

## **The Influence of Market Orientation on Export Performance of Small and Medium-Sized Enterprises (SMEs) in Rwanda**

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**Abstract:** *Grounded on the resource-based theory, this study examined the role of market orientation (MO) dimensions in the export performance of small and medium enterprises (SMEs) in Rwanda. The study adopted an explanatory survey design and a cross-sectional strategy. Data were collected from a final sample of 105 respondents selected from 58 exporting firms purposively chosen due to the absence of a formal sampling frame. The collected data were analyzed using the structural equation modelling (SEM) technique with the analysis of moment structure (AMOS) version 25.0. The findings revealed that market intelligence generation (MIG) and market intelligence responsiveness (MIR) have a positive and significant influence on export performance but the influence of market intelligence diffusion (MID) was weak and insignificant. The mixed findings of this study confirmed that the development of MO is important for a firm to go international and that not all dimensions of MO are equally important factors for export performance, so much so that only MI and MIG contributed significantly to export performance. The proposed model, which was based on RBT, was therefore partially validated. The study recommends that policymakers develop an export education strategy for exporting SMEs to improve their performance.*

**Keywords:** market orientation, export performance, SEM, SMEs, Rwanda

### **1.0 Introduction**

Small and medium-sized enterprises (SMEs) are vital for the stability of national economies and also play a key role in the development of innovation, productivity, and employment (Wu, Yao, & Muhammad, 2017). Small and medium-sized enterprises are experiencing a big challenge of limited access to the market. The challenge is more complex when it comes to access to the international market which is far more sophisticated than the domestic one, especially for SME exporters in developing countries. Inadequate resources have been cited as one of the constraining factors to the effective implementation of marketing strategies by SMEs (Bamfo, & Kraa, 2019). Specifically, limited access to export-related information exposes SMEs to export barriers such as; new market trends, different customers, regulations, and fierce competition (Leonidou, Katsikeas, Palihawadana, & Spyropoulou, 2007). Therefore, there is a need for SMEs, and in particular, those in developing countries to welcome the concept of market orientation

(MO) and its applicability in their lines of operations if they want to be competitive in the international market (Bylon & Jerry Jay, 2019).

Rwandan SMEs are also facing similar challenges relating to access to the international market as all manufacturers are competing for a limited domestic market. A recent study by English, McSharry, & Ggombe (2016) showed that the export sector is characterized by the highest rate of product death and low performance. This low export performance is evidenced in its low level of exports-to-GDP of 14% in 2015 when compared with other landlocked countries and even far below the average for Sub-Saharan Africa (English *et al.*, 2016). Whereas exports are getting more diversified in Rwanda; the Rwanda export structure is made of five main categories: (i) Traditional commodities (tourism, minerals, and tea and coffee), (ii) Non-traditional exports (NTE), (iii) Informal cross-border trade, (iv) re-export, and (v) services (English *et al.*, 2016). This study focused on "Non-traditional exports (NTE) because, as recognized by the Ministry of Trade and Industry (MINICOM, 2016), few countries have managed to develop rapidly based on exports of primary products alone.

Looking critically at explanations provided by Kohli & Jaworski (1990); Zhou, Li, Zhou, & Su (2008); Tho (2019); Savabieh, Nayebzadeh, Abghari, & Hatami-Nasab (2020) with respect to market orientation definition, one theme surrounding its meaning is that MO is a capability-based activity which pertains to the resource-based theory (RBT) of the firm. For instance, Zhou *et al.*, (2008) consider the market orientation as one of the important firm-level resources and capabilities. Tho (2019) and Papadas *et al.*, (2019) look at MO as a valuable, rare imperfectly imitable, and non-replaceable capability that can generate sustainable competitive advantage. Given the capability-oriented nature of the market orientation, this study is grounded on the RBT which assumes that firms compete based on their resources and capabilities needed to protect themselves against imitation and transfer from competitors (Wade, & Hulland, 2004; Barney *et al.*, 2011). This is because MO is an internal intangible resource that gathers and uses the information to satisfy customers' needs and wants, thereby improving export performance.

Empirically, some researchers have reported a positive and significant impact on the market orientation and firm performance. However, although the importance of MO has been largely acknowledged (Acosta, Crespo, & Agudo, 2018; and Alhakimi, & Mahmoud, 2020), the positive influence of MO on firm performance is empirically supported by studies conducted for large firms in developed countries (Ku-Ho, Kuo-Feng, & Yao-Ping, 2014; Sisay, Verhees, & Hans, 2017). Therefore, studies in developing countries are overlooked.

Another gap identified in the previous literature on the MO-performance nexus is the tendency to adopt an aggregated approach to MO in empirical tests of models. As commented by Yusif (2012), the relationship between MO and performance may be complex and the impact cannot be viewed simply. For instance, Fernandes, Ferreira, Lobo, & Roposo (2020) investigated the impact of the internationalization process and international performance in keeping with company market orientations (MOs). Data were collected from 320 Portuguese SME exporters. Findings displayed a positive MO effect both on the internationalization process and international performance.

Moreover, the use of a cultural approach to MO in the previous literature on the MO-performance nexus is obvious. For instance, Dawit, Verhees, & Van Trip 2017 examined the impact of MO components on the performance of seed producer cooperatives in Ethiopia. Using SEM analysis, the study revealed that customer orientation, inter-functional coordination, and supplier orientation but not competitor orientation, contribute to higher business performance. In the same vein, Bamfo, & Kraa (2019) examined the impact of MO on the performance of SMEs in Ghana. Data were collected from 391 SMEs and analyzed using SME. The findings revealed that customer orientation and competitor orientation positively and significantly predicted performance while inter-functional orientation did not show any significant impact on the performance of SMEs in Ghana. The mediating role of innovation was not proved for competitor orientation and performance relationship.

However, only a few studies have used the behavioral approach to MO that considers the three dimensions as advocated by Jaworski & Kohli (1993). For example, Wei-Shong, Jing-Wen, & Ming-Yih (2015) showed that MIG, MID, and MIR have a very strong influence on firm performance. Likewise, Lee, Kim, Seo, & Hught, (2015) showed that the three dimensions of MO have a positive effect on financial and non-financial performance. The current study, however, examined market orientation at the disaggregated level to develop a model that enables to understand how MO's outcomes can be achieved (Sørensen, 2009; Long, Ali, John, & Alma, 2017). In addition, mixed results concerning the relationship between MO and export performance were reported in previous studies, some revealing positive and significant effect of MO on export performance such as; Lee, Kim, Seo, & Hught, 2015; while others reported both significant and non-significant effects such as; Cadogan, Diamantopoulos, & Siguaw, 2002 and Akyol, & Akehirst, 2003 necessitating further empirical studies.

Therefore, the objectives of the current study were twofold; (i) to examine the impact of dimensions of market orientation namely market intelligence generation (MIG), market intelligence dissemination (MID), and market intelligence responsiveness (MIR) of small and medium enterprises in Rwanda and (ii) to develop and test a model that enables to understand how MO's outcomes can be achieved. The central benefit in adopting the disaggregated approach to MO in this study was the identification of which component of MO was the most effective driver of export performance in the SME sector. In this context, the current study modelled market intelligence generation, dissemination, and responsiveness as drivers of export performance. These MO dimensions are operationalized as follows:

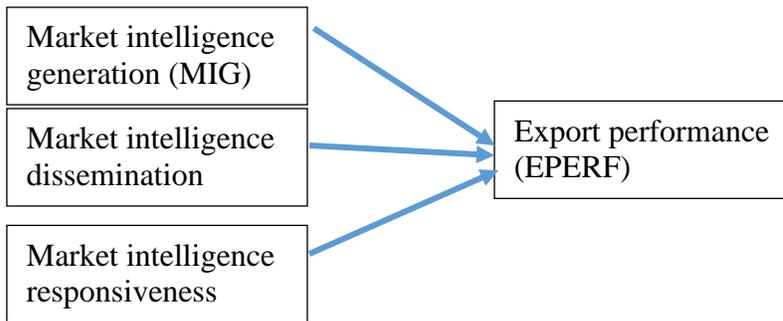
Market intelligence generation (MIG) refers to a firm's ability to gather information from different actor's such as; competitors, suppliers, intermediaries, and market forces such as; social, cultural, regulatory, and macroeconomic factors (Matsuno, & Mentzer, 2000). The process includes for instance assessing customer needs and preferences (Dong *et al.*, 2016) and analyzing government regulations, technology, competitors, and other environmental factors.

Market intelligence dissemination (MID) is the extent to which the collected information is distributed, shared, and discussed across the firm's departments formally or informally (Kara *et al.*, 2005). This is a process that involves communication between the owners and employees of a firm about the collected information. Disseminating the information internally includes discussing competitor's strategies and customers' needs and preferences.

Market intelligence responsiveness (MIR) refers to the firm's ability to respond to the collected and disseminated information from customers, competitors, and other sources (Wei *et al.*, 2013). This ability involves taking promptly action to satisfy the needs and preferences of customers about the product design, quality, and low cost that maintains and sustains a competitive edge (Jimenez-Zarco, Martinez-Ruiz, & Izquierdo-Yusha, 2011).

Export performance refers to increased export sales, export profit, market share (in terms of destinations), and customer satisfaction (Kasema, 2020a). In the resource-based theory, export performance is a variable that is essentially related to export activity or the first stage of the internationalization process.

Viewing under this research, MO is an internal resource that cannot be bought in any market. In this regard and by referring to the views of Jaworski & Kohli, (1993) explaining MO in the form of MIG, MID, and MIR, the following conceptual model was developed and tested through three hypotheses:



**Figure No 1: Conceptual Model**

*H1. Market intelligence generation (MIG) influences the export performance of SMEs*

*H2. Market intelligence dissemination (MID) influences the export performance of SMEs*

*H3. Market intelligence responsiveness (MIR) influences the export performance of SMEs*

## **2.0 Methodology**

### **2.1 Research Design, Sample Size, and Data Collection**

This research study adopted an explanatory survey design and a cross-sectional strategy due to the time of data collection, and the nature of the study. The quantitative method was engaged in hypotheses testing of the causal relationship between predictors and criterion variables, which is usually known as causal research (Sekaran & Bougie, 2013). Small and medium-sized export firms were the unit of analysis for this study. However, with the absence of a formal sampling frame, the sample was purposively selected among the 1700 export firms' country-wide that

fulfilled the selection criteria such as being in the export sector for at least three years; making a target sample of 62 firms.

Data were collected from 124 respondents who were drawn from the 62 export firms purposively selected countrywide. With the minimum criteria of being directly involved with export marketing decisions and the level of background knowledge about the research topic two qualified informants (marketing managers and finance managers) were selected to avoid common method bias. Out of 124 distributed questionnaires, 105 were returned with a response rate of 83%; enough for generalization (Anseel, Lievens, Schollaert, & Choragwicka, 2010). This study used a personal interview-based survey method with a drop-off and collect approach for executing the survey.

## **2.2 Pre-test and Pilot Study**

Before the final survey, the questionnaire was pre-tested with five export SMEs with two respondents from each company, making a total of 10 respondents. Burns & Bush (2005) suggest that a pre-test of 5-10 representative respondents is usually sufficient to identify problems with a questionnaire. They were also asked to comment for clarity, biasness, the ambiguity of the questions, and relevance of the questionnaire to the export business context, and corrections were made accordingly for some questions. Piloting the survey questionnaire was done to assess the wording and psychometric properties of the measurements (Memon, Ting, Ramayah, Chuah, Cheah, 2017). The Cronbach's alpha for all the four constructs ranged between 0.66, and 0.79 greater than 0.6 (Dunn, Baguley & Brunnsden, 2014) confirming the questionnaire reliability.

## **2.3 Research Constructs and their Measurements**

The dependent variable of this study was export performance (EXPERF). Since the objective measures of export performance were not accessible to the researchers, this study used the perception-based performance measurement to assess the export performance which is common in strategy research (Fonti, Maoret, & Whitbred, 2017) using a five-item with five-point Likert scale. So, as in previous export studies (e.g. Morgan, Vorhies, & Mason, 2009; Sousa, 2004), this study used subjective indicators to assess export performance. Respondents were asked to indicate on a five-point Likert-type scale ranging from strongly dissatisfied to strongly satisfied over the past three years to balance short-term export performance fluctuations (Katsikea *et al.*, 2000). The following six items were used: export sales, export sales growth, export profitability, export market share, the competitiveness of product in the foreign market, export market satisfaction with export sales volume, and the number of export destination countries. The value of these six items was then summed and averaged to create the study's export performance construct (Cronbach's  $\alpha=0.72$ ). For the market orientation variable, this study adopted a shortened nine-item but with five-point scale by Cadogan *et al.*, 2009) rooted in the mainstream MO literature (Kohli, Jaworski, & Kumar, 1993). This nine-item scale included three items for each dimension of MO namely MIG ( $\alpha=0.76$ ), MID ( $\alpha=0.66$ ), and MIR ( $\alpha=0.79$ ).

## **2.4 Data Analysis Technique: The Structural Equation Modelling**

The collected data were analyzed using the Covariance-Based Structural Equation Modelling (CB-SEM) approach. This is a multivariate data analysis approach that enables a simultaneous

examination of multiple relationships among many variables, including latent variables. It minimizes unexplained variance while supporting superior theoretical model development. Moreover, SEM tests construct validity extensively and more deeply in comparison to the traditional correlation analysis (Bagozzi, & Yi, 2012). The application of the SEM approach is currently on top of research studies involving firm performance and more broadly competitive advantage. Some of the recently published papers using SEM in these areas are those of Kasema (2020); Yasin, & Ong (2020), and Sriyono (2020).

The check of statistical assumptions and indices before using SEM was completed. For instance, using Little's test, results showed that there were no missing data, nor were there any outliers because the Mahalanobis distance ( $D^2$ ) was less than the Chi-square values of the applied items (Harns and DeSimone, 2015). Using Kolmogorov-Smirnov and the Shapiro-Wilk tests, results showed that data were normally distributed as the significance value was greater than 0.05 (Pallant, 2013). Testing for multi-collinearity was done by the Variance Inflation Factor (VIF) which is used to test a higher correlation between independent constructs. The data passed the multi-collinearity test since all VIFs ranged between 2.305 and 2.908 which is far below the general threshold of 10.00; indicating that multi-collinearity is not a serious issue (Tabachnick, & Fidell, 2013; Pallant, 2016). The reliability test result showed a Cronbach's Alpha for all the measured variables was 0.76 for MIG, 0.66 for MID, 0.79 n for MIR, and 0.72 for EXPERF greater than 0.6; the acceptable limit (Dunn *et al.*, 2014). To test the adequacy of the data set for factor analysis, both the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy ( $0.783 > 0.5$ ) and the Bartlett test of Sphericity (407.164,  $p=0.000$ ) i.e.  $p < 0.001$  were used and found greater than the cut-off (Pallant, 2013).

### 3.0 Results and Discussions

#### 3.1 Evaluation of the Measurement Model

Confirmatory factor analysis (CFA) was used to test the measurement model of the study through Constructs' internal reliability, convergent, and discriminant validity (Ylinen & Gullkvist, 2014). The principal approach used to assess the convergent validity was the composite reliability (CR) and the average variance extracted measures (AVE) for each construct with a minimum threshold of 0.7 (CR) and 0.6 (AVE) (Hair, Hult, Ringle, & Sarstedt, 2017). The discriminant validity for each construct was gauged via square roots of AVE. Adequate discriminant validity should be larger than the squared correlations (Hair, Black, Babin, Anderson, & Tatham, 2014).

**Table No 1: Reliability and Convergent Validity**

<b>Construct</b>	<b>Cronbach's Alpha</b>	<b>Composite Reliability (CR)</b>	<b>Average Variance Extracted (AVE)</b>
MIG	0.763	0.82	0.76
MID	0.664	0.93	0.69
MIR	0.792	0.88	0.71
EXPERF	0.715	0.79	0.68

**Source:** Researcher's compilation based on AMOS results, 2020.

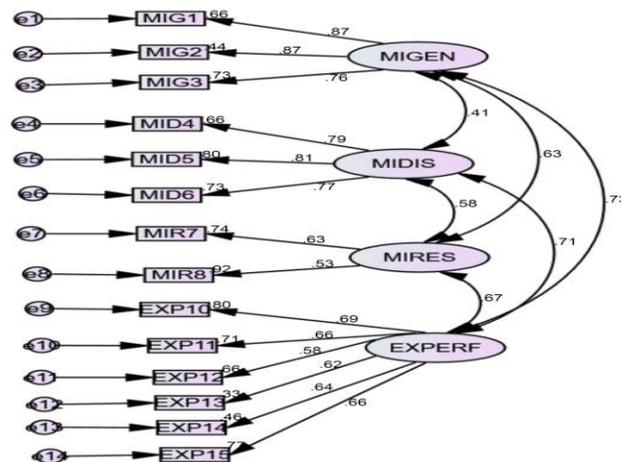
It can be observed from Table 2 that convergent validity was confirmed as CR, and AVE statistics for all four constructs were greater than the cut-off. In the same vein, the square root of each construct's AVE was greater than the correlations with the other constructs (0.69, 0.72, and 0.60 respectively for MIG-EXPERF, MID-EXPERF, and MIR-EXPERF confirming the discriminate validity.

**Table No 2: Fit Indices for the Measurement Model**

Fit index	This Research	Recommended Values	References
$\chi^2$ (p-value)	0.046	$\geq 0.05$	Byrne (2016)
CMIN/df	2.02	$\leq 3$	Gefen <i>et al.</i> , (2000)
GFI	0.94	$\geq 0.09$	Hair <i>et al.</i> , (2017)
RMSEA	0.05	$\leq 0.06$	Hu & Bentler 1999
NFI	0.92	$\geq 0.09$	Byrne (2016)
CFI	0.96	$\geq 0.09$	Kumar (2015)
AGFI	0.95	$\geq 0.09$	Hair <i>et al.</i> , (2017)

**Source:** Researcher's compilation based on AMOS results, 2020

Furthermore, the model fit indices were applied to determine whether the model fitted the data well. The model fit indices generated the following results: CMIN/DF = 2.02, GFI = 0.94, AGFI = 0.95, CFI = 0.96, NFI = 0.92, and RMSEA = 0.05 which signify an adequate model fit. Fig. 2 displays the measurement model.



**Figure No 2: The Measurement Model of this Study**

Source: AMOS Output, 2020

### 3.2 Evaluation of the Structural Model and Hypothesis Testing

After ensured that the measurement model fitted the data well, researchers tested the three hypotheses of the current study. Nevertheless, before testing the structural model, researchers checked for its fitness using similar goodness of fit indices as per the measurement model. It was found out that the structural model attained the recommended cut-off of the goodness of fit indices.

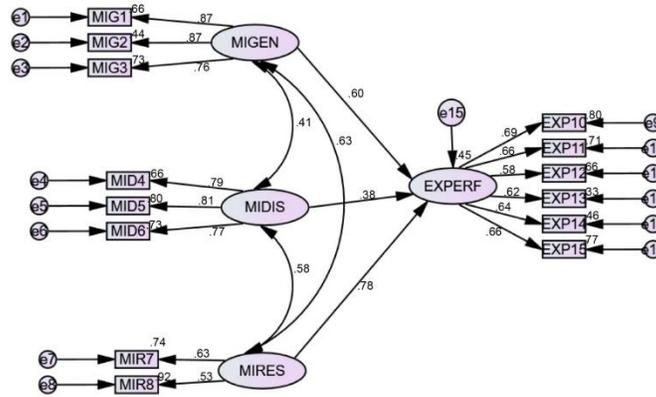
In testing hypotheses, three criteria  $p < 0.05$ ; critical ratio ( $t$ ) = 1.96, standardized regression weight ( $\beta$ ) = 0.5 as recommended by Hox & Bechger, (2012) and Hair *et al.*, (2017) were applied to examine the relationship between the individual components of MO and export performance. Therefore, any relationship which resulted in a critical ratio greater than 1.96 was considered significant.

**Table No 3: Hypothesis Testing Results**

Hypothesis	Relationships	S.E.	C.R	P-Values	$\beta$ -Value	Decision
H <sub>1</sub>	MIG → EXPERF	.108	6.29	***	.60	Accepted
H <sub>2</sub>	MID → EXPERF	.194	1.95	.063	.38	Rejected
H <sub>3</sub>	MIR → EXPERF	.202	3.56	***	.78	Accepted

**Source:** Researcher's compilation based on AMOS output, 2020

The results from Table 5 indicate that a path from MIG to EXPERF attained a critical ratio of 6.29, a significant  $p$ -value of \*\*\*, and a  $\beta$  value of 0.60 which met the recommended cut-off. Hence, H<sub>1</sub> which stated that market intelligence generation influences the export performance of SMEs was accepted. These findings also revealed that a path from MID to EXPERF attained a critical ratio of 1.95, a non-significant  $p$ -value of 0.623, and the  $\beta$  values of 0.195 which deviates from the recommended cut-off. Hence, H<sub>2</sub> which stated that market intelligence dissemination influences the export performance of SMEs was rejected. Finally, the findings also revealed that a path from MIR to EXPERF generated a critical ratio of 3.56, a significant  $p$ -value of \*\*\*, and a  $\beta$  value of 0.78 which met the recommended cut-off. Hence, H<sub>3</sub> which stated that market intelligence responsiveness influenced the export performance of SMEs was also accepted. These results are also indicated in Figure 3.

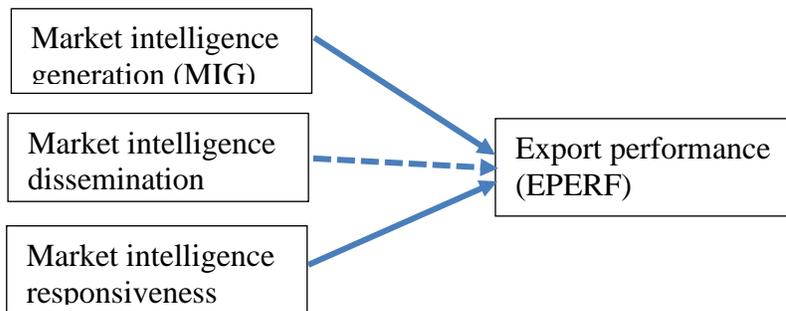


**Figure 3: The Structural Export Performance Model**

Source: AMOS output, 2020

#### 4.0 Study Implications

The purpose of this study was to examine the role of MO dimensions namely MIG, MID, and MIR in the export performance of small and medium enterprises in Rwanda. The findings revealed that MIG and MIR had a positive and significant influence on export performance but the influence of the market intelligence dissemination (MID) was weak and not significant. Nevertheless, it should be noted that the market responsiveness ( $\beta = 78\%$ ) was more influential followed by market intelligence generation ( $\beta = 60\%$ ) than the market intelligence dissemination ( $\beta = 38\%$ ) as shown in the revised conceptual model.



**Figure No 4: The Revised Conceptual Model**

**Legend:** - - - - -> Insignificant relationship    ———> significant relationship

These findings, which partially validated the resource-based theory that emphasizes the importance of market orientation in generating or creating competitive advantage, nevertheless qualified the results found in the previous literature such as; Jaworski, & Kohli (1993); Wei-Shong, Jing-Wen, & Ming-Yih (2015); Lee, Kim, Seo, & Hught, (2015); Long *et al.*, (2017) by not fully recognized the significant impact of these three dimensions of market orientation on the export performance of SMEs in Rwanda. However, unlike previous studies, these mixed results in the market orientation – export performance nexus constituted a novel contribution to the

market orientation literature because most previous studies had overlooked the effect of individual MO dimensions on the export performance, especially for SMEs.

This study also offered empirical validation for the scale, because it revealed the possible use of two items per factor for factor analysis, and thereby adding knowledge to the market orientation literature regarding the minimum items for each factor. This accords with Yong & Pearce, (2013) who argued that even two items per factor are sufficient for factor analysis, but contradicts Hair *et al.*, (2014) who support that each factor should have at least 3 items to be explained to ensure high reliability.

## **5.0 Conclusion and Recommendations**

Grounded on the resource-based theory (RBT), this study examined the role of MO dimensions namely; MIG, MID, and MIR in the export performance of small and medium enterprises in Rwanda. The findings revealed that MIG and MIR had a positive and significant influence on export performance but the influence of the market intelligence dissemination (MID) was weak and not significant. The mixed results of this study confirmed that developing MO was important for a firm to go international and that all dimensions of MO were not equally important drivers of export performance as only MI and MIG contributed to export performance at 78% and 60% respectively. The proposed model which was grounded on the RBT was then partially validated. Therefore, this study contributed to the advancement of the knowledge in the market orientation literature because most previous studies had overlooked the effect of individual MO dimensions on export performance, especially for SMEs. Also, the use of SME exporters as the unit of analysis in a less developed country enriched the debate on the market orientation literature and its components factors.

This study suggested that to sustain export performance and product presence in the international market, managers should proactively develop effective MO behavior through thoughtful activities in gathering, disseminating, and responding to relevant information. Thereby, they can take advantage of business and market opportunities in international markets. The study recommended also that policymakers should develop an export educational strategy for SME exporters who were increasingly embarking on an expansion and correspondingly attempting to identify the best strategy for raising their performances.

This study is subject to several theoretical and methodological limitations, which may provide additional research opportunities. First, the study examined only Rwandan export firms. Therefore, the findings may not be generalizable to firms from other countries. Second, the study focused on a single time; essentially, export performance should be measured more dynamically, using longitudinal data. Future research may use longitudinal data to provide more insights and a deeper understanding of the investigated issue and compared it with these findings.

## 6.0 Reference

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