



Examining the Linkage among Market Orientation, Learning Orientation and Innovation Performance: The Mediation Role of Knowledge Management



Anak Agung Gede Andy Pratama Putra ^a

Ni Made Wahyuni ^b

Putu Ngurah Suyatna Yasa ^c

I Gusti Ayu Ketut Giantari ^d

Article history:

Submitted: 09 August 2020

Revised: 18 September 2020

Accepted: 27 October 2020

Keywords:

innovation performance;

knowledge management;

learning orientation;

manufacturing industry;

market orientation;

Abstract

Small and medium enterprises (SMEs) exports contribute as a driver of the global economy and a source of economic growth. In the global era, to main a competitive advantage, SMEs need to produce behavior to ensure the feasibility of innovation performance. The purpose of this study is to investigate the relationship between market orientation, learning orientation, and knowledge management on innovation performance. The research method uses a research design cross-section. The study population includes all export-oriented manufacturing industries. SMEs and is registered in the Bali Provincial Industry and Trade Office database (2019). A total of 94 senior managers are SME interested in participating in the survey. Seven hypotheses are presented related to market orientation, learning orientation, knowledge management, and innovation performance, and the mediating effect of knowledge management. Structural equation model based Partial least square (SEM-PLS) is used to test the hypothesis. These findings reveal that learning orientation in manufacturing SME operation contributes to knowledge management. Knowledge management plays a mediating role in the relationship between market orientation and learning orientation on innovation performance. These results contribute additional insights to managers and policymakers about the concepts of market orientation, learning orientation, and knowledge management to achieve innovation performance.

International research journal of management, IT and social sciences © 2020.

This is an open access article under the CC BY-NC-ND license

(<https://creativecommons.org/licenses/by-nc-nd/4.0/>).

Corresponding author:

Ni Made Wahyuni,

Faculty of Economic Warmadewa University, Denpasar, Indonesia.

Email address: mdwahyuni17@gmail.com

^a Faculty of Economic Warmadewa University, Denpasar, Indonesia

^b Faculty of Economic Warmadewa University, Denpasar, Indonesia

^c Faculty of Economic Warmadewa University, Denpasar, Indonesia

^d Faculty of Economic and Business, Udayana University, Denpasar, Indonesia

1 Introduction

Over the past decade, the marketing literature has shown a growing interest in academics and practitioners studying the internationalization of SMEs, so companies are strong, growing, and remain competitive (Mac & Evangelista, 2016). Likewise, the growth of export SMEs has a strategic role in national economic growth, employment, and equal distribution of income for welfare. SMEs have opportunities in line with the growing domestic and global population (Lisboa, 2017). SMEs play a role as an Economic driver and job creation, as well as creating the idea, new processes through innovation activities (Cronin-Gilmore, 2012). The ability of innovation enables companies to achieve performance and sustainable competitive advantage (Al-Ansari et al., 2013).

In Indonesia today, SMEs in the export manufacturing industry is the backbone of the economy and are currently experiencing dramatic developments. The current experiproportion of Indonesian people who are in the activities of industrial SMEs is very large (81%) (Hapsari, 2014). In the Province of Bali, SMEs in the manufacturing industry are part of the business that sustains people's economic life. Manufacturing industry SMEs contributed to the Gross Regional Domestic Product (GRDP) of the Province of Bali at the current price according to employment for 2018, by 28 % (Badan Pusat Statistik Provinsi Bali, 2019). The contribution of the industrial sector to Bali's total GRDP is indeed not as big as other sectors such as tourism, but the sustainability of the industrial sector as one of the economic drivers and supporting structures of the economy must be maintained and even enhanced. Entities have opportunities and face challenges in an increasingly competitive business and market environment, so there is a need to continue to innovate to achieve sustainable competitive advantage. SMEs need to ensure behavior that enables companies to achieve success through the ability to innovate (Ndubisi & Iftikhar, 2012; Padilha & Gomes, 2016).

Innovation performance (KI) reflects the company's achievements or achievements related to the adoption of ideas, processes, new products (Falasca et al., 2017). The level of success of the innovating company shows the company's innovation performance (Alegre Vidal & Chiva Gómez, 2008). Likewise, one of the important factors that accompanied the development of SMEs in the manufacturing industry was the problems related to innovation performance. Understanding how SMEs succeed in achieving performance related to innovation and what positive factors lead to improved performance compared to competitors is attractive to researchers and practitioners. Solution search requires the simultaneous use of input factors Innovation performance shows the company's capacity to innovate (Zhang & Duan, 2010a). The company's mechanism for generating new ideas, processes, products, and systems to win the competition reflects the performance of organizational innovation. Innovation performance is one of the important resources of a company's capability to adopt new ideas, products, and processes, closely related to market orientation culture (Keskin, 2006; Carbonell & Rodríguez-Escudero, 2009).

Empirical evidence from the management literature supports the resource-based view (RBV) that the success of customer-centered market orientation (MO) practices drives innovation performance (Raju et al., 2011), eliciting information generation behavior, spreading and responding to market-related information thereby creating ideas, processes, and products that satisfy customers (Wahyuni, 2019; Roach et al., 2014). Although it is claimed that market orientation is positively related to innovation performance, companies have realized that paying attention to customer needs alone is not sufficiently successful in building innovation (Ozkaya et al., 2015). On the other hand, no relationship between market orientation — innovation performance is found, or research has found that market orientation has a more positive influence on innovation performance than learning orientation (Zhou et al., 2005; O'Cass & Heirati, 2015). The development of a market orientation culture is only the first step towards market success. Market orientation only impacts performance when combined with a learning orientation within the company. The level of learning orientation will affect the relationship between market orientation and innovation performance (Suliyanto & Rahab, 2012). There is still little research linking orientation strategies (such as market orientation and learning orientation) to innovation performance in the export literature.

Learning orientation (OB) unique, difficult to imitate resources as a source of competitive advantage (Baker & Sinkula, 1999), enables successful adaptation to the environment. Learning orientation significantly influences innovation performance (Calantone et al., 2002). Given the increasingly important innovation that competes in the global market, this study focuses on understanding market orientation and learning orientation on the innovation performance of the export SME context. In this study, unique features that are rooted in abilities, such as knowledge management (MP) are included in the framework of this study. From the point of view of a resource-based (RBV) theory, knowledge management is a resource and a company's ability to achieve competitive advantage (Barney, 1991; Ozkaya et al., 2015). The management and marketing literature emphasizes knowledge management as the ability to systematically collect, produce, analyze, integrate knowledge, and communicate knowledge with customers having a relationship on innovation performance.

Previous research has found empirical support for the relationship between market orientation and learning orientation on innovation performance (Fang et al., 2014; Mahmoud et al., 2016), but the mediating effect of customer knowledge management on these relationships has not provided clear clarification, specifically how to orient the market and learning orientation affect innovation performance interactively through knowledge management in the context of SMEs, not yet revealed. Research questions on how to improve market orientation and learning orientation practices are combined with knowledge management focused on customers to respond to market changes and increasingly competitive competition through the creation of innovation performance into an area of research that needs to be systematically examined from the perspective of Bali's export manufacturing SMEs.

Literature review

Innovation performance

Innovation performance is the level of success of companies doing innovation. The ability to introduce new products, being the first to be present in the market, the level of product differentiation and the level of product success compared to competitors, and the compatibility of the product with market demands reflect the level of innovation performance (Falasca et al., 2017). Padilha & Gomes (2016), define innovation performance as market acceptance and the accompanying benefits due to the introduction of innovative products/services to the market. Zhang & Duan (2010), emphasized that innovation performance is reflected in: a) product innovation is the ability to introduce services, ideas, processes on product characteristics, b) process innovation as the company's ability to develop new production methods, the introduction of new technologies that are useful in improving processes; and c) efforts to develop management methods so that they can improve organizational activities which include the division of responsibilities and decision making processes (Cheng & Shiu, 2015).

Knowledge management

The marketing literature has addressed the concept of knowledge management capabilities (Griffith et al., 2012; Lichtenthaler, 2016). In the era of globalization, conditions of intense competition, and fast-moving innovation, knowledge management (KM) becomes an important concept to maintain a competitive advantage. This is an important reason for companies to identify management practices within a company (Jyoti et al., 2011). Knowledge management is the company's strategic ability to acquire knowledge, manage, and utilize knowledge about the market (Falasca et al., 2017). The ability of entities to acquire knowledge and experience customers, share knowledge with partners about products, customer needs, and apply knowledge to create new processes and products that can meet customer demands is a reflection of knowledge management (Lin et al., 2012). KM plays an important role in improving innovation performance. The important role of knowledge management in driving innovation capability has been studied in several studies (Darroch, 2005; Chen et al., 2015; Wang & Xu, 2018).

Market Orientation

Academics and practitioners have accepted market orientation as the adoption of marketing concepts as a key strategic element for achieving success under competitive environmental conditions. Market orientation (MO) as an implementation of marketing concepts can be understood from two main perspectives namely the cultural approach (Narver & Slater, 1990) and the behavioral approach (Jaworski & Kohli, 1993). Market orientation from a cultural perspective is a collection of philosophies, values, norms, and company trust to place customer satisfaction as the main goal by offering superior customer value (Gaur et al., 2011). Market orientation from a behavioral perspective is a series of activities such as intelligence generation to discover customer needs and actual & potential customer expectations, dissemination, and responsive actions to information (Sandvik & Sandvik, 2003; Nwokah, 2008), enabling management to understand and respond to market needs effectively to be able to offer superior customer value (Raju et al., 2011).

Market orientation behavior is indicated by the activity of finding information, disseminating, and responding to information related to the markets (Jaworski & Kohli, 1993). Market orientation affects the level of corporate knowledge (Cambra-Fierro et al., 2011; Chao et al., 2014). Knowledge management as a framework reflects the company's ability to combine, manage, and evaluate new information and knowledge that is absorbed and the combination of experience is determined by market orientation culture. The resource-based view (RBV) becomes a theoretical foundation that analyzes how market orientation as an intangible ability and unique resources that must be

owned and built by companies becomes the foundation for knowledge management (Ozkaya et al., 2015). The marketing literature has explained that market orientation as a process and activity of information generation from customers and competitors, disseminating, and responding to market intelligence increases the ability to combine, evaluate new information generated, insights, expertise, contextual information, and experience combinations to be key elements encourage organizations to achieve success. Previous empirical research has proven that market orientation has an impact on knowledge management (Wahyuni, 2019; Zebal et al., 2019). Therefore:

H1: Market orientation has a significant effect on knowledge management.

The resources based view theory (RBV) explores the importance of resources as a strategy for achieving competitive advantage and subsequently superior performance (Clulow et al., 2007). Companies understand the concept of market orientation as a company's capabilities and resources and turn it into valuable results for customers (Barney, 1991; Mamun et al., 2018). Market orientation as an ability and intangible resource increase the mechanism of how relationship learning takes place within a company so that the process of transforming information becomes knowledge. Customer and competitor information has been collected through market-oriented activities, and subsequently, information is converted into new knowledge for the company as a result of knowledge management. Market orientation is an organizational culture to find information, understand, and anticipate the needs of current customer preferences with listening activities and customer communication intensity (Wahyuni et al., 2019). Although there is conflicting evidence regarding empirical research related to the relationship between market orientation and innovation performance (Zhou et al., 2005; Keskin, 2006), most studies have shown a positive effect of market orientation on innovation performance. The level of market orientation has a positive effect on the company's ability to adapt ideas, new processes, policies, new products, and new services so that overall performance including sales volume, market share, and profitability increases (Padilha & Gomes, 2016; Sandvik & Sandvik, 2003; Wang & Chung, 2013a; Jiménez-Zarco et al., 2011). Therefore, the hypothesis is proposed:

H2: Market orientation has a significant effect on innovation performance.

Learning orientation

In general, learning orientation (OB) is associated with the process of knowledge creation. According to Levinthal & March (1993), learning orientation shows the ability of organizations to carry out the learning process. A set of organizational values that influence actions and efforts to obtain and share information related to customer needs, competitor actions, and market changes that drive products beyond competitors (Calantone et al., 2002). Learning orientation shows a framework of organizational values such as principles, morals, ethics, standards, and ideas that give rise to action activities to broaden decision-makers' perspectives and exploit opportunities. Values such as commitment to learning, open-mindedness, and sharing of vision are the keys to being able to adapt to dynamic environmental conditions and competition (Wolff et al., 2015). Likewise, the level of learning orientation that is indicated by the willingness to learn, open-mindedness in facing the challenges of a competitive environment, and the value of sharing a shared vision and commitment to deal with partners increase the effectiveness of the utilization of knowledge (Darroch, 2005). Previous research confirmed the positive relationship between learning orientation in knowledge management. The ability of organizations to continue learning as a process of gaining knowledge, disseminating, and interpreting information and external knowledge supports knowledge management activities (Ho, 2008). The view of the importance of learning to build the company's future through activity interactions with customers and exploration of opportunities supported by human resource practices influences the attitude of organizations in knowledge management (Griese et al., 2012). Learning orientation as a set of characteristics, ethics, norms makes learning possible by combining knowledge, new knowledge creation, and utilization (Huang & Li, 2017). Therefore:

H3: Learning orientation has a significant effect on knowledge management.

Furthermore, the positive relationship between learning orientation and innovation performance is supported by several kinds of literature (Suliyanto & Rahab, 2012; Fernández-Mesa & Alegre, 2015). There is already empirical evidence showing that learning orientation contributes positively to innovation performance (Peter et al., 2010). Organizations with high levels of learning commitment will build a company's understanding of customer needs, competitor strategies, anticipate customer needs, fill the opportunities and opportunities created by emerging markets that lead to contribute to innovation performance (Calantone et al., 2002). Learning by relying on external information in the context of learning will facilitate the exchange of information and updating behavior according to the expectations of

customers, suppliers, government agencies to enable companies to strengthen innovation performance (Chen & Huang, 2009). Learning orientations such as open-mindedness, open communication, and information sharing are predictors of innovation success (Calisir et al., 2013). Although there is still disagreement about the relationship between learning orientation and performance based on innovation (Nasution et al., 2011), some existing research reveals a positive relationship between learning orientation and innovation performance (Alegre Vidal & Chiva Gómez, 2008). According to Mahmoud et al. (2016), who researched 28 senior bank respondents in Ghana, learning orientation components such as commitment to learning and sharing knowledge between organizations effectively improve innovation performance. Thus the following hypothesis is proposed:

H4: Learning orientation has a significant effect on innovation performance.

Knowledge management shows the ability of organizations to formulate strategies for managing knowledge in the form of acquisition of knowledge obtained from customers, suppliers, professional networks, transfer, and application of knowledge (Chen & Huang, 2009). Knowledge acquisition, sharing, and efforts to utilize knowledge enable understanding of market dynamics, helping to capture changes in preferences that are manifested into new ideas and products (Lin et al., 2012; Huang & Li, 2017). The customer knowledge base is utilized for the development of new products, so that share performance, market demand, and earnings performance increase (Falasca et al., 2017). This study suspects knowledge management to be a significant factor in improving innovation performance. Thus the following hypothesis is proposed:

H5: Knowledge management has a significant effect on innovation performance.

Integration, coordination of individual knowledge, and organizational knowledge help companies learn, create, develop, disseminate, and use knowledge (Jyoti et al., 2011). Knowledge management is a systematic process that involves the acquisition, dissemination, and responsiveness of knowledge and the more efficient use of knowledge contributes positively to the process of innovation and performance. Knowledge management is determined by two strategic orientations namely market orientation and learning orientation (Grinstein, 2008). Brashear et al. (2012), conducted in the United States emphasizes market orientation as the ability of a market-oriented alliance that enables organizations to collectively and systematically gather market intelligence to understand customer needs and preferences, disseminate information, and respond to collected market intelligence. A high level of market orientation effectively enhances knowledge management (Chao et al., 2014), and subsequently, knowledge management becomes the basis for building innovation performance (Lin et al., 2012).

Furthermore, there is evidence of empirical research that shows learning orientation has a positive effect on knowledge management capabilities and subsequent innovation performance (Marques et al., 2018). Learning in organizations as continuous learning activities, sharing vision, disclosure of information drives the process of creating knowledge, disseminating, transforming knowledge, gaining meaning from knowledge, and utilizing knowledge. Thus there is a positive relationship between learning orientation and knowledge management (Nielsen et al., 2011). It is believed that knowledge management contributes to innovation performance (De Luca & Atuahene-Gima, 2007). Thus the study put forward the following hypothesis:

H6: Knowledge management positively mediates the relationship between market orientation and innovation performance.

H7: Knowledge management positively mediates the relationship between learning orientation and innovation performance.

Based on the conceptual framework that explains the relationship of each variable, a conceptual framework is arranged as shown in Figure 1.

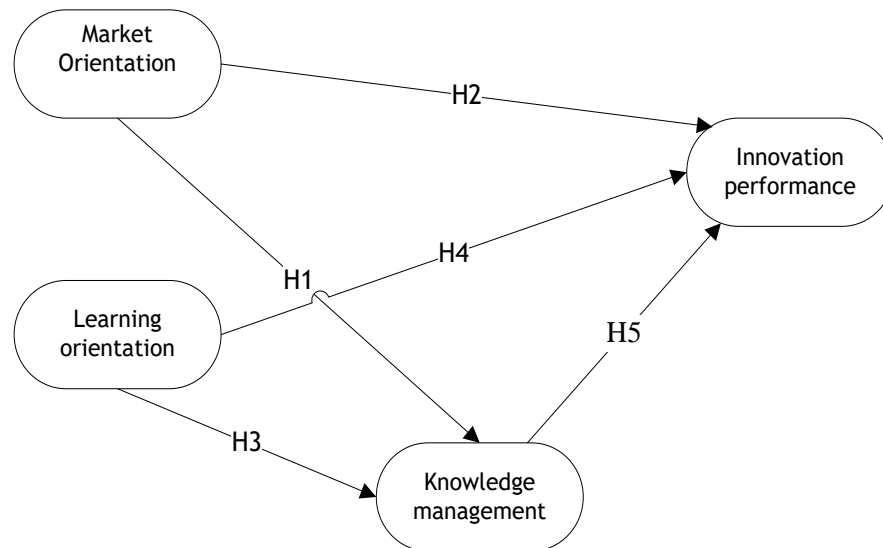


Figure 1. Conceptual framework

2 Materials and Methods

Research design

This study uses a cross-sectional design. Small and medium businesses (SMEs) with a research focus on manufacturing with one of their main functions ultimately determining survival, growth, and long-term profits (Gaur et al., 2011). Research develops conceptual models and models are empirically tested. Furthermore, quantitative analysis based on multivariate analysis using structural equation modeling based on Partial Least Square (PLS) based is used to connect between constructs and test the hypothesis path that we propose (Hair et al., 2014).

Research data sources

This research is focused on the export-oriented garment or apparel industry in Bali. Bali as one of the provinces in Indonesia has the cultural arts contained in the form of clothing that has become a creative industry in Bali. The selection of the object of this research is based on the following considerations: First, manufacturing SMEs are one of the SMEs that are oriented towards domestic and global markets. Second, manufacturing SMEs are considered as businesses that most need innovation with design and modification as demands for a rapidly changing market desire. Secondary data sources come from the Central Statistics Agency of Bali Province (2019) to determine the number of export manufacturing SMEs, and the results of manufacturing products of Bali SMEs (Statistics BPS, 2019). Primary data sources come from respondents' responses and perceptions related to market orientation, learning orientation, knowledge management, and innovation performance factors.

Research variables

The latent variables in this study consisted of 1) exogenous variables (market orientation and learning orientation); 2) endogenous variables (knowledge management and innovation performance). Market orientation consists of nine items adopted from previous research (Suliyanto & Rahab, 2012; Wahyuni, 2019). Learning orientation as behavior and ability to determine basic attitudes towards learning is measured by six items adapted from (Calantone et al., 2002; Wu & Lin, 2013). Knowledge management that reflects the ability to build the process of finding, selecting, and utilizing information and knowledge is measured by items adopted from previous research (Ho, 2008; Lin et al., 2012). All latent variable items were measured using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Innovation performance is measured by previous research items (Alegre Vidal & Chiva Gómez, 2008; Ozkaya et al., 2015; Falasca et al., 2017; Wahyuni, 2019).

Research instrument

The instrument used in collecting data was a questionnaire. The questionnaire that became the instrument in this study was tested for validity and reliability to ensure that the conditions for using an instrument were fulfilled. The instrument validity test uses the Pearson product-moment test, where the question items are declared valid if the correlation coefficient ($r_{count} > 0.30$). And, the reliability test uses Cronbach's alpha criteria provided that if the Cronbach's alpha value is ≥ 0.60 then the construct used is reliable (Hair et al., 2014). Next, managers were asked to rate their perceptions of market orientation, learning orientation, knowledge management practices, and innovation performance on a five-point Likert scale (1 = Very poor and 5 = Very good).

Population, samples, and data collection

The research analysis unit is a company with research subjects as an export orientation SME manufacturing manager. Thus, the population in this study is all manufacturing SMEs operating in Bali, with the number of employees managed by the company amounting to between 10 and 99 people (Central Statistics Agency of Bali Province, 2019). Research locations in Bali for reasons of the function and presence of SMEs in Bali in supporting the tourism sector and meeting the needs of consumers. The population in this study amounted to 561 manufacturing SMEs that are officially registered at the Central Statistics Agency of Bali Province (2019). The determination of sample size refers to the Slovin formula and produces a total sample size of 242 samples. The survey was conducted online among the management/owner of a Bali manufacturing SME. A total of 242 questionnaires were distributed, of which 117 were returned. Then, questionnaires were disposed of 31, because the information provided was incomplete. Thus, this study used 94 questionnaires with an effective response rate of 38.84 percent.

3 Results and Discussions

Data analysis uses SmartPLS (Partial Least Square) 3.0 to estimate the relationship of paths in research models that use latent constructs with several indicators (Joseph et al., 2016). The SmartPLS 3.0 analysis tool produces two levels of model evaluation as provided in Figure 2, namely: (1) a construct measurement model with reflexive indicators to determine the validity of construct indicators and construct reliability and (2) evaluation of structural models (path coefficients and R^2) (Hair et al., 2014).

Measurement model

Indicator validity criteria are measured by convergent validity and discriminant validity. Furthermore, testing the reliability to ensure the internal consistency of the construct was measured by Cronbach's alpha, composite reliability, and average variance extracted (AVE), where the value of the reliability measurement must be above 0.70. The convergent validity results are adequate if the factor loading value of all measurement items is at least 0.70, but for exploratory research, loading of 0.40 is still accepted (Mamun et al., 2018). The results of discriminant validity are adequate if values above 0.50 indicate the validity of the construct item can be accepted. Another method for evaluating construct reliability is to assess AVE results for each construct ≥ 0.50 (Sarstedt et al., 2014). Table 1 shows the results of the loading factor, Cronbach's alpha, composite reliability, and AVE, where all values are above the threshold.

Table 1
Constructions and measurement items

Constructions and items	Loadings factors	T-statistics	Composite reliability (CR) value and AVE
Market orientation (Cronbach's alpha = 0.810). At our company:			
OP1	Participates in creating added value	0.598	5.629
OP2	We try to listen to customer opinions	0.647	6,518
OP3	We try to interact with customers.	0.556	5,453

OP4	Responding to the strategy of competitors	0.714	8.190	
OP5	Routine sharing information about competitors	0.614	4.190	
OP6	We discuss with other functions.	0,616	5,270	
OP7	Establish effective communication between functions.	0,509	3,848	
OP8	We regularly coordinate	0,641	5.788	CR = 0.910 AVE = 0.627
OP9	We routinely detect the customer's desire	0.737	11.312	
To learn Orientation (Cronbach's alpha = 0,880). At our company:				
OB1	We are committed to learning to achieve our goals	0.780	16.690	
OB2	We have an agreement on company vision.	0,697	5,629	
OB3	Our leaders share a vision with a lower level	0.647	16,317	
OB4	Our company emphasizes openness.	0.835	14.681	
OB5	We have to learn basic values	0.859	25.892	
OB6	Commitment to building relationships with partners	0.788	16.996	
Knowledge management (Cronbach's alpha = .778). Our company carries out:				
MP1	We actively obtain information and knowledge from market surveys	0.805	21.722	CR = 0.871 AVE = 0.693
MP2	We disseminate knowledge that develops in the workplace by using technology.	0.835	27.537	
MP3	We use new knowledge to develop flexible marketing functions.	0.856	30,071	
Innovation performance (Cronbach's alpha = 0.901). In our company:				
KI1	Products match market demands	0.724	13,475	CR = 0.920 AVE = 0.592
KI2	Developing products outside the main product	0.754	14.634	
KI3	We have a product differentiation level of	0.749	13,500	
KI4	We design products for different customers.	0,697	15,179	
KI5	We involve management in business.	0,806	21,325	
KI6	We are creative in operating methods.	0.716	16.317	
KI7	Flexibility in production	0.872	32.037	
KI8	Improving business processes in profitable sales.	0.822	21.873	

Source: Analysis of the author's data

Structural model

The relationship between constructs was tested using partial least square structural equation modeling (PLS) -SEM. SmartPLS 3.0 modeling provides path analysis results from conceptual models such as β and R^2 . The β symbol as the path coefficient implies the strength of the relationship between the constructs of the model, while R^2 shows the percentage of construct variants in the model (Chin & Dibbern, 2010). The hypothesis is accepted if the p-value < 0.05 . This study uses a 95 percent confidence level ($\alpha = 0.05$). Correlation coefficient values are used to determine the direction of the correlation relationship. The positive correlation coefficient shows the direct relationship between constructs and vice versa. In testing the hypothesis it is very important to pay attention to the influence indicated by the direction of the arrows between latent variables, namely market orientation, learning orientation, knowledge management, and innovation performance. The hypothesis path between market orientation and knowledge management is 0.238 with a t-value of 3.640 ($\beta = 0.238$; $p < 0.05$), where the t-value exceeds 1.96 so that it can be said that this relationship is significantly positive, H1 is supported. The findings are consistent with existing literature which reports that companies that tend to explore customer desires by actively exploring market information contribute to strengthening knowledge management with a customer focus (Cabra-Fierro et al., 2013).

Surprisingly, the value of the market orientation and innovation performance (H2) path was found to be 0.161 ($\beta = 0.161$; $p > 0.05$) with a t-value of 1.922. Because the t-value is smaller than 1.96, the relationship between market orientation and non-innovation performance is significant. The results of this study failed to confirm the relationship between market orientation and innovation performance, H2 was rejected. The results of this study are surprising because there is no support for hypothesis 2 regarding the relationship between market orientation and innovation performance. This study contrasts with (Jiménez-Zarco et al., 2011). Thus this study failed to confirm the existence of the relationship between MO and innovation performance, at a significance level of 5 percent. This study differs from many previous studies that found a significant positive relationship between market orientation and innovation performance (Wang & Chung, 2013; Sandvik & Sandvik, 2003). About the path value between learning orientation and knowledge management (H3) a coefficient of 0.605 was found with a t-value of 9.264. Because the t-value exceeds 1.96, the relationship between learning orientation and knowledge management is considered to be significantly positive at the 5 percent level, H3 supported. To that end, companies should build a culture of learning by establishing long-term partnership relationships and learning commitments for generations and gaining new knowledge (Ho, 2008). Then, the value of the learning orientation path on innovation performance is 0.404 with a t-value of 4.546 ($\beta = 0.404$; $p < 0.005$). Because the t-value is more than 1.96, this relationship is positively significant, H4 is accepted. The results of this study are consistent with the existing literature. A culture of commitment to learning and sharing knowledge between organizations significantly determines better innovation performance. Organizations that place a high value on openness and organizational appreciation on the original ideas of employees, help SMEs improve the ability to produce products that match customer desires and market share expansion (Calisir et al., 2013; Mahmoud et al., 2016). And, the path coefficient between knowledge management and innovation performance is 0.380 with a t-value of $3.821 > 1.96$ ($\beta = 0.380$; $p < 0.05$). These results indicate that knowledge management has a significant positive impact on innovation performance statistically at a significance level of 5 percent, supported H5. This finding strengthens the study of Huang and Li (2009) which explains that social interaction strengthens the ability to manage and utilize knowledge so that it can support innovation performance.

On the other hand, knowledge management partially mediates the relationship between market orientation and innovation performance ($\beta = 0.074$; $p < 0.05$). The results of this study provide credibility for the findings of Huang & Li (2009), which show that managers and/or SME managers must build a market-oriented organizational environment and communicate explicit marketing plans and knowledge-based market information to all employees in all parts of the organization to achieve organizational goals. And, knowledge management partially mediates the relationship between learning orientation on innovation performance ($\beta = 0.173$; $p < 0.05$). Organizational efforts create a learning climate and culture by collaborating and encouraging team learning to facilitate organizational efforts to enhance and update knowledge to strengthen sustainable competitive advantage (Jain & Moreno, 2015). The coefficient of determination using R-squared (R^2) is a goodness-fit test of the model is evaluating the research model and evaluating what percentage of construction variance can be explained by the construct that is thought to influence it (exogenous). R-squared knowledge management construct of 0.507 means that the variance of knowledge management can be explained by 50.7 percent by the variance of market orientation and learning orientation.

And, the R-squared construct of innovation performance of 0.630 which can be explained means that the variance of innovation performance can be explained by 63 percent by the variance of market orientation, learning orientation, and knowledge management. Or, innovation performance can be shaped by market orientation, learning orientation, and knowledge management by 63 percent. Hypothesis test results, the value of the correlation coefficient between constructs, the level of significance, and the value of the R-squares are summarized in Table 2.

Table 2
Summary of hypothesis test results

Hypothesis	Path coefficient (β)	T-statistics	Significance of	R-square	Decision
H1	0.238	3.640	0.000	0.507	Received
H2	0,161	1,922	0,055		Received
H3	0.605	9.264	0.000		Rejected
H4	0.404	4.546	0.000		Received
H5	0,380	3,821	0,001	0.630	Received
Securities mediation knowledge management knowledge					
H6	0,090	2,458	0,014		Full mediation

H7	0, 230	3,951	0,000	Partial mediation
----	--------	-------	-------	-------------------

Remarks: OP=Market orientation; OB=learning orientation; MP=knowledge management; IC=innovation performance

Source: Analysis of the author's data

4 Conclusion

The era of globalization, intense business competition, increasingly shorter product life cycles, and the dynamism of consumer behavior are a challenge for all businesses, including SMEs. SMEs are not only required to have strategies and knowledge in organizations but are also able to innovate as a driving force to achieve business performance. However, the achievement of innovation is a dynamic process in which a strategy is determined to determine knowledge so that it can be used to innovate (Wu & Lin, 2013). The effects of market orientation and learning orientation on knowledge management and innovation performance currently receive less attention. This study seeks to help fill old gaps Keskin (2006), by contributing to market orientation and a culture of learning orientation in knowledge management focused on customers and innovation performance in the SME context. Thus, our research overcomes the gap of previous research, modifies, and between constructs, the level of significance, and the value of the R-squares are summarized in Table 2.

The empirically validates the conceptual model. The research objective is to understand the process of innovation in companies, namely: first, to examine the relationship between the constructs of market orientation, learning orientation on knowledge management, and innovation performance. Second, to examine the mediating role of knowledge management in the relationship between market orientation and innovation performance, and the mediating role of knowledge management in the relationship of learning orientation and innovation performance. The research findings show that each construct is significantly related to the other constructs, except the direct relationship of market orientation-innovation performance (H2 is not significant). Innovation performance is influenced by several factors such as strategic orientation such as market orientation, knowledge management skills, and learning. Therefore, clearly understanding how the dynamics of market orientation as a culture and strategy as well as what key factors are needed to create a successful innovation becomes important for the entity. Table 2 shows that all hypotheses are supported, except for hypothesis 2.

Market orientation was not found to have a significant direct effect on innovation performance. This finding is a bit surprising, considering that Zhang & Duan (2010), emphasized the strong willingness to form a market-oriented culture from an Asian perspective and the integration of coordination between functions and the willingness of managers to use the information and other resources to drive innovation-based performance. However, a simple explanation of hearing customer complaints, in the context of this study is the possibility that there is a fundamental reluctance of SMEs to respond to customer complaints and suggestions into new information and knowledge resources. The reason for this finding is because the company's focus is on understanding customers by hearing complaints, seeking market information (customers, competitors, suppliers) only as a discourse without the desire to apply information to new knowledge, so it has no effect on innovation performance. In reality, market orientation practices demonstrated by high-quality, relevant, trustworthy, accurate, and timely information-seeking behavior when needed will lead to increased response at the company level so that the process of adopting ideas, as well as product modification and innovation increases (Ozkaya et al., 2015). Furthermore, when this research finds a direct relationship of learning orientation to innovation performance, the entity needs to create a learning-oriented environment to achieve superior innovation performance.

Existing literature on SMEs proposes that companies implement marketing plans with the courage to challenge assumptions and values and develop customer information. This study suggests that to improve learning orientation in SMEs, companies must emphasize the importance of openness and willingness to oppose assumptions, values, or views to absorb insights, market information, and new customer-based knowledge so that it has a positive effect on improving innovation performance. Although H2 is rejected, specifically H6 shows that market orientation indirectly influences innovation performance through knowledge management. Interesting findings, the indirect relationship of learning orientation to innovation performance mediated by knowledge management was also significantly positive. Understanding companies in a unique way of doing business with an export focus makes it easy for SMEs to formulate appropriate market orientation, learning orientation, and innovation strategies through knowledge management. The ability to do learning in organizations gives decision-makers an informative and analytic insight. Wolff et al., (2015),

showed learning orientation as shared vision behavior throughout the organization, open-mindedness, and sophisticated learning commitments to improve knowledge management to overcome problems related to needs, customer preferences to obtain valuable products/services (Jyoti et al., 2011). Thus, the findings of this study present a viewpoint on the integration of knowledge management on the indirect effects of market orientation and learning orientation on innovation performance.

Implications for research

This research develops research models obtained from existing theories and research. The RBV theory provides a summary for understanding the effects of orientation strategies on knowledge management and innovating performance (Ozkaya et al., 2015). The RBV theory becomes a theoretical foundation that supports strong knowledge management that significantly facilitates innovation performance (Chao et al., 2014). To examine the effects of market orientation, learning orientation, and knowledge management on innovation performance, this research contributes to the literature in several ways. First, knowledge management does not only directly influence innovation performance but indirectly mediates the relationship between market orientation and innovation performance. It can be said, market orientation can have an indirect impact on innovation performance, through knowledge management mediation. The explanation is that the company's market orientation as a unique resource can accurately reveal and obtain information on customer needs and effectively encourage customer knowledge management, and efficiently identify innovative ideas. Second, the empirical results verify that the learning orientation process influences knowledge management, through the mediation of knowledge management. Customers as an important source of innovating entities often have unclear characteristics of their desires and preferences. Knowledge management based on learning outcomes can effectively increase creativity so that innovation performance increases. Thus, it can be explained that knowledge management is very important to create innovation performance in the context of export manufacturing SMEs.

Implications for practice

This study also offers managerial implications, which provide empirical evidence of market-oriented activities, learning orientation, and knowledge management activities that affect innovation performance. It offers advice and serves as a guideline for managers and/or owners that to improve knowledge management practices in business processes needs to be supported by strategic orientation, for example, market orientation and learning orientation. Research also shows that companies need to be market-oriented by paying attention to their interactions with customers, listening to help companies get information as a basis for managing successful innovation knowledge and practices. Companies can engage in market orientation practices such as routinely detecting customer desires and responding to competitor strategies that facilitate successful innovation performance. And, organizations need to have a culture and high learning commitment, spread the vision and goals of the organization in all functions, and an open mind to absorb market information so that knowledge management becomes effective to support the innovation process in small and medium businesses (SMEs).

Research limitation

This research still has several limitations that need to be considered and possibly discussed in future research. First, the spotlight from an orientation strategy perspective (eg market orientation and learning orientation) is combined with knowledge management to explore the mechanism for innovation performance. Future research can be done by exploring more in-depth the mechanism of how an orientation strategy with organizational capabilities results in the performance of new products. Second, this study specifically uses a sample consisting of one manufacturing SME industry. This approach reduces the generalization of results. Future research directions are therefore conducting orientation strategy research in the context of SMEs in the manufacturing and service sectors. Third, for future research directions, it is recommended to develop research models by adding other concepts such as strategic orientation and the use of knowledge effectiveness to achieve sustainable competitive advantage.

Conflict of interest statement

The authors declared that they have no competing interests.

Statement of authorship

The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

Acknowledgments

This research was supported by the government of the Republic of Indonesia through the Research Fund provided by DRPM (Direktorat Riset dan Pengabdian Masyarakat) Republik Indonesia. We are grateful to the editor of IRJMIS for their support, valuable time, comments, and advice in completing the earlier version of this paper

References

- Al-Ansari, Y., Pervan, S., & Xu, J. (2013). Innovation and business performance of SMEs: the case of Dubai. *Education, Business and Society: Contemporary Middle Eastern Issues*.
- Alegre Vidal, J., & Chiva Gómez, R. (2008). Assessing the impact of organizational learning capability on product innovation performance: An empirical test.
- Badan Pusat Statistik Provinsi Bali. (2019). *Provinsi Bali Dalam Angka 2019*.
- Baker, W. E., & Sinkula, J. M. (1999). The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of the academy of marketing science*, 27(4), 411-427.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
- Brashear, T., Bicen, P., & Hunt, S. D. (2012). Alliance market orientation, new product development, and resource advantage theory. *Journal of Business & Industrial Marketing*.
- Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial marketing management*, 31(6), 515-524. [https://doi.org/10.1016/S0019-8501\(01\)00203-6](https://doi.org/10.1016/S0019-8501(01)00203-6)
- Calisir, F., Gumussoy, C. A., & Guzelsoy, E. (2013). Impacts of learning orientation on product innovation performance. *The Learning Organization*.
- Cambra-Fierro, J. J., Melero-Polo, I., & Vázquez-Carrasco, R. (2013). Customer engagement: Innovation in non-technical marketing processes. *Innovation*, 15(3), 326-336.
- Cambra-Fierro, J., Florin, J., Perez, L., & Whitelock, J. (2011). Inter-firm market orientation as antecedent of knowledge transfer, innovation and value creation in networks. *Management Decision*.
- Carbonell, P., & Rodríguez-Escudero, A. I. (2009). Relationships among team's organizational context, innovation speed, and technological uncertainty: An empirical analysis. *Journal of Engineering and Technology Management*, 26(1-2), 28-45. <https://doi.org/10.1016/j.jengtecman.2009.03.005>
- Chao, M. C. H., Feng, S., & Li, F. (2014). The Journey from Market Orientation to New Product Performance in the Host Country: A Knowledge and Learning Perspective. *Journal of Marketing Development & Competitiveness*, 8(1).
- Chen, C. J., & Huang, J. W. (2009). Strategic human resource practices and innovation performance—The mediating role of knowledge management capacity. *Journal of business research*, 62(1), 104-114. <https://doi.org/10.1016/j.jbusres.2007.11.016>
- Chen, K. C., Jin, B. H., & Wu, C. S. (2015). A Study of Market Orientation, Social Customer Relationship Management and Organizational Performance. *Xing Xiao Ping Lun*, 12(4), 395.
- Cheng, C. C., & Shiu, E. C. (2015). The inconvenient truth of the relationship between open innovation activities and innovation performance. *Management Decision*.
- Chin, W. W., & Dibbern, J. (2010). An introduction to a permutation based procedure for multi-group PLS analysis: Results of tests of differences on simulated data and a cross cultural analysis of the sourcing of information system services between Germany and the USA. In *Handbook of partial least squares* (pp. 171-193). Springer, Berlin, Heidelberg.
- Clulow, V., Barry, C., & Gerstman, J. (2007). The resource-based view and value: the customer-based view of the firm. *Journal of European industrial training*.
- Cronin-Gilmore, J. (2012). Exploring marketing strategies in small businesses. *Journal of Marketing Development and Competitiveness*, 6(1), 96-107.
- Daroch, J. (2005). Knowledge management, innovation and firm performance. *Journal of knowledge management*.
- De Luca, L. M., & Atuahene-Gima, K. (2007). Market knowledge dimensions and cross-functional collaboration: Examining the different routes to product innovation performance. *Journal of marketing*, 71(1), 95-112.
- Falasca, M., Zhang, J., Conchar, M., & Li, L. (2017). The impact of customer knowledge and marketing dynamic capability on innovation performance: an empirical analysis. *Journal of Business & Industrial Marketing*.
- Fang, S. R., Chang, E., Ou, C. C., & Chou, C. H. (2014). Internal market orientation, market capabilities and learning orientation. *European journal of marketing*.
- Fernández-Mesa, A., & Alegre, J. (2015). Entrepreneurial orientation and export intensity: Examining the interplay of organizational learning and innovation. *International Business Review*, 24(1), 148-156. <https://doi.org/10.1016/j.ibusrev.2014.07.004>
- Gaur, S. S., Vasudevan, H., & Gaur, A. S. (2011). Market orientation and manufacturing performance of Indian SMEs. *European Journal of Marketing*.
- Geigenmüller, A., Griese, I., Pick, D., & Kleinaltenkamp, M. (2012). Antecedents of knowledge generation competence and its impact on innovativeness. *Journal of Business & Industrial Marketing*.

- Griffith, D. A., Kiessling, T., & Dabic, M. (2012). Aligning strategic orientation with local market conditions. *International Marketing Review*.
- Grinstein, A. (2008). The relationships between market orientation and alternative strategic orientations. *European journal of marketing*.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM). *European business review*.
- Hapsari, I. M. (2014). Identifikasi Berbagai Permasalahan Yang Dihadapi Oleh Ukm Dan Peninjauan Kembali Regulasi Ukm Sebagai Langkah Awal Revitalisasi Ukm. *Permana*, 5(2).
- Ho, L. A. (2008). What affects organizational performance?. *Industrial Management & Data Systems*.
- Huang, J. W., & Li, Y. H. (2009). The mediating effect of knowledge management on social interaction and innovation performance. *International journal of Manpower*.
- Huang, J. W., & Li, Y. H. (2017). The mediating role of ambidextrous capability in learning orientation and new product performance. *Journal of Business & Industrial Marketing*.
- Jain, A. K., & Moreno, A. (2015). Organizational learning, knowledge management practices and firm's performance. *The Learning Organization*.
- Jaworski, B. J., & Kohli, A. K. (1993). Market Orientation: Antecedent and Consequences. *Journal of Marketing*, 57(1), 53–70.
- Jiménez-Zarco, A. I., Martínez-Ruiz, M. P., & Izquierdo-Yusta, A. (2011). The impact of market orientation dimensions on client cooperation in the development of new service innovations. *European Journal of Marketing*.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.
- Jyoti, J., Gupta, P., & Kotwal, S. (2011). Impact of knowledge management practices on innovative capacity: A study of telecommunication sector. *Vision*, 15(4), 315-330.
- Keskin, H. (2006). Market orientation, learning orientation, and innovation capabilities in SMEs. *European Journal of innovation management*.
- Nielsen, P., Rasmussen, P., & Kuo, T. H. (2011). How to improve organizational performance through learning and knowledge?. *International Journal of Manpower*.
- Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic management journal*, 14(S2), 95-112.
- Lichtenthaler, U. (2016). Determinants of absorptive capacity: The value of technology and market orientation for external knowledge acquisition. *Journal of Business & Industrial Marketing*.
- Lin, R. J., Che, R. H., & Ting, C. Y. (2012). Turning knowledge management into innovation in the high-tech industry. *Industrial Management & Data Systems*.
- Lisboa, I. (2017). Capital structure of exporter SMEs during the financial crisis: evidence from Portugal. *European Journal of Management Studies*, 22(1), 25-49.
- Mac, L., & Evangelista, F. (2016). Intensity and diversity of Internationalization among SME exporters in China.
- Mahmoud, M. A., Blankson, C., Owusu-Frimpong, N., Nwankwo, S., & Trang, T. P. (2016). Market orientation, learning orientation and business performance. *International Journal of Bank Marketing*.
- Al Mamun, A., Mohiuddin, M., Fazal, S. A., & Ahmad, G. B. (2018). Effect of entrepreneurial and market orientation on consumer engagement and performance of manufacturing SMEs. *Management Research Review*.
- Marques, C. S., Santos, G., Marques, V., & Ramos, E. (2018, September). The impact of knowledge creation, acquisition and transfer on innovation in the healthcare sector. In *European Conference on Knowledge Management* (pp. 494-502). Academic Conferences International Limited.
- Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of marketing*, 54(4), 20-35.
- Nasution, H. N., Mavondo, F. T., Matanda, M. J., & Ndubisi, N. O. (2011). Entrepreneurship: Its relationship with market orientation and learning orientation and as antecedents to innovation and customer value. *Industrial marketing management*, 40(3), 336-345. <https://doi.org/10.1016/j.indmarman.2010.08.002>
- Ndubisi, N. O., & Iftikhar, K. (2012). Relationship between entrepreneurship, innovation and performance. *Journal of Research in Marketing and entrepreneurship*.
- Nwokah, N. G. (2008). Strategic market orientation and business performance. *European Journal of Marketing*.
- O'Cass, A., & Heirati, N. (2015). Mastering the complementarity between marketing mix and customer-focused capabilities to enhance new product performance. *Journal of Business & Industrial Marketing*.

- Ozkaya, H. E., Droge, C., Hult, G. T. M., Calantone, R., & Ozkaya, E. (2015). Market orientation, knowledge competence, and innovation. *International Journal of Research in Marketing*, 32(3), 309-318. <https://doi.org/10.1016/j.ijresmar.2014.10.004>
- Padilha, C. K., & Gomes, G. (2016). Innovation culture and performance in innovation of products and processes: a study in companies of textile industry. *RAI Revista de Administração e Inovação*, 13(4), 285-294. <https://doi.org/10.1016/j.rai.2016.09.004>
- Raju, P. S., Lonial, S. C., & Crum, M. D. (2011). Market orientation in the context of SMEs: A conceptual framework. *Journal of Business Research*, 64(12), 1320-1326. <https://doi.org/10.1016/j.jbusres.2010.12.002>
- Roach, D. C., Ryman, J., & White, J. (2014). Culture, conduct and innovation: a deconstruction of market orientation. *Journal of Research in Marketing and Entrepreneurship*.
- Sandvik, I. L., & Sandvik, K. (2003). The impact of market orientation on product innovativeness and business performance. *International journal of Research in Marketing*, 20(4), 355-376. <https://doi.org/10.1016/j.ijresmar.2003.02.002>
- Sarstedt, M., Ringle, C. M., Smith, D., Reams, R., & Hair Jr, J. F. (2014). Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *Journal of Family Business Strategy*, 5(1), 105-115. <https://doi.org/10.1016/j.jfbs.2014.01.002>
- Suliyanto, S., & Rahab, R. (2012). The role of market orientation and learning orientation in improving innovativeness and performance of small and medium enterprises. *Asian Social Science*, 8(1), 134.
- Wahyuni, N. M. (2019). Efek kompetensi menghasilkan pengetahuan sebagai mediasi pengaruh orientasi pasar terhadap inovasi UKM tekstil di Bali. *Matrik: Jurnal Manajemen, Strategi Bisnis Dan Kewirausahaan*, 13(1), 47–55.
- Wahyuni, N. M., Sara, I. M., & Amerta, I. M. S. (2019). Effect of Market Orientation and Competence of Knowledge on Innovation. 74(AICMaR 2018), 158–160.
- Wang, C. L., & Chung, H. F. (2013). The moderating role of managerial ties in market orientation and innovation: An Asian perspective. *Journal of Business Research*, 66(12), 2431-2437. <https://doi.org/10.1016/j.jbusres.2013.05.031>
- Wang, X., & Xu, M. (2018). Examining the linkage among open innovation, customer knowledge management and radical innovation. *Baltic Journal of Management*.
- Peters, L. D., Pressey, A. D., Westerlund, M., & Rajala, R. (2010). Learning and innovation in inter-organizational network collaboration. *Journal of Business & Industrial Marketing*.
- Wolff, J. A., Pett, T. L., & Ring, J. K. (2015). Small firm growth as a function of both learning orientation and entrepreneurial orientation. *International Journal of Entrepreneurial Behavior & Research*.
- Wu, L. W., & Lin, J. R. (2013). Knowledge sharing and knowledge effectiveness: learning orientation and co-production in the contingency model of tacit knowledge. *Journal of Business & Industrial Marketing*.
- Zebal, M., Ferdous, A., & Chambers, C. (2019). An integrated model of marketing knowledge—a tacit knowledge perspective. *Journal of Research in Marketing and Entrepreneurship*.
- Zhang, J., & Duan, Y. (2010). Empirical study on the impact of market orientation and innovation orientation on new product performance of Chinese manufacturers. *Nankai Business Review International*.
- Zhou, K. Z., Yim, C. K., & Tse, D. K. (2005). The effects of strategic orientations on technology-and market-based breakthrough innovations. *Journal of marketing*, 69(2), 42-60.