

# Masterminding and Steering: The Impact of Subsidiary Decision-Making Participation, Headquarters-Subsidiary Communication, and Knowledge on Innovation Performance

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## **Abstract**

**Purpose:** This study aims to investigate the influence of subsidiary top management's involvement in decision-making on innovation performance, and further explore whether this improved innovation performance contributes to enhancing the competitive advantage of headquarters. The study also examines the moderating effects of communication and knowledge transfer between subsidiaries and headquarters.

**Design/methodology/approach:** The study utilizes a sample of 185 multinational subsidiaries in Taiwan. Through a combination of systematic sampling and hierarchical regression analysis, the research explores the relationships between subsidiary decision-making involvement, innovation performance, and headquarters' competitive advantage. Additionally, the moderating effects of communication and both explicit and tacit knowledge are analyzed.

**Findings:** The results reveal a significant positive relationship between subsidiary decision-making involvement and innovation performance, as well as between innovation performance and headquarters' competitive advantage. Moreover, communication between headquarters and subsidiaries, along with tacit knowledge, significantly strengthen these relationships.

**Research limitations/implications:** The study's focus on multinational subsidiaries in Taiwan limits the generalizability of the findings to other regions. Additionally, subjective measures were used for communication and knowledge variables, which might differ in other contexts. Future research could expand the sample to include subsidiaries from diverse markets and utilize alternative measurement approaches.

**Practical implications:** Subsidiary involvement in decision-making fosters innovation, which, in turn, strengthens the competitive advantage of the headquarters. Effective communication and the transfer of tacit knowledge between subsidiaries and headquarters are crucial for maximizing innovation outcomes.

**Originality:** This study contributes to the literature by highlighting the role of subsidiary decision-making involvement in enhancing both subsidiary innovation performance and

headquarters' competitive advantage. It underscores the importance of communication and knowledge management as critical factors in fostering innovation within multinational enterprises.

**Keywords:** Multinational enterprises, subsidiary decision-making involvement, innovation performance, competitive advantage, headquarters-subsidiary relations

### **Introduction**

In modern multinational enterprises (MNEs), subsidiaries not only provide operational flexibility across borders but also serve as key hubs for technological innovation and knowledge transfer, thereby enhancing the global competitiveness of MNEs. Additionally, subsidiaries play a crucial role in integrating supply chains and industry chains, improving production efficiency and cost control (Weng *et al.*, 2022). However, much of the earlier research on international business focused predominantly on headquarters, often overlooking the subsidiary as a research subject. It wasn't until the 1980s that the evolving role of subsidiaries began to attract more attention, particularly when the effects of knowledge transfer were considered. This shifted the focus of many studies to the roles subsidiaries play and their interactions with headquarters (Huang *et al.*, 2023; Wang and Zhang, 2023).

From the perspective of agency theory, the relationship between headquarters and subsidiaries is often marked by misalignment, as headquarters' strategic decisions may not always align with the interests of subsidiaries. To ensure subsidiaries follow their strategies, headquarters often employ clear control mechanisms (Ambos *et al.*, 2019). Bartlett and Ghoshal (1991) argued that subsidiaries in international enterprises can play diverse roles and have the capability to create value. In today's increasingly competitive environment, innovation has become a key factor in improving corporate performance (Fan *et al.*, 2023). Subsidiaries are especially important for fostering innovation within MNEs, helping to provide a competitive advantage (Wang and Zhang, 2023). Consequently, determining whether subsidiaries can undertake value creation has become one of the key challenges faced by headquarters (Reichstein-Scholz *et al.*, 2021).

We adopt agency theory as the key theoretical framework for examining the relationship between headquarters and subsidiaries in MNEs. Agency theory challenges the traditional Chandlerian view of the firm, arguing that value creation within an organization depends on owner primacy and the structuring of relationships between external stakeholders and agents. It emphasizes mechanisms that align managerial decision-making with returns, ensuring that both parties share common goals and mutual interests (Jensen & Meckling, 1976).

From the perspective of agency theory, the relationship between headquarters and subsidiaries is a critical factor influencing MNEs' strategic planning. This relationship affects the firm's perception of risk and its approach to innovation strategy (Hall *et al.*, 2014). Consequently, decision-making participation and communication serve as essential prerequisites for corporate innovation (Gorgijevski and Andrews, 2021; Zhang *et al.*, 2025). Given the nature of knowledge, particularly in terms of transfer and comprehension processes, these considerations highlight the substantial relevance of applying agency theory to analyze headquarters-subsidiary interactions.

Based on the research background outlined above, this study aims to explore whether subsidiary decision-making involvement can enhance its own innovation performance and, in turn, whether the subsidiary's improved innovation performance can also contribute to enhancing the headquarters' competitive advantage. Additionally, this study examines the moderating effects of communication between headquarters and subsidiaries, as well as the presence of explicit and tacit knowledge. The findings reveal that subsidiary decision-making

involvement is a key explanatory variable for both subsidiary innovation performance and headquarters' competitive advantage. Furthermore, communication between headquarters and subsidiaries, along with tacit knowledge, are influential moderating variables. To explain the importance of innovation performance, we incorporate agency theory (Jensen & Meckling, 1976). Previous studies suggest that MNEs' innovation performance is largely driven by effective communication and decision-making participation (Gorgijevski and Andrews, 2021; Zhang *et al.*, 2025). More importantly, innovation performance is not only beneficial to the subsidiary itself but also enhances the competitiveness of the headquarters.

### **Literature Review and Hypothesis Development**

Since MNEs operate across different national institutional environments, they cannot fully grasp the management conditions of every host country, and their local embeddedness tends to be relatively limited (Morgan & Kristensen, 2006). A firm's strategies and management practices are also shaped by both formal and informal institutional norms within its environment (Brewster *et al.*, 2008). Therefore, compared to domestic firms, MNEs require more efficient and responsive corporate governance mechanisms. This makes MNEs the primary focus of analysis in this study.

#### ***Agency Theory and MNEs***

Agency theory primarily examines the principal-agent problem, which arises when there is a misalignment of goals and information asymmetry between owners (principals) and managers (agents). This misalignment is associated with agency costs, which, in turn, influence the attainment of corporate objectives and overall performance (Jensen & Meckling, 1976).

In the context of MNEs, agency problems become even more complex. MNEs not only operate across diverse institutional environments but also face internal structural challenges between headquarters and subsidiaries. These complexities make it difficult to ensure consistency in decision-making and execution, posing additional challenges to corporate governance and strategic alignment (Morgan & Kristensen, 2006).

In corporate management, the most common agency problems are moral hazard and adverse selection. The conventional view suggests that firms can mitigate these issues through contracts and corporate governance mechanisms (Eisenhardt, 1989). However, the severity and management of agency problems vary depending on the firm's ownership structure and managerial framework.

In the case of MNEs, headquarters and subsidiaries operate in different market environments, making it essential for MNEs to establish suitable communication and interaction mechanisms to reduce agency risks. Research indicates that headquarters' involvement in decision-making plays a crucial role in corporate innovation and risk management (Mei *et al.*, 2023). This is particularly significant in rapidly changing markets where consumer demands shift quickly, exacerbating agency problems.

Overall, agency theory provides a critical framework for understanding how firms shape their foreign investment decisions to enhance innovation performance and offers theoretical support for addressing agency issues in headquarters-subsidiary relationships within MNEs. Grounded in agency theory, this study explores the relationship between decision-making participation, knowledge transfer, and innovation performance, analyzing how such management mechanisms influence the international competitiveness of MNEs.

#### **Knowledge and Competitive Advantage**

In today's globalized market, competitive advantage is a key concept, referring to a company's uniqueness in resources, capabilities, or strategies relative to its competitors, which allows it

to occupy a favorable position in the industry (Chatterjee *et al.*, 2023). Michael Porter's Five Forces Model (Porter, 2004) provides a comprehensive framework for understanding industry structure and competitive environments, covering five dimensions: the threat of existing competitors, potential entrants, substitutes, the bargaining power of suppliers, and the bargaining power of buyers. Additionally, Porter's types of competitive strategies further divide competitive advantage into two major directions: cost leadership and differentiation, helping businesses identify the most suitable strategic positioning.

Innovation performance measurement is also a key source of competitive advantage. According to Luzzini *et al.* (2015), the metrics for innovation performance can include the success rate of new product development, contribution to company sales, and the relative success of innovation projects compared to competitors. Moreover, innovation spans process innovation, product innovation, organizational innovation, and strategic innovation, and these innovation indicators directly influence a company's competitiveness and market performance.

Knowledge plays a pivotal role in driving corporate innovation. The integration of explicit knowledge and tacit knowledge contributes to creating sustainable competitive advantage. Nonaka (1994) classified knowledge assets into explicit and tacit categories, emphasizing the importance of knowledge management in organizations. Explicit knowledge is easier to codify, disseminate, and share systematically, while tacit knowledge is closely tied to personal experience and intuition, making it highly inimitable and irreplaceable, which forms the foundation of a company's competitive advantage (Smedlund, 2008; Yi *et al.*, 2021).

Companies that effectively combine these two types of knowledge often have an edge in innovation and competition (Carnevale *et al.*, 2017). For example, explicit knowledge, such as documented procedures or patents, helps companies maintain operational efficiency and facilitates knowledge transfer between global subsidiaries. Tacit knowledge, rooted in the experience of employees and leaders, provides a unique source of creativity and innovation that is difficult for competitors to replicate. Therefore, companies that can fully utilize tacit knowledge and incorporate it into decision-making processes are more likely to sustain long-term competitive advantage.

Additionally, cross-boundary knowledge sharing enhances a company's ability to respond to market changes and innovate. As markets become increasingly dynamic and complex, it is essential for subsidiaries and headquarters to establish an environment where both explicit and tacit knowledge can flow freely across all organizational levels (Larkin, 2020). By doing so, companies can maintain agility, stay ahead of competitors, and continuously create value for customers and stakeholders.

In summary, in a globalized market, building and sustaining competitive advantage largely depends on a company's ability to effectively manage and leverage both explicit and tacit knowledge. Companies that master this balance not only enhance their innovation capabilities but also maintain a leading position in their industry.

### ***The Relationship Between Subsidiary Decision-Making Involvement and Subsidiary Innovation Performance***

Management refers to achieving objectives through the effective use of resources, and those engaged in management, such as CEOs, general managers, and directors, are referred to as managers (Ampofo and Barkhi, 2024). In multinational enterprises (MNEs), for the sake of unified management and development, decision-making authority often resides with headquarters' managers. Headquarters determine the strategic direction, processes, and corresponding performance outcomes. Senior management involved in decision-making can provide alternative solutions or relevant suggestions, and help decision-makers harness the collective intelligence of all members (Alayo *et al.*, 2023).

From the perspective of agency theory, decision-making involvement can be viewed as a mechanism to reduce agency costs and mitigate information asymmetry between headquarters and subsidiaries (Jensen & Meckling, 1976). When subsidiaries participate in decision-making, they have greater incentives to align their strategies with corporate goals while also ensuring that local market-specific knowledge is incorporated into strategic decisions (Blind *et al.*, 2024). Additionally, Lunnan *et al.* (2023) suggests that subsidiary participates in decision-making that facilitates knowledge sharing and integration, thereby driving innovation (Nonaka & Takeuchi, 1995; Ambos *et al.*, 2019).

If subsidiary top management is involved in decision-making, it signifies that the subsidiary has gained decision-making autonomy in certain value chain activities (Gorgijevski and Andrews, 2021). When a subsidiary possesses such autonomy, it can increase its learning and development capabilities to better respond to the needs of local business partners (Andersson and Forsgren, 1996; Kogut and Zander, 1993), thus improving its innovation performance. Therefore, the following hypothesis is proposed:

**H1: The more decision-making involvement a subsidiary has, the more positive the impact on its innovation performance.**

### ***The Relationship Between Subsidiary Innovation Performance and Headquarters' Competitive Advantage***

Innovation is regarded as a long-term indicator (Chen *et al.*, 2022) and a key capability for generating competitive advantage (Cho and Pucik, 2015; Ciabuschi *et al.*, 2017). In today's rapidly changing environment, innovation is one of the primary drivers of maintaining competitive advantage. Innovation facilitates improvements in products and processes, enabling companies to grow and progress more efficiently and quickly. Moreover, innovative companies often outperform non-innovative ones in terms of profitability. As market conditions evolve rapidly, leading to shorter product life cycles and faster market entry of new products, a company with higher innovation capabilities can achieve better performance. Therefore, innovation capabilities play a decisive role in enhancing competitive advantage and organizational performance. The technologies and capabilities generated from innovation can also be transferred to other units within the MNEs, thus providing the headquarters with a competitive edge (Calantone *et al.*, 2002). Subsidiaries can leverage their innovation capabilities to establish unique advantages, thereby improving their standing within the multinational network (Narula, 2014). This not only elevates the subsidiary's position but also contributes to enhancing the headquarters' competitive advantage, creating a virtuous cycle of mutual growth. Hence, the following hypothesis is proposed:

**H2: The better the subsidiary's innovation performance, the higher the headquarters' competitive advantage.**

### ***Communication Between Headquarters and Subsidiaries***

Headquarters and subsidiaries do not always share the same interests. Recognizing the risk of goal misalignment highlighted by agency theory, when their objectives diverge, it becomes necessary for subsidiaries to engage in thorough communication and discussion with headquarters' senior management (Haq *et al.*, 2017). In such scenarios, it is crucial for subsidiary to clearly and comprehensively articulate their needs while providing all relevant information. Smooth communication between headquarters and subsidiaries increases the likelihood that headquarters will recognize and endorse subsidiary perspectives during decision-making, thereby spurring innovation initiatives at the subsidiary level (Birkinshaw, 1999).

Moreover, effective communication enables headquarters to offer a range of resources—such as financial support, access to raw materials, knowledge of host-country politics and culture, and internationalization experience—to facilitate faster integration into local markets (Dellestrand and Kappen, 2011). By maintaining open channels of communication, subsidiaries can more readily obtain the resources they need and present well-informed recommendations during strategic decision-making. This dynamic, in turn, encourages headquarters to enhance subsidiary involvement. Therefore, the following hypothesis is proposed:

**H3: The higher the level of communication between headquarters and subsidiaries, the stronger the positive relationship between subsidiary decision-making involvement and subsidiary innovation performance.**

### ***Explicit Knowledge and Tacit Knowledge***

Knowledge can be broadly classified into explicit and tacit forms (Huang *et al.*, 2023; Nelson and Winter, 1982). Explicit knowledge is relatively straightforward and consists of highly codified technical or procedural information (Nonaka and Takeuchi, 1995). This type of knowledge is often written or documented—such as in manuals, databases, or standard operating procedures—making it relatively easy to store, transmit, and replicate (Nelson and Winter, 1982; Smith, 2001). Because explicit knowledge can be efficiently shared across different units or locations, it facilitates the coordination and standardization of processes within a MNEs, thereby reducing information asymmetry and lowering agency costs.

In contrast, tacit knowledge is more complex and challenging to articulate, comprising action-oriented know-how and practice-based insights. It often involves intuition or skill-based understanding developed through personal experience and social interaction (Smith, 2001). For instance, employees learn tacit knowledge by collaborating closely with experts, observing their techniques, or receiving direct mentoring (Snihur and Wiklund, 2019). While harder to codify, tacit knowledge is a vital source of creativity and innovation, providing context-specific insights and problem-solving capabilities.

Although explicit and tacit knowledge differ in their modes of transfer, they serve as complementary resources that drive innovation and performance (Alavi and Leidner, 2001; Nonaka, 1994). Through systematic conversion and dissemination, explicit knowledge establishes a foundation of best practices and technical know-how (Nonaka and Takeuchi, 1995). Meanwhile, acquiring tacit knowledge depends on ongoing interaction, observation, and learning-by-doing. When subsidiaries combine both types of knowledge in decision-making—by codifying explicit insights and facilitating the transfer of tacit expertise—they can produce more robust and creative solutions, thereby enhancing enterprise-wide performance (Darroch, 2005; Zack *et al.*, 2009).

From an agency theory perspective, such effective knowledge sharing among geographically dispersed MNE units can significantly reduce agency costs. By minimizing information gaps between the principal (headquarters) and the agents (subsidiaries), MNEs improve goal alignment and foster better-informed strategic decisions. In particular, subsidiary management teams that possess abundant explicit and tacit knowledge not only make more informed choices but also wield greater influence in shaping these decisions, ultimately leading to stronger innovation outcomes and efficient utilization of organizational resources.

**H4: Possessing explicit knowledge strengthens the positive relationship between subsidiary decision-making involvement and subsidiary innovation performance.**

**H5: Possessing tacit knowledge strengthens the positive relationship between subsidiary decision-making involvement and subsidiary innovation performance.**

Based on the above research, Figure 1 illustrates the research framework.

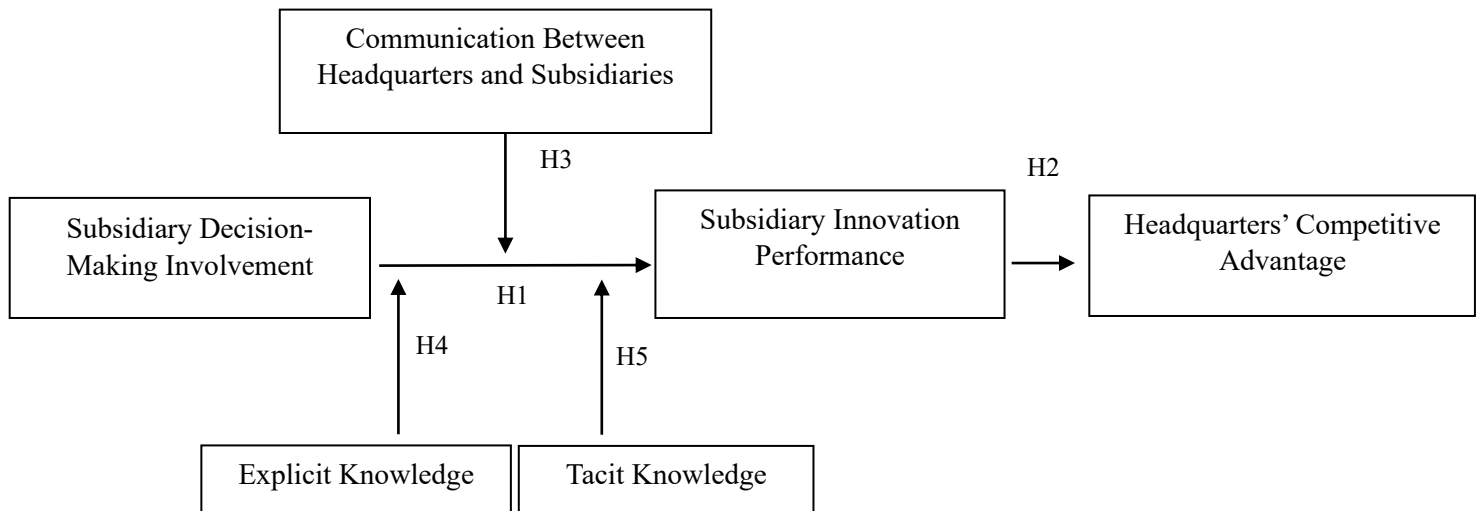


Figure 1: Theoretical Framework

## Data Analysis and Empirical Results

### Sample Description

#### Questionnaire Distribution and Collection

This study focuses on MNEs' firms in Taiwan, with the sampling period set in 2022. The sampled firms must meet the criterion that the foreign parent company holds at least 50% ownership stake in the Taiwanese firm, ensuring that the parent company retains operational control, which aligns with the study's focus on decision-making participation and knowledge-sharing dynamics. The sample exhibits industry diversity, covering various sectors to enhance the generalizability of the findings<sup>1</sup>. Additionally, the geographic distribution of firms is mainly concentrated in major cities, such as Taipei and New Taipei City, where foreign enterprises predominantly operate. The sample was drawn from the latest national registry of foreign firms using a systematic sampling method. Data collection was conducted through mailed questionnaires for some firms, while others were approached through direct interviews to obtain in-depth insights. This sampling design and data collection approach ensure the representativeness of the sample, allowing the study to effectively capture the decision-making participation and knowledge-sharing patterns of MNEs' firms in Taiwan.

After processing, a total of 1,000 questionnaires were distributed, and 217 were returned. Among these, 6 questionnaires had missing answers, and 26 were returned due to incorrect addresses, resulting in 32 invalid questionnaires and 185 valid ones. The total response rate was 21.7%, and the effective response rate was 18.5%.

#### Sample Demographic Analysis

The largest age group of respondents was between 41 and 50 years old, with 52 individuals, accounting for 28.1% of the total. In terms of subsidiary size, the majority had 0 to 20 employees, with 44 subsidiaries, representing 23.8%. Regarding expenditure on new products/services/research and development, the most common spending range was between NT\$3 million and NT\$6 million, with 48 subsidiaries, accounting for 25.9%. The majority of

<sup>1</sup> According to Schulze and Dada (2025), industry variables are typically insignificant when firms implement strategies and actions related to development and knowledge.

the subsidiaries belonged to the electronics, electrical, and information technology industries, with 116 subsidiaries (62.7%), while the remaining 69 subsidiaries (37.3%) were in non-electronics and IT-related industries.

To ensure the representativeness of the sample, a non-response bias test was conducted. The data were divided into two categories based on the time of response: early (125 responses) and late (60 responses). After testing, all variables showed no significant differences ( $p > 0.05$ ), indicating that the sample is representative.

**Reliability and Validity Analysis**

To assess the validity of the questionnaire items and ensure the accuracy of the measurements, principal component analysis with varimax rotation was conducted. Six factors with eigenvalues greater than one were extracted, and all factor loadings were greater than 0.5, with a cumulative explained variance of 82.983%. The results are shown in Table 1.

Regarding reliability, the analysis results showed that the highest reliability was for communication between headquarters and subsidiaries, with a Cronbach’s  $\alpha$  of 0.885. This was followed by subsidiary innovation performance, with a Cronbach’s  $\alpha$  of 0.858, tacit knowledge with a Cronbach’s  $\alpha$  of 0.856, explicit knowledge with a Cronbach’s  $\alpha$  of 0.817, and headquarters' competitive advantage with a Cronbach’s  $\alpha$  of 0.815. The lowest reliability was for subsidiary decision-making involvement, with a Cronbach’s  $\alpha$  of 0.736.

Table 1: Validity Analysis

Item	Factor Loadings	Eigenvalue	Variance	Cumulative Variance
<b><u>Subsidiary Decision-Making Involvement</u></b>				
You can regularly participate in meetings with headquarters' senior management to discuss relevant decision-making issues	0.562			
You often need to work together with headquarters' senior management, participating in relevant decision-making discussions	0.682	5.235	24.928	24.928
You spend a lot of time each year discussing relevant decision-making issues with headquarters' senior management	0.770			
<b><u>Subsidiary Innovation Performance</u></b>				
You are satisfied with your company’s innovation profit rate over the past three years	0.906			
You are satisfied with your company’s market share over the past three years	0.843	2.741	13.054	37.982
You are satisfied with your company’s sales growth rate over the past three years	0.889			
<b><u>Headquarters' Competitive Advantage</u></b>				
You believe that the brand awareness of the headquarters has improved	0.705			
You believe that the market share of the headquarters has improved	0.911	2.726	12.981	50.963
You believe that the headquarters has stable profitability	0.899			

<b><u>Communication Between Headquarters and Subsidiaries</u></b>				
You regularly have meetings with headquarters' senior management to discuss matters	0.853			
You have a clear understanding of the decision-related information from the headquarters	0.848	2.486	11.836	62.799
You frequently interact with headquarters' senior management during work	0.829			
<b><u>Explicit Knowledge</u></b>				
It is easy to obtain relevant written knowledge or online information necessary for work within the company	0.836			
Your company regularly provides various employee training and development courses	0.850	2.123	10.112	72.911
<b><u>Tacit Knowledge</u></b>				
You can easily obtain professional assistance from others during work	0.811			
Your company regularly rotates job positions	0.864	2.115	10.072	82.983
Your company regularly holds job experience-sharing meetings	0.836			

### ***Regression Analysis***

From the results of the correlation analysis in Table 2, it can be observed that all variables, except for control variables, are positively correlated. This indicates that the positive relationships between variables will contribute to the regression analysis.

**Table 2: Results of the correlation analysis**

	1	2	3	4	5	6	7	8	9	10
1. SDI	1									
2. SIP	0.30**	1								
3. HCA	0.33**	0.48**	1							
4. CHS	0.73**	0.28**	0.25**	1						
5. EK	0.72**	0.33**	0.30**	0.62**	1					
6. TK	0.75**	0.14	0.17	0.54**	0.50**	1				
7. SMA	-0.04	0.01	0.08	-0.01	-0.07	-0.03	1			
8. SS	0.01	-0.07	-0.04	0.02	-0.02	0.06	-0.06	1		
9. YSE	0.13	0.10	-0.03	0.08	0.18*	0.08	-0.04	-0.04	1	
10. SEN	-0.00	0.04	-0.04	0.07	-0.06	-0.06	-0.04	-0.07	0.05	1

SDI= Subsidiary Decision-Making Involvement; SIP= Subsidiary Innovation Performance; HCA= Headquarters' Competitive Advantage; CHS= Communication Between Headquarters and Subsidiaries; EK= Explicit Knowledge; TK= Tacit Knowledge; SMA= Senior Management Age; SS= Subsidiary Size; YSE= Years of Subsidiary Establishment; SEN= Subsidiary Expenditure on New Products/Services/R&D

This study employs a regression model to explore the causal relationships between variables. The dependent variables in the model are subsidiary innovation performance and headquarters' competitive advantage. The regression models are structured as follows: (1) Model with control variables only, (2) Control variables + subsidiary decision-making involvement, (3) Control variables + subsidiary decision-making involvement + subsidiary innovation performance, (4) Control variables + subsidiary decision-making involvement  $\times$  communication between headquarters and subsidiaries, (5) Control variables + subsidiary decision-making involvement  $\times$  explicit knowledge, (6) Control variables + subsidiary decision-making involvement  $\times$  tacit knowledge. The results of the regression analysis are shown in Table 3<sup>2</sup>.

Based on the results from Model 1 and Model 3, no significant relationships were found between the control variables and subsidiary innovation performance or headquarters' competitive advantage. This indicates that variables such as senior management age, subsidiary size, years of subsidiary establishment, and average expenditure on new products/services/R&D have no significant impact on subsidiary innovation performance.

The results from Model 2 show a positive and significant relationship between subsidiary innovation performance and subsidiary decision-making involvement ( $\beta = 0.291$ ,  $p < 0.01$ ). Therefore, the empirical results support H1 of this study, indicating that greater subsidiary decision-making involvement contributes to better innovation performance. The results from Model 4 show a positive and significant relationship between subsidiary innovation performance and headquarters' competitive advantage ( $\beta = 0.427$ ,  $p < 0.01$ ), supporting H2 of this study, meaning that better subsidiary innovation performance enhances the competitive advantage of headquarters.

Through the mediation effect test, it was found that when examining the effect of subsidiary decision-making involvement on headquarters' competitive advantage, the coefficient for subsidiary decision-making involvement was significant ( $t = 4.723$ ,  $p < 0.01$ ). After including subsidiary innovation performance, the coefficient for subsidiary decision-making involvement remained significant but slightly decreased ( $t = 3.084$ ,  $p < 0.05$ ), indicating that subsidiary innovation performance has a partial mediating effect between subsidiary decision-making involvement and headquarters' competitive advantage. The results are shown in Table 4.

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<sup>2</sup> This study employs regression analysis to assess the explanatory power of each variable and to examine potential interaction effects. In particular, because our measurements and theoretical framework do not involve complex latent constructs, regression provides a more direct and transparent means of testing our hypotheses (Cohen *et al.*, 2002). Under these circumstances, we believe there is no significant difference in explanatory power between regression and SEM. Therefore, we have chosen regression as our primary analytical method.

Table 3: Hierarchical Regression Analysis Results

Dependent Variable	Subsidiary Innovation Performance		Headquarters' Competitive Advantage		
	Model 1	Model 2	Model 3	Model 4	
<b>Independent Variables</b>					
Subsidiary Decision-Making Involvement		0.291***		0.219***	
Subsidiary Innovation Performance				0.427***	
<b>Control Variables</b>					
Senior Management Age	0.013	0.023	0.074	0.077	
Subsidiary Size	-0.067	-0.072	-0.040	-0.015	
Years of Subsidiary Establishment	0.097	0.060	-0.028	-0.098	
Subsidiary Expenditure on New Products/Services/R&D	0.031	0.034	-0.042	-0.054	
	<b>R<sup>2</sup></b>	0.016	0.100	0.010	0.29
	<b>Adj-R<sup>2</sup></b>	-0.006	0.075	-0.012	0.266
	<b>F-value</b>	0.739	3.956***	0.468	12.114***

\*p<0.1, \*\*p<0.05, \*\*\*p<0.01

Table 4: Mediation Effect Analysis Results

Relationship Between Variables	t-value
Subsidiary Decision-Making Involvement → Subsidiary Innovation Performance	4.210***
Subsidiary Innovation Performance → Headquarters' Competitive Advantage	7.437***
Subsidiary Decision-Making Involvement → Headquarters' Competitive Advantage	4.723***
Subsidiary Decision-Making Involvement → Subsidiary Innovation Performance → Headquarters' Competitive Advantage	3.084**

\*p<0.1, \*\*p<0.05, \*\*\*p<0.01

Next, this study introduced the three moderating variables—communication between headquarters and subsidiaries, explicit knowledge, and tacit knowledge—into Model 2 to observe their moderating effects on the relationship between subsidiary decision-making involvement and subsidiary innovation performance, thereby testing H3, H4, and H5. The results are shown in Table 5.

Table 5: Moderation Effect Analysis Results

Dependent Variable	Subsidiary Innovation Performance			
	Model 5	Model 6	Model 7	
<b>Independent Variables</b>				
Subsidiary Decision-Making Participation	0.193*	0.175	0.433***	
Communication Between Headquarters and Subsidiaries	0.181*			
Explicit Knowledge		0.195		
Tacit Knowledge			-0.135	
<b>Moderation Effects</b>				
Subsidiary Decision-Making Participation × Communication Between Headquarters and Subsidiaries	0.141*			
Subsidiary Decision-Making Participation × Explicit Knowledge		0.098		
Subsidiary Decision-Making Participation × Tacit Knowledge			0.163**	
<b>Control Variables</b>				
Top Management Team Age	0.022	0.030	0.028	
Subsidiary Size	-0.058	-0.061	-0.053	
Subsidiary Age	0.059	0.039	0.062	
Average Expenditure on New Product/Service/R&D by Subsidiary	0.014	0.041	0.020	
	<b>R<sup>2</sup></b>	0.125	0.124	0.138
	<b>Adj-R<sup>2</sup></b>	0.091	0.090	0.104
	<b>F-Value</b>	3.627***	3.584***	4.063***

\*p<0.1、\*\*p<0.05、\*\*\*p<0.01

The results from Model 5 show that communication between headquarters and subsidiaries has a positive and significant effect on the relationship between subsidiary decision-making involvement and subsidiary innovation performance ( $\beta = 0.141$ ,  $p < 0.1$ ), supporting H3. This means that good communication between top management at the subsidiary and headquarters enhances the positive impact of subsidiary decision-making involvement on innovation performance. The results from Model 6 show no significant effect of explicit knowledge on the relationship between subsidiary decision-making involvement and subsidiary innovation performance ( $\beta = 0.098$ ,  $p = 0.180$ ), indicating that H4 is not supported. This suggests that possessing explicit knowledge does not strengthen the relationship between subsidiary decision-making involvement and innovation performance. Finally, the results from Model 7 show that tacit knowledge has a positive and significant effect on the relationship between subsidiary decision-making involvement and innovation performance ( $\beta = 0.163$ ,  $p < 0.05$ ), supporting H5. This means that tacit knowledge strengthens the positive relationship between subsidiary decision-making involvement and innovation performance.

Through the interaction plots, the moderating effects of communication between headquarters and subsidiaries, explicit knowledge, and tacit knowledge can be interpreted, as shown in Figures 2, 3, and 4.

First, based on Figure 2, under high subsidiary decision-making involvement, the impact of high communication between headquarters and subsidiaries on innovation performance is greater than that of low communication. Under low subsidiary decision-making involvement, although the impact of high communication on innovation performance is similar, it is still greater than that of low communication. The figure also shows that, compared to low communication, high communication between headquarters and subsidiaries enhances the

effect of subsidiary decision-making involvement on improving innovation performance. This suggests that when both parties engage in high levels of communication, greater management decision-making involvement is associated with a more substantial improvement in innovation performance compared to low communication.

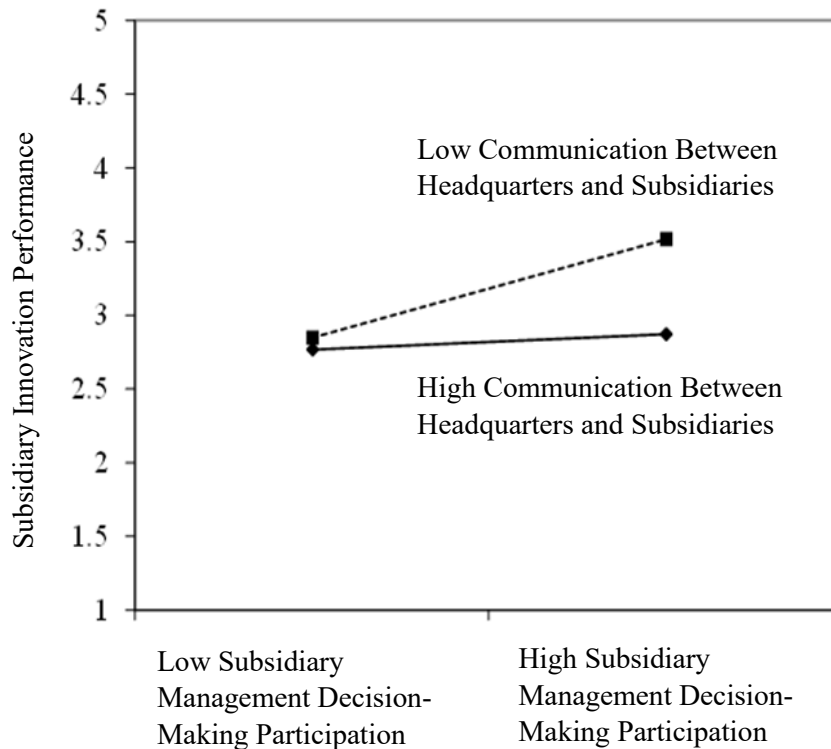


Figure 2: Interaction Effect between Communication Between Headquarters and Subsidiary Decision-Making Participation

According to Figure 3, under high subsidiary decision-making involvement, the impact of high explicit knowledge on innovation performance is greater than that of low explicit knowledge. Similarly, under low subsidiary decision-making involvement, the impact of high explicit knowledge on innovation performance is also greater than that of low explicit knowledge. The figure shows that, compared to low explicit knowledge, high explicit knowledge strengthens the effect of top management decision-making involvement on innovation performance. This suggests that when a firm possesses a high level of explicit knowledge, greater involvement in decision-making is associated with a gradual enhancement in innovation performance, whereas the effect is less pronounced when explicit knowledge is low.

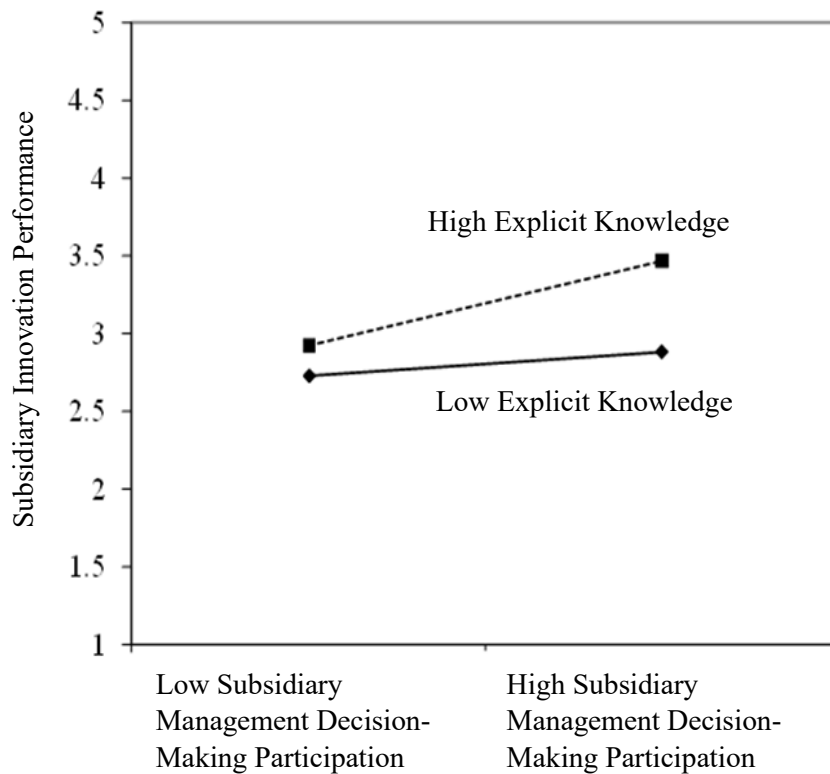


Figure 3: Interaction Effect between Explicit Knowledge and Subsidiary Decision-Making Participation

Finally, according to Figure 4, under high subsidiary decision-making involvement, the impact of high tacit knowledge on innovation performance is slightly greater than that of low tacit knowledge. However, under low subsidiary decision-making involvement, the impact of low tacit knowledge on innovation performance is greater than that of high tacit knowledge. The figure also reveals that, compared to low tacit knowledge, high tacit knowledge enhances the effect of subsidiary decision-making involvement on improving innovation performance. This suggests that when a firm possesses a high level of tacit knowledge, greater management decision-making involvement is associated with a significant enhancement in innovation performance. Moreover, as management decision-making involvement increases, the innovation performance under high tacit knowledge surpasses that under low tacit knowledge.

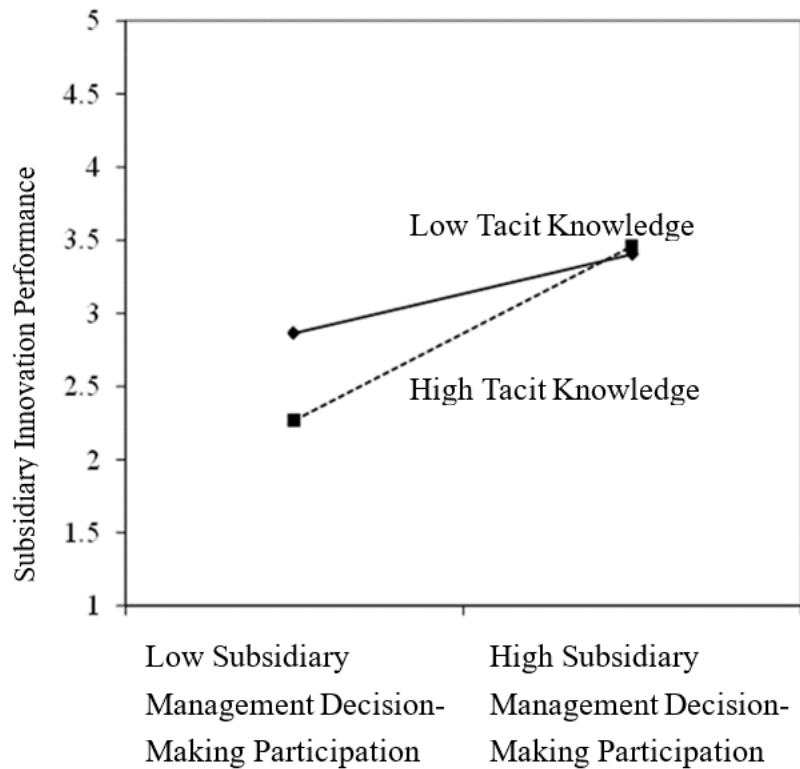


Figure 4: Interaction Effect between Tacit Knowledge and Subsidiary Decision-Making Participation

## Conclusion and Recommendations

### *Research Findings and Conclusions*

The main argument of this study is to verify the relationship between the subsidiary's top management participation in decision-making and its innovation performance, as well as the relationship between subsidiary innovation performance and the competitive advantage of the headquarters. Additionally, the study examines whether effective communication between headquarters and subsidiaries, as well as the presence of explicit and tacit knowledge among subsidiary top management, positively reinforces innovation performance. The results show that all hypotheses were significantly supported except for H4, which was not empirically validated.

Comparing the research results with previous literature, The findings regarding subsidiary decision-making participation align with prior research (Andersson & Forsgren, 1996; Kogut & Zander, 1993), reinforcing the notion that greater decision-making involvement at the subsidiary level enhances learning, development, and innovation performance. These results support the argument that decentralization of decision-making fosters localized innovation, a perspective echoed by Ciabuschi *et al.* (2017). However, other scholars argue that excessive autonomy may lead to inefficiencies or misalignment with corporate strategy (Ambos *et al.*, 2010). The present findings suggest that while subsidiary decision-making enhances innovation, its impact may depend on additional contextual factors, such as headquarters' strategic control mechanisms.

Similarly, the positive association between subsidiary innovation performance and headquarters' competitive advantage is consistent with previous research (Cho & Pucik, 2015; Calantone *et al.*, 2022), which highlights innovation as a fundamental driver of competitive advantage. Hadjikhani *et al.* (2008) further suggested that subsidiaries with decision-making

power contribute more significantly to the corporate group's value creation. However, while prior studies focus largely on headquarters' role in fostering innovation, our study emphasizes how subsidiary-driven innovation can reinforce the broader MNE's strategic position. This highlights the importance of subsidiaries not merely as implementers of corporate strategy but as active contributors to corporate competitiveness.

Regarding the influence of moderating variables, the findings suggest that effective communication between headquarters and subsidiaries strengthens the relationship between subsidiary decision-making participation and innovation performance. This aligns with Birkinshaw (1999), who argued that communication facilitates subsidiary innovation by ensuring alignment with corporate strategy. Similarly, Dellestrand and Kappen (2011) found that subsidiaries with strong communication channels are better positioned to request and receive strategic resources from headquarters. However, while our study confirms the importance of communication, it does not directly measure the quality or depth of communication, which could be an important area for future research.

Finally, Regarding the moderating effects of explicit and tacit knowledge, the results reveal an asymmetry: only tacit knowledge positively reinforces the effect of decision-making participation on innovation, whereas explicit knowledge does not. This partially aligns with prior research suggesting that knowledge sharing enhances innovation (Darroch, 2005; Zack *et al.*, 2009). However, it also challenges assumptions that explicit knowledge alone significantly contributes to innovation performance. Alavi and Leidner (2001) and Nonaka (1994) emphasized that explicit and tacit knowledge serve different functions, and not all types of knowledge contribute equally to firm performance. One possible explanation for our results is that explicit knowledge, being codified and easily transferable, may not necessarily empower subsidiaries in strategic decision-making, whereas tacit knowledge—rooted in experiential learning—plays a more critical role in fostering innovation.

The lack of support for H4 suggests that explicit knowledge alone may not be sufficient to enhance innovation, especially in dynamic environments where tacit, experience-based knowledge is crucial. This finding diverges from some earlier studies (e.g., Grant, 1996), which emphasized the role of explicit knowledge in organizational learning. Future research could explore whether the effectiveness of explicit knowledge as a moderator depends on industry characteristics or the nature of decision-making processes within MNEs.

### ***Managerial Implications***

As internationalization advances, subsidiaries play a critical role in the global operations of MNEs. According to Birkinshaw and Hood (2001), when subsidiaries possess a certain level of decision-making authority over their business direction, they can respond more swiftly to emerging market opportunities and proactively boost their innovation performance. For instance, when subsidiaries actively participate in decision-making and maintain strong communication with headquarters to secure the necessary support and alignment, they are better positioned to introduce innovative products or services and foster new market demands (Birkinshaw & Hood, 2001; Williams, 2009). Consequently, subsidiaries become key drivers in generating competitive advantages and enhancing innovation capabilities (Cho & Pucik, 2015; Ciabuschi *et al.*, 2017). Not only does innovation capability enable subsidiaries to pursue competitive advantages in today's rapidly evolving markets, but it also provides significant benefits for headquarters.

Based on the findings of this study, increasing decision-making participation by subsidiary top management markedly improves subsidiary innovation performance. Moreover, enhanced subsidiary innovation performance, in turn, bolsters the competitive advantage of headquarters. Additionally, our results suggest that subsidiaries maintaining effective communication with

headquarters are more likely to receive timely support and assistance. Subsidiaries that possess higher levels of tacit knowledge further excel in decision-making, ultimately leading to stronger innovation outcomes.

An illustrative example is LVMH Moët Hennessy Louis Vuitton (LVMH Group), the world's largest multinational luxury goods conglomerate, which owns renowned brands such as Hennessy, Tiffany & Co., and Rimowa. Bernard Arnault, Chairman and CEO of LVMH Group, personally oversees only major decisions for each brand, delegating other management decisions to professional managers and brand leaders while granting them the necessary autonomy and support. This approach not only enables the Group to pursue diverse growth opportunities but also preserves each brand's independence and unique identity, maintaining their essence and setting new fashion trends.

From a human resources perspective, Arnault emphasizes cross-group learning and the employment of senior personnel with broad expertise. LVMH Group's senior managers are expected to rotate across different departments and brands, and all business units require staff to collaborate in cross-departmental brand planning. This training model prevents talent shortages within the Group and ensures the continuous development of new talent. Moreover, the accumulated tacit knowledge—encompassing experience, skills, and insights—among LVMH's senior managers helps replicate successful practices across all of the Group's brands. In the process of globalization, headquarters should enhance subsidiary decision-making participation and establish effective knowledge-sharing mechanisms to foster innovation and strengthen competitive advantages. In terms of decision-making participation, headquarters can implement Regional Decision Committees, allowing subsidiary management teams to participate in strategic decision-making and ensuring that the needs of the host country market are considered. Additionally, headquarters can adopt a performance-based decision-making autonomy approach, granting subsidiaries decision-making authority based on their performance to incentivize active involvement in corporate strategy planning. Furthermore, introducing innovation incentive programs can encourage subsidiaries to propose innovative initiatives and provide the necessary resources for implementation, thereby promoting both decision-making participation and innovation development.

In terms of knowledge sharing, MNE headquarters can establish an internal knowledge-sharing platform, enabling subsidiaries to access successful corporate cases, technical expertise, and data from various international markets in real-time, thereby improving decision-making efficiency and learning capabilities. Additionally, headquarters can implement an Executive Rotation Program, where senior managers are periodically stationed at subsidiaries to facilitate two-way knowledge exchange and experience transfer. This approach not only strengthens subsidiaries' expertise but also helps build a more integrated internal collaboration mechanism, reducing information asymmetry in the decision-making process.

Therefore, headquarters should appropriately increase subsidiaries' decision-making participation. By doing so, subsidiaries can engage in proactive learning and development, which not only enhances their innovation performance but also boosts the competitive advantage of headquarters. Meanwhile, subsidiaries should maintain good communication with headquarters and continuously accumulate and absorb tacit knowledge, creating a win-win situation for both headquarters and subsidiaries.

### ***Research Limitations and Future Recommendations***

Due to the constraints of time and manpower, this study has certain limitations. Despite efforts to be thorough in data collection, result analysis, and the research process, there are still some shortcomings and restrictions. The following suggestions may help future studies improve the completeness of their analysis.

First, regarding the sample selection, this study focused on subsidiaries of MNEs in Taiwan. Although the sample is representative, future research could attempt to obtain data from subsidiaries in different markets for comparison. This would not only enhance the stability of the research results but also better reflect the current state of the global market.

Second, in terms of measuring moderating variables, this study used subjective indicators to assess communication between headquarters and subsidiaries, explicit knowledge, and tacit knowledge. Future studies could employ alternative measurement methods. For instance, knowledge could be measured using patents or codified technical manuals, which might yield different results.

Third, this study utilized subjective measures for key variables such as communication and knowledge, which may lead to issues like social desirability bias or respondent misinterpretation. Future research could collect objective indicators (e.g., communication frequency records, R&D expenditures, or patent counts) and employ multiple data sources (e.g., interviews, internal firm records, or external evaluation mechanisms) to address the limitations of subjective measures. This approach would enable a more comprehensive and rigorous assessment of a firm's communication quality and knowledge levels.

Fourth, future research could employ the instrumental variable approach to address endogeneity issues (Eckert and Hohberger, 2023). By selecting appropriate instrumental variables, this method can help control endogeneity arising in theoretical analysis and enhance the accuracy of causal inference. While this study provides an empirical analysis of the relationships between decision-making participation, innovation performance, communication, and knowledge characteristics, we still recommend that future research further examine endogeneity concerns to ensure the rigor and external validity of research findings.

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