Research Paper

Knowledge Management and Marketing Innovation Impact on Manufacturing Firms Performance in Ethiopia

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ABSTRACT

The study aims to examine the joint impact of knowledge management and marketing innovation on manufacturing companies' performance in Bahir-Dar, Ethiopia. The study employed a quantitative research approach and an explanatory research design. Stratified and simple random sampling techniques were used to pick a sample of 341 respondents from 20 firms based on the Krejcie and Morgan table formula. Structural equation modeling and AMOS software version 23 were used to analyze the data. The founding shows knowledge management has a direct impact on manufacturing firm performance. The study also revealed marketing innovation has a positive direct impact on business performance. Although, marketing innovation has a positive and significant effect on manufacturing firm performance managers should have to focus more on knowledge management strategy since, it boosts firm performance more in relative.

Keywords: Knowledge management, marketing innovation, firm performance and Ethiopia.

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1. INTRODUCTION

Effective knowledge management in terms of organizational memory, information absorption, knowledge sharing, and knowledge receptivity improves an organization's ability to organize new goods, services, and administrative structures, resulting in greater unique outcomes (Liu et al., 2017; Rahman et al., 2018). Knowledge is recognized as a key economic resource associated so organizations have to be compelled to possess the right knowledge within the required kind and content underneath all circumstances thus on accomplish success, Brimah et al., (2020). Knowledge is now acknowledged as a resource on par with other economic resources, Wamitu (2016), and managing it could provide a competitive advantage (Kianto et al., 2018, Omotayo, et al., 2015). As a result, knowledge management, like other resources, is one of the most powerful assets for the growth of companies and the development of a country's economy.

Although knowledge management systems are important enablers of business processes in industries, they also serve as a link between the performance of industries and the performance of enterprises. However, the prior study revealed that the status of knowledge management systems in the Ethiopian industry is low, with only a few knowledge management systems available, Zeleke et al., (2018). In addition, the efforts made so far in the field in terms of clarifying concepts and responding to various situations are insufficient in our country, Mesay et al., (2018). Even, both management and employees are unable to clearly articulate the value and contribution of knowledge management in any business or non-profit organization, Tadesse (2020).

By examining 29 published papers, Al Rashdi, et al. (2019) identified limitations such as a lack of studies, particularly in developing countries, a lack of cause-and-effect analysis, less sample size (less than 200) which does not meet the role of thumb for using AMOS or PLS and excessive use of SPSS software as the data analysis technique rather than SEM software such as AMOS, PLS, and LISREL focused on the impact of knowledge management on organizational performance. Finally, they recommended for future studies to increase the sample size and use more frequently structural equation modeling (SEM).

Moreover, even though several empirical studies have demonstrated the importance of knowledge management in improving organizational performance, there are no consistent findings regarding knowledge management's effects on organizational performance (Al Rashdi, et al., 2019), with some findings being significantly positive, others significantly negative, and others not significantly positive, AL -L. Hakim et al (2012). Apart from mixed results, there are also contradictory studies that claim that knowledge management alone cannot improve firm performance unless it is combined with mediation variables, most notably innovation variables, Byukusenge et al., (2016); Nawab et al., (2015); Alrubaiee et al., (2015) Mafabi et al. (2012), Eugenie et al., (2017).

In addition, Wibowo et al., (2021) found that while the indirect influence of knowledge management on company performance via innovation was considerable, the direct impact was not, which contradicted Puryantini's (2018) findings. In addition, Mardani et al., (2018); Lopez-Cabarcos et al., (2019) found direct and indirect significant impacts between knowledge management and organizational performance. Mmeanwhile, Samir (2020); Aliyu (2016), Ferraris, et al., (2019), Shrafat (2018), Alaarj et al. (2016); Saqib et al. (2017); El-Chaarani & El-Abiad (2020), El Kharraz et al. (2021), Dogan et al. (2020); Gholami et al. (2013), Davila G. et al., (2019) have proved the direct and positive significant between knowledge management and organizational performance. Finally, Davila et al. (2019), called future researchers to prove the discrepancy.

Furthermore, new and emerging variables such as knowledge management have not been adequately investigated, and more research is needed to understand the impact of knowledge management practices and capabilities in developing countries (Obeidat et al., 2016; Alaarj et al., 2017; Bajaj et al., 2018; & Al Rashdi et al., 2019). Similar limitations were also found in the limited empirical research undertaken in Ethiopia, which is explored in length in the literature section. Thus, one of the goals of this research is to look into the impact of knowledge management on the performance of Ethiopian manufacturing firms.

Today's problems can't be solved with yesterday's alternatives, especially in this volatile market. Organizations can't guarantee their long-term viability unless they innovate since the environment is so dynamic, lively, and uncertain, Tidd & Bessant (2018). Firms must embrace innovation as a strategic priority to keep up with today's severe market competition. If knowledge management, market orientation, and performance-related innovation are adopted,

the results are promising and moving in the right direction, Ullah et al., (2019). Businesses must continually develop new products and strategies to remain competitive and improve their performance, Ungerman, et al., (2018). Because marketing is fundamental to value generation, marketing innovation is critical to a company's overall performance. In the manufacturing industry, marketing innovation has been demonstrated to be useful in improving firm performance, Gunday et al., (2011), Bartoloni et al., (2016). Adamua et al., (2020).

With the advent of several smallholder factories, the current operational setup in large and medium manufacturing firms of Ethiopia is dynamic and extremely competitive. The majority of underutilized manufacturing plants do not have a well-defined marketing strategy, Endalew, (2019). These manufacturers must implement competitive strategies to surpass their competitors and maintain their existence and sustainability in the marketplace. The expansion of the manufacturing sector within the industry is critical for the development of national technical capacity, industrial capabilities, and the creation of a diverse range of job opportunities and increased revenue.

Furthermore, the growth of the manufacturing industry contributes to the whole economy's total factor productivity and competitiveness, as well as its trickle-down impact up and down the supply chain. The government of Ethiopia provides several incentives for the expansion of the manufacturing industry due to the country's comparative advantages and to increase its competitiveness. Despite the country's abundance of natural resources, the industrial sector has only contributed around 5% of GDP and has a low overall performance. Recent studies have highlighted a lack of innovation culture and information sharing culture as one of the primary challenges that hinder the performance of manufacturing enterprises in Ethiopia. These may be the outcome of LMEs' poor product and process (technological innovation) practices, Tekeba, (2018) & Zenebech, (2017).

Even though organizations are willing to share information about their needs, most managers avoid collaborating with other businesses. Ethiopian businesses make tiny incremental improvements to improve efficiency and competitiveness. Ethiopian consumers have access to a wide range of imported goods. Many business owners see this as a squandered opportunity for local manufacturing and attempt to manufacture these items on their own. Surprisingly, in such a situation, innovation could be one approach to make better use of resources and procedures while

also competing on the local market with imports. A quality-focused innovation strategy would be a reasonable step forward, Gizaw & Voeten (2018).

Although some scholars have recognized that marketing innovations play a critical role in a firm's overall performance (Bartoloni et al., 2016, Gunday et al., 2011), the mechanism by which market innovations exert such effects is largely unknown, and many arguments about it are yet to be resolved, Tuan et al., (2016), Tang et al., (2021). There is also a scarcity of studies on the sorts of marketing innovations and their consequences in the literature, according to Peng et al., (2021). Only a little amount of study on innovation studies has been done in Ethiopia Zenebech, (2017), Daksa et al. (2018), & Tekeba (2018). No research has been done on the direct influence of marketing innovation on the overall performance of Ethiopian manufacturing enterprises, to the best of the researchers' knowledge.

Consequently, one of the current study's objectives is to establish the direct impact of marketing innovation on the performance of Ethiopian manufacturing firms. Furthermore, while the presence of marketing innovation within a firm in terms of product and process innovation (Tuan et al., 2015; Atalay et al., 2013; Gunday et al., 2011; Ibrahim & Yusheng, 2020) leads to improved corporate overall performance, in most prior researches, innovation was considered a mediating variable alongside knowledge management. While only the study of Lee et al., (2010), investigated the combined influence of knowledge management and marketing innovation strategy on market performance. Thus, further to the space in managerial practices, there's additionally a theoretical hole concerning the joint effect in which this study tries to fill.

Therefore, along with knowledge management, one of the study's unique features is the use of marketing innovation as an independent variable to investigate the direct joint influence of knowledge management and marketing innovation strategy on firm performance. The current study is the primary empirical investigation revealing the joint outcomes of knowledge management and marketing innovation particularly, on the performance of Ethiopian manufacturing firm's environment using SEM and AMOS software as data analysis. This research is divided into seven sections. The first section is an introduction, followed by a survey of the literature, which includes empirical analysis, hypothesis generation, and a conceptual framework. The methodology of this investigation is detailed in the third section. The model fitness is examined in the fourth section, and the findings are presented in the fifth section. The six-section is the discussion and conclusion of the findings. The theoretical, as well as

managerial implications, limitations of the study, and future research, are presented in the final part.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Empirical analysis

Studies on the impact of knowledge management on organizational performance have been reported to focus on contexts other than Ethiopia, particularly manufacturing companies. For example, a study by Genet & Mesfin (2015) focused on the UNDP Ethiopia knowledge sharing architecture, Addis Ababa, a study by Lemlem (2017) focused on the role of knowledge management in enhancing the organizational performance of international NGOs operating in Addis Ababa, Addis Ababa University, Jemal & Zewudie (2021), explored the role of knowledge management practice on the performance in higher education institute at Jimma, and Addis Ababa University, Mesay et al. (2018) investigated Ethiopian Universities' knowledge management strategy.

Mamo (2020) looked into the state of Ethiopia's knowledge management framework, as well as challenges and opportunities in the healthcare sector. Zeleke et al., (2018) looked into the factors and barriers affecting knowledge management systems on organizational performance in Mesfin Industrial Engineering. Mosissa et al., 2017, researched in western Ethiopia to design a knowledge management approach for managing indigenous knowledge of land use and agricultural development. Mitiku et al. (2016) look into a knowledge management technique for sharing and acquiring indigenous knowledge (IK) of traditional healthcare practices in Horro Guduru Wollega zone, Ethiopia. However, no previous research on Ethiopia's manufacturing industry has been conducted.

Similarly, just a few studies on the practice of innovation have been done in the country. (Zenebech, 2017) had examined the innovation practices of Large and Medium Enterprises (LMEs) and also describe factors that affect innovation performance of manufacturing firms found in Ethiopia, Dire Dewa Town & Tekeba (2018), identified challenges and opportunities of Ethiopian Manufacturing Industry, while (Daksa et al., 2018), examined the main determinants of an enterprise's innovation in Ethiopia using a secondary data collected by World Bank. Talegeta (2014) identified the primary barriers to technological innovation for SMEs in Addis

Ababa in his study. Zeleke (2020) investigated the company-level characteristics that determine manufacturing export performance.

2.2 Knowledge management & firm performance

Knowledge management has become a major strategic necessity that organizations require to succeed in the global business atmosphere. Knowledge is one of the most vital assets of all corporate organizations that must be effectively identified, acquired, stored, shared, and implemented in the most profitable way that could achieve sustainable competitive advantage (Sarkindaji et al.,2014). The link between knowledge management and the organizational performance studied by a lot of researchers in different sectors, such as education (Zwain et al., 2012), construction (Abu Bakar & Yusof,2012), small and medium enterprises (Gholami et al., 2013), high tech (Yang et al., 2014; Yang, 2010), telecommunication (Suraj & Ajiferuke, 2013), and supplier relationship (Tseng, 2014) had shown a significant relationship between knowledge management and business performance.

Moreover, Alrubaiee et.al., (2015), El-Chaarani & El-Abiad (2020), El Kharraz et al., (2021), had founded a significant relationship between knowledge management and business performance, particularly between knowledge sharing and financial performance. Dogan et al., (2020) investigated the relationship between innovation, knowledge sharing, and firm performance, and obtained a positive effect of explicit knowledge sharing, and tacit knowledge sharing on firm performance. Furthermore, Samir 2020 investigated the relationship between knowledge management (KM) and the performance of SMEs in Egypt.

The results of the study found that knowledge management (knowledge acquisition, knowledge sharing, and knowledge application) had a statistically significant positive effect on innovativeness, competitive advantage, and customer satisfaction. The same results were also confirmed by Aliyu, (2016), Ferraris et al., (2019), Shrafat, (2018), Alaarj et al., (2016), and Saqib et al., (2017). In addition, Jemal & Zewuie (2021) investigated the impact of knowledge management practices on higher education institute performance in Ethiopia. Their research revealed that knowledge usage has a positive and large impact on college performance, allowing for innovation and the launch of new programs, whereas knowledge sharing has a negative but negligible impact.

Al Rashdi, et al., 2019, evaluated 29 publications published between 2015 and 2018 to provide the state of the art in the field of knowledge management and organizational performance. They

found research limitations such as a paucity of studies, especially in developing countries, and a lack of cause-and-effect analysis or regression analysis focused on the impact of knowledge management on organizational performance. Furthermore, more than 40% of the articles had used SPSS software extensively as a data analysis approach rather than SEM software such as AMOS, PLS, and LISREL, which was also claimed by Khanam et al., (2013). This necessitates the use of SEM as a data analysis technique. The study that was also conducted in Ethiopia in the field of knowledge management and the organizational performance had similar limitations. Thus, the current study proposed the following hypothesis to address this gap:

H1: Knowledge Management by knowledge storage, knowledge sharing, and knowledge absorption features has a positive significant effect on firm performance.

2.3 Marketing innovation and business performance

The search for creative and fresh solutions to challenges and needs is defined as marketing innovation. Businesses must continually develop new products and strategies to remain competitive and improve their performance, Ungerman, et al., (2018). Because marketing is fundamental to value generation, marketing innovation is critical to a company's overall performance. In the manufacturing industry, marketing innovation has been demonstrated to be useful in improving firm performance, Gunday et al., (2011); Bartoloni et al., (2016) and Adamua et al., (2020).

Kamp & Parry (2017) demonstrated in their article that modern inventive marketing has a positive influence on increasing sales and lowering expenses, thereby improving competitiveness. In the context of industry 4.0, Ungerman et al. (2018) also investigated the influence of marketing innovation on firm competitiveness. The study found that businesses believe the largest benefit of innovative marketing in the context of Industry 4.0 is an increase in enterprise competitiveness, which was the highest-ranked impact in the study. Peng et al., (2021) studied the characteristics of marketing innovations, their effects on company performance, and how market environmental factors attenuate those effects. Their findings reveal that both market-driven and market-driving innovations have a major impact on a company's success. Similarly, Mohamed et al. (2017) discover that the effects of product innovation, marketing innovation, and organizational innovation are statistically significant among SMEs in Hargeisa, Somaliland in their paper.

Funsho et al. (2021) looked into strategic marketing innovation and bank performance in Nigeria. Their findings demonstrated a positive and significant association between strategic marketing innovations and bank performance. Similarly, Adamua et al., 2020, researched Nigeria to know the impact of marketing innovation on SMEs' success. Their findings show that marketing innovation tactics have a favorable impact on the efficiency of small and medium businesses. In their paper, Ullah et al. (2019); Ibrahim & Yusheng (2020), found a significant relationship between market innovation, process innovation, and firm performance. This is true, as market innovation and process innovation focus on developing new markets and also seeking to generate additional revenue through market expansion, new customer acquisition, and product differentiation.

The recent findings (Venter & Hayidakis 2021; Koffi et al., 2021, Peng et al., 2021, Tuan et al., 2016, Tang et al., 2021 & Quaye et al., 2019) also have shown how important it is that innovations in marketing will result in the accomplishment of competitive advantage that successively resulted to be profitable. Thus, to stay competitive as well as become profitable, firms should constantly look for ways to be innovative. Although some scholars have recognized that marketing innovations play a critical role in a firm's overall performance because marketing is critical to value generation in various sectors, and it has been found effective for improving firm performance in the manufacturing industry as well (Bartoloni et al., 2016, Gunday et al., 2011), the mechanism by which market innovations exert such effects are largely unknown, and many arguments about it are yet to be resolved, Tuan et al., (2016), Tang et al., (2021).

There is also a scarcity of studies on the sorts of marketing innovations and their consequences in the literature, according to Peng et al., (2021). Meanwhile, existing research from other nations is primarily descriptive, and a more in-depth study is needed to investigate the dimensionality of marketing innovation and its impact, Gunday et al., (2011), Tang et al., (2021). Although some of the studies on organizational innovation practices conducted in Ethiopia were descriptive rather than cause-and-effect investigations, no studies on the impact of marketing innovation strategy on company performance, particularly in manufacturing and other business sectors, have been conducted. Thus, the current study proposed the following hypothesis:

H2: Marketing innovation by process innovation and product innovation features has a positive significant effect on firm performance.

2.4 Knowledge management, marketing innovation and firm performance

The two most important things that influence a company's performance are knowledge management and innovation, Samir (2020). However, there are no consistent conclusions among them, AL-Hakim et al (2012), Al Rashdi, et al., (2019). For example, in the prior studies of Santoro et al., (2018), Wibowo et al., (2021), AL-Hakim et al., (2012), the direct impact of knowledge management on organizational performance were not significant, while the indirect effect through innovation was positive and significant.

Similarly, Nawab et al. (2015) also revealed that knowledge management processes have an indirect significant impact on business performance through innovation in the banking industry, whereas Alrubaiee et al. (2015), Byukusenge et al., (2016) confirmed the same results in telecommunication and information technology industry and SMEs in Rwanda, respectively. Mardani et al., (2018) study examine the quantitative relationship between knowledge management, innovation, and performance. The findings show that knowledge management activities impact innovation and organizational performance directly and indirectly through increased innovation capability. Lopez-Cabarcos et al. (2019), also confirmed the same results in which tacit knowledge impacts firm performance directly, and indirectly through partial mediating of product innovation.

Other scholars, such as Mafabi et al. (2012), Eugenie et al., (2017); López-Nicolás (2011); Yousif Al-Hakim, et al., (2013) revealed a full mediation of innovation between knowledge management and organizational performance of different sectors. However, in the study of Puryantini (2018), knowledge management had no indirect effect on business performance. Even though innovation has a direct impact on firm performance, it was considered a mediating variable in the knowledge management framework in the above literature, with only Lee et al., (2010) exploring the joint impact of knowledge management and marketing innovation strategy on market performance. As a result, the following hypothesis is presented to fill this void:

H3: Both knowledge management and marketing innovation has a direct impact on manufacturing firms' performance in Ethiopia.

2.5 Conceptual framework

It is presently conceivable to foster a general model summing up the theories and mirrors a causal requesting got from the writing evaluated previously. The proposed underlying model directing this exploration is portrayed in Figure 1. It builds on core linkages between study

variables: knowledge management, marketing innovation, and firm performance. As can be found in the figure, we hypothesized knowledge management and marketing innovation as exogenous factors in which they will straightforwardly affect the firm performance (the endogenous variable). Knowledge management is measured by (knowledge absorption, knowledge storage, and knowledge sharing) dimensions while marketing Innovation comprises of two measurements: Processes innovation and Product innovation. Likewise, firm performance as an endogenous variable consists of three dimensions: financial performance, firm innovation performance, and employee performance.
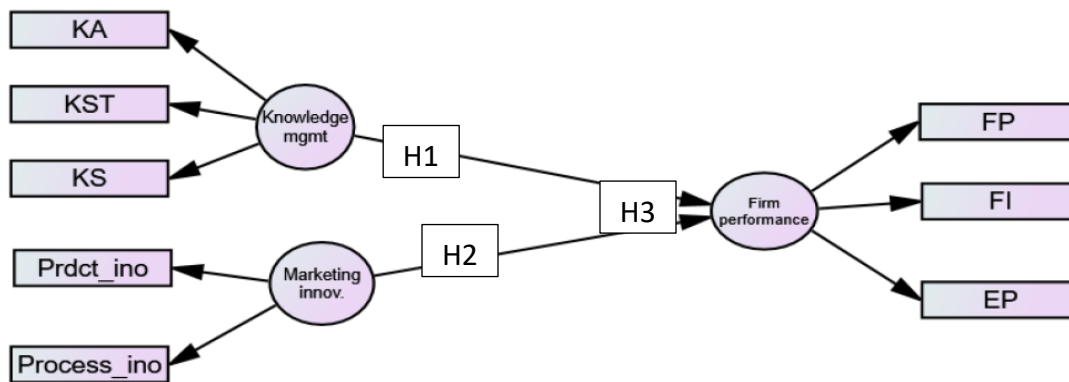

Figure 1. Conceptual Framework

3. METHODOLOGY

3.1 Design, population and sample size

An explanatory and quantitative study technique was used to investigate the relationship between knowledge management, marketing innovation, and firm performance. The explanatory method employed a mixed design strategy, which combines qualitative and quantitative forms (Creswell, 2009), with hypotheses confirmed by the measurement of correlations between variables and statistical analysis of data. Other methods of quantitative research that will attempt to find causal linkages by analyzing correlations between variables were also included (Maxwell, 2012). Because the study was primarily concerned with quantifying a link to discover a cause-effect relationship, the explanatory research design was appropriate.

A study's target population is a group of people drawn from the general population who share common traits and are used to generalize particular industrial phenomena. All business unit

managers, supervisors, departmental personnel, and support staff were included in the target group. In Bahir Dar, Ethiopia, the study selected 24 large and medium-sized governmental manufacturing enterprises with more than three years of experience and more than 50 employees. From the total of 24 LMEs, we excluded 4 organizations and only 20 LMEs have participated in the final sample. The 20 manufacturing enterprises from seven important industrial sub-sectors received from the Bahir City administration and investment bureau will be the sampling frame for this study (2021).

The statistical population included employees from 20 manufacturing companies found in Bahir Dar city. The participants were chosen using proper stratification for the proportion using a multi-stage stratified sampling procedure. In this approach, seven manufacturing sectors (strata) were chosen from a total of 20 manufacturing firms. Using the Krejcie and Morgan (1970) table, a sample of 341 employees was selected from a target population of 3000 employees from 20 organizations. Then, based on the proportion of staff members in each organization, participants were chosen with help of simple random sampling technique.

Textiles, leather & products, Agro-processing, Metal goods, Plastic & products, Construction materials, Electric & electronics products, and Paper & products are among the sub-sectors in which the sample was drawn. These are expected to be significant manufacturing sectors in the city. Employees in each subsector were given survey questionnaires in person after receiving approval from their respective managers, and they were asked to return them within two weeks. A summary of research findings was given to the respondents to encourage a prompt and comprehensive answer, and the promise was kept at the end of the study.

The survey's administration began in the first week of April 2021 and ended in the last week of June 2021. As a result, the survey administration took over three months. A total of 341 structured survey instruments were sent out, with 250 being returned, yielding a response rate of 73.31 percent. Due to inconsistent and inadequate information, 40 were eliminated from further screening. The remaining 210 copies were only utilized for testing.

3.2 Instrument and variable measurement

This study is centered on three dimensions: knowledge management, marketing innovation strategy, and firm performance. Knowledge management, one of the exogenous variables of the study was measured in terms of knowledge storage, knowledge sharing, and knowledge absorption, Darroch (2003); Mafabi et al., (2012). Each item was scored on a five-point Likert

scale with anchors of 1 = 'strongly disagree' and 5= 'strongly agree'. Here, the aim was to ask the respondents to point out the way knowledge is managed in their respective businesses.

The other exogenous variable of the study, marketing innovation strategy was measured in terms of product innovation and process innovation (technological innovation). The items were adopted from the previous study of (Gunday et al., 2011). Each item was scored on a five-point Likert scale with anchors of 1 = 'not implemented' and 5= 'original product innovations were implemented". Firm performance, the endogenous variable of this study was examined in terms of financial performance, firm innovative performance, and employee's performance. The items were adapted from the study of (Tavitiyaman et al., 2012); (Richard et al., 2009). Each item was scored on a five-point Likert scale with anchors of 1 = 'much worse' and 5= 'much better.

3.3 Data analysis

This study used the structural equation modeling technique using the Analysis of Moment Structures (AMOS) version 23 to validate the relationship between the variables and to check the research model. In contrast to regression and analysis of variance (ANOVA), SEM may simultaneously examine many associations between distinct independent and dependent variables in a single run. As a result, to evaluate the acquired data, the structural model was used to check and validate the validity and consistency of constructs, and the measurement model was used to test the hypothesis. To do so, the measurement model was first looked at for instrument validation, and then the structural model was looked at to see whether the relationships expected in the research model could be tested.

4. Measurement model

4.1 The measurement model for exogenous variables

We run a preliminary data test to see if the items met the needed assumption before studying the causal relationships described in the proposed model. As a result, Confirmatory Factor Analysis (CFA) was utilized to measure and test the model's discriminant and convergent validity in this study. Loading objects with a low aspect ratio (less than 0.5) have been removed (Gefen & Straub, 2005). Marketing innovation is measured using the product and process innovation (technological innovation). Each measurement is taken with the help of five different objects. Since its factor loading is less than 0.5, which is 0.33, one item (PI2) from the product innovation variable was removed from the total 10 items used to assess the two-sub scale of marketing innovation. The fit indices of the revised item shown in figure 2 below prove a

suitable fit. However, the $\chi 2=92.386$ is significant as it is depending on others factors. The RMSEA = 0.071<.08, and GFI=.89, AGFI=.84, CFI= 0.91, which indicates as the revised version suits the statistics higher than the initial model.
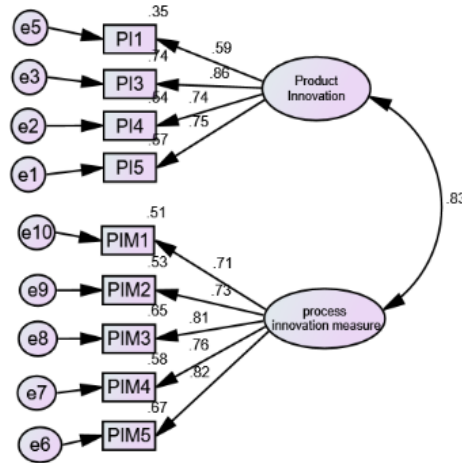

Figure 2. Measurement model for marketing innovation

Knowledge management, the study's other exogenous variable, is assessed using ten items. To assess knowledge storage and absorption, three items were employed. Four items were used to assess knowledge exchange. Based on the exams, we only removed one item from the knowledge sharing variable (KS4) at a time when factor loading was low. The new model, which is represented in Figure 3 below, which consists of 9 elements, matches the data better than the original model. The amended item's fit indices show a satisfactory fit, with 2=73.2907 remaining significant, RMSEA = 061.08, GFI=.9153, and AGFI=.8412.
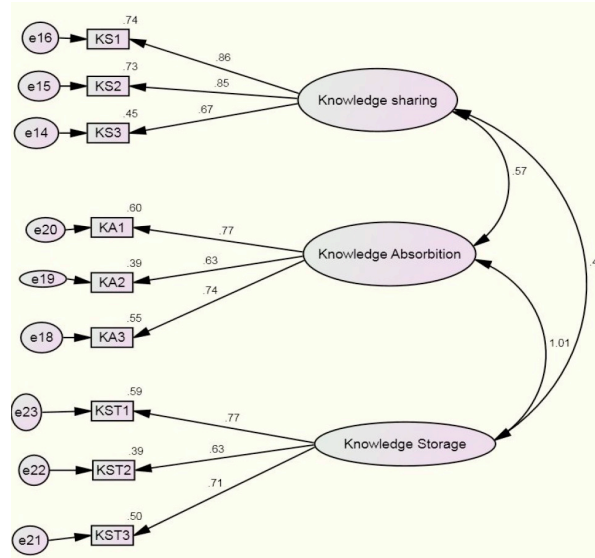
Figure 3. Measurement model for knowledge management

4.2 The measurement model for endogenous variables

The financial performance, firm innovative performance, and employee performance subscales of the firm performance scale have 13 items. All of the reflected indicators have quite high loadings with their relevant construct, according to the initial test findings. This demonstrates that the indicators are accurate indicators of company success and that they have convergent validity. The fit measures model was well-fit, with the RMSEA, AGFI, and P-value all exceeding the intended threshold.
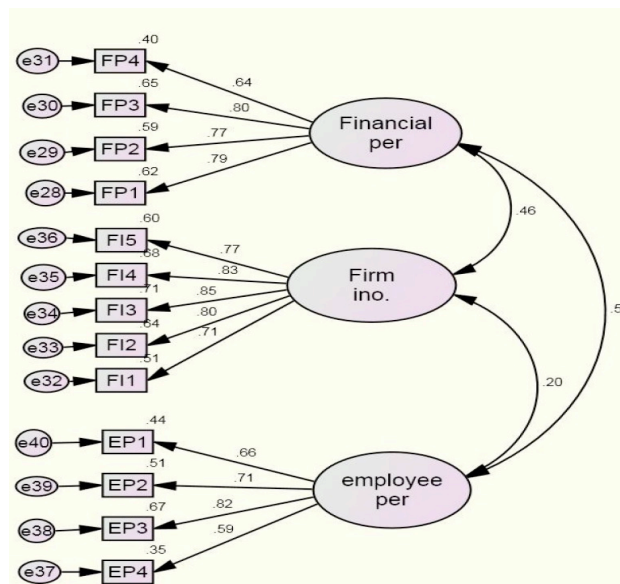

Figure 4. Measurement model for firm performance

4.3 Assessment of reliability and validity

Cronbach alpha coefficient value (α) and composite reliability (CR) were used to check the reliability of the items in each construct. All variables have Cronbach alpha coefficients ranging from 0.894 to 0.733. Nunnally's (1978) threshold value of 0.7 is exceeded. The constructions' composite reliability (CR) ratings are higher than the 0.7 minimal limits (Fornell & Larcker, 1981; Ringle et al., 2015). All of the research constructs' Cronbach alpha coefficients and CR values are greater than the minimum requirements of 0.70, as shown in Table 1. As a result, trustworthiness is formed. To viably evaluate the legitimacy of the estimation model, discriminant and convergent validity was checked. Discriminant validity estimates how many factors that should quantify a particular development are disconnected (Wang and Wang, 2012). Fornell and Larcker's methodology was utilized to test discriminant validity.

Discriminant validity will be proved when each item loads greater strongly on their assigned construct than on the different constructs and the square root of the Average Variance Extracted of every construct is larger than its correlations with the different constructs (Gefen & Straub, 2005). As displayed in Table 1, the square root of AVE (shown within the diagonal of correlation matrix) among constructs is bigger than their inter-construct correlations, subsequently, discriminant legitimacy is set up. Convergent validity measures the extent to which factors ought to measure one construct similar to one another. Convergent validity was verified according to the item loadings and average variance extracted (AVE). Convergent validity is shown when each of the measurement items loads significantly, with the p-value of its t-value well within the 0.05 level on its assigned construct (Gefen & Straub, 2005). The standardized factor loadings of all items belonging to the final models for knowledge management, marketing innovation, and firm performance are greater than the minimum threshold of 0.5 with a statistically significant level. As depicted in table 1, the AVE varies from 0.50 to 0.64. Thus, the AVE value fulfilling the minimum threshold of 0.5 indicates a good convergent validity for the questionnaire.

Table 1. Items loading and construct liability

	Construct	Items	Factor Loading	Cronbach alpha	AVE	CR
			≥ 0.50	≥ 0.70	**≥ 0.50**	≥ 0.70
Marketing Innovation	**Process innovation Measure (PI)**			**0.819**	**0.55**	**0.83**
		PI1	.59			
		PI3	.86			
		PI4	.74			
		PI5	.75			
	Product Innovation Measures (PIM)			**0.875**	**0.59**	**0.88**
		PIM 1	.71			
		PIM 2	.73			
		PIM 3	.81			
		PIM 4	.76			
		PIM5	.82			
Knowledge Management	**Knowledge Sharing (KS)**			**0.767**	**0.64**	**0.84**
		KS1	0.86			
		KS2	0.85			
		KS3	0.67			
	Knowledge Absorption (KA)			**0.749**	**0.51**	**0.76**
		KA1	0.77			
		KA2	0.63			
		KA3	0.74			
	Knowledge Storage (KST)			**0.877**	**0.51**	**0.75**
		KST1	0.77			
		KST2	0.63			
		KST3	0.71			
firm performance	**Financial Performance Measures (FP)**			**0.832**	**0.57**	**0.84**
		FP1	0.79			
		FP2	0.77			
		FP3	0.80			
		FP4	0.64			

				0.894	0.63	0.90
Firm Innovation Performance						
	FI1	0.71				
	FI2	0.80				
	FI3	0.85				
	FI4	0.83				
	FI5	0.77				
Employee Performance				0.778	0.50	0.80
	EP1	0.66				
	EP2	0.71				
	EP3	0.82				
	EP4	0.59				

Table 2. Average variance extracted and correlation matrix

	EP	FI	FP	Pdt.in	Pro_in	KA	KST	KS
EP	**0.707**							
FI	.301	**0.793**						
FP	.408	.451	**0.754**					
Pdt.in	.101	.112	.151	**0.768**				
Pro.in	.091	.101	.136	.710	**0.742**			
KA	.360	.398	.539	.043	.039	**0.714**		
KST	.380	.419	.568	.045	.041	.741	**0.714**	
KS	.235	.260	.352	.028	.025	.459	.484	**0.800**

4.3 Structural model testing

After the validity and reliability of the scale were examined, we then test the overall compatibility model that compares the data entered with standards found by using Amos. The results are depicted in Table 3 below:

Table 3. Model fit result for structural equation modeling (SEM)

Measure GOF	Measurement		Measurement Result	
	Good fit	Margin fit		
Absolute fit model				
GFI (Goodness of Fit Index)	≥0.90	0.8 - < 0.90	0.920	Good Fit
RMSEA (Root Mean Square	< 0.08		0.011	Good Fit

Error)				
Increment fit Model				
NFI (Normal Fit Index)	≥0.90	0.8 - < 0.90	0.868	Marginal Fit
CFI (Comparative Fit Index)	≥0.90	0.8 - < 0.90	0.902	Good Fit
IFI (Incremental Fit Index)	≥0.90	0.8 - < 0.90	0.904	Good Fit
RFI (Relative Fit Index)	≥0.90	0.8 - < 0.90	0.806	Marginal Fit

Table 3 above shows an SEM yield of AMOS 23 and discovers information for absolute fit size models which is expected to decide the general expectation level of the model (structural model) to the appropriateness of the information comprising of RMSEA 0.011 <0.08 (good fit) and a GFI worth of 0.920. With respect to different rules of model fit, the Incremental Fit Model comprises of a few test instruments in similarity, in particular the CFI value = 0.902; NFI = 0.868; IFI = .904 and RFI = 0.806. The outcomes expressed that the primary condition model is supposed to be acceptable because it is at the degree of adequately great testing measures and meets the necessities of the Incremental Fit Model. From the yield, it was reasoned that the model was supposed to be at the level of the test standards very well and met the necessities of the stingy fit model.

5. RESULTS

The result in table 4 shows the significant direct and strong influence of knowledge management on firm performance (β 0.81 p<0.001), which is consistent with the proposed hypothesis. This indicates that knowledge management increases firm performance by 81% roughly. The critical ratio (5.87) discloses that knowledge management is considered a significant factor for the performance of manufacturing firms. Therefore, **H1** was supported. The result shows that for each 1% of effectively managing knowledge in terms of knowledge absorption, sharing, and storage in the firm, will enhance firm performance by 81% if other variable remains unchanged. The other particular result of the hypothesis exploring the impact of marketing innovation shows that it has a significant impact on firm performance with the path coefficient of (β 0.17 p<0.05), which is consistent with the proposed hypothesis. So **H2** was accepted. For each 1% investing in innovating marketing strategy in terms of product and process innovation enhances firm performance by 17% if the other variable remains unchanged. In addition, about 71% of the

variance in firm performance ($R2 = 0.71$) is explained jointly by knowledge management and marketing innovation, which leads to accept **H3**.
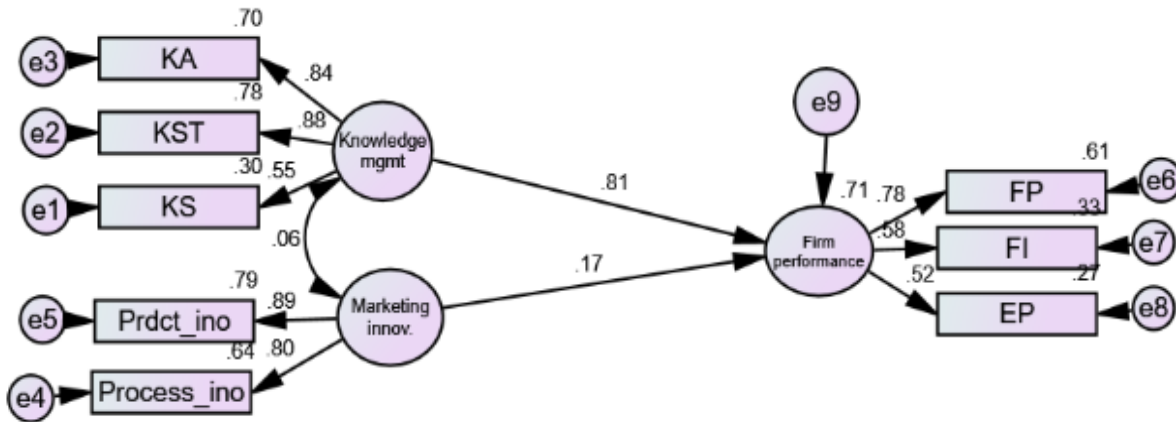

Figure 5. Path Diagram for the Model

Table 4. Path analysis by structural equation modeling (SEM)

Hypothesis	B	C.R	p-value	Supported
Knowledge Management → Firm Performance	.81	5.874	***	Yes
Marketing Innovation → Firm Performance	.17	2.055	*	Yes

* *P* < 0.05; *** *p* < 0.001

6. DISCUSSION

This study looked at the combined impact of knowledge management in terms of information absorption, sharing, and storage, as well as marketing innovation by product and process innovation, on the performance of manufacturing organizations when most previous research had looked at their effects separately. Also, the study has looked at the extent that each variable contributed to the performance of manufacturing firms of Ethiopia. Regarding the first objective, knowledge management in terms of knowledge storage, knowledge sharing, and knowledge absorption impact on firm performance is a statistically significant positive effect, so the first hypothesis is fully supported. The standardized path coefficient of (.81) shown in table four and

figure five above demonstrated that knowledge management had a strong, direct, and substantial influence on company performance.

How this data is absorbed, stored, shared, and used by all members of the staff have a direct impact on employee performance, firm innovation performance, and the financial success of generating organizations. The findings revealed that without intervening variable knowledge management alone can improve the performance of Ethiopian manufacturing firms. This finding contradicts the findings of (AL-Hakim et al., 2012; Byukusenge et al., 2016; Wibowo et al., 2021; Eugenie et al., 2017), that highlighted business performance won't be impacted by knowledge management except it goes through intervention. However, it's similar to the recent findings of (Ullah et al., 2019; Davila et al., 2019; Puryantini, 2018) in which knowledge management had a direct influence on organizational performance.

Concerning the relationship between marketing innovation and firm performance, it was found that marketing innovation impacts on firm performance are statistically significant positive effects, so the second hypothesis is fully supported. This provides empirical evidence that improved business performance is also the result of marketing innovative activities. This implies that innovating marketing strategies (in terms of product and process innovation) in the organizations directly can boost the performance of Ethiopian manufacturing firms. The current result is similar to the finding of (Karabulut, 2015, Peng et al., 2021), which proved marketing innovation had positive impacts on financial performance, customer performance, and internal business processes performance. Handoyo, (2016) also found a significant impact between marketing innovation and competitive advantage.

The other similar prior results of, Rosli et al., (2013), Perez et al., (2019), and Atalay et al., (2013), also proved a positive impact of product and process innovation on firm performance in the manufacturing sector in Malaysia, Chile & Peru, and Turkish automotive supplier industry, respectively. Lastly, the joint influence of knowledge management and marketing innovation on the performance of manufacturing enterprises in Ethiopia was investigated using the R2 value (the extent that the exogenous variables explain the endogenous variable). Figure 2 shows that the R2 value of firm performance is 0.71, indicating that marketing innovation strategies and knowledge management variables together explain 71 percent of the variability in the construct of firm performance. This lends credence to the third hypothesis.

7. CONCLUSIONS

The findings of this investigation support the fact that both knowledge management and marketing innovation strategies are an important major driver of firm performance and should be developed and executed as an integral part of the business strategy. To enhance the performance of manufacturing firms in Ethiopia, the managers simultaneously can apply both knowledge management and marketing innovation strategies. However, knowledge management strategy is a relatively more important and distinct means to boost firm performance than a marketing innovation strategy. This is because of the effective knowledge management by itself via proper absorption; sharing and storage of knowledge could lead to or contribute to the innovation performance.

Knowledge management strategy determines innovation efforts and should have a powerful influence on their value and performance. In addition, newly created knowledge guides the succeeding innovation efforts Forcadell and Guadamillas (2002). Accordingly, proper management of knowledge is a seed of innovations (Eugenie et al., (2017). The study has proved that knowledge management (knowledge absorption, sharing, and storage) on itself can straightforwardly influence performance (innovation performance, employee performance, and financial performance) of Ethiopian manufacturing firms, in which the earlier investigation discovered that business performance might not be impacted by knowledge management except it goes through intervention. The current study explanation for these contradictions with prior studies is stated in the discussion part remains may be linked with the multidimensionality of firm performance. Indicators of different dimensions cannot be used interchangeably, since they represent different aspects of firm performance. Knowledge management strategies may also have different impacts on each performance dimension (Santos, 2012). The effect of knowledge management on performance is hence relied on upon the performance dimensions used to measure performance, which requires further examination regarding the impact of knowledge management on performance by taking diverse performance measurements.

The other conclusion from the current finding is the significant direct effect of marketing innovation on firm performance. Substantial improvements in technical specifications, components, and materials, incorporated software, user-friendliness, or other functional characteristics of a product, and the implementation of a new or significantly improved production or delivery method could enhance the performance of manufacturing firms in

Ethiopia. Overall, the existence of a marketing innovation strategy and knowledge management in the firm are crucial organizational activities to improve manufacturing performance in terms of financial performance, personnel performance, and organizational innovation performance) in Ethiopia.

By giving evidence from a developing country where there is little study on the subject, the paper contributes to scholarly debate on the direct effect of knowledge management on business performance. Thus, the study has proven that knowledge management, on itself, can influence business performance of manufacturing firms in Ethiopia, whereas previous research found that business performance may not be impacted by knowledge management unless it is accompanied by intervention. This implying that knowledge resources that are acquired, stored and shared directly can affect the innovation performance, employee performance, and financial performance in order to achieve improved business performance.

Another novelty of this study is the inclusion of the marketing innovation dimension as an independent variable in the knowledge management framework, which was previously assumed to be a mediating variable alongside knowledge management in most previous studies.

Past research on marketing innovations and knowledge management was limited to the developed economies, where the knowledge culture, market maturity and average income per capita were high. To the knowledge of the authors, this study represents the primary empirical investigation revealing the joint outcomes of knowledge management and marketing innovation on the performance of Ethiopian manufacturing firm's environment in a developing economy. Thus, further to the space in managerial practices, there's additionally a theoretical hole concerning the joint effect in which this study tries to fill. Indeed, the combined influence of knowledge management and marketing innovation on manufacturing firm performance will be seen as a novelty contribution of this study.

7.1 Managerial contribution

Understanding the significant impact of knowledge management and marketing innovation on performance is demonstrated in this study, and taking into account the challenges that have been identified in recent studies that have hampered the performance of manufacturing firms in Ethiopia, the following recommendations are made. The findings of this study suggest that manufacturing company executives raise their awareness of the importance of knowledge management and marketing innovation, take appropriate actions and a road map to implement

knowledge management and marketing innovation initiatives; develop knowledge management policies in tandem with marketing innovation policies to help boost the firm's performance. It is proven that both knowledge management and marketing innovation will improve the overall firm performance-financial, firm innovation, and employee performance which is a critical issue for the Ethiopian LMEs manufacturing firms during the pandemic as it changes people's behavior and turns down the economy.

Therefore, to compete and survive, LMEs of Ethiopia need to increase their performance through knowledge management and marketing innovation. The Ethiopian Ministry Education, in particular, should take steps to direct all universities to build harmonized curricula that can link universities and industries through various means. Perhaps, all students should take an apparent ship before graduating. This can be accomplished through classroom instruction and paid on-the-job training under the supervision of a mentor. Since universities are the source of information, the university-industry linkage office should be re-established at the directorate level, with a dual goal of extending collaboration beyond student internships.

7.2 Theoretical contribution

The current study will extend the literature in which limited study is conducted regarding the association between marketing innovation, knowledge management, and firm performance in developing countries, particularly in Ethiopia. In addition, the study can enrich the literature by examining the direct joint effect of knowledge management and marketing innovation on the performance of manufacturing firms in which most of the prior studies had been investigated their effect separately. The study additionally adds to the literature by adopting a large sample size (over 200) and data analysis using SEM with AMOS software, which was a limitation of previous studies.

The study found that knowledge management (knowledge absorption, sharing, and storage) can directly influence manufacturing firm performance (innovation performance, employee performance, and financial performance), whereas previous research found that business performance may not be impacted by knowledge management unless it is accompanied by intervention. Similarly, the study can add to the literature by investigating the direct influence of marketing innovation on performance, which was previously thought to be a mediating variable alongside knowledge management in most previous studies. In general, this study contributes to knowledge by studying the direct links among those variables in bridging these gaps. Indeed, the

combined influence of knowledge management and marketing innovation on manufacturing firm performance will be seen as a novelty contribution of this study.

7.3 The practical implications

The practical implications of this study are that the managers/owners of manufacturing firms should improve technical systems, such as contemporary informational hardware and software, as well as human processes, in order to identify, code, and index knowledge in an organization for subsequent retrieval. Employees should be encouraged to document their expertise in the form of high-level research articles, job manuals, and reports, among other things. This information should be maintained in repositories where it can be easily accessed and used by anybody in the company.

Thus, critical infrastructure aspects such as organizational culture, leadership, information technology, and organizational procedures need be present in order to exchange knowledge. The more adaptable the organizational structure and procedures are, the better they can adapt to knowledge management changes. They should also reduce the number of hierarchies in an organizational structure since the more hierarchies an organization has, the less it can stimulate communication among individuals and units and facilitate information sharing and flow.

In addition, it is also suggested that businesses allocate more resources to marketing innovations (technological innovations), as it is critical to uncover customer demands, build a relevant offering, and remove the fog of irrelevancy by matching clients with the goods or services they desire or require, which improves firm performance.

The managers of manufacturing firms have the potential of enhancing its firm's performance through marketing innovation (product and process innovation). The product innovation requires the LMEs to adopt improved modern technological tools like artificial intelligence and the industry 4.0 concept. These concepts may potentially enhance the production capacity, and innovate manufacturing products more rapidly. Additionally, the product innovation requires continuous feedback and a timely response system from the customer care centre in the manufacturing industry in Ethiopia. The constructive feedback towards the improvement in products may add more features that will ultimately enhance the sale of products and hence boost the performance of the manufacturing industry in Ethiopia. Our findings support the notion that innovation strategy is a key driver of firm performance and that it should be established and implemented as part of the overall business strategy.

7.4 Limitations and future study directions

There are certain drawbacks to this study. Because of the groundbreaking significance of this research, particularly in our country, it will need to be confirmed through replication. This study should be duplicated in both the same geographic setting as well as far-removed geographic contexts, as the first recommendation for future research. Furthermore, researchers could expand on the findings of this study by examining the impact of knowledge management on the financial and non-financial elements of performance measurement, which yielded different results in the previous study. Accordingly, comparing its impact allows us to fully comprehend if knowledge management has merely indirect effects on performance when it is linked to other performance dimensions. Finally, because this study used a cross-sectional survey approach to collect quantitative data, it is limited to a certain measurement period. Future research on the subject should take a longitudinal approach to compare any long-term alterations in the results. Alternatively, qualitative research could be undertaken to enhance quantitative data as a consequence of method triangulation to have a deeper understanding of the combined result of marketing innovation, knowledge management, and business success.

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REFERENCES

Abubakar, A. & Yusof, M. N. (2012). Knowledge management and growth performance in construction companies: a framework. *Procedia - Social and Behavioral Sciences, 62*, 128-134.

Adamua, U. G., Hussinb, S. R., & Ismailc, N. A. (2020). Effect of Marketing Innovation on Performance of Small and Medium Enterprises in Nigeria, *International Journal of Innovation, Creativity and Change*, Vol 11, Issue, 12, 353-370.

Al Rashdi, M., Akmal; S. B., & Alshami, S. A. (2019). Knowledge Management and Organizational Performance: A Research on Systematic Literature. *International Journal of Innovative Technology and Exploring Engineering*, Vol 8, Issue- 6S4. 757-762.

Alaarj, S., Abidin-Mohamed, Z. & Bustamam, U.S.B.A. (2016) Mediating Role of Trust on the Effects of Knowledge Management Capabilities on Organizational Performance. *Procedia Social and Behavioral Sc*iences, 235, 729-738.

Alaarj, S., Mohamed, Z. A., & Bustamam, U. S. A. (2017). The Effect of Knowledge Management Capabilities on Performance of Companies: A Study of Service Sector. *International Journal of Economic Research*, 14(15), 457–470.

AL-Hakim, L. A. Y., & Hassan, S. (2012). The relationships among knowledge management processes, innovation, and organizational performance in the Iraqi MTS. Proceedings of the 6th Knowledge Management International Conference (KMICe).

Aliyu, M.S. (2016) Influence of Knowledge Management on Performance in Small Manufacturing Firms. *International Journal of Business, Economics and Law*, 8, 63-67.

Alrubaiee, L., Alzubi, H.M., Hanandeh, R. & Ali, R.A. (2015). Investigating the Relationship between Knowledge Management Processes and Organizational Performance. The Mediating Effect of Organizational Innovation. *International Review of Management and Business Research, 4*(4), 989-1009.

Atalay, M., Anafarta, N. & Sarvan, F. (2013). The Relationship between Innovation and Firm Performance: An Empirical Evidence from Turkish Automotive Supplier Industry. *Procedia - Social and Behavioral Sciences*, 75, 226–235.

Bajaj, S., Garg, R., & Sethi, M. (2018). Total quality management: a critical literature review using Pareto analysis. *International Journal of Productivity and Performance Management*, 67(1), 128–154.

Bartoloni, E. & Baussola, M. (2016). Does Technological Innovation Undertaken Alone Have a Real Pivotal Role? Product and Marketing Innovation in Manufacturing Firms. *Economics of Innovation and New Technology*, 25(2) 1-23.

Brimah, B. A., Olanipekun, W. D., Bamidele, A. G., & Ibrahim, M. (2020). Knowledge Management and its Effects on Financial Performance: Evidence from Dangote Flour Mills, Ilorin. *Financial Markets, Institutions and Risks, 4*(2), 34-42.

Byukusenge, E., Munene, J., & Orobia, L. (2016). Knowledge Management and Business Performance: Mediating Effect of Innovation. *Journal of Business and Management Sciences*, *4*(4), 82-92.

Cascio, R. P. (2011). *Marketing Innovation and Firm Performance Research Model, Research Hypotheses, And Managerial Implications* (Theses). https://stars.library.ucf.edu/etd/1906.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed-Method Approaches*. Sage Publications, Inc.

Daksa, M. D., Yismaw, M. A.; Lemessa, S. D. & Hundie, S. K. (2018). Enterprise innovation in developing countries: Evidence from Ethiopia, *Journal of Innovation and Entrepreneurship*, Vol.7, Issue.6, 1-19.

Darroch, J. (2003). Developing a measure of knowledge management behaviours and practices. *Journal of knowledge management, 7* (5), 41-54.

Davila, G., Varvakis, G., & North, K. (2019). Influence of Strategic Knowledge Management on Firm Innovativeness and Performance. *Brazilian Business Review, 16*(3), 239–254.

Dogan, M. & Dogan, H. (2020). Knowledge Sharing, Innovation and Firm Performance: Evidence from Turkey, *Financial Studies*, Vol. 24, Iss. 1, 36-52.

El Kharraz, O., & Boussenna, Y. (2021). Moderating effect of culture on the relationship between knowledge management and organizational performance in the university context. IJBTSR *International Journal of Business and Technology Studies and Research*, v. 3, n. 2, 16 pages.

El-Chaarani H., & El-Abiad Z., (2020), Knowledge Management and Job Performance: The Case of Lebanese Banking Sector, *International Review of Management and Marketing*, Vol.10 (1), 9 pages.

Endalew, A. (2019). Imperatives of Marketing for the Manufacturing Sector Performance in Ethiopia, *Texila International Journal of Management,* DOI: 10.21522/TIJMG.2015.SE.19.02. Art 017

Byukusenge, E. & John C. Munene Milena Ratajczak-Mrozek, (2017). Knowledge management and business performance: Does innovation matter? *Cogent Business & Management, 4:*1, DOI: 10.1080/23311975.2017.1368434.

Ferraris, A., Mazzoleni, A., Devalle, A. & Couturier, J. (2019). Big Data Analytics Capabilities and Knowledge Management: Impact on Firm Performance. *Management Decision*, 57, 1923-1936.

Forcadell, F. J. & Guadamillas, F. (2002), A case study on the implementation of a knowledge management strategy oriented to innovation. *Knowledge and Process Management*, 9, 162-171.

Fornell C, Larcker DF. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*. 18(1), 39-50.

Kolapo, F. T., Mokuolu, J. O., Dada, S. O. & Adejayan, A. O. (2021). Strategic marketing innovation and bank performance in Nigeria. *Innovative Marketing*, 17(1), 120-129.

Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-graph: Tutorial and annotated example. *Communications of the Association for Information Systems 16(1)* 91-109.

Ayalew, G. & Mesfin (2015). *Knowledge Sharing Architecture for UNDP Ethiopia*, Addis Ababa.

Gholami, M. H., Asli, M. N., Nazari-Shirkouhi, S. & Noruzy, A. (2013). Investigating the Influence of Knowledge Management Practices on Organizational Performance: An Empirical Study. *Acta Polytechnica Hungarica*, *10* (2), 205-216.

Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. *International Journal of Production Economics*, *133*(2), 662–676.

Handoyo, Ag. (2016). The effect of marketing innovation, market orientation, and social capital on competitive advantage and marketing performance: A study in MSMEs of embroidery Central Java Province. *Journal of Economics, Business and Accountancy Ventur*a. 18. 351. 10.14414/jebav. v18i3.506.

Ibrahim M. & Yusheng K. (2020). Service innovation and organizational performance: Mediating role of customer satisfaction. *International Journal of Management & Entrepreneurship Research.* V*2*, Issue 3, 97-108.

Jemal S. & Zewdie S., (2021). The Role of Knowledge Management on Organizational Performance, Case of Jimma University in Ethiopia. *Journal of International Business and Management* 4(5), 01-18.

Kamp, B., & Parry, G. (2017). Servitization and advanced business services as levers for competitiveness. *Industrial Marketing Mana*gement, 60, 11–16.

Karabulut, A. T. (2015). Effects of innovation types on performance of manufacturing firms in Turkey. *Procedia-Social and Behavioral Sciences*, *195*, 1355-1364.

Kianto, A. & Hussinki, H. & Vanhala, M. (2018). The Impact of Knowledge Management on the Market Performance of Companies, In Vatamanesci, E. M. & Pinzaru, F., (2018) Knowledge Management in the Sharing Economy, 189-207.

Koffi, A. L., Hongbo, L., & Zaineldeen, S. (2021). Examining the Impact of Innovation types on Ivorian Small and Medium-sized Enterprises (SMEs) Performance and Competitiveness. *International Journal of Academic Research in Accounting Finance and Management Sciences, 11*(1), 305-326.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607–610.

Lee, Yu-Je, Chang, Lung-Yu, Chien, Chen-Lin, Huang, Ching-Lin & Chen, Ching-Yaw (2010). The influence of knowledge management and marketing innovation strategies on marketing performance: a case study of a Taiwan's funeral service company. *Innovative Marketing*, *6*(2), 69-76.

Tarekegn, L. M. (2017). The role of knowledge management in enhancing organizational performance; the case of selected international NGOs operating in Addis Ababa (Theses), Addis Ababa University.

Liu, D., Gong, Y., Zhou, J., & Huang, J.-C. (2017). Human resource systems, employee creativity, and firm innovation: The moderating role of firm ownership. *Academy of ManagementJournal,60*(3),1164-1188.

López-Cabarcos, M. Ángeles, Srinivasan, S., Göttling-Oliveira-Monteiro, S., & Vázquez-Rodríguez, P. (2019). Tacit knowledge and firm performance relationship. The role of product innovation and the firm level capabilities. *Journal of Business Economics and Management*, *20*(2), 330-350.

López-Nicolás, C., & Á. L. Meroño-Cerdán. (2011). Strategic Knowledge management, Innovation and Performance. *International Journal of Information Management,* 31(6), 502-509.

Mafabi, S., Munene, J. & Ntayi, J. (2012), Knowledge management and organizational resilience: Organizational innovation as a mediator in Uganda parastatals, *Journal of Strategy and Management,* Vol. 5 No. 1, pp. 57-80.

Mulate, E. M. (2020). The status of knowledge management framework for knowledge sharing in healthcare sector, challenges and opportunities in Ethiopia: a systematic review. *European Academic Research*. VIII(9), 5313-5341.

Mardani, A., Nikoosokhan, S., Moradi, M., & Doustar, M. (2018). The relationship between knowledge management and innovation performance. *The Journal of High Technology Management Research*, *29*(1), 12-26.

Maxwell, J. (2012). The Importance of Qualitative Research for Causal Explanation in Education. *Qualitative Inquiry*, 18, 649-655.

Mesay, S. & Gojeh, L. A. & Jimma, W. (2018). *Knowledge Management Stratgy for Ethiopian Universities*. LAP LAMBERT Academic Publishing.

Mitiku, H. & Worku, J. & Chala, D, (2016). Knowledge Management Approach and a Framework for Sharing and Acquisition of Indigenous Knowledge of Traditional Healthcare Practices: The Case of Horro Guduru Wollega Zone, Ethiopia. *European Academic Research*, IV, 416 - 433.

Muhumed, M. M. (2017). The Impact of Innovation on Small and Medium Enterprises Performance: Empirical Evidence from Hargeisa, Somaliland. *International Journal of Academic Research in Business and Social Sc*iences, 7(8), 2222-6990.

Mosissa, R., Jimma, W., & Bekele, R. (2017). Knowledge Management Strategy for Indigenous Knowledge on Land Use and Agricultural Development in Western Ethiopia. *Universal Journal of Agricultural Research*. 5. 18-26.

Nawab, Samina & Nazir, Tahira & Zahid, Mohsin & Fawad, Syed. (2015). Knowledge Management, Innovation and Organizational Performance. *International Journal of Knowledge Engineering-IACSIT*, 1, 43-48.

Nunnally, J. C. (1978). *Psychometric The*ory (2nd ed.). New York: McGraw-Hill.

Obeidat, B. Y., Hashem, L., Alansari, I., Tarhini, A., & Al-Salti, Z. (2016). The Effect of Knowledge Management Uses on Total Quality Management Practices: A Theoretical Perspective. *Journal of Management and Strategy*, 7(4), 18–29.

Omotayo, F. O. (2015). Knowledge Management as an important tool in Organisational Management: A Review of Literature, Library Philosophy and Practice (e-journal). 1238.

Peng, J.; Qin, Q.; & Tang, T. (2021)The Influence of Marketing Innovations on Firm Performance under Different Market Environments: Evidence from China. *Sustainabilit*y, 13(18) 10049. https://doi.org/10.3390/su131810049.

Perez-Luno, A., Alegre, J., & Valle-Cabrera, R. (2019). The role of tacit knowledge in connecting knowledge exchange and combination with innovation. *Technology Analysis & Strategic Management*, *31*(2), 186-198.

Puryantini, N., Rofikotul, A., & Dian, P. & Tjahjadi, B.. (2018). The Association of Knowledge Management, Organization Culture, and Innovation with Organizational Performance: A Case at Study Institute Research XYZ. *Journal Akuntansi dan Keuangan.* 20, 39-52.

Quaye, D.; & Mensah, I. (2019). Marketing Innovation and Sustainable Competitive Advantage of Manufacturing SMEs in Ghana. *Manag. Decis*. 57, 1535–1553.

Rahman, M. S., Daud, N. M., & Raman, M. (2018). Knowledge sharing behavior among non-academic staff in higher learning institutes: The role of trust and perceived risk. *Knowledge Management & E-Learning, 10*(1), 113–124.

Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring Organizational Performance: Towards Methodological Best Practice. *Journal of Management, 35*(3), 718-804.

Ringle, C. M., Wende, C. M., & Becker, J.-M. (2015). Smart PLS 3. Boenningstedt, Germany: SmartPLS GmbH. http://www.smartpls.com

Rosli, M. M., & Sidek, S. (2013). The Impact of innovation on the performance of small and medium manufacturing enterprises:: Evidence from Malaysia. *Journal of Innovation Management in Small & Medium Enterprises*, *2013*, 1.

Samir, M. (2020) The Impact of Knowledge Management on SMEs Performance in Egypt. *Open Access Library Journal*, 7, 1-23. E6445 DOI: 10.4236/oalib.1106445

Santoro, G., Vrontis, D., Thrassou, A., & Dezi, L. (2018). The Internet of Things: Building a knowledge management system for open innovation and knowledge management capacity. *Technological forecasting and social change*, *136*, 347-354.

Santos, J. B., & Brito, L. A. L. (2012). Toward a Subjective Measurement Model for Firm Performance. *Brazilian Administration Review, 9*(spe), 95-117.

Saqib, M., Baluch, N. H. & Udin, Z. M. (2017) Moderating Role of Technology Orientation on the Relationship between Knowledge Management and SMEs' Performance in Oman: A Conceptual Study. *International Journal of Economic Perspectives*, 11, 433-441.

Sarkindaji, B. D., Hashim, N. A. & Abdullateef, A.O. (2014) Knowledge Management and Organizational Performance of Mobile Service Firms in Nigeria: A Proposed Framework*, Information and Knowledge Management*, *4,* 88-95.

Shrafat, F. D. (2018) Examining the Factors Influencing Knowledge Management System (KMS) Adoption in Small and Medium Enterprises SMEs. *Business Process Management Journa*l, 24, 234-265.

Suraj, O. A. & Ajiferuke, I. (2013). Knowledge management practices in the Nigerian Telecommunications industry, *Knowledge and Process Management*, *20(1),* https://doi.org/10.1002/kpm.1399

Tadesse, D. K. (2020). The impact of knowledge management on organization performance. *Journal of Business and Management*, *22*(3), 2278-487.

Talegeta, S., (2014). Innovation and barriers to innovation: Small and medium enterprises in Addis Ababa, *Journal of Small Business and Entrepreneurship Development,*Vol 2, Nº 1, 83-106.

Tang, T.; Zhang, S.; & Peng, J. (2021). The Value of Marketing Innovation: Market-Driven versus Market-Driving. *J. Bus. Res*. 126, 88–98.

Tavitiyaman, P., Zhang, H. Q., & Qu, H. (2012). The Effect of Competitive Strategies and Organizational Structure on Hotel Performance. *International Journal of Contemporary Hospitality Management, 24*(1), 140-159.

Tekeba, E. (2018). Ethiopia's Manufacturing Industry Opportunities, Challenges and Way Forward: A Sectoral Overview. *Novel Techniques in Nutrition and Food Science. 2*(2). NTNF.000532. 2018. DOI: 10.31031/NTNF.2018.02.000532

Tidd, J., & Bessant, J. R. (2018). *Managing innovation: Integrating technological, market and organizational change*. John Wiley & Sons.

Tseng, S. (2014). The impact of knowledge management capabilities and supplier relationship management on corporate performance, *International Journal of Production Economics,* 154, 39-47.

Tuan, N. P. (2015). Determinants of innovation: an empirical analysis for Vietnamese manufacturing firms. *Економічний часопис-XXI*, *155*(11-12), 87-90.

Tuan, N., Nhan, N., Giang, P., & Ngoc, N. (2016). The effects of innovation on firm performance of supporting industries in Hanoi, Vietnam. *Journal of Industrial Engineering and Management, 9*(2), 413-431.

Ullah, I., Mirza, B., Kashif, A. R., & Abbas, F. (2019). Examination of knowledge management and market orientation, innovation and organizational performance: Insights from telecom sector of Pakistan. *Knowledge Management & E-Learning, 11*(4), 522–551.

Otakar, U., Dedkova, J., & Gurinova, K. (2018). The Impact of Marketing Innovation on The Competitiveness of Enterprises in The Context of Industry 4.0. *Journal of Competitiveness*, Vol. 10, Issue 2, pp. 132 -148.

Venter, E. & Hayidakis, H., (2021). Determinants of innovation and its impact on financial performance in South African family and non-family small and medium-sized enterprises, *Southern African Journal of Entrepreneurship and Small Business Management* 13(1), a414. https://doi.org/ 10.4102/sajesbm.v13i1.414

Voeten, J., & Gizaw, B. (2018). *Ethiopia: Qualitative Study on Innovation in Manufacturing Small and Medium-Sized Enterprises (SMEs): Exploration of Policy and Research Issues.* Tilburg University.

Wamitu, S. N. (2016). Functional Boundaries as a Tacit Knowledge Sharing Factor and Its Effect on Public Sector Performance in Kenya. *Open Journal of Business and Management, 4*, 225-237.

Wang, J., & Wang, X. (2012). *Structural Equation Modeling: Applications using Mplu*s. Chichester: John Wiley & Sons.

Wibowo, D. Y. A., Muljono, P., & Sumertajaya, I. M. (2021). Analysis Of the Effect of Knowledge Management, Competency, And Innovation on Employee Performance. *Jurnal Aplikasi Manajemen*, 19, 804-811.

Yang, J. (2010). The knowledge management strategy and its effect on firm performance: A contingency analysis. *International Journal of Production Economics, 125*(2), 215–223.

Yang, L. R., Huang, C. F., & Hsu, T. J. (2014). Knowledge leadership to improve project and organizational performance. *International Journal of Project Management*, *32*(1), 40-53.

Yousif Al-Hakim, L. A., & Hassan, S. (2013). Knowledge Management Strategies, Innovation, and Organisational Performance: An Empirical Study of the Iraqi Mts. *Journal of Advances in Management Research*, 10(1), 58- 71.

Kiros, Z., Mamo, W., & Tesema, W. (2018). Factors and Barriers affecting Knowledge Management System on the Organizational Performance in Mesfin Industrial Engineering of Ethiopia. *Universal Journal of Industrial and Business Managemen*t, 6(2), 23 - 29.

Admasu, Z. (2017), Innovation Practices of Manufacturing Firms' and Competitiveness. *International Journal of Scientific and Research Publications,* Volume *7,* Issue 7, 2250-3153.

Zwain, A., Teong, L. & Othman, S. 9 (2012). Knowledge management Processes and Academic performance in Iraq HE/s: An Empirical Investigation*. International Journal of Academic Research in Business and Social Sciences,* Vol. 2(6).

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