring the limitations of existing literature in providing empirical evidence from a digital marketing context.

Market orientation

Kohli and Jaworski's (1990) and Narver and Slater's (1990) definitions of market orientation dominate the market orientation literature. Kohli and Jaworski (1990: 6) provided a behavioural definition of market orientation as "the organization-wide generation of market intelligence, dissemination of its intelligence across departments, and organization-wide responsiveness to it". This definition captures the essence of a market sensing capability (Day, 1994:43). Another definition by Narver and Slater (1990) considers market orientation as a culture in which all employees are committed to creating superior customer value. Although these two definitions take two different orientations (behavioural and cultural), the definitions agree. The Kholi and Jaworski (1990) and Narver and Slater (1990) market orientation perspectives agree on their dimensions (Amangala & Wali, 2020:3). The collection, distribution, and responsiveness to market intelligence (Kholi & Jaworski, 1990) facilitate the accomplishment of Narver and Slater's (1990) perspectives of customer orientation, competitor orientation and inter-functional coordination that leads to superior customer value. According to Andotra and Gupta (2016:807) and Narver and Slater (1990), superior value is obtained through "customer orientation, competitor orientation and inter-functional coordination". Customer orientation comprises a full understanding of customer demands; together with the expectation of future demands, as market forces change. Competitor orientation centres on understanding competitors or probable competitors' fortes and flaws. The inter-functional role comprises other departments applying customer and competitor information to produce superior customer value. The gathering of market intelligence enables a full comprehension of customers' demands, as well as competitors' strengths and weaknesses. Dissemination and responsiveness allows inter-functional coordination and acting upon the information. Chinakidzwa and Phiri (2020) defined digital market orientation as "a deeply entrenched cultural orientation that calls organisations to focus on creating superior customer value through customer and competitor focus as well as an organisational-wide coordination in the digital environment". Therefore, this study uses market orientation in a digital world to refer to digital market orientation.

While some researchers generally use market orientation and marketing orientation interchangeably (Amangala & Wali, 2020), these two concepts are significantly different. Marketing orientation focuses on activities of the marketing function whilst market orientation emphasises cross-functional information distribution and response to market information. The more an organisation is market oriented, the less it would be marketing oriented (Slater & Narver, 1994). Market orientation is a deeply embedded cultural facet that provides a distinctive resource in firms (Hooley, Cadogan & Fahy, 2005) and constitutes the intangible structural capital (Edvinsson & Sullivan, 1996). Corporate culture guides thinking and actions all over the firm, and assist in the creation of values, norms and behaviours linked to the market (Moorman & Day, 2016; Narver & Slater, 1990:21). However, market orientation can either be responsive or proactive (Gotteland et al., 2020). A responsive market orientation seeks to comprehend and fulfil the articulated needs of customers, while a proactive market orientation seeks to comprehend and to fulfil the dormant or hidden customer needs (Narver & Slater, 1990). The dormant needs are those future needs that customers are not yet conscious of – therefore cannot define them.

The digital marketing environment has challenged the applicability of existing market orientation knowledge. Digital marketing tools are now being used to execute customer orientation, competitor orientation and inter-functional coordination. For example, social media largely detects customer engagement activities. Marketers now make use of virtual communities, blogs, customer reviews and comments to engage customers, gather market and competitor intelligence, and execute social listening. Digital channels have empowered customers to choose what to follow, when, and what to do (Kotler, Kartajaya & Setiawan, 2017). The internet has opened a new era of electronic word of mouth (eWOM) that has the capacity to reach large numbers of networked customers in a short space of time (Alrwashdeh et al., 2019:513). According to Alrwashdeh. et al (2019), eWOM is more significant than brand image

in influencing consumer purchase intentions. Thus, market power has shifted from marketers to consumers, and it lies within social groups more than individuals (Kotler et al, 2017:6). However, it remains to be empirically revealed how this power shift influences market orientation, market sensing capabilities and market performance of SME agro-processors.

Market sensing capability

Market sensing capability is an outside-in capability that involves the active collection, interpretation, and distribution of market information (Day, 1994). The market-sensing capability consists of three sub-capabilities: sensing (obtaining of the correct market information); sense making (correct interpretation of market information), and response (the application of obtained insights in decision-making) (Amangala & Wali, 2020). The digital marketing environment demands that firms continuously monitor market changes and predict customer responses so that pre-emptive action is taken (Chinakidzwa & Phiri, 2020). Digital technologies empower marketers to sense and respond effortlessly to market needs (Setia, Venkantesh & Joglekar, 2013). Chinakidzwa and Phiri (2020) conceptualised e-market sensing capability as an imperative, incomparable and difficult to develop resource that stimulates and influences digital marketing and market performance.

SMEs are good in market sensing capabilities. Extant research in the physical marketing environment show that SMEs are close to their customers, making it easy for the SMEs to comprehend their consumers' unambiguous and prominent needs, nurturing the development and provision of products that meet customer needs and wants (Alshanty et al., 2019:733; Ardyan, 2016:84). However, research on market sensing capability in the digital marketing environment, and influence on market performance remains scarce. Further linkages between market orientation and market sensing capabilities from a digital marketing perspective needs exploration. The next section discusses market orientation and market sensing capability.

Market orientation and market sensing capability

There is debate on the classification of market orientation as a capability (Menguc & Ash, 2006). Market orientation and market-sensing capability are often considered as synonymous since they are conceptual related (Day, 1994); however, these two are different constructs (Olivarrieta, 1999). For example, Foley and Fahy (2004) narrowly perceived capabilities as resources that are valuable, inimitable and appropriable, and as such, treated market orientation as a marketing capability. However, market orientation on its own is unlikely to qualify as a dynamic capability (Menguc & Auh, 2006). Instead, market orientation is a valuable, rare and inimitable firm level resource (Day, 1994). A firm must be a moving target (Porter 1985), and this can only occur if a firm has active market sensing capabilities (Menguc & Auh, 2006). Chinakidzwa and Phiri (2020) conceptualised digital market orientation as a digital marketing asset that requires e-market sensing capabilities to execute digital marketing activities and contribute towards market performance. Market orientation reflects a culture that encourages organisational learning (Olavarrieta & Friedmann, 2008) that is exhibited in market sensing capabilities. When market sensing capabilities are deeply entrenched in an organisation, all functional activities and organisational processes will be well focused towards anticipating and responding to fluctuating market demands ahead of competitors (Ahmed et al., 2017; Day, 1994). As a result, market sensing capabilities help in the design of programmes to enhance market orientation (Day, 1994). Market-sensing capabilities empower firms to extract customer preferences that may not be clear in the collected market information (Lankinen, Rokman & Tuominen, 2007). Creating continuous customer value is difficult if a firm cannot recognise and sense new customer needs (Gotteland et al., 2020).

However, the relationships between market sensing capabilities and market orientation remain partially explained. For example, Amangala and Wali (2020) found market sensing capabilities to have no influence on the association between market orientation and customer satisfaction. This is despite the argument that market orientation reposition organisational focus to outside-in tactics through "market sensing and customer linking capabilities" (Day, 2011), thus influencing firm performance (Moorman & Day, 2016; Milfelner, Gabrijan & Snoj, 2008; Hooley et al., 2005). In view of the need to contribute to this discussion, and provide evidence from a digital marketing environment, the following

hypothesis was made:

H1 Market orientation positively influences market sensing capabilities.

The following section discusses the linkage between market orientation and market performance.

Market orientation and market performance

Extant research linking market orientation and market performance provides different outcomes. The differences in results could be attributed to different conceptualisations, measures and contexts. For example, one stream of literature provides empirical evidence of the direct positive influence of market orientation on market performance (Andreou et al., 2020:1; Amangala & Wali, 2020; Alshanty et al., 2019; Andotra & Gupta, 2016:807; Kirca, Tsiotsou & Vlachopoulou, 2011; Milfelner et al., 2008; Jayachandran & Bearden, 2005). The other stream found no influence of market orientation on market performance (Gotteland et al., 2020).

In seeking to understand the market orientation and market performance linkage, different market performance conceptualisations exist, for example customer satisfaction (Amangala & Wali, 2020; Kirca et al, 2005), sales (Gotteland et al., 2020), profitability (Chang and Chen, 1998; Day, 1994), customer satisfaction and loyalty (Alshanty et al., 2019; Kirca et al., 2005). Further, extant research shows that the relationship between market orientation and market performance is more pronounced in competitive environments (Andreou et al., 2020:1). Andotra and Gupta (2016:817) also found a moderate link between market orientation and performance. Chang and Chen (1998) established that 'market orientation had a strong and positive influence on both service quality and business profitability'. Milfelner et al. (2008) found market orientation to be a determinant of organisational achievement in new product development and capability to launch successfully new products. A market engrossed culture determines market, financial and innovation results (Moorman & Day, 2016). Tsiotsou and Vlachopoulou, (2011) found that market orientation has a "direct and indirect" effect on market performance. It indirectly affects market performance with e-marketing as an enabling variable. However, evidence of the influence of market orientation in digital marketing environments remains missing, particularly for SME agro-processors. Therefore, the following hypothesis was made:

H2: Market orientation in a digital world positively influences market performance.

Market sensing capability and market performance

The linkage between market sensing capabilities and market performance remains elusive. Researchers continue to find conflicting evidence from different contexts. Three main streams of findings exist: one that provides evidence of a positive influence of market sensing capabilities on market performance; another that found no significant evidence of a positive association; and finally, studies that found an indirect relationship between market sensing capabilities and market performance. For example, Morgan et al. (2009) and Lindblom et al. (2008) found no evidence to support the influence of market sensing capabilities on profit growth. Aligned to these findings, Hernández-Linares et al. (2020), Ardyan (2016:80) and Olavarrieta and Friedmann (2008) found no evidence of the influence of market sensing on overall firm performance.

However, Lindblom et al. (2008) found evidence of a weak positive relationship between market sensing capability and company growth. In relation to the indirect relationship, Ardyan (2016) found market sensing capabilities to have a significant effect on speed to market and innovativeness.

In the third stream of results, Ahmed et al. (2017); Osakwe et al. (2016) and Sugiyarti and Ardyan (2017) found market sensing capability to significantly contribute to SME profitability and market performance. Further, Alshanty et al. (2019:73) found that market sensing capabilities are important for SMEs' improved performance that relies on learning-positioning. Good market sensing capabilities contribute to knowledge creation in SMEs (Alshanty et al., 2019:733). Considering that SMEs have a tendency to have great personal connections with their customers (Hernández-Linares et al., 2020:8; Mhazo et al., 2012), market sensing may not create an exceptional or limited capability, but one that results in improved market performance only when complemented with extra resources

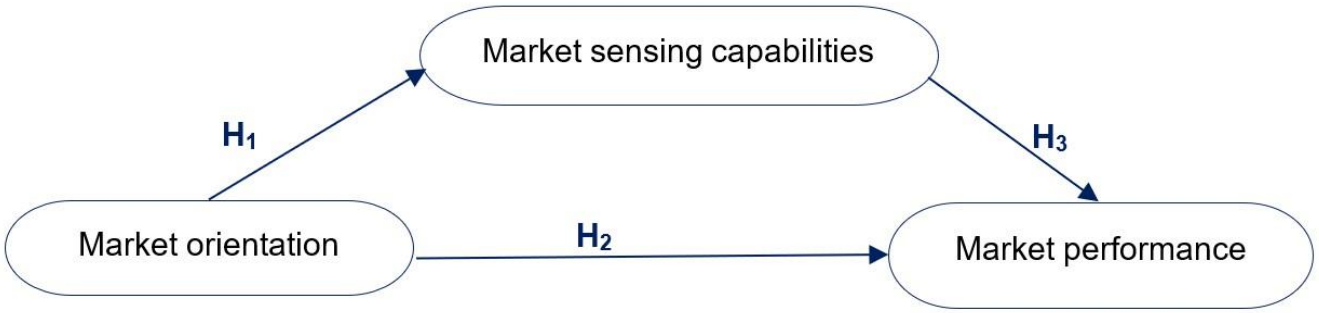
(Hernández-Linares et al., 2020:8). These disparities call for more evidence from a different context. Therefore, the following hypotheses were made:

H3 Market sensing capability influences market performance.

H4 Market sensing capabilities mediate the relationship between market orientation and market performance

Conceptual model

FIGURE 1
CONCEPTUAL MODEL



Source: Authors' own

Model Overview

The conceptual model summarises the relationships hypothesised in the previous sections. It shows that market orientation influences both market sensing capabilities and market performance. Market sensing capabilities then influence market performance. Market sensing capabilities mediate the relationship between market orientation and market performance.

METHODOLOGY

Context: The study was conducted in Harare, Zimbabwe. Respondents were drawn from SME agro-processors that were based in Harare. Harare was ideal for the study because of its capital city status and its high intensity of industrial activities. Internet connectivity, mobile penetration and financial inclusion are also high which made it reasonable to conduct digital marketing related research.

Measurement scale: Constructs and measurement items for the study were adapted from previous literature (Kholi & Jaworski, 1990; Narver et al., 1998; Morgan et al., 2009; Vorhies & Morgan, 2005; Kirca et al., 2005; Sugiyarti & Ardyan, 2017). This helped obtain construct validity. Market orientation was based on questions adapted from Kholi and Jaworski (1990) and Narver et al. (1998) and the questions were linked to customer orientation, competitor orientation and inter-functional orientation. Market sensing capabilities questions were adapted from Morgan et al. (2009) and Vorhies and Morgan (2005) and questions addressed issues related to sensing, sense making and response. Market performance questions related to profitability, sales volume and market share, and were adopted from Kirca et al. (2005) and Sugiyarti and Ardyan (2017). A Likert scale was used on all the questions. The scale on market orientation and market performance ranged from 1–7 (completely disagree to completely agree) whilst the one for market sensing ranged from 1–5 (strongly disagree to strongly agree). For a detailed definition of measurement scales, refer to Appendix 1.

Pilot testing: The questionnaire was pilot tested in two phases. In the first phase it was distributed to colleagues in the field of marketing research. This helped with face and expert validity. In the second phase, it was distributed to manufacturing SMEs who were chosen by the researcher using convenience sampling. Corrections to the flow of questions, clarity and typing errors were made after the pilot testing.

Sample Size and Sampling: A sample of 298 respondents was drawn from SME agro-processors in Harare. SME agro-processors' marketing managers, owners or senior executives in charge of marketing constituted the target sample. These were chosen for their deep insights about marketing and performance issues. Managers are critical in

the implementation of market orientation because they have to identify and appreciate the value of market orientation and be able to communicate the value to all other employees (Kholi & Jaworski, 1990). Only one respondent per SME was chosen. A mixed sampling approach of stratified and quota sampling was adopted. This was necessary because a complete sampling frame could not be established in some agro-processors. Therefore, quota sampling was applied where no complete lists existed. Refer to Appendix 2 for detailed sample definition.

Data collection: Quantitative data was collected using a closed-ended questionnaire. The questionnaire was administered using the 'drop and pick' approach. Respondents were first called or emailed (where contacts existed) and told about the questionnaire. However, where no prior contacts existed, respondents were visited at their workplaces. The establishment of contact before visiting enabled a good rapport between the respondent and researcher, since the respondent identified slots that he/she would be available.

DATA ANALYSIS AND RESULTS

A total of 298 usable questionnaires were received. The data was captured on a Microsoft Excel spreadsheet which was later uploaded to the SmartPLS3.2.1. Through the SmartPLS3.2.1 software, a partial least squares (PLS) structural equation modelling (SEM) was conducted. The SmartPLS3.2.1 software assesses the psychometric properties of the measurement model, and estimates the parameters of the structural model. The PLS-SEM was ideal in this study because of its high statistical power which is useful in a less developed or developing theory (Hair et al., 2019).

The results are presented in two sections: 1) measurement model assessment and 2) structural model assessment. In the measurement model assessment, results of indicator loadings, reliability tests (composite reliability), convergent validity and discriminant validity are shown. In the structural model assessment, collinearity tests, results of the coefficient of determination (R^2) and statistical significance are shown. It was important to follow these steps because the measurement model must be satisfactory before assessing the structural model (Hair et al, 2019:8).

Measurement model assessment

Results to assess the measurement model are presented in the sections 4.1.1 to 4.1.4.

Indicator loadings

The factor loadings (and cross loadings) of all indicator items to their respective latent constructs are shown in Table 1.

TABLE 1
FACTOR LOADINGS (BOLD) AND CROSS LOADINGS

	Market orientation	Market sensing capability	Market performance
MO1	**0.516**	0.273	0.340
MO2	**0.524**	0.300	0.320
MO3	**0.769**	0.468	0.440
MO4	**0.621**	0.363	0.371
MO5	**0.843**	0.598	0.390
MO6	**0.941**	0.590	0.520
MO7	**0.977**	0.602	0.550
MS1	0.617	**0.933**	0.553
MS2	0.576	**0.878**	0.525
MS3	0.438	**0.751**	0.502
MS4	0.482	**0.848**	0.579
MkS	0.505	0.587	**0.920**
Prof	0.476	0.550	**0.864**
Sal	0.550	0.600	**0.967**

Recommended loadings are those above 0.70 as they show that the construct describes more than 50 per cent of the indicator's variance; therefore provide an acceptable item reliability (Hair et al., 2019:8). However loadings of 0.60 are acceptable in exploratory research (Hair et al., 2019:15). The results in Table 1 show all items loaded on their corresponding constructs (bolded factor loadings) from a lower bound of 0.60 to an upper bound of 0.97, except for MO1 and MO2. Again, the items loaded higher on their respective construct compared to any other construct (i.e. the non-bolded factor loadings in any one row). Although MO1 and MO2 were below the recommended factor loadings, they were left in the model because they satisfied other quality tests.

Reliability tests: Composite reliability

Internal consistency reliability was assessed by composite reliability. The Cronbach's alpha was not used because it is a less precise measure of reliability, as the items are unweighted (Hair et al., 2019:8). According to Hair et al., (2019:8), when assessing composite reliability, high values essentially show high levels of reliability. Accordingly, reliability values ranging from 0.60 and 0.70 are regarded as "acceptable in exploratory research," and values ranging 0.70 and 0.90 are considered "satisfactory to good". Values above 0.95 and higher are considered problematic because they show item redundancy, thereby reducing construct validity. These high values may also indicate other problems, such as straight lining, which trigger inflated correlations.

The results for internal consistency reliability assessments are shown in Table 2.

TABLE 2
COMPOSITE RELIABILITY, CORRELATIONS AND DISCRIMINANT VALIDITY

Latent variables	Composite Reliability	Average Variance Extracted (AVE)	Market orientation	Market performance	Market sensing capability
Market orientation	0.902	0.581	**0.762**		
Market performance	0.941	0.842	0.557	**0.918**	
Market sensing capability	0.915	0.731	0.622	0.631	**0.855**

The results in Table 2 indicate that items measured well on the composite reliability and the average variance extracted (AVE) tests. The composite reliabilities of the different measures in the model range from 0.90 to 0.94, which surpassed the acclaimed threshold value of 0.70 (Nunnally, 1994) and are less than the problematic range of 0.95 and above (Hair et al., 2019:8).

Convergent validity

The AVE tests were conducted to give proof for convergent validity (Fornell & Larcker, 1981). Convergent validity refers to the model's ability to explain the indicator's variance. Bagozzi and Yi (1991) suggest an AVE threshold level of 0.5 as a signal of convergent validity. This means the construct describes at least 50 percent of the variance of its items (Hair et al., 2019). Therefore, measures of the three 'reflective constructs' can be said to have high levels of convergent validity, as shown in Table 2.

Discriminant validity

According to Fornell and Larcker (1981), discriminant validity is 'the degree to which a construct is empirically different from other constructs in the structural model'. Fornell and Larcker (1981) proposed that "each construct's AVE should be matched to the squared inter-construct correlation (as a measure of shared variance) of that same construct and all other reflectively measured constructs in the structural model". The shared variance for all model constructs must not be higher than their AVEs. An acceptable AVE should be "0.50 or higher, indicating that the construct explains at least 50 per cent of the variance of its items" (Hair et al., 2019:8).

The results for discriminant validity tests are shown in Table 2. Consistent with the recommendations of Fornell and Larcker (1981) and Hair et al, (2019:8), the AVE for each measure exceeds 0.50 thus providing evidence of discriminant validity. Further, all the square root values of AVE were larger than their corresponding correlations, and therefore met the discriminant validity test, as prescribed by the Fornell-Larcker Criterion. The bolded elements in the matrix diagonals, signifying the square roots of the AVEs, are larger in all cases than the off-diagonal elements in their matching row and column, supportive of the discriminant validity of the scales.

However, discriminant validity assessment such as Fornell-Larcker Criterion and (partial) cross-loadings, have been criticised for largely failing to detect a lack of discriminant validity (SmartPLS, 2020; Henseler et al., 2015). According to Henseler et al. (2015), the heterotrait-monotrait ratio of correlations (HTMT) provides superior performance to the Fornell-Larcker criterion and the assessment of cross loadings. As such, constructs were further subjected to the HTMT criterion. The HTMT is defined "as the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct" (Hair et al., 2019:9). According to Hair et al. (2019:9), discriminant validity problems are present when HTMT values are high. HTMT recommended values should "be <0.90 for conceptually similar constructs and <0.85 for conceptually different constructs" (Hair et al., 2019:15). The results indicated that all the constructs have HTMT values ranging from 0.5 to 0.6 (less than 0.9) and as such confirmed the presence of discriminant validity.

Structural model assessment

The results for structural model assessment are presented in the following sections 4.2.1 to 4.2.3.

Collinearity tests

According to Hair et al. (2019:11) variance inflation factor (VIF) values above 5 are indicative of probable collinearity issues among the predictor constructs. Hair et al. (2019:11) further suggested that even lower VIF values of 3–5 may indicate collinearity problems and as such, recommended values close to 3 or lower. The results of collinearity tests using the VIF criterion showed that all the constructs have VIF values <2, thus collinearity was not a problem in the study.

Coefficient of determination (R^2)

As collinearity was not an issue, the R^2 value of endogenous constructs was examined. The R^2 ranges from 0 to 1, with high values indicating a larger explanatory power. R^2 values of 0.75, 0.50 and 0.25 are regarded as substantial, moderate and weak respectively. However, the interpretation of R^2 is contextual (Hair et al., 2019:11).

The results indicated that in terms of explanatory power, market orientation had an explanatory power of 38.7% on market sensing capability (R^2=0.387) whilst the two constructs had a combined explanatory power of 44.2% on market performance (R^2=0.442).

Further, the results showed that, market sensing capability had an f^2 coefficient of 0.237 on market performance indicating a medium effect size. Market orientation had an f^2 coefficient of 0.079 on market performance indicating a small effect size whilst having an f^2 coefficient of 0.631 on market sensing capability indicating a large effect size. F^2 values higher than 0.02, 0.15 and 0.35 represent small, average and big f^2 effect sizes (Cohen, 1988 cited by Hair et al., 2019).

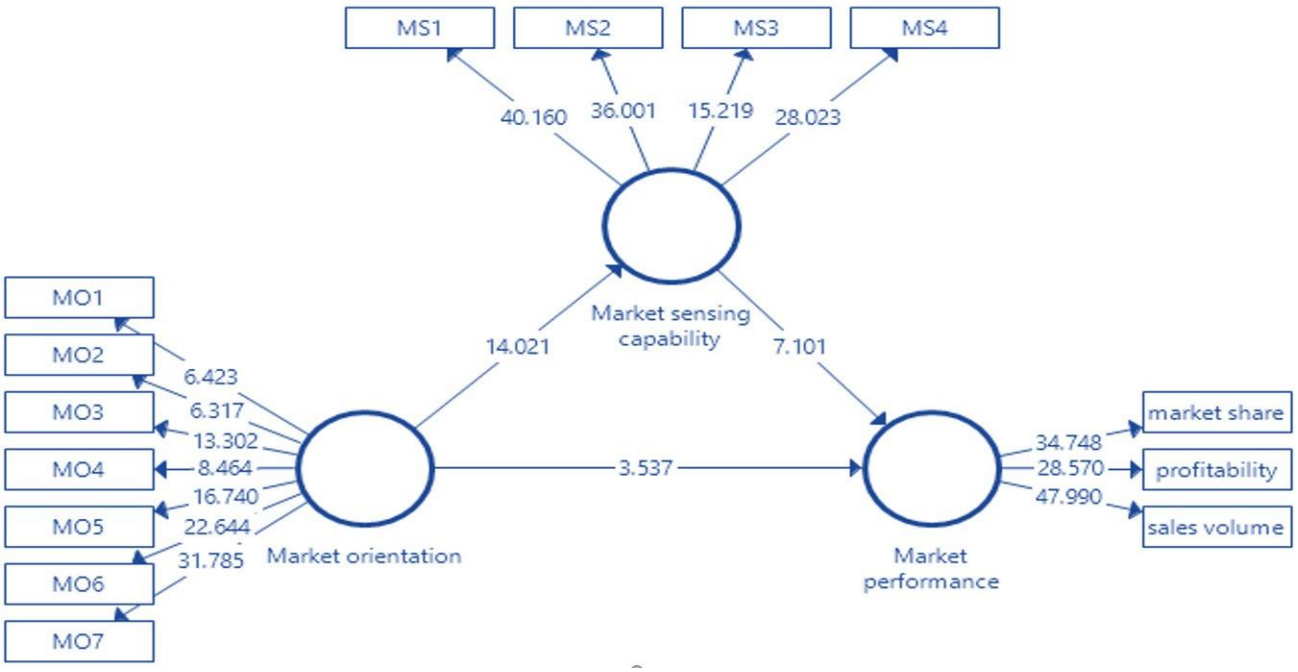
Hypothesis Testing: Statistical significance

Figure 2 shows results of the PLS-SEM. The model shows that market orientation and market sensing capability influence market performance.

The results in Table 3 also support Figure 2. Market orientation exhibited a statistically significant influence (t=14.02, p<0.001) on market sensing capability, whilst market sensing capability exhibited a statistically significant influence as well (t=7.10, p<0.001) on market performance. Market orientation had a statistically significant influence (t=3.537, p<0.001) on market performance. Finally, market sensing capability has a statistically significant mediating effect between market orientation and market performance (t=7.109, p<0.001).

The results show that all tested hypotheses were accepted.

FIGURE 2
STRUCTURAL MODEL RESULTS



Source: Authors own from data analysis

TABLE 3
SUMMARY: SIGNIFICANCE TESTING RESULTS OF THE STRUCTURAL MODEL PATH COEFFICIENTS

Hypothesis	Path	Path Coefficients	t Values	p Values	Decision
H_1	MO -> MS	0.622	14.021	0.001	Accepted
H_2	MO -> MP	0.269	3.537	0.001	Accepted
H_3	MS -> MP	0.464	7.101	0.001	Accepted
H_4	MO -> MS -> MP	0.289	7.109	0.001	Accepted

*MO=Market orientation *MS=Market sensing capability *MP=Market performance

DISCUSSION

Market orientation is an important determinant of market performance in the digital marketing world. The study revealed that market orientation significantly statistically influences market sensing capabilities in the digital marketing world. The influence of market orientation on market sensing capabilities was strong compared to the influence of market orientation on market performance. These results support previous studies by Amangala and Wali (2020), Alshanty et al. (2019), Kirca et al. (2005) and Tsiotsou and Vlachopoulou (2011) who found market

orientation to have both a direct and indirect effect on market performance. However, although market orientation directly influences market performance, the effect was weak compared to the influence of market orientation through market sensing capabilities (indirect effect). The empirical evidence on the relationships between market orientation, market sensing and market performance supports the argument that market orientation is a resource that must be applied to marketing capabilities for improved market performance (Chinakidzwa & Phiri, 2020; Day, 1994; Day, 2011; Olavarrieta & Friedmann, 2008; Moorman & Day, 2016; Milfelner et al., 2008; Hooley et al., 2005).

Another important finding in this study was that market sensing capabilities positively influence market performance, and the influence was stronger than that of market orientation on market performance. This empirical evidence is contrary to Lindblom et al's (2008) findings that there was a weak positive relationship between market sensing capability and company growth. Instead, we found a weak relationship between market orientation and market performance. Our findings support Osakwe et al's (2016) and Sugiyarti and Ardyan's (2017) findings that market sensing capability contributes significantly to SME profitability and market performance. These findings contradict Morgan et al. (2009) and Lindblom et al. (2008) who found no evidence to support the influence of market sensing capabilities on profit growth and overall firm performance (Ardyan, 2016; Olavarrieta & Friedmann, 2008).

The study has contributed to literature by providing empirical evidence on the direct linkage between market orientation and market sensing capabilities. Another contribution is the linkage of market orientation and market sensing to market performance in a digital world. The paper further contributes to literature by extending the market orientation, market sensing and market performance discussion to the digital marketing environment, in a developing market. Particularly the results indicated that market orientation and market sensing are crucial for SME agro-processors in Zimbabwe as they engage in digital marketing.

CONCLUSIONS AND IMPLICATIONS

In the digital marketing world, market orientation influences market sensing capabilities and market performance. Therefore market orientation is an important market performance determinant that digital marketers must always develop. The market orientation – market performance linkage is however strong when mediated by market sensing capabilities. These conclusions imply that SME agro-processors must develop strong market orientation resources, and aim to influence market performance through development of market sensing capabilities. Ignoring the market sensing capability route would be futile as the direct market orientation – performance route is weak and therefore leads to less impact on market performance. Market orientation and market sensing capabilities remain relevant in a digital marketing context, and should be developed. SME agro-processors must always use digital marketing tools such as social media platforms to execute market sensing capabilities and to fulfill market orientation. For example, using social media, marketers can engage in social listening, intelligence gathering and co-creation activities and thus fulfill market sensing and market orientation. The government and industry support bodies including SME organisations, must create an enabling digital marketing environment. This includes digital infrastructure development, empowering agro-processors with digital skills for enhanced market sensing capabilities. Digital is no longer an option, instead it is the critical new driver of competitiveness and value creation.

LIMITATIONS AND FUTURE RESEARCH

As with every study, our study has its own limitations. First, the use of self-reported measures can be affected by response bias. Respondents tend to report what they think the researcher may want to hear. Responses are subject to respondent perceptions which might be different from actual market performance outcomes. The use of actual quantifiable performance data would have been ideal. Secondly, a cross-sectional study cannot truly identify market performance outcomes. Although arguably digital marketing must bring instant results, sales volume, market share and profitability take time to build. Instead, measures that could be easily and directly linked to certain digital marketing activities would have been ideal. Thirdly, the linkage between market orientation, market sensing and market performance remains elusive. There is a need for more studies in different contexts and industries. In addition, there is a need to test the linkage between market orientation and other marketing capabilities in a digital marketing context.

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APPENDIX 1
QUESTIONNAIRE MEASUREMENT ITEMS

Market orientation measurement items

"How well do the following statements describe your company?"

	[7 point scale (1=completely disagree (CD) to 7=completely agree (CA)]	CD						CA
MO1	Our business objectives are driven by online customer satisfaction.	1	2	3	4	5	6	7
MO2	Top management regularly contact important customers.	1	2	3	4	5	6	7
MO3	Managers understand how employees contribute to value for customers.	1	2	3	4	5	6	7
MO4	Customers are targeted when we have an opportunity for competitive advantage.	1	2	3	4	5	6	7
MO5	We achieve rapid response to competitor actions using digital channels.	1	2	3	4	5	6	7
MO6	Top management regularly discuss competitors' strengths and weaknesses.	1	2	3	4	5	6	7
MO7	Functions are integrated to serve markets.	1	2	3	4	5	6	7

Market sensing capabilities measurement items

	[5 point scale: 1=strongly disagree (SD) to 5=strongly agree (SA)]	SD	D	N	A	SA
MS1	We actively track key e-market conditions and activities.	1	2	3	4	5
MS2	We always study e-marketing actions and activities of leading organizations in our sector.	1	2	3	4	5
MS3	We study direct competitors to emulate their moves.	1	2	3	4	5
MS4	We accurately anticipate (tell in advance) responses to actions that we take.	1	2	3	4	5

Market performance measurement items

"Please indicate your firm's performance over the last year relative to competitors in the primary market that you serve"

	[1 = "very poor (VP)" to 7 = "outstanding (O)"]	VP						O
7.3.1	Sales volume	1	2	3	4	5	6	7
7.3.2	Market share	1	2	3	4	5	6	7
7.3.4	Profitability	1	2	3	4	5	6	7

APPENDIX 2
SAMPLE DEFINITION

Major Agro-processor Classifications	Sample Size	Sampling Approach Used	Justification
Manufacture of food & beverage products	215	Mixed: 1) Simple random sampling for Millers & Stock feed manufacturers (60 selected). 2) Quota Sampling for all other manufacturers (155 selected).	Sampling frame partly available – available for millers and stock feed manufacturers only.
Manufacture of wood, wood related products and furniture.	138	Quota sampling	Sampling frame not available
Manufacture of wearing apparel & textiles	125	Quota sampling	Sampling frame not available
Manufacture of paper, paper products & printing	30	Quota sampling	Sampling frame not available
Manufacture of tobacco products	15	Simple random sampling	Sampling frame available
Manufacture of leather & related products	15	Census	Small sampling frame (below 30)
TOTAL SAMPLE SIZE	538		

Source: Adapted from UN ISIC classifications