

How Do the Determinants of New Product Development Matter in the International Context? The Moderating Role of Learning Orientation

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Abstract

New product development provides a resource for enterprises to gain competitiveness, especially for enterprises that are exploring the international market. It is necessary to understand how the strategic behaviors, cultures, and capabilities of international enterprises are critical factors in improving innovation and new product development. From an external perspective this study argues that firms can facilitate the development of dynamic internationalization capabilities through knowledge acquisition in the organizational learning literature via social networks. The purpose of this study is to explore the relationship among relational embeddedness, export market orientation, dynamic internationalization capability and new product development, as well as the moderating effect of learning orientation. This study empirically verifies its research framework from 217 Taiwanese internationalized enterprises. Partial least squares structural equation modeling is used to detect the relationships between the variables in the model. Many items must be taken into consideration regarding specific facet scales. Our research results confirm previous studies that indicate positive correlations between relational embeddedness and international exploration as well as export market orientation. The results also suggest that international exploration and international exploitation have positive effects on new product development. Learning orientation plays a moderating role in terms of the relationships among relational embeddedness, export market orientation, international exploration, international exploitation, and new product development. Based on the empirical results, research conclusions and theoretical implications are proposed.

Keywords: dynamic internationalization capability, export market orientation, learning orientation, new product development, relational embeddedness

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1. INTRODUCTION

New product development (NPD) and innovation have attracted the attention of many scholars in recent years, especially in the fields of science and technology as well as manufacturing,

fields which are indispensable and necessary conditions for achieving competitive advantage and organizational growth (Flor et al., 2018). For internationalized enterprises, NPD often determines the strategic direction and competitive behavior of enterprises (Cavusgil & Knight, 2015). In the dynamic global market, NPD and innovation are generally not available through market exchange or purchases, but come from the gradual derivation of long-term accumulated knowledge along with the resources and capabilities of enterprises (Gomes & Wojahn, 2017; Vahlne & Jonsson, 2017). Therefore, in discussing the issue of NPD of internationalized enterprises, most scholars in the past have drawn from relevant theories of dynamic capability (Peng & Lin, 2021), knowledge management (Flor et al., 2018; García-Villaverde et al., 2018) and / or organizational learning (Liu et al., 2018). Despite some disagreement, there is generally compatibility among different theories, and discussion on the phenomena based on a combination of theories can facilitate a deeper understanding of the individual theories themselves (García-Villaverde et al., 2018; Liu et al., 2018). In this study, the application of organizational learning theory and dynamic capability theory are discussed in the international context to explore the effects of determinants of different opinions on the issue of NPD.

In the perspective of organizational learning, several constituent elements are essential during the learning process for a firm, such as knowledge source, knowledge integration, organizational capability and final output (Aranda et al., 2017; Argote & Hora, 2017; Liu et al., 2018). In this study, NPD and innovation are the desired output of the firm. To improve NPD, it is necessary to combine knowledge and capability, especially in internationalized enterprises (Cavusgil & Knight, 2015; Vahlne & Jonsson, 2017). However, the international market environment is highly fluid, this a firm's dynamic capability plays an important role (Vahlne & Jonsson, 2017). Pinho & Prange (2016) put forward the concept of dynamic internationalization capability, which they combine with international marketing theory based on existing dynamic capability. Dynamic internationalization capability is defined as the way enterprises expand their scale through an internationalization process and accumulate more experiences to cope with the rapid changes in the environment of the overseas market by continuous development, consolidation behaviors and the reallocation of resources (Cavusgil & Knight, 2015; Spyropoulou et al., 2018; Peng & Lin, 2021). Nevertheless, few studies have presented discussions and empirical results of dynamic internationalization capability in terms of NPD and innovation (Peng & Lin, 2021). To fill this research gap, the present study aims to explore the impact of dynamic internationalization capability on NPD for internationalized enterprises.

Our background proceeds in accordance with the corresponding knowledge properties of dynamic internationalization capability (e.g. explicit and tacit knowledge) (Dhanaraj et al., 2004) supplemented with different ways of knowledge acquisition. The knowledge properties required in the process of improving dynamic internationalization capability depend on the source of knowledge acquisition and the behavior and attitude towards knowledge acquisition. In studies from Pinho & Prange (2016) and Peng & Lin (2021), only the source of knowledge acquisition (social network) has been discussed, with the behavior and attitude of knowledge acquisition within the enterprise neglected. In the context of international marketing, scholars have put forward social networks (Liu et al., 2018; Pinho & Prange, 2016) and EMO (Cadogan et al., 2009; Lin et al., 2014) as antecedents of enhanced performance and capability growth of firms. The

social network has been identified as the cooperative relationship between firms in the social capital view, while the relational dimension of social capital (so-called relational embeddedness) is regarded more as the tightness and strength of the network relationship (Garcia-Villaverde et al., 2018; Luca et al., 2018). Scholars have argued that a high degree of relational embeddedness (RE) could contribute to the acquisition of valuable and non-repeatable knowledge by firms which is beneficial to the cultivation of international exploration as well as a source of new knowledge creation (Alinaghian et al., 2020; Dhanaraj et al., 2004; Riikkinen et al., 2017). Moreover, while the international market is highly dynamic in terms of the environment (Cadogan et al., 2009), scholars have proposed that the establishment and reinforcement of export-market-oriented behavior can help internationalized enterprises to collect (Cadogan et al., 2009; Lin et al., 2014), spread and apply market intelligence (Spyropoulou et al., 2018). Therefore, the purpose of this study is to take RE and EMO as antecedents of dynamic internationalization capability and to discuss the relationship.

Scholars have proposed that organizational learning is not only a process (Liu et al., 2018) but also represents a corporate culture, especially the proposed concept of learning organization. In the learning process of resource-capability-performance (Alinaghian et al., 2020; Flor et al., 2018; Luca et al., 2018), few studies represent the cultural elements of learning added in each stage, despite the fact that most studies present complete development frameworks (Garcia-Villaverde et al., 2018). Specific cultures in any organization are reflected by different sets of values, beliefs, assumptions and values (Aranda et al., 2017). Since Baker & Sinkula (1999) proposed the concept of learning orientation (LO), in the past 20 years studies have emerged that discuss the influence of organizational capability and organizational innovation (Aranda et al., 2017; Argote & Hora, 2017; Gomes & Wojahn, 2017). Most studies have even added the variable of market orientation to provide a more insightful understanding of organizational learning (Fang et al., 2014; Nasution et al., 2011). Thus, to strengthen the understanding of dynamic internationalization capability and NPD, LO is regarded as the role of catalyst in the learning process in the exploration of the moderating effect of LO in our study framework.

Section 2 describes concepts related to relational embeddedness, export market orientation, dynamic internationalization capability and learning orientation, as well as developing hypotheses associated with their interdependence. Section 3 presents the research methodology and instruments, while Section 4 tests the hypotheses and discusses the results. This paper concludes with theoretical and managerial implications as well as study limitations.

2. THEORETICAL BACKGROUND

2.1 Dynamic Internationalization Capability

Limaj & Bernroider (2019) have argued that internationalized enterprises must have external capabilities to understand the changes in external environments in order to learn and manage them and thus help them operate more viably. At the same time, internal resources are used to centralize capabilities and the internal resources themselves to enhance the performance of a firm. Both adapting to the environment and learning are necessary conditions for the long-term survival of an enterprise, which entails improving existing knowledge and attaining new

knowledge to successfully penetrate new markets (Limaj & Bernroider, 2019). Some scholars have also suggested that dynamic internationalization capabilities can improve resources and capabilities, which in turn affect firm performance (Helfat & Raubitschek, 2018).

Limaj & Bernroider (2019) argued for notable differences among internationalized enterprises in terms of increasing exploration and exploitation. In the past, scholars proposed conducting duality studies of exploration and exploitation, both of which enable enterprises to simultaneously implement capabilities and perform different and competing behaviors based on their capabilities (Simsek et al., 2009). The key to success relies not only on what organizations learn and the depth of the knowledge, but also on how long it takes to apply new or exploratory information and resources that can enable organizations increase their competitive advantage and improve performance (Limaj & Bernroider, 2019). Exploration is primarily applied to current knowledge as the driving force for internationalization, which may be improved or enhanced by learning from locally available information and adjusting allocation resources (Vrontis et al., 2017; Limaj & Bernroider, 2019); exploitation is innovation, flexibility and discovery (Limaj & Bernroider, 2019). As internationalization opens up new markets, it develops new knowledge and resources through its relationships with local partners to create new capabilities and unique, providing internationalized enterprises with potential advantages and better long-term performance (Vrontis et al., 2017), as well as adapting to market changes. Based on the dynamic capabilities driven by international expansion, this study explores the differences between dynamic capabilities and internationalization through market exploration and exploitation.

Internationalized enterprises can significantly improve their performance through internal resource replacement and the learning of management knowledge (Zhang et al., 2010). Empirical evidence between dynamic internationalization capabilities and performance has still not been apparent (Stadler et al., 2013). Their dynamic internationalization capabilities also vary with different internationalization strategies, with the need to develop those competencies to influence the success of internationalization yet undiscovered (Gassmann & Keupp, 2007).

Teece (2018) argued that firms developing existing capabilities could generate new resources and capabilities, re-align internal resources for business efficiency, and identify and exploit market opportunities. Spyropoulou et al. (2018) also believed that with exploration, enhancing their international exploration can help them meet customer needs and create competitive advantages in NPD while at the same time cultivating their abilities to integrate resources and make the market value they need to achieve superior NPD performance (Hunt & Madhavaram, 2020). As such, this study proposes the following hypothesis:

H1a: International exploration of dynamic internationalization capability positively correlates with new product development.

Organizational learning requires the application of new capabilities and the creation of new values, leveraging these new capabilities to assist integration after entering new international markets. The exploitation of this advantage enables internationalized enterprises to create new capabilities, increase business resilience, continually develop new technologies, attain new managerial capabilities, and create a mix of internal and external resources (Mikalef & Pateli, 2017), enabling organizations to extend their prior knowledge and build new value

(Limaj & Bernroider, 2019) to maintain a long-term competitive advantage in response to NPD. Li et al. (2018) indicated that internationalized enterprises would obtain new knowledge by exploiting new markets to enhance their internal capabilities and thus their innovation performance. Furthermore, exploitation leads to disruptive innovations (Vrontis et al., 2017), giving internationalized enterprises greater flexibility and innovative energy infusions to sustain their NPD. Limaj & Bernroider (2019) proposed a positive correlation between exploitation and innovation. Yalcinkaya et al. (2007) found that the relation between exploitation and NPD is positive and significant, so this study proposes the following hypothesis:

H1b: International exploitation of dynamic internationalization capability positively correlates with new product development.

2.2 Export Market Orientation

Export market orientation (EMO) is regarded as a manifestation of the international behavior of enterprises. Lin et al. (2014) asserted that EMO refers mainly to a means of continually monitoring information about customers, competitors and the market environment so enterprises in foreign markets can provide goods and services of value to customers (Li et al., 2018). When enterprises have a higher EMO, they will be able to obtain more information on foreign markets (Cadogan et al., 2009) to better understand the trends and demands of those markets. This serves to stabilize the position of enterprises in the international market.

Export intelligence generation refers to the acquisition of information on all foreign market activities, including international market research, export information and activities that affect the environmental changes of corporate customers and competitors (Cadogan et al., 2009; Lin et al., 2014); export intelligence dissemination is the sharing of information on foreign markets and sharing of market information through events. Export intelligence responsiveness is the planning and execution of responses to market information (Cadogan et al., 2009; Chung, 2012), which will affect the direction of export decision-making. With a higher EMO, internationalized enterprises will have more information about foreign markets (Chung, 2012; Lin et al., 2014) and understand the needs of their customers in order to stabilize the position of the international market and enable enterprises to drive their new technologies and information (Flor et al., 2018).

According to Mikalef & Pateli (2017), environment knowledge is learned using the gathering and sharing of information through the marketplace in which they wish to learn from, managing environmental changes, addressing customer needs and achieving superior performance. However, internationalized enterprises should create excellent international exploitation by understanding customers and innovating products and resources over time (Cadogan et al., 2009). This study proposes the following hypothesis:

H2: Export market orientation positively correlates with international exploitation.

2.3 Relational Embeddedness (RE)

Relational embeddedness implies the frequency of communication and interaction among members, and the higher it, the richer the knowledge quantity (Alinaghian et al., 2020; Evangelista & Hau, 2009; Ferraris et al., 2018), as well as more resolution or new creative

ideas are produced for the collective target (Evangelista & Hau, 2009). From the perspective of the social network, in the related studies on knowledge transfer, the strength of a network is regarded as the whole network structure formed by a series of social relations (Paraponaris et al., 2015; García-Villaverde et al., 2018). Among which, the so-called relational dimension of social capital (that is, RE) (Luca et al., 2018) refers to the overall pattern aggregated via ties and position of each other's interaction by network members (Alinaghian et al., 2020) and has a significant impact on the access to resources and information, including efficiency and timeliness of information acquisition, as well as referral of interests, or forming a tight network system via information exchange, and producing collective norms (Ferraris et al., 2018; Liu et al., 2018). Following the claims from Dhanaraj et al. (2004) that information and knowledge could be exchanged by organizations through means of market, hierarchy and a hybrid form. The international joint venture is a typical example concerning a hybrid form, and they elaborate on the relationships among organizations with three factors in RE, namely, the strength of ties, trust and shared system (Liu et al., 2018; Wu et al., 2020).

The boundaries of the cooperation of enterprises are reflected by the legal contract among them, and it restricts the development of the relationship among them (Luca et al., 2018). At the same time, these boundaries can be broken through by the embedded social relationship (Chung, 2012). RE can conquer the obstacles and contribute to the cost reduction of knowledge acquisition in the process, in which free exchange of knowledge that has been created resulting in learning facilitation (Luca et al., 2018; Wu et al., 2020). Knowledge transfer will be obstructed by them when there is high complexity in the knowledge, and it is explicit to be made (Paraponaris et al., 2015; García-Villaverde et al., 2018).

Hence, equipped with good RE, internationalized enterprises are capable of comparing their current knowledge with new network knowledge (Evangelista & Hau, 2009; Flor et al., 2018); based on successive, repeated reflections, the content and quality of the knowledge can be obtained by such enterprises (Alinaghian et al., 2020), and problems can be figured out by them, together with their relevant customers and suppliers (Luca et al., 2018), consequently, their tacit knowledge is obtained (Luca et al., 2018). In conclusion, external knowledge is acquired, converted and utilized by internationalized enterprises based on RE (Alinaghian et al., 2020). External and internal knowledge can be combined, and international exploration can be strengthened in the process of organizational learning (García-Villaverde et al., 2018; Wu et al., 2020). Therefore, here is the following hypothesis made in the study:

H3: Relational embeddedness positively correlates with international exploration.

2.4 Learning Orientation (LO)

According to Baker & Sinkula (1999), learning orientation is a combination of learning beliefs and values, representing the commitment to knowledge learning and results in the transfer of knowledge models. In the past, many studies regarded LO as a crucial organizational culture, which promotes the learning intention of organization members on new knowledge or unknown knowledge, thus improving organizational performance (Nasution et al., 2014). What's more, many empirical studies have followed the measurement of variables and scales proposed by Peng & Lin (2017) to verify the important role of LO in studies, including (1) commitment to learning,

which signifies the promise of an organization to promote a learning culture and place value on learning activity; (2) open-mindedness, which is linked to the notion of unlearning; and (3) shared vision, focused on the learning that cultivates energy, makes a commitment, and achieves purpose among members of an organization. In knowledge management, LO also reflects knowledge-questioning values, which promotes organization members to derive attitudes toward higher-order learning and deep learning (Peng & Lin, 2017; Nasution et al., 2014). It indicates that LO is not only a kind of strategic behavior but also an organizational culture, which can help organizations “actively” absorb and digest external knowledge, and propose insights, know-how and understanding to improve organizational performance and customer value. This study takes LO as a cultural aspect that emphasizes all direct paths of a conceptual framework that needs to be complemented by an appropriate climate for learning (Nasution et al., 2014).

By strong learning attitude and culture, internationalized enterprises possessing sufficient dynamic internationalized capability can internalize the inter-firm information and knowledge acquired by the enhancement of RE (Najafi-Tavani et al., 2016) and EMO (Cadogan et al., 2009; Chung, 2012), and further, put forward a higher level of international exploration and international exploitation. The values of the learning culture determine the basic norms and beliefs about the reasons for and approach of digesting, sharing and integrating knowledge in an organization (Liu et al., 2018; Spyropoulou et al., 2018). Therefore, more LO helps members of an organization comprehend new knowledge and information, share different views, change the structure of shared meanings, and propose concrete action steps based on their understanding (Wu et al., 2020), thereby facilitating the development of dynamic internationalized capability. Javalgi et al. (2014) also indicated that the acquisition of new knowledge does not mean the improved quality of dynamic internationalized capability; it is easier to process external knowledge when employees collaborate in an open learning environment and culture where knowledge flows into, no matter within or out of the organization (Limaj & Bernroider, 2019). Based on these arguments, the relevant hypotheses are made as follows in this study:

H4a: Learning orientation positively moderates the relationship between relational embeddedness and international exploration.

H4b: Learning orientation positively moderates the relationship between export market orientation and international exploration.

International exploration and exploitation encourage foreign-specific knowledge integration, application and strengthen NPD of internationalized enterprises and innovation for demands of international markets (Wu et al., 2020). However, internationalized enterprises often do not entirely distribute and leverage all capabilities they own (Spyropoulou et al., 2018). The size and age of internationalized enterprises grow with operating in the international market. There is a feature of dynamic path dependence (Liu et al., 2018), if there is no autonomy in learning which deals with the update and intensification of international exploration and international exploitation, internationalized enterprises may be affected by the vicious cycle of rigid capability or capability trap, thus shifting the direction of NPD or making it difficult to develop products that meet the needs of overseas markets (Nasution et al., 2011). However, LO is conducive to making internationalized enterprises avoid and overcome these problems by ensuring commitment to learning, open-mindedness and vision of achieving the organizational goals.

Based on these arguments, the relevant hypotheses are made as follows in this study:

H5a: Learning orientation positively moderates the relationship between international exploitation and new product development.

H5b: Learning orientation positively moderates the relationship between international exploration and new product development.

Building on the above arguments, this study thus presents Figure 1:

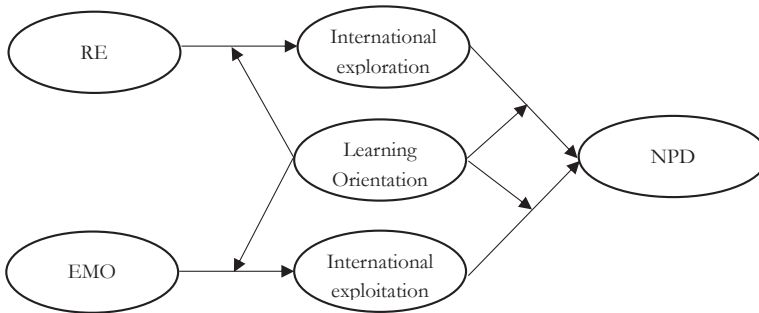


Fig. 1 – Research Framework. Source: own research

3. RESEARCH OBJECTIVE, METHODOLOGY AND DATA

3.1 Sampling design

This study holds that among the small and medium-sized enterprises pursuing overseas investment, the manufacturing industry with a larger scale than other industries and mature management mode and network structure has a particular knowledge transfer system. Therefore, this study mainly targets those SMEs in the manufacturing industry which have internationalized and desire to set up factories in foreign regions to explore the relevance between network structure and overseas market performance. The sample effectiveness is to conduct profound research on the selection of information-rich cases. However, this study chooses the manager of Taiwanese foreign-invested enterprises as the research objects. It expects to provide relevant internal scale, capability and experience of production activities through the understanding of such manager at the enterprise. The source of the required sample size was built based on the investigation of the business directory and mail questionnaire approved by the Investment Commission of the Ministry of Economic Affairs. The questionnaire was mailed to 1,000 SMEs, and 223 copies were recalled. Excluding those who did not complete the questionnaire and those who filled with the same answer, as well as those who did not know the internal and external operations of the organization with less than one year's experience, than a total of 6 copies were deleted, and 217 copies were effectively recalled, leading to a response rate of 21.7%. Table 1 summarizes the respondents' demographic characteristics.

Tab. 1 – Demographic characteristics of respondents. Source: own research

Characteristics		Frequency	Ratio
Industrial sector	Motor manufacturing	83	38.2
	Electronic parts	31	14.4
	Chemicals	23	10.6
	Semiconductors	17	7.8
	Precision machinery	27	12.4
	Information technology	26	12.0
	Other	10	4.6
Marketing proportion to total costs	Lower than 1%	20	9.2
	1-3%	61	28.1
	3-5%	49	22.6
	5-7%	51	23.5
	More than 10%	36	16.6
R&D proportion to total costs	Lower than 1%	24	11.1
	1-3%	55	25.3
	3-5%	43	22.6
	5-7%	39	19.8
	more than 10%	46	21.2

3.2 Measures

Consistent with previous work in the international marketing literature (Prange & Verdier, 2011), this study operationalized dynamic internationalization capability as a higher-order construct of international exploitation (threshold capability (TC) and consolidation capability (CC)) and international exploration (value-adding capability (VAC) and disruption capability (DC)). This measure consists of nineteen items: threshold capability (5 items), consolidation capability (4 items), value-adding capability (6 items), and disruption capability (4 items). This study also considers the studies of Swaminathan & Moorman (2009), based on which seven items were developed. The measures of relational embeddedness were drawn from Dhanaraj et al. (2004) and were measured using a 14-item scale: strength of ties (ST), trust and shared system (SS).

Export market orientation is defined as enterprises continuously monitoring the international market, current and future customer needs, competitor information and actions, and market environment information, thus enabling enterprises in foreign markets to create value in goods and services for customers. Following Cadogan et al. (2009), we employed their measures of EMO: export intelligence generation (OIG) (5 items), dissemination (OID) (5 items) and responsiveness (OIR) (8 items). LO is a complex and higher-order construct. Following Baker & Sinkula (1999), we adopted the following multi-dimensional methods to measure LO: four items for commitment to learning (CL), five items for shared vision (SV) and four items for open-mindedness (OM). New product development is the direct outcome of operation in foreign markets. Following He et al. (2014), we adopted the following scale to measure new product

development: “Product quality and reliability”, “Time to market” and “Product innovativeness”. All above scales are measured by a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) and shown in Appendix 1.

4. RESULTS AND DISCUSSION

4.1 Reliability and Validity

All scales used were found to be reliable, with the Cronbach’s α ranging from 0.77–0.91 (Table 1). Confirmatory factor analysis was employed to verify the scales’ construct validity (both convergent and discriminant). Hair et al. (2010) recommended convergent validity criteria as follows: (1) standardized factor loading >0.7 ; (2) average variance extracted (AVE) >0.5 ; and (3) composite reliability >0.7 . The evaluation standard for discriminant validity is the square root of the AVE for one dimension greater than the correlation coefficient with any other dimension. The standardized loadings ranged from 0.65–0.83, and most exceeded the 0.70 thresholds. As Table 2 indicates, all three criteria for convergent validity were met, and the correlation coefficients were less than the square root of the AVE, suggesting that each dimension had good discriminant validity.

Tab. 2 – Measurement. Source: own research

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. TC	.764													
2. CC	.578	.787												
3.VAC	.509	.596	.831											
4. DC	.527	.570	.748	.809										
5. OIG	.562	.684	.641	.505	.829									
6. OID	.548	.693	.637	.512	.835	.856								
7. OIR	.527	.705	.651	.554	.739	.849	.788							
8. CL	.370	.314	.489	.424	.342	.349	.415	.857						
9. SV	.356	.352	.497	.493	.472	.445	.486	.724	.819					
10. OM	.340	.346	.550	.513	.435	.468	.452	.550	.633	.799				
11. ST	.387	.401	.310	.317	.398	.404	.447	.302	.361	.360	.874			
12. Trust	.381	.447	.367	.361	.410	.425	.420	.375	.380	.416	.595	.758		
13. SS	.338	.347	.351	.315	.423	.402	.433	.218	.312	.243	.652	.562	.866	
14. NPD	.317	.358	.410	.400	.341	.335	.432	.324	.409	.385	.378	.363	.361	.829
α	0.824	0.803	0.867	0.827	0.900	0.910	0.918	0.898	0.854	0.888	0.882	0.879	0.850	0.815
Mean	3.803	3.839	3.961	3.935	3.771	3.694	3.723	3.992	3.882	3.807	3.543	3.595	3.552	3.415
SD	0.632	0.669	0.586	0.631	0.735	0.802	0.697	0.666	0.623	0.724	0.753	0.644	0.771	0.723
AVE	0.583	0.620	0.691	0.654	0.687	0.733	0.621	0.734	0.671	0.638	0.763	0.575	0.749	0.688
CR	0.875	0.866	0.900	0.883	0.915	0.932	0.929	0.917	0.910	0.873	0.928	0.890	0.923	0.868

Note: Lower triangle shows correlations for each pair of variables; the diagonal shows the square roots of the AVE.

4.2 Structural Model

To test our hypotheses, we employed structural equation modeling (SEM) via SmartPLS. Before hypotheses testing, the values of the variance inflation factor (VIF) were determined. The VIF values were less than 5, ranging from 1.042 to 2.342. Thus, there were no multicollinearity problems among the predictor latent variables (Hair et al., 2017). The proportions of the total variance (R^2) in each endogenous construct explained by the model are as follows: 54.7% for international exploration, 33.1% for international exploitation, and 27.3% for NPD. The values satisfy the minimum of 10% for the R^2 of the endogenous variables. Figure 2 shows the results of the hypothesized relationships and standardized coefficients in the collected sample. The results showed that international exploration ($\beta = 0.157$, $f^2 = 0.014$, $p > 0.05$) and international exploitation ($\beta = 0.150$, $f^2 = 0.016$, $p > 0.05$) were positively and significantly related to NPD, supporting H1a and H1b. RE ($\beta = 0.471$, $f^2 = 0.341$, $p < 0.001$) was positively and significantly related to international exploration and EMO ($\beta = 0.362$, $f^2 = 0.151$, $p < 0.001$) was positively and significantly related to international exploitation, supporting H2 and H3.

Finally, this study sought to verify the moderating effects of LO on the relationship among RE, EMO, international exploration, international exploitation and NPD. Figure 2 shows significant positive moderating effects of LO on the relationships of RE \rightarrow International exploration ($\beta = 0.063$, $f^2 = 0.012$, $p < 0.1$) and EMO \rightarrow International exploitation ($\beta = 0.090$, $f^2 = 0.019$, $p < 0.1$), supporting H4a and H4b. Similarly, a significant positive moderating effect of LO ($\beta = 0.124$, $f^2 = 0.019$, $p < 0.1$) on the relationship between international exploitation and NPD was found, as well as no significant effect on the relationship between international exploration and NPD, supporting H5a rather H5b. According to these research results, the relationship among determinants and NPD have been positively and significantly supported. Further, learning orientation positively influenced the relationship among determinants and NPD.

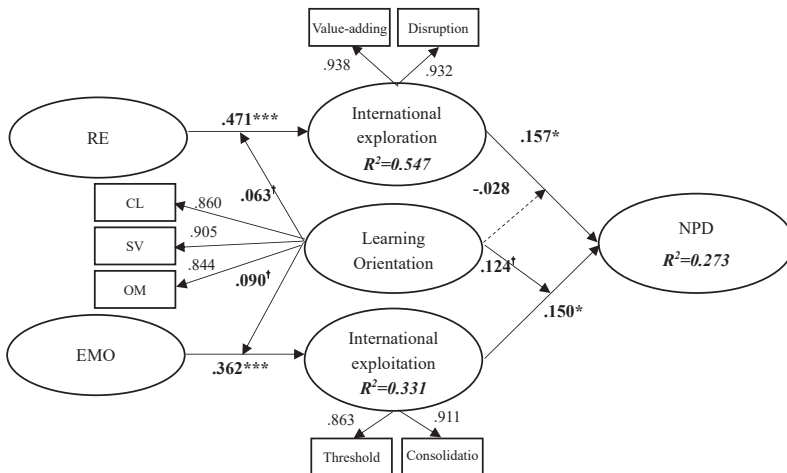


Fig. 2 – Structural model and path analysis. Source: own research

4.3 Discussion

This study discusses the relationships among RE, EMO, international exploration, international exploitation, learning orientation and NPD, the study of which has extended recent international marketing and organizational learning research (i.e. Cadogan et al., 2009; Gomes & Wojahn, 2017; Wu et al., 2020). Specifically, this study makes the following contributions. First, as concluded in previous studies (e.g. Pinho & Prange, 2016; Prange & Verdier, 2011), the positive impacts of RE and EMO on international exploration and international exploitation were verified through the statistical analysis in the present study, which was conducted in an Asian context. This supplements the previous opinions as well as consolidates support for the international market and dynamic capability via an organizational learning perspective (Alinaghian et al., 2020; Aranda et al., 2017; Mikalef & Pateli, 2017). Moreover, our results also found that different dynamic internationalization capability corresponds to sources of knowledge acquisition needed, which is in line with the findings of Peng & Lin (2017, 2021) in Taiwan, with our research results establishing that various sources of knowledge and resources individually improve international capabilities for performance. These findings could provide guidance strategies for managers to improve the effectiveness of knowledge acquisition in terms of international competitiveness.

Secondly, our research shows that international exploration and international exploitation have statistically significant effects on NPD. These findings are non-consistent with those described by Flor et al. (2018) and Ferreras-Mendez et al. (2015), who found that the more radical the NPD and innovation, the less impact the amount of knowledge and capabilities have on innovation. However, our results are consistent with those of Gomes & Wojahn (2017) and Argote & Hora (2017), who found a significant effect of organizational learning capability on innovation performance. These two studies established that the organizational learning process is a crucial mechanism to improve competitive advantage for SMEs based on existing learning capabilities in terms of maximizing the effect of innovative performance on organizational performance (Limaj & Bernroider, 2019; Hunt & Madhavaram, 2020; Vrontis et al., 2017). Furthermore, in the establishment of mechanisms of international exploration and exploitation an internationalized enterprise should be ready to undergo a learning process to integrate and apply valuable knowledge to improve NPD. This is consistent with claims proposed by Peng & Lin (2021), in particular their claims noting that dynamic internationalization capability associated with the knowledge acquisition process entails a broader range of knowledge, resources and routines, thus international performance will be improved via international exploration and international exploitation. Peng & Lin (2021) confirmed that in the international context DICs create and deliver customer value, thus these firms can achieve more competitive advantages and superior performance than foreign competitors, especially in NPD. Therefore, the present study suggests that internationalized SMEs should focus on improving disruption and value-added capabilities. The classification of the firm's capabilities also provides managers with a means to focus on resources, which helps to concentrate resources and reduce unnecessary waste.

This study also found learning orientation to play an important moderating role in the enhancement of the effects of RE and EMO on international exploration and international exploitation. These findings are similar to those reported in previous research, which generally found a positive moderating effect on knowledge sources and capability (Liu et al., 2018;

Wu et al., 2020). Moreover, following and extending prior organizational learning studies, the current study provides an integrated theoretical model which has not yet been identified or verified in the literature. We thus provide here a moderate critical mechanism for learning orientation in terms of dynamic internationalization capability (Javalgi et al., 2014; Limaj & Bernroider, 2019). As stated by Garay et al. (2017), an organization's learning culture can be regarded as a significant moderator of capability development, while learning orientation enables internationalized enterprises to actively acquire, transfer, and assimilate external knowledge and information within the organization, enabling them to strengthen the development of dynamic internationalization capability (Kang & Lee, 2016; Limaj & Bernroider, 2019). In addition, we found that learning orientation positively strengthened the relationship between international exploitation and NPD. Following this previous research, our study captures learning orientation as internationalized enterprises evolve through the use of international exploitation rather than international exploration as NPD advances. We explain the link between organizational learning and its subsequent moderate role, with a new perspective of creating NPD. This study also suggests that managers should build a well-established learning culture, which can provide more understanding and insights into external knowledge and information.

Further, our results show that international exploration and international exploitation mediate the positive effects of RE and EMO on NPD. The findings support the argument that internationalized enterprises should improve dynamic internationalization capability through building closed connections with partners as well as through other social relations to obtain new knowledge and facilitating behaviors to collect information about markets and customers in order to provide new/novel products and services (Kmieciak, 2019), all of which serve as critically important sources of NPD. This study makes substantial contributions to organizational learning theory, proposing the concept of dynamic capability in combination with international marketing.

5. CONCLUSIONS

The antecedents of dynamic capabilities have mainly been discussed in previous studies, but few have mentioned the forming factors of dynamic internationalization capability. Apart from the relational embeddedness and export market orientation discussed in this study, there is also another important support mechanism for improving NPD – long-term relationships and coordination. The study concludes that relational embeddedness positively influences international exploration as well as that export market orientation also positively influences international exploitation. In the process of resource-capability performance, international exploration and international exploitation have similar positive effects on NPD. From the perspective of organizational learning, learning orientation positively moderates the paths of relational embeddedness→ international exploration, export market orientation→ international exploitation and international exploitation→ NPD, further indicating the significance of learning culture in improving the process of NPD.

While the huge industrial differences among firms are the critical factor in comparing internationalized enterprises, enterprises in only one industry have been involved in this study,

and the impact of industrial differences was not considered. Therefore, future researchers are suggested to compare internationalized enterprises from different sectors in their studies to ensure the universality of the research results. Current studies indicate that dynamic internationalization capability is the dominant AC, but is this conclusion applicable for most other industries? Generally only micro, small and medium-sized B2B firms have been covered in the current studies, thus future researchers are suggested to include large B2B firms in their studies to determine whether they also display similar organizational learning behaviors.

In addition, as this study mainly targets and analyzes individual firms, there is no way to verify whether the characteristics of the relationships among cooperative partners are truly like what the firms indicated. It can be said that future studies should explore the relationship content between and among firms from the perspective of dyads or networks.

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