The Effect of Marketing Capabilities on Small and Medium Enterprises' Performance: A Dynamic Capabilities Approach to Rwanda Manufacturing Sector

Kasema Romain
The Open University of Tanzania
kasema.romain@yahoo.com

Abstract: *The issue of what contributes to performance heterogeneity among firms has, since, been within the business strategic management literature. Some scholars have focused on external factors while others, recently, focused on internal factors (resources) to explain inter-firm performance differences. Falling into the second wave focusing on internal factors, this study, therefore, investigated the contribution of marketing capability on small and medium enterprises' performance in the Rwanda manufacturing sector. Grounded on the dynamic capabilities theory, the study specifically thought to determine the effect of innovation-marketing capability and brand-marketing capability on firm performance. By the mean of a survey questionnaire, data were collected from 210 selected manufacturing companies and the qualified respondents were marketing managers. Using a structural equation modelling approach, it was empirically proved that marketing capability has a positive significant impact on firm performance, especially, it was found that a firm's innovation-marketing capability and brand-marketing capability both positively and significantly influence firm performance. It is suggested that manufacturing companies lay more emphasis on improving their branding capability since it is the most critical in boosting firm performance. The findings implied that firms with strong marketing capability innovate and implement new processes to meet customer needs.*

Keywords: Marketing Capabilities, Performance, Rwanda, Manufacturing Sector

Introduction

Research Background

Despite the world's widely recognized potential role of SMEs in contributing to the socio-economic development of nations, the sector continues to face binding constraints that limit their potential growth. Some of these constraints are related to the business environment in general such as access to finance, access to market, rigid regulatory, etc. However, little is known about internal factors that limit the potential growth of SMEs, especially organizational capabilities.

A firm's capabilities develop when individuals and groups within the organization apply their knowledge and skills to acquire, combine, and transform available resources in ways that

contribute to achieving the firm's strategic goals (Mahoney & Pandian 1992; Teece *et al.*, 1997). These capabilities are dynamic when they enable the firm to implement new strategies to reflect changing market conditions by modifying the resources available to the firm and/or combining and transforming available resources in new and different ways (Teece *et al.*, 1997). Among these capabilities, marketing-related ones are considered relevant to sustainable competitive advantage (Mu, 2015).

Marketing capabilities represent a firm's ability to understand and forecast customer needs better than its competitors and to effectively link its offering to the customer (Dutta *et al.*, 1999; Mu, 2015). Therefore, based on the dynamic capabilities' perspective, marketing capabilities are expected to influence firms' performance positively because they are embedded in the organization. To support this thinking, prior empirical studies reported a positive relationship between marketing capabilities and firm performance/competitiveness (Acikdilli, 2013; Guoa *et al.*, 2018; Morgan *et al.*, 2009; Saleh, 2015); product capability and export performance (Leonidou *et al.*, 2002) product innovation and export performance (Lim *et al.*, 2006; Murray *et al.*, 2011; Zhang *et al.*, 2003) highlighting that firm with strong marketing capability can effectively develop strong competitiveness.

Rwanda suffered devastation in the 1990s which culminated in the genocide against Tutsi in 1994 and the destruction of economic tissues. In a bid to address the situation, five years after the war and genocide against Tutsi, the government of Rwanda documented a vision to strive for self-reliance and rebuild itself. Rwanda's manufacturing sector was among the key productive sectors of the economy identified under vision 2020 which can spur growth because of its immense potential for value creation, employment generation, and poverty alleviation. However, the industrial sector in Rwanda is still small (0.68%: 868/126.398 firms) but quite competitive and contributed to average 16% of GDP for a decade ago (2008-2017); one-third the size of the agricultural sector (48% for the same period) (World Bank 2018) and some way short of Rwandan Vision 2020's target of 26% with 11% of contribution to total employment (MINICOM, 2017). This requires, however, that the sector remains competitive to deliver. A curious observation yet, suggests that overall aggregate demand for the sector in Rwanda remains to the researcher's best knowledge very low, the narrowed markets are saturated with internal stiff competition (processing similar goods) and competition from imported goods and mostly the limited information about the market. As such these constraints are internal to the company and call for a new approach to address the marketing issues within the Rwandan manufacturing sector.

Although the dynamic capability theory provides an important framework to explain firm performance variations based on capabilities including marketing capability, its framework, however, was designed to fit larger firms. it is unclear if this theory developed for larger firms should fit also small and medium enterprises. This was previously supported by Zahra *et al.*, 2006 and Trot *et al.*, 2009 findings that most research and theory building has concentrated on large companies while ignoring SMEs. A curious observation from the reviewed literature indicates that there is a scantiness of related studies on SMEs to test this theory in developing countries including Rwanda. The literature on the use of marketing capability combining innovation and branding as its determinants that enhance competitiveness in SMEs is –to the

researcher's best knowledge- really scanty in less developed countries including Rwanda as both innovation and branding concepts are customarily used in large firms.

This study undertook to bridge this knowledge gap by validating the Dynamic Capabilities Theory framework that was developed in advanced economies for large companies to fill the gap. Therefore, the purpose of this research paper is to investigate the potential contribution of marketing capabilities proxy as Innovation-Marketing capability and Brand-Marketing capability on the performance of small and medium Enterprises (SMEs) operating in the manufacturing sector. This study provides the necessary dimensions of marketing capability required –other factors remaining constant- for improving the sector's competitiveness to enable it to deliver to the country's expectations. Therefore, this knowledge is important for policymakers, business practitioners as well as researchers/ academicians.

Theoretical Foundation and Hypothesis Development

The issue of what contributes to performance heterogeneity among firms has, since, been within the business strategic management literature. Some scholars have focused on external factors while others, recently, focused on internal factors (resources) to explain inter-firm performance differences (Barreto, 2010; Helfat & Peteraf, 2009). Falling into the second wave focusing on internal factors, the starting point of the present study is the dynamic capabilities theory (DCT) that seeks to identify the characteristics of firms with superior performance and that adopts the resources and capabilities controlled by a firm as its primary unit of analysis (Rouse & Daellenbach, 2002). As extension of the resource-based view, pioneering by the works of Teece & Pisano, 1994; Teece *et al.*, 1997; and continuing with the studies of Helfat *et al.*, 2007; Teece, 2014; Teece, 2017; Wang & Ahmed, 2007 and Wang *et al.*, 2015 and many others; the dynamic capability theory framework has emerged as the new hallmark in the domain of strategic management literature due to its increased importance in the explanation of strategic advantages (Cordes-Berszinn, 2013). According to this theory, firm performance is primarily determined by the firm's capabilities of acquiring and deploying resources to match their market environment (Al-Aali, 2011; Eisenhardt & Martin, 2000; Makadok, 2001; and Teece *et al.*, 1997). Within this context, the contribution of marketing capability in driving superior firm performance has been of significant interest to marketing scholars (Mu, 2015; Vorhies, 2005).

Song *et al.*, (2005) and Mu (2015) define marketing capability as the ability of a company to use its tangible and intangible resources to understand complex consumer specific needs, achieve product differentiation relative to competition, and achieve superior performance advantage. Day (1994) for its part, defines marketing capability as an integrative process designed to apply the collective knowledge, skills, and resources of the firm to the market-related needs of the business, enabling the business to add value to its goods and services and meet competitive demands. He further points out that it is not possible to list all company capabilities because every firm develops its configuration rooted in the realities of its competitive market, past commitments, and anticipated requirements. However, some capabilities can be recognized in all businesses, corresponding to the core process for creating economic value. In this sense, Day (1994) identified three types of marketing capabilities: outside-in, inside-out and spanning capabilities.

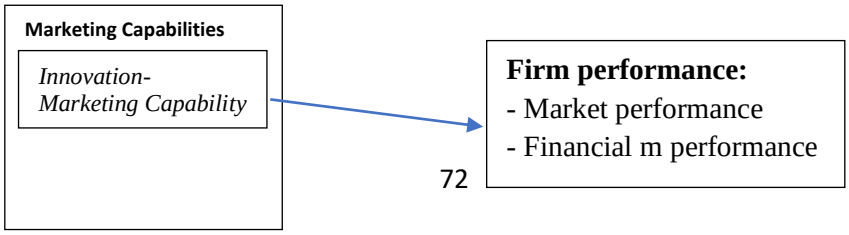
Conceptual literature has endorsed the relevance of marketing capabilities to understanding firm strategy and performance (Varadarajan & Jayachandran, 1999). They proposed a way forward in terms of understanding and explaining firm behaviour in the realm of deploying marketing resources for competitive advantage. In empirically appraising the contribution of marketing capabilities to firm performance, there appear to be two approaches. One approach, especially the early studies, conceptualise marketing capabilities in terms of mid-level marketing process supporting strategy and includes the marketing mix (4Ps) elements, market research, and market management (Vorhies, 1998; Vorhies & Morgan, 2005); advertising and distribution (Vorhies, 1998; Vorhies & Harker, 2000; Vorhies & Morgan, 2005). A limitation of this stream, however as recognized by one of the proponents Vorhies & Morgan, 2005 is that it excludes any assessment of high-level integrative capabilities, such as brand management, innovation, and customer relationship management, which is the second approach.

In the same year, Hooley *et al.*, (2005) building on preliminary work in Hooley *et al.*, (1999) provided an assessment of several high-level marketing capabilities, including brand reputation, customer relationship marketing, and innovation. Therefore, the current paper restrains itself to investigating just two higher-level marketing capability, namely innovation and Branding as summarised hereunder:

Innovation capability is seen as critical for competitive advantage and superior marketing performance (Han *et al.*, 1998; Hooley *et al.*, 2005); it is a particularly powerful determinant of marketing performance. A significant change in product design, packaging, placement, and promotion or pricing is defined as a marketing innovation (OECD, 2005). To increase the firm's sales, marketing innovation will be implemented through fulfilling the customer needs better, opening up new markets, or re-position a firm's product on the market. In the SME context, similar studies have shown the importance of innovation in performance (Weerawardena *et al.*, 2006).

Branding capability is a second higher-level marketing capability that is a potential determinant of marketing performance. Branding capability reflects the ability not only to create and maintain high levels of brand equity but also to deploy these resources in ways that are aligned with the market environment (Morgan *et al.*, 2009). The importance of branding is also emphasized in Mitchell *et al.*, (2001) and McQuiston (2004). Therefore, firms with strong brand management capability are likely to enjoy higher performance through the attraction of new customers.

Firm performance refers to the capability of a business to access the degree of its success within a particular period (Eniola & Ektebang, 2014). In this research study, firm performance is conceptualized as referred to as market performance and financial performance. Market performance includes market share, number, and quality of key customer relationships and physical facilities established to carry out marketing activities. Financial performance includes increased sales and increased profit.



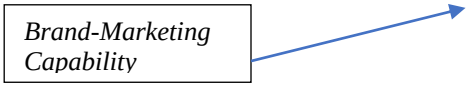


Figure.1. Conceptual Model of the Marketing Capabilities-Performance Nexus
Source: Researcher's compilation, 2019

This study developed a conceptual model that captures the relationship between marketing capabilities proxy as innovation-marketing capability and brand-marketing capability on firm performance. Therefore, based on the above discussion, it was hypothesised the following:

H01: Innovation-Marketing Capability positively relates to the performance of small and medium manufacturing companies.

H02: Brand-Marketing Capability positively relates to the performance of small and medium manufacturing companies.

Empirical Review

In recent times, there is an extensive amount of literary research devoted to the influence of marketing capabilities and firm performance within the context of resource-based view and dynamic capability theory. Nevertheless, the bulk of such empirical research on capabilities-performance relationship using dynamic capability theory tends to be concentrated on large companies in developed countries (Li & Liu, 2014; Wang & Ahmed, 2007); very limited studies have devoted such research on SMEs in Africa, and even few in Rwanda. Research on this issue assumes performance is attributable to variation in firm-level marketing capability. This section reviewed and summarised some empirical studies linking marketing capability to firm performance.

Table 1. Summary of Previous Empirical Researches

Author(s) and Year	Research context	Respondents	Methods/ Approaches	Analysis techniques	Findings
Morgan *et al.*, 2009	USA	114 industries	Descriptive survey	Regression analysis	Marketing capabilities have direct and complementary effects on both revenue and margin growth rates
Acikdilli (2013)	Turkey	415 manufacturing firms	Survey	Confirmatory factor analysis and structural equation modelling	Marketing capabilities (i.e., product development, channel management, selling and delivery management) positively and significantly affect export market orientation.
O'Cass and Siahtiri (2015),	Pakistan	341 manufacturing and service firms.	Descriptive survey	SEM analysis	Marketing capabilities and marketing orientation have significant effect in achieving firm performance
Harram and Fozia (2015)	Pakistan	100 manufacturing firms	Descriptive survey	Correlation, Regression and mediating regression analysis	Positive effect of marketing capabilities on performance
Salisu *et al.*, (2017)	Nigeria-Kano	361 firms	Quantitative method	PLS-SEM approach	Positive relationship between marketing capability and firm

state	performance.

Source: Researcher's compilation based on the reviewed literature, 2019

Method

Research Philosophy and Design

Falling into the positivist paradigm which accords with the quantitative method and deductive approach, the study design selected for this research is the cross-sectional explanatory survey design due to time strategy of data collection, analytical method of data and the survey strategy nature of the study.

Research Population, Sample Size, and Sampling Method

The total population of this study comprises of 868 small and medium manufacturing companies countrywide. While a population is the total collection of elements about which the researcher wishes to make some inferences (Cooper & Schindler, 2014) a sample is a selection of elements or individuals from a larger body or population (Hair *et al.*, 2017b) or the number of observations that are included in the research study (Cooper & Schindler, 2011; Zikmund *et al.*, 2015). A good sample should reflect the similarities and differences found in the population so that it is possible to make inferences from the (small) sample about the (large) population (Hair *et al.*, 2017b). However, to operationalise a multiple regression analysis or structural equation modelling the rule of thumb of selecting appropriate sample size is to identify the number of parameters (i.e. measurement items) that should be multiplied with 5 or 10 (Kline, 2015) also known as a subject-to-variables ratio of 5:1 or 10:1. The minimum sample size is "to have at least five times as…the number of variables to be analysed" Hair *et al.*, (2006). So, since the questionnaire of this study has 28 questions, the estimated sample size for this study would be 28*5= 140 or 28*10=280. The actual respondents consisted of 244 marketing managers/directors from small and medium manufacturing companies that fulfilled the selection criteria. However, from the 244 distributed questionnaires, 210 were returned and fully completed; making the final response rate of 86%; enough for generalisation.

The stratified sampling method was chosen in selecting respondents. Within this context, the researcher has applied proportionate stratification that is based on the stratum's share of the total population to come up with the minimum sample in each stratum (Amin, 2005) herein referred to as business categories (Food, beverage and tobacco; Textile, clothing and leather; Wood, Paper and Printing; Chemicals, Rubber and Plastics; Non-metallic minerals, Furniture and Others). A survey questionnaire was used for data collection.

Data Collection, Research Variables and their Measurements

Data for both the independent and dependent variables were collected through a survey questionnaire that was addressed to companies' marketing managers or directors. In line with the previously postulated hypotheses, the questionnaire encompassed various elements of marketing capabilities as well as the firm's performance that the managers were asked to measure. The survey questionnaire was borrowed from previous studies and adapted to fit the current setting.

The survey instrument was developed in English and translated into the local language followed by a back-translation (English-Kinyarwanda-English). The questionnaires were administered using the drop-off and collection method. Before the final survey, the questionnaire was pre-tested and the pilot study conducted to a sample of 17 small and medium manufacturing companies to assess the psychometric properties of the measures so that each item in a scale associated with the remaining items (Babbie & Mouton, 2002). After performing the pilot study, the resulting Cronbach's alpha was 0.906 (see Appendices Table 4) high then the cut-off of 0.7 (Hair *et al.*, 2010).

All respondents, of which there were 244 in this study, were asked to answer questions using a five-point Likert scale. They were asked to rate the level of marketing capabilities and firm performance over three years when compared with their most important competitors. After pre-testing, all the three constructs were measured by twenty-four-items with five-point rating scales ranging from (1) Very low (5) Very high to capture the perceived marketing and performance levels compared to competitors over the past three years. Out of 17 items, 12 were adapted from Vorhies & Morgan (2005) (marketing capabilities) and six of the seven items related to performance were borrowed from Kasema (2019a); while the remaining ones were self-developed. The measures were constructed so that the individual items refer to various necessary and related areas of the unobserved construct (Cohen *et al.,* 1990).

Data Analysis Technique

The collected data were analysed using Structural equation modelling (SEM) approach with two statistical software tools, namely, the Statistical Package for Social Sciences (SPSS) version 25.0 and the Analysis of Moment Structures (AMOS). Referred to as structural equation modelling, SEM is a second-generation technique used to overcome the weaknesses of first-generation methods that simultaneously estimate the multiple regression equation in a single framework, i.e. it tests the relationships between observed and latent variables (Pervan *et al.,* 2018). The technique enables researchers to incorporate unobservable variables measured indirectly by indicator variables (Hair *et al.,* 2017b).

Results and Discussion

Preliminary Results

There exist some assumptions before conducting SEM including but not limited to the sample size, data normality, data outliers and multi-collinearity.

The *size of the sample* influences the ability of the model to be estimated correctly, as well as the specification error to be identified. As the Maximum Likelihood Estimation (MLE) technique is one of the most commonly used to perform SEM fittingly, Ding *et al.,* (1995) endorse a minimum sample size ranging between 100 and 150 respondents. Besides, a subject to the variable ratio of 5:1 or 10:1 is often used as a standard sample size that would make the obtained fit significant. Therefore, the sample size of 244 for this model fits well with the recommendation of Kline, 2015 and Ding *et al.,* 1995. Another important issue that has to be checked in conducting SEM is the presence of outliers.

A common approach to the detection of an outlier is to calculate the squared Mahalanobis distance, which measures the distance in standard deviation units between a set of scores for one case/respondents and the sample means for all the variables, i.e. centroid (Byrne, 2016). It was found that outlies were not part of the entire population identified (Hair *et al.*, 2006). An additional important issue that must be checked before running SEM is that the data show a *multivariate normal distribution*. The results obtained for the data normality showed that there is no deviation from normality.

The presence of *multicollinearity* causes a problem in SEM because the results of some tests may be biased. The usual practice is to compute bivariate correlation or to run the multiple regression and inspect values of tolerance and variance inflation factor (VIF). VIF values for all the variables in the model as reported in Appendices Table 5 are far below the critical level of 10 but greater than 1; confirming that there is no evidence of multicollinearity in the analysed data (Everrit, 2004).

Finally, in assessing the structural equation model, the reliability and validity of the measurement model must be examined. Item (construct) reliability can be assessed by factor loadings (Cronbach's Alpha) values. According to Azwa *et al.,* 2016, the individual item reliabilities use ladings of the item into their respective constructs, and on their standardized from, loadings should be greater than 0.7 (Hair *et al.,* 2010). The result showed that all the items had satisfying loadings that were close to or higher than the desirable level. Besides, the construct's reliability can be assessed by Cronbach's Alpha that analysed the consistency of the overall respondents in answering the items of a particular contract. The value of this indicator should generally be larger than 0.6 (Azwa *et al.,* 2016; Teo *et al.,* 2013). In this study, these values were 0.825, 0.744 and 0.972 respectively for innovation capability, brand capability and performance as reported in Appendices Table 6 confirm, therefore, the reliability of the measurement model.

As per the validity of the measurement model, convergent and discriminant validity were used. Convergent validity was evaluated according to Ylinen & Gullkvist (2014) by examining the composite reliability (CR) and average variance extracted (AVE) for which results are reported in Appendices Table 6. While CR indicates the consistency of the constructs, AVE measures the amount of variance attributed to the construct relative to the amount due to measurement error (Azwa *et al.,* 2016). Both the CR values for this study (0.772; 0.766 and 0.792) and the AVE (0.612; 0.609 and 0.669) were higher than the minimum threshold of 0.7 (CR) and 0.6 (AVE) (Hox & Bechger, 2012; Teo *et al.,* 2013; Ylinen & Gullkvist, 2014). So, the convergent validity for the measurement model was positively assessed and established. On the other side, the discriminant validity for each construct was obtained by comparing the squared correlations between latent variables and the average variance extracted (AVE) scores for each of the pairwise constructs. For adequate discriminant validity, AVE should be larger than the squared correlation (Hair *et al.*, 2014). Since this condition was fulfilled for all three of the observed relationships (as reported in Appendices Table 6), it was concluded that the discriminant validity for the constructs had also been obtained. The assessment of the structural model is presented in the following sections.

When profiling the participants and their businesses, it was found that the sector is a male-dominated one (61%) with most of the actors having a secondary level of education (47%) falling into middle adulthood aged between 40 and 59. As per business age, most surveyed companies fall between 4-9 years old representing almost half of total surveyed businesses mostly operating into food, beverage and tobacco sub-sector with 47%.

Exploratory Factor Analysis (EFA)

In this research study, a conceptual model was developed with constructs and indicators variables from different theories, empirical literature and expertise view without data. Therefore, EFA was used as a diagnostic tool to assess whether the collected data are in line with the theoretically expected structure of construct used and determine if the measures used measured what they were intended to measure. So, the EFA was conducted using Principal Component Analysis (PCA) and orthogonal method with VARIMAX rotation to evaluate the underlying dimensions of the three latent variables and later to identify the number of components and factors emerging in the survey questionnaire. Indeed, principal components with Eigenvalues greater than one are usually retained. According to Leech *et al.*, (2005) the assumptions for PCA include:

Sample size: a minimum sample size of 100 subjects is acceptable, the final sample was 210 in this study. Normality: PCA is robust to the assumption of normality. *The normality* of the data was assumed by using the Kolmogorov-Smirnov test (significance value was greater than 0.05). *Sampling adequacy:* Bartlett's Test of Sphericity (BTS) and the Kaiser-Meyer-Olkin (KMO) measure the sampling adequacy and can be used to determine the factorability of the matrix as a whole. If Bartlett's Test of Sphericity is large and significant and if the KMO is greater than 0.6 then factorability is assumed. The KMO measure of sampling adequacy is an index used to examine the appropriateness of factor analysis. Higher values (between 0.5 and 1.0) indicate factor analysis is appropriate (Leech *et al.*, 2005). The results from Table 7 in Appendices the KMO (0.881) and BTS 2.66 and the level of significance at p=0.00) indicated that data were appropriate for PCA. The result of the KMO measure of sampling adequacy was 0.881 which indicated that three are sufficient items for each factor. Therefore, the two tests supported the appropriateness of the PCA technique.

Application of Structural Equation Modelling (SEM) Approach on Firm Performance Research Model

The structural equation modelling (SEM) is widely applied in different areas of Economics, Business, Marketing, ICT and Management. However, regardless of the area of the application of SEM, practitioners and theorists agree upon five steps involved in testing SEM: model specification, identification, estimation, evaluation and (if needed) modification (Teo *et al.*, 2013).

Model Specification

In this step of specifying the model, the relationship between the observed and latent variables are specified by researchers and are represented by parameters or paths. Three types of parameters are being specified: directional effects, variances, and covariance. The directional

effects in the structural model presented in Figure 2 are eighteen-factor loadings and two path coefficients. Variances are estimated for indicator error related to the 24 manifest variables, error related to the unobserved endogenous variable (performance) and two unobserved exogenous variables (branding and innovation). There is one covariance) non-directional relation between independent latent variables) in the analyzed model. The results of the estimated model are graphically presented in Appendices Figure 2. To facilitate the interpretation of the parameters, the parameter estimates are presented in their standardized form.

Model Identification

At this stage, the concern is whether a unique value for each free parameter can be obtained from the observed data. Shumacker & Lomax (2004) indicated that three identification types are possible. Indeed, structural models can be over identified, under-identified or just-identified, depending on whether the number of the parameters to be estimated is lower, higher or equal to the number of data points (variances and covariances of the observed variables). Since only the over-identified model is of scientific use, it is important in SEM to specify the model in a manner that encounters the criterion of over-identification (Pervan *et al.*, 2018). As illustrated in figure 2 there are 50 parameters in the model. On the other side, the application of the formula $p(p+1)/2$, where p stands for the number of manifest variables, revealed the total of (24*25)/2 = 300 data points. Therefore, the analysed model is over-identified with 240◦ of freedom.

Model Estimation

Using SPPSS and AMOS version 25.0 the model was estimated through the Maximum Likelihood procedure. Indeed, the MLE technique is suitable for data that present a multivariate normal distribution, which was confirmed to be the case for data in this sample. In assessing the parameter estimates Byrne (2015) recommended to pay more attention to the following three features: feasibility of parameter estimates, appropriateness of standard errors, and statistical significance. As per parameter estimates, the findings revealed that all parameter estimates showed a correction and size, and are consistent with the underlying theory. Standard errors are also of great importance in model estimation. The standardized values of the estimates as reported in Table 2 are similar to the standardised *B* weights and standardized betas in the regression analysis. The table reported also the critical ration (C.R) which stands for z-statistics in testing that the estimated standardized values of estimates, as well as the critical values for all parameters included in the analyzed model.

Certainly, the alternative hypothesis was that "there is a positive effect…" and parameter estimates were used to produce the estimated population covariance matrix for the structural model. The covariance matrix among the constructs was applied to test the model. When the critical ratio (C.R or t-value) is higher than 1.96 for an estimate (regression weight), then the parameter coefficient value is statistically significant at the 0.05 levels (Hair *et al.*, 2006). The critical ratio or t-value was obtained by dividing the regression weight estimate by the estimate of its standard error (S.E). Hox & Bechger (2014) contended that any relationship which will result in a critical ratio greater than 1.96 is considered statistically significant. Using the path estimates and C.R values, two causal paths were examined in this research study. For all causal paths estimates, t-values were above the 1.96 critical values (11.8 and 7.806 respectively) at the

significant level p ≤.05. It was also found that branding capability was the most critical (*β= 0.765)* in boosting firm performance.

Table 2. Regression Estimates of the Latent Constructs

Construct	Hypo theses	Relationship (Positive)	Standardized Regression weights (*β*)	C.R	Support
Innovation-Marketing Capabilities	H01	*IMC →FP*	0.749	11.88	Supported
Brand-Marketing capabilities	H02	*BMC → FP*	*0.765*	*7.80*	Supported

Source: Researcher's compilation based on AMOS output, 2019

Model Evaluation

The main task of model fit is to provide information about the degree to which the model fits the data. One of the measures to look at is the overall chi-square ($\chi 2$), which indicates whether the observed and implied variance-covariance matrices differ (Teo *et al.,* 2013) or not. A statistically no-significant value of this measure is an indicator of a good model. However, as worried by Byrne (2016), this index has proven to be unrealistic in most SEM empirical research, therefore, it must be considered in combination with the indices of model fit.

Table 3: Structural Model Assessment of Goodness of Fit Indices

	Absolute Fit Indices (AFI)					**Incremental Fit Indices (IFI)**		**Parsimony Fit Indices (PFI)**
	$\chi 2$	df	$\chi 2$ /df	GFI	RMSEA	TLI	CFI	AGFI
Criteria	≥ 0.05	21	>1<3	≥ 0.90	≤ 0.06	≥ 0.90	≥ 0.90	≥ 0.90
Source	Byrne 2016		Gefen *et al.,* 2000	Rehman *et al.,* 2015	Hu and Bentler 1999	Lei & Wu, 2007	Lei and Wu, 2007	Hair *et al.,* 1998
This Research	0.000		2.356	0.966	0.053	0.968	0.954	0.937

Note: $\chi 2$ = Chi-Square ; df =Degree of Freedom; GFI= Goodness of Fit Index; RMSEA= Root Mean Square Error of Approximation; CFI=Comparative Fit Index, AGFI= Adjusted Goodness of Fit Index; TLI = Tucker Lewis Index; F= Fail; P=Pass

Source: Researcher's compilation based on AMOS output, 2019

The fit indices reported in Table 3 indicated that the hypothesized structural model provided a good fit to the data. Although the likelihood ratio chi-square ($\chi 2 = 51.788$; df = 22; p = .000) was significant (p <.001) indicating an inappropriate fit; other fit measures showed that the model adequately fit the observed data. Moreover, the absolute fit measures i.e. GFI and RMSEA were 0.966 and 0.053 respectively indicating a good fit of model. The increment fit measures i.e. TLI and CFI were 0.968 and 0.954 respectively which were above the minimum requirement, showing adequate fit and the parsimony fit measure i.e. AGFI was 0.937 which also was above

the cut-off point of > 0.9. Further to these indices, the $\chi 2/$ df = 2.35 was within the threshold level i.e. 1.0 < x2 / df < 3.0) supporting these findings.

Discussion of Results

The hypothesised structural model was assessed using regression estimate and critical ratio. As result, the findings of this study strongly supported the hypothesised relationships proposed in the model; in particular, the results revealed that innovation capabilities and branding capabilities lead to firm performance over time. This suggested the existence of a positive and significant effect of marketing capabilities on firm performance. Therefore, the results of this research are consistent with the DCT and with those of prior research. These findings evidenced the provision of Dynamic capability theory, which emphasises on firm's ability to innovate and reconfigure the resources to cope with changes in the market (Wang & Ahmad, 2007), to deal with the rapid changes within the environment which makes some resources obsoletes as firms are regularly adjusting to meet up with changes in the market (Eisenhardt & Martin 2000). Theoretically, these results suggested that firm performance is improved through the distinctive way of allocation, coordination, and utilisation of resources and these attributes are derived from the dynamic capabilities.

The results implied further that marketing capability proxy as innovation-marketing and brand-marketing capabilities was a strong determinant of firm performance confirming thus the extant literature about marketing capabilities-performance nexus in favor of positive effect such as Atalay *et al.,* 2103; Abimbola & Vallaster 2007; Hulland *et al.*, 2007; Harram & Fozia 2015; Hooley *et al.*, 2005; Guoa *et al.*, 2018; O'Cass & Siahtiri 2015; Saleh, 2015; Weerawardena *et al*., 2006; Wong & Merrielees, 2008. It can reasonably be suggested that the level of innovation –marketing capability can assist manufacturers to cope not only with production cost but also and mostly with the quality of goods that can compete with imported ones.

Conclusion and Recommendations

Conclusion

The study main objective was to determine the impact of marketing capabilities and firm performance in the Rwanda manufacturing sector. More specifically, this study sought to determine the (i) impact of innovation-marketing capability and (ii) the impact of brand-marketing capability on firm performance in the Rwandan manufacturing sector. The study adopted a cross-sectional explanatory survey design due to the time strategy of data collection, analytical method of data and the survey strategy nature of the study. To collect data for this study, a survey questionnaire was developed and pre-tested. Data were analysed using Structural Equation Modelling (SEM) approach. Data were inspected for the presence of outliers, multivariate normality, and multi-collinearity, while reliability and validity were assessed by Cronbach's alpha, convergent and discriminant validity were also tested. After testing all the statistical assumptions, the standardised regression weights *(β)* and critical ratio (C.R) indicated that the hypothesis structural model provided a good fit to the data and that all hypotheses were accepted. More specifically, the results revealed that a firm's innovation-marketing capability and brand-marketing capability both influence firm performance. Moreover, brand-marketing

capability was proven to play, the most important role in determining a firm's performance among the surveyed firms. Therefore, the possibility of SMEs to grow depends highly upon their level of capabilities that allow striving in a competitive environment. Finally, the paper addressed the knowledge gap by investigating how specific marketing capability can effect a firm's performance. This study made a substantial contribution to the advancement of knowledge in marketing literature. It built on the DCT from strategic management, the paper developed a theoretical framework that associates a firm's innovation-marketing capability and brand-marketing capability with performance of small and medium manufacturing firms.

Limitations

Methodologically, the data collected for this study was cross-sectional; it would be difficult to contend that the accuracy of these findings will not vary over time because of the nature of a cross-sectional design. Besides, the study used self-reported (subjective) data to test the model. Although considerable efforts were made to ensure data quality during both data collection and data construct validation phases, the potential of survey biases cannot be excluded. Despite these limitations, however, steps were followed to mitigate them as evidenced by the results confirming that all the statements successfully passed the benchmark reliability and validity values.

Recommendations

For Policymakers and Managers

Furthermore, these findings offer suggestions that are beneficial to policymakers for addressing the sector constraints that affect the competitiveness of Rwanda's manufacturing sector against competitor countries. Managers should pay attention to marketing capabilities with a focus on brand-marketing capability. It is expected that by adapting these two components of marketing capability, SMEs operating in the Rwanda manufacturing sector could achieve superior performance.

For Future Research

Methodologically, logical expansion of this study would be to follow a combination of quantitative and qualitative methods for empirical testing to unpack how successful firms in the manufacturing sector execute marketing capabilities as a process. Secondly, the study was cross-sectional in nature, the use of longitudinal data and comparisons with this study would provide further insight that would assist in generalising knowledge on the marketing-performance nexus. Besides, in this study to collect data the researcher focused on the view of a single respondent within each firm, the marketing manager. Hence, a future empirical examination should emphasis multiple informants' views for inter-rater validity and to improve the internal validity of this kind of study. This study has recommended also that future research applying the study method in other destinations to be conducted for the generalisation of the model.

References

Acikdilli, G. (2013). The effect of marketing capabilities and export market orientation on export Performance. *Interdisciplinary Journal of Contemporary Research in Business*. *5*(6).

Aaker, D.A. and Jacobson, R. (1994). The financial information content of perceived quality. *Journal of Marketing Research, 31*(2), 191-201.

Abimbola, T and Vallaster, C. (2007). Brand, organizational identity and reputation in SMEs: an overview. *Quantitative Market Research, 10*(4), 341-348

Abimbola, T. (2001). Branding as a competitive strategy for demand management in SMEs. *Journal of Research in Marketing and Entrepreneurship*, *3*(2). 97-106

Adel Saleh, A. (2015). The role of marketing capabilities in firm's success. *International Journal of Management Science and Business Administration*, 2(1), 56-65

Amin, M. E. (2005). *Social science research: conception, methodology and analysis.* Makerere University Printery, Kampala. 459pp.

Azwa A. Nabila, S. and Kalsom A. W. (2016). The Relationship between Corporate Entrepreneurship and Firm Performance: Evidence from Malaysian Large Companies. *International Journal of Business and Society. 17*,59-80

Byrne, B. M. (2016). *Structural Equation Modelling With AMOS: Basic Concepts, Applications, and Programming* (3rd Ed.). New York: Routledge.

Berthon. P., Ewing, M. and Napoli, J. (2008). Brand management in small to medium-sized enterprises. *Journal of Small Business Management, 16*(1), 27-45

Cohen, L., Manion, L. and Morrison, K. (2000). *Research methods in Education*. 5th ed, London: RoutledgeFalmer

Cooper, D.R., and Schindler, P.S. (2011). *Business Research Methods* (11th edn). McGraw-Hill. New York. 761pp

Cooper D.R. and Schindler P. (2014). *Business research methods*, 12th edition. McGraw-Hill/Irwin. USA.

Day, G. (1994). The capabilities of market driven organizations. *Journal of Marketing*, *58*(4), 37 61.

Dutta, S., Narasimhan, O. and Rajiv, S. (1999). Success in high-technology markets: Is marketing capability critical? *Marketing Science, 18*(4), 547-568

Eisenhardt, K and Martin, J. (2000). Dynamic capabilities: What are they? *Strategic Management Journal, 21*(10-11).

Eniola, A.A. &Ektebang, H. (2014). SME firms' performance in Nigeria: Competitive and its impact. *International journal of Research Studies in Management*, 3(2), 75-86.

Gefen, David, Detmar Straub, and Marie-Claude Boudreau (2000). Structural Equation Modeling and Regression: Guidelines for Research Practice. *Communications of the Association for Information Systems 4*, 1–70.

Guoa H, Xub H. Tangc C., Liu-Thompkinsc, Y Guod Z and Donge B (2018). Comparing the impact of different marketing capabilities: empirical evidence form B2B firms in China. *Journal of Business Research* (2018), https://doi.org/10.1016/j.jbusres.2018.04.010

Hair, J.F., Black, W.C, Babin, B.J., Anderson, R.E and Tatham, R.L. (2006). *Multivariate data analysis*. Upper Saddle River, NJ: Pearson Prentice Hall.

Hair, J.F, Anderson, R.E., Tatham, R.L. and Black, W.C. (1998). *Multivariate data analysis*, (5th Edition). Upper Saddle River, N.J: Prentice Hall.

Hair, J. F., Hult, G. T. M., Ringle, C. M. and Sarstedt, M. (2017b). *A primer on partial least squares structural equation modelling (PLS-SEM)* (2nd ed.). Thousand Oaks, CA: Sage.

Han, J., Kim, N. and Srivastava, R. (1998). Market orientation and organizational performance: Is innovation the missing link? *Journal of Marketing, 62*(1), 30-45.

Harram A. and Fozia M. (2015). Customer orientated marketing capability and firm performance mediated by new product development capabilities and moderated by environmental turbulence. *International Journal of Economic and Management Science*. *4*(9).

Hooley, C., Greenley, G., Cadogan, J and Fahy, J. (2005). The performance impact of marketing Resources. *Journal of Business Research*, *58*(1), 18-27

Hox, J.J. and Bechger, T.M. (2012). An introduction to structural equation modelling. *Family Science Review*. *11*(2), 354-373.

Hu, L and Bentler, P. (1999). Cut-off criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modelling. 6*, 1-55.

Hulland, J., Business, R.I.S. (2017). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strateg. Manag. J. 20*, 195–204.

Hult, G., Hurley, R. and Knight, G. (2004). Innovativeness: It is antecedents and impacts on business performance. *Industrial Marketing Management*, *33*, 429-438

Kasema R. (2019a). The effect of innovation capabilities on firm performance of small and medium manufacturing companies in Rwanda. *Lambert Publishing House*.

Keller, K.L. (1993). Conceptualizing, measuring and managing customer-based brand equity. *Journal of Marketing, 57*(1), 1-22

Kline, R.B. (2011). *Principles and Practice of structural equation modeling,* 3rd ed. New York: Guilford Press, pp. 1–427.

Leonidou, L.C, Katsikeas, C.S. and Samiee, S. (2002). Marketing strategy determinants of export performance: A meta-analysis. *Journal of Business Research*, *55*(1), 51-67.

Lim, J.S., Sharkey, T. and Heinrichs, J. (2006). Strategy impact of new product development on export involvement. *European Journal of Marketing, 40*(1/2), 44-60.

Makadok, R. (2001). Toward a synthesis of the resource-based view and dynamic capability views of rent creation. *Strategic Management Journal. 22*(5), 387–401.

Mahoney, J. T and Pandian, J. R. (1992). The resource-based view within the conversation of strategic management. *Strategic Management Journal*. 13(5), 363-380.

McQuiston, D. (2004). Successful branding of a commodity product: The case of RAEX LASER steel. *Industrial Marketing Management, 33*, 345-354

MINICOM (Ministry of Trade and Industry) (2017). Made in Rwanda Policy. Kigali: Government of Rwanda.

Mitchell, P., King, J and Reast, J. (2001). Brand values related to industrial products. *Industrial Marketing Management*, *30*, 415-425

Morgan, N.A., Slotegraaf, R., J. and Vorhies, D.W. (2009). Linking marketing capabilities with profit growth. *Intern.J.of Research in Marketing*, *26*, 284-293

Murray, J.Y., Gao, G.Y. and Kotabe, M. (2011). Market orientation and performance of export ventures: the process through marketing capabilities and competitive advantage. *Journal of the Academy of Marketing Science*, *39*(2), 252– 269.

Netemeyer, R. G., Krishnan, B., Pulling, C., Wang, G., Yagci, M and Dean. D. (2004). Developing and validating measures of facets of customer-based brand equity. *Journal of Business Research, 65*(3), 1-16

O'Cass, A., Ngo, L. V. and Siahtiri (2015). Marketing resources-capability complementarity and firm performance in B2B firms. *Journal of Business and Industrial Marketing,* 30(2), 194-207.

OECD (2005). Oslo manual: Proposed Guidelines for Collecting and Interpreting Technological Innovation Data. Paris.

Pervan, M., Curak M., Kramaric, T. P. (2018). The Influence of Industry Characteristics and Dynamic Capabilities on firm's Profitability. *International Journal of Financial Studies*. *6*(4), 1-19

Rode, V. and Vallaster, C. (2005). Corporate branding for start-up: the crucial role of entrepreneurs. *Corporate Reputation Review*, *8*(2), 121-135

Teece, D.J., Pisano, G. and Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 19(7), 509-533.

Teece, D. (2007). Explicating Dynamic Capabilities: The Nature and Micro foundations of (Sustainable) Enterprise Performance. *Strategic Management Journal*. *28*, 1319-50.

Teece, D. (2014). The Foundations of Enterprise Performance: Dynamic and Ordinary Capabilities in an (Economic) Theory of Firms. *The Academy of Management Perspectives*. *28*, 328-52

Teece, D. (2017). Business models and dynamic capabilities. *Long Range Planning*. 1-10.

Teece, D.J. and Pisano, G. (1994). The dynamic capabilities of the firms: An introduction. *Industrial and Corporate Change. 3*, 541-44.

Teo, T., Liang TT. And Yang C.C. (2013). Applying structural equation modelling (SEM) in educational research: An Introduction. Application of Structural Equation Modelling in Education Research and practice. Edited by Myint Swe Khine. Rotterdam: Sense Publishers, pp. 3–21

Salisu B., Julienti L.A, and Huda, S. A. (2017). The influence of marketing capability on firm performance: an empirical evidence from Nigeria. *European Journal of Business and Management, 9*(32).

Song, Z.H. (2015). Organizational learning, absorptive capacity, imitations and innovation: empirical analyses of 115 firm across China. *Chinese Management Studies,* 9(1), 97-113

Schumacker, R.E., and Lomax, R.G (2004). *A beginner's guide to structural equation modelling*. New jersey: Lawrence Erlbaum Associates.

Wang, C.L. and Ahmed P.K. (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews*. *9*, 31-51

Wang, C. L., Chaminda S., and Rafiq M. (2015). Success, Traps, Dynamic Capabilities and Firm Performance. *British Journal of Management*. *26*(44).

Weerawardena, J., O'Cass, A. and Julian, C. (2006). Does industry matter? Examining the role of industry structure and organizational learning in innovation and brand performance. *Journal of Business Research, 59*(1), 37-45

Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal*. *4*, 171-80.

Wong, H and Merrilees, B. (2005). A brand orientation typology for SME: A case research approach.*Journal of Product and Brand Management, 14*(3), 155-162

Wong, H and Merrilees, B. (2008). The performance benefits of being brand-oriented. *Journal of Product and Brand Management, 17*(6), 372-383

Varadarajan, P. and Jayachandran, S. (1999). Marketing strategy: An assessment of the state of the field and outlook. *Journal of the Academy of Marketing Sciences, 24*(2), 120-143

Vorhies, D. and Morgan, N. (2005). A roadmap for branding in industrial markets. *Journal of Brand Management, 11*, 388-402

Vorhies, D. (1998). An investigation of the factors leading to the deployment of marketing capabilities and organizational effectiveness. *Journal of Strategic Marketing*, *6*(1), 3-23

Zhang, C., Cavusgil, S.T. and Roath, A.S. 2003). Manufacturing governance of foreign distributor relationship: Do relational norms enhance competitiveness in the export market? *Journal of International Business Studies*, *34*(6), 550–566.

Zikmund, W., Quinlan, C., Babin, B., Carr, J. and Griffin, M. (2015). *Business research methods* (1rst edn.). Southwestern, Cengage Learning, Cincinnati Ohio. 704pp.

Zott, C. (2003). Dynamic Capabilities and the Emergence of Intraindustry Differential Firm Performance: Insights from a simulation study. *Strategic Management Journal*. *24*, 97-125.

APPENDICES

Table 4. Cronbach's Alpha of the Pilot Study.

Reliability Statistics

Cronbach's Alpha	N of Items
.906	24

Table 5. Multi-collinearity

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.162	.110		.597	.141		
	Mkcap	.791	.049	.821	36.014	.000	.660	1.054

a. Dependent Variable: Performance

Table 6. Reliability and Convergent Validity

Construct	**Cronbach's Alpha**	**Composite Reliability (CR)**	**Average Variance Extracted (AVE)**
InC	0.825	0.772	0.612
BrC	0.744	0.766	0.609
FmP	0.972	0.792	0.669

Table 7. KMO and BTS

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.881
Bartlett's Test of Sphericity	Approx. Chi-Square	2666.315
	df	276
	Sig.	.000

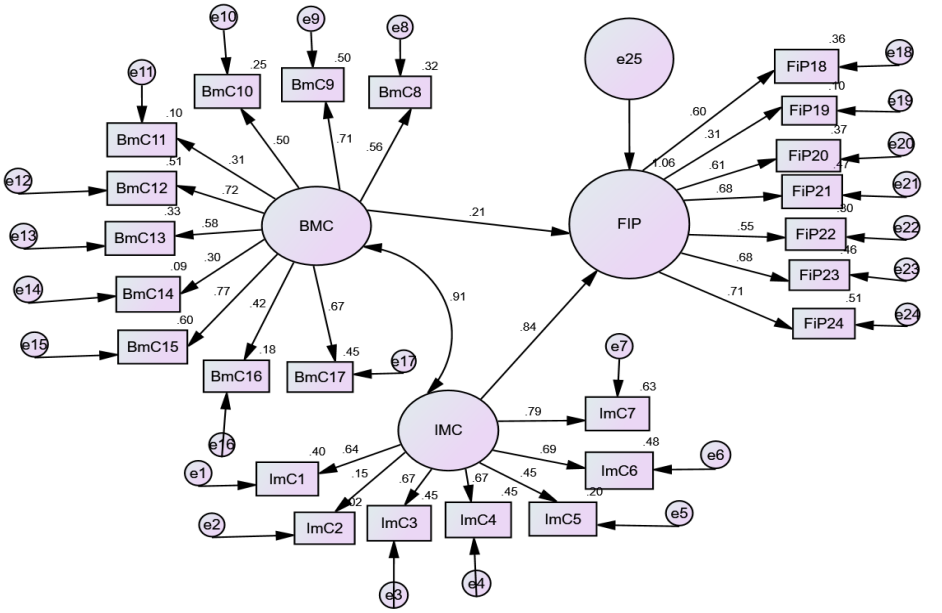


Figure 2. Structural Performance Model- standardized Estimate