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管理能力與組織成長之研究

Three Essays on Managerial Competence and Organizational Growth

孔令玉
Lin-Yu Kung

指導教授：李吉仁 博士

Advisor: Ji-Ren Lee, Ph.D.

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口試委員會審定書

管理能力與組織成長之研究

Three Essays on
Managerial Competence and Organizational Growth

本論文係 孔令玉 君，學號 D96724004，在國立臺灣大學國際企業學研究所完成之博士學位論文，於民國 108 年 1 月 28 日承下列考試委員審查通過及口試及格，特此證明

論文考試委員：林舒柔　湯明哲　王慧美　吳政衛

指 導 教 授：李吉仁

所　　　長：林俊昇

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感謝所有的陪伴、鼓勵與打擊，

人生終將因此而更加美好。

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摘　要

關於企業高階管理團隊所應展現的管理能力，相關研究業已進行數十餘載，各式理論架構所解析的精髓，如何運用於管理實務，對於企業管理者而言，難免因各家所言相去甚遠而無所適從。尤其，創造組織成長，高階管理者必須掌握環境所出現的機會，結合內外部相關資源方能達成。因此，高階管理團隊所展現的管理能力，與組織成長著實密不可分。

有鑑於此，本論文聚焦於探討組織管理能力如何展現，以及管理能力如何影響組織成長。首先，本研究藉由回顧相關理論，釐清企業組織所屬資源與能力的本質，探討管理能力的本質與成效；進而提出由三組面向剖析高階管理團隊的特質，分別為成員組合、協調分工與激勵因素，並討論這些面向的調整，將如何影響高階管理團隊所展現的管理能力與成效。再者，依據前述三組面向，本研究分別舉出相對應的三項特質，並闡述藉由改變此三項特質，如何有助於克服組織成長過程中，因缺乏管理能力而導致成長受限的問題，亦即所謂潘若斯效應（Penrose Effect）。最後，本研究探討企業以分拆（spin-off）作為組織成長策略時，外部環境的成長機會與企業內部資源的支持，如何影響分拆後新事業體的經營績效。

透過上述三篇研究，本論文期望對於管理能力的本質，以及管理能力如何影響組織成長提出新解；並解析潘若斯效應的消長，藉以啟迪後續實證研究，延伸至更多組織成長的相關議題。此外，本論文建議企業擬以分拆作為組織發展策略時，應同時參酌內部及外部因素，並採用涵蓋新舊事業體的整體經營績效作為評估依據。

關鍵詞：管理能力、組織成長、高階管理團隊特質、潘若斯效應、分拆

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ABSTRACT

The nature of managerial competence has been studied for decades. However, different frameworks of developing managerial competences make research propositions divergent and practitioners confused when applying these concepts in creating organizational growth. Furthermore, managerial competences and environmental opportunities interact to support firms to pursue continuous growth, which necessitates the importance of managerial competences in organizational growth.

In light of the research needs, this dissertation proposes the fundamental outcomes of managerial competences and their impact on organizational growth. The first essay clarifies the nature of competence and resources. It recognizes the fundamental managerial outcomes and their relations to corporate growth and the principal dimensions of managerial teams. The next essay adopts the stated arguments to explore the relationship between managerial outcomes and the Penrose effect. The influence of collective managerial characteristics on organizational growth is then explicated. Finally, the last study focuses on spin-offs, a special mode of corporate divestiture and growth. The roles of external opportunities and internal supportive endowments in determining the spun-off firm's performance are investigated.

The first essay provides new insight about the nature of managerial competence and its outcomes, and the managerial factors that increase the fundamental managerial outcome. It also suggests a positive relationship between the fundamental outcomes and organizational growth. By manifesting the role of entrepreneurial visions, which are the crucial outcome of managerial competences for corporate growth, the second essay sheds light on the debate of the existence of the Penrose effect and indicates a novel direction of elaborating the random rate of organizational growth. The last essay suggests that the

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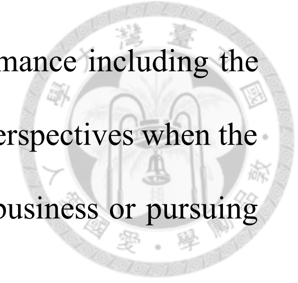
evaluation of spin-offs requires consideration of the overall performance including the spun-off firm and the divesting firm from the internal and external perspectives when the firm intends to undertake spin-off approaches for restructuring its business or pursuing organizational growth.



Keywords: managerial competence; organizational growth; TMT characteristics; Penrose effect; spin-off

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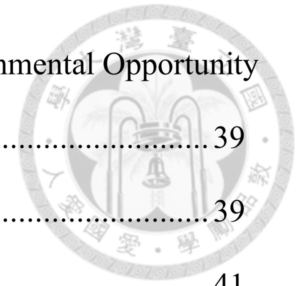

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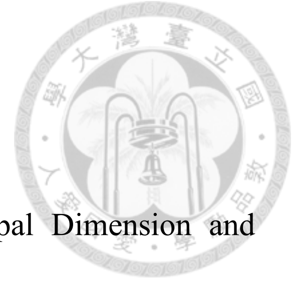

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Chapter 1 Introduction

In the broad domain of strategic management, resource and competence are the rudimentary constructs, and they play critical roles in organizational management. However, while the nature of these two constructs have been discussed for more than a half century, they remain confusing to scholars. The nature of managerial competence, in this vein, also has been a puzzle. Furthermore, insufficient comprehensive works directing organizations to improve managerial competences allow the divergent propositions to confuse practitioners when adopting them in corporate situations.

Organizational growth, a central subject of strategic management, results from the interaction of managerial competences and environmental opportunities and also results in the change of organizational boundaries. With this perspective, the influence of managerial competences is critically extensive to economic organization and necessitates the importance of researching the relationship between managerial competences and organizational growth.

In light of these research gaps, this dissertation focuses on the fundamental outcomes of managerial competences and the issues of organizational growth. Stemming from the domain of resource-based view (Grant, 2002; Penrose, 1959), in Chapter 2, the first essay attempts to clarify resources, competences and the nature of managerial competences. Recognizing shared vision and organizational synergy as the fundamental outcomes of managerial competences, the relationship between the fundamental outcomes and organizational growth are proposed. Based upon the literatures of upper echelons theory (Hambrick, 1994; Hambrick & Mason, 1984), this study identifies three principal dimensions of managerial teams (composition, coordination and compensation) to synthesize an integrative view for incorporating the collective managerial characteristics.

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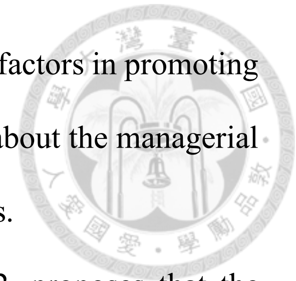

Furthermore, by considering these principal dimensions as the main factors in promoting fundamental managerial outcomes, this essay provides new insight about the managerial factors that lead to the increase of fundamental managerial outcomes.

Chapter 3, following with the central argument of Chapter 2, proposes that the availability of entrepreneurial visions, viewed as the crucial managerial outcome for organizational growth, enables the firm along the path to maintain the growing momentum. According to upper echelons theory (Hambrick, 2007; Hambrick & Mason, 1984) and Penrose's theory of firms' growth (Penrose, 1959), this study suggests that altering the collective characteristics of managerial teams will expedite the emergence of entrepreneurial visions and, in turn, contribute to reducing the managerial limitation and continuing the corporate growth. In this manner, the detrimental role of managerial competences in organizational growth is more likely to be disabled and the firms will counterbalance the Penrose effect (Kor & Mahoney, 2000; Lockett, Wiklund, Davidsson, & Girma, 2011; Thompson, 1994).

The third essay, Chapter 4, asserts that the influence of external factors on the consequence of spin-off approaches is as significant as the internal factors which are widely documented in prior research (Sapienza, Parhankangas, & Autio, 2004; Semadeni & Cannella, 2011; Seward & Walsh, 1996). Building on a sample of spin-off events, the findings suggest that the environmental opportunities of spun-off firms and the supportive endowments of divesting firms are notably related to the profitability of spun-off firms. Therefore, with the intention of undertaking spin-offs for organizational growth or restructuring business, the firm must evaluate the overall performance, including the divesting firm and the spun-off firm, from the perspectives of both the inside and the outside.

In order to complement current understanding of the managerial outcomes and

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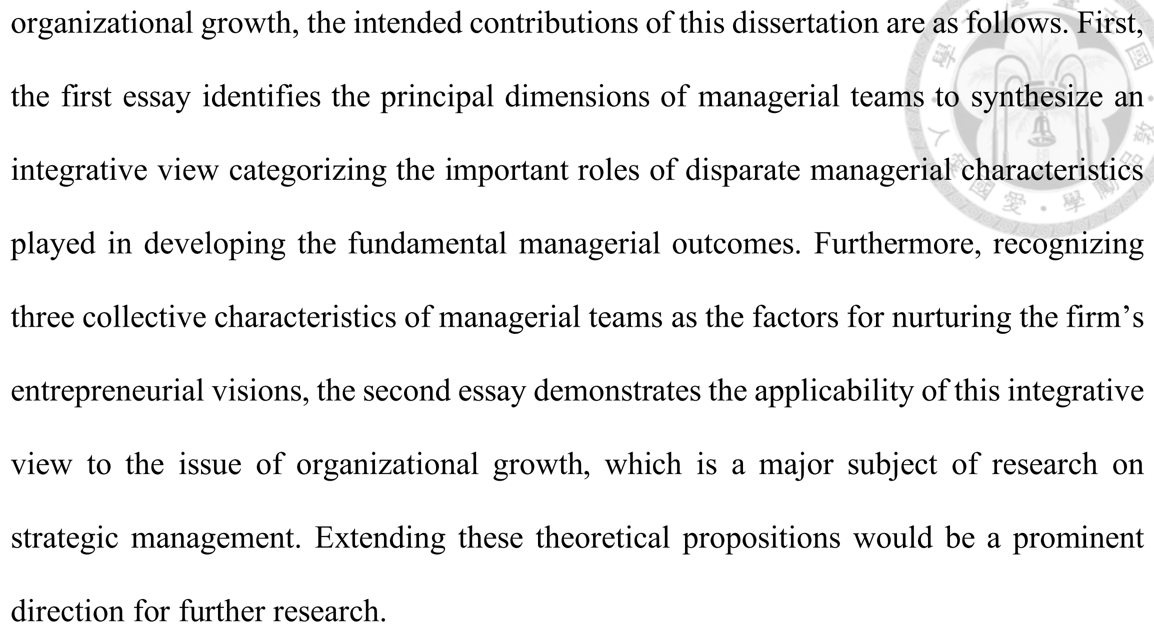

organizational growth, the intended contributions of this dissertation are as follows. First, the first essay identifies the principal dimensions of managerial teams to synthesize an integrative view categorizing the important roles of disparate managerial characteristics played in developing the fundamental managerial outcomes. Furthermore, recognizing three collective characteristics of managerial teams as the factors for nurturing the firm's entrepreneurial visions, the second essay demonstrates the applicability of this integrative view to the issue of organizational growth, which is a major subject of research on strategic management. Extending these theoretical propositions would be a prominent direction for further research.

Second, along with clarifying the rudimentary constructs, competence and resource, the first essay proposes the nature of managerial competences and its fundamental outcomes. The positive relationship between the fundamental managerial outcomes and organizational growth forms a theoretical basis for further empirical study.

Next, the second essay explicates that the emergence of entrepreneurial visions contributes to the diminishing of the Penrose effect. This illuminates the debate of the existence of the Penrose effect, as well as revealing a new direction of explaining the random rate of organizational growth (Geroski, 2005). The entrepreneurial visions guide the firm to reduce managerial limitation and sustain its growth probably in a variable rate. For this reason, the detrimental role of managerial competences is incapacitated and the situation is similar to the nonexistence of the Penrose effect.

Finally, the findings of the third essay contribute to the literature by advocating the ignored role of environmental elements, which are as important as organizational elements, in the consequence of spin-off approaches. This provides an interesting foundation for further investigating the effect of other extrinsic factors, and suggests that firms reciprocally contemplate the inside situations and the outside conditions when they

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intend to adopt spin-offs as a strategy for restructuring its business or pursuing organizational growth.

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Chapter 2 Managerial Competence and Outcome

2.1 Overview

Contemporary managers are challenged to orchestrate activities and develop future organizations to create the maximum value while facing rapidly changing environments and uncertainty. The collective outcomes performed by managerial teams are therefore critical. However, the fundamental outcomes of managerial teams remain a confusing puzzle in the literature of strategic management research. To some, managerial competences, representing a particular type of dynamic capabilities, are defined as the capacity of managers for purposefully creating, extending, or modifying the resource base of an organization (Helfat et al., 2007, p.24). This stream of research focuses on the internal perspective and emphasizes the managerial outcomes in optimizing the resource base of organizations. However, other researchers have argued that managerial competences are the function of sensing new opportunities and leading the organization forward to seize them (Augier & Teece, 2009). From this external perspective, the managerial outcomes present by recognizing and pursuing emerging opportunities.

While these different perspectives of managerial functions denote the various outcomes that should be delivered by managers, the lack of comprehensive research in this area enables the diverse views on managerial competences and complicates the puzzle of managerial outcomes. Therefore, this study attempts to complement the knowledge of managerial competences and outcomes. The present study identifies the principal dimensions of managerial teams and untangles the relationship between those dimensions and fundamental managerial outcomes. Drawing on the resource-based view (RBV) literature, the current study clarifies managerial competences and recognizes their

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perceivable and fundamental outcomes, that is, shared vision and organizational synergy (Eisenhardt & Martin, 2000; Grant, 2002; Penrose, 1959). Organizational growth is more likely to be achieved in the presence of shared vision and organizational synergy. Additionally, following upper echelons theory, three principal dimensions of managerial teams (composition, coordination and compensation) are identified and considered as the main factors in promoting managerial outcomes (Hambrick, 1994; Hambrick & Mason, 1984; Tsai, 2002).

This study seeks to contribute to the research of managerial competences in two ways. First, by clarifying the nature of managerial competences and recognizing managerial fundamental outcomes, as well as proposing the relationship between the fundamental outcomes and organizational growth, this study exhibits a novel direction for researching managerial competences. Second, based on prior research, this study identifies three principal dimensions synthesizing an integrative view to categorize the dispersed characteristics of managerial teams. The linkages between these dimensions and managerial outcomes disclose an interesting direction for future research.

This study starts by clarifying two rudimentary constructs, competence and resource, within the RBV tradition. Next, it recognizes the fundamental managerial outcomes, in addition to the specialties of managerial competences. Furthermore, it delineates the features of a shared vision and the sources of organizational synergies. After identifying the three principal dimensions of managerial teams, this study explicates the relationships between the principal dimensions of managerial teams and the fundamental managerial outcomes. Finally, this study closes with a discussion of the implications and suggestions for future research.

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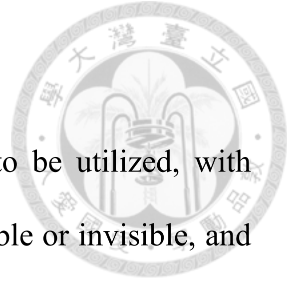
2.2 Competence and Resource



This study defines a resource as a potential, which is able to be utilized, with assumed value(s) (Penrose, 1959, p.25). This potential could be visible or invisible, and its actual value would be realized after being utilized. The presenting values of a resource could vary when it is utilized by different functions.

In contrast, a competence is an acted function which utilizes single or multiple resources and generates aimed value(s) (Eisenhardt & Martin, 2000; Penrose, 1959). Put differently, a competence is able to realize the aimed values of the used resources.

The term "acted function" implies a competence requiring the actor, or actors, to act it. Nevertheless, the actor can be implicit. The acted functions are similar to abilities, capabilities, capacities, processes, routines, or collective activities (Eisenhardt & Martin, 2000; Helfat et al., 2007; Zollo & Winter, 2002). In other words, a competence is stable patterned (Eisenhardt & Martin, 2000; Helfat et al., 2007; Zollo & Winter, 2002). Acting the same competence would generate the same values when utilizing the same set of resources. Because of its stability and patterned ability, a competence is frequently estimated or measured by its historical performance.

The words "generate aimed values" indicate that the outcomes of an acted competence are perceivable. The perceivable outcomes are significant for evaluating a competence. Namely, the performance of a competence can be evaluated by the perceived outcomes. The term "aimed values" reflects that the end results of an acted competence should match the expected values of resources used. Stated differently, to act a competence is purposeful, specific, and target-oriented (Helfat et al., 2007, p.5). When an acted competence realizes the aimed values of utilized resources, a superior processing function happens to create over-expected values.

Some researchers in RBV have argued that the competence is a type of resource in

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the most general sense (Barney, 1991; Helfat et al., 2007). According to the definition of resources, a competence should be treated as a special type of resource because its nature differs significantly from other resources. First, a competence only appears during the process of generating values. In the absence of this process, it is difficult to identify its existence and performance. Second, a competence requires an actor to perform it and make it perceivable, whereas other resources do not. Finally, a competence can be utilized by its actor or other competences. It should not be utilized by itself.

2.3 Managerial Competence and Fundamental Outcome

In compliance with the definition of competences, managerial competences are defined as managerial functions which utilize resources and generate aimed values. Within the context of organizations, managerial competences are treated as processes of synergizing internal and external resources to generate purposive values.

The focus of this study is the top management team (TMT), referring to the group of the most influential executives that makes strategic decisions (Hambrick, 1994). Accordingly, this study concentrates on the managerial competences functioned by the TMTs of organizations. By their nature, the managerial competences are distinguished by the following specialties. The first specialty is their collectiveness. Similar to other organizational competences, managerial competences are socially constructed (Kogut & Zander, 1992). Their actors are the members of managerial teams within a firm. These members collectively perform the managerial competences and mutually develop the integrated and firm-specific competences of management (Eisenhardt & Martin, 2000). Second, managerial competences are usually acted with the processes of problem-solving or decision-making, and such complex situations are seldom repeated. Seeking identical circumstances to exercise the specific managerial competence becomes more difficult,

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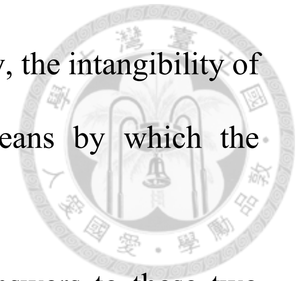

which influences the cumulation of managerial competences. Finally, the intangibility of major outcomes results in the difficulty of determining the means by which the performance of managerial competences can be evaluated.

Connecting with the domain of strategic management, the answers to these two central questions, where the organization goes and how the organization gets there (Grant, 2002), enlighten the kernel of managerial outcomes. This study proposes that the shared vision and organizational synergy are the fundamental outcomes of managerial competences. The shared vision is the answer to the former question: an organization should go forward to its vision. As well, the organizational synergy answers the latter question: an organization should go by synergistically generating additive values.

Respecting the specialties of managerial competences, these two perceivable outcomes also further the perceivability of collective, seldom-repetitive, and intangible competences of managerial teams. In general, a competent managerial team will lead the organization to be a visionary and synergistic entity which reflects the fundamental managerial outcomes. Without a shared vision, the organization is similar to navigating in the ocean with no direction and will never achieve its ambition. Without organizational synergies, the organization will fade away for losing competitiveness due to less value-creation. Therefore, in addition to developing their organizational shared vision, managers must create organizational synergies from collaborative activities to accelerate the journey of organizational growth.

Shared Vision

A vision is an image of future development. For an organization, this image comprises several aspects such as what the organization will be, what its environment will be, and how it and its environment mutually interact and evolve. The organizational

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vision expresses what it aspires to achieve and the common purposes of its members (Carton, Murphy, & Clark, 2014; Tsai & Ghoshal, 1998). It also guides organizational managers to verify the direction in which the organization requires to move (Kotter, 2007).

The following are the distinctive features of organizational shared vision. First, a shared vision should be imaginable. An imaginable vision is more communicable to employees, yields clear pictures of the future. Scholars have noted that managers communicating a large amount of vision imagery enable employees to strive for the established common purposes and in turn increase organizational performance (Carton et al., 2014). In fact, with a lot of credible communication, employees will sacrifice their own interests as they strongly believe that the long-term benefits deserve their short-term sacrifices (Kotter, 2007). In summary, within a visionary organization, employees clearly imagine their shared vision and strive for their common purposes.

Second, a hopeful vision inspires employees striving to achieve it, even if the vision is somewhat uncertain and implies the requirement to overcome unexpected difficulties. A hopeful vison appeals to the opponents who intend to consider different perspectives. This enables the proponents, who are willing to incorporate contrasting opinions and further integrate with the opponents to strive for the hopeful vision and their common purpose (Burgers, Jansen, Van den Bosch, & Volberda, 2009). Moreover, the attainability of a vision encourages organizational personnel to fulfill it. The attainable vision results from considering the long-term development and the short-term operations recursively. In particular, the future development of the firm and its environment becomes more predictable by contemplating the internal strengths and the external opportunities reciprocally. This takes the organization in the right direction to realize its shared vision (Kotter, 2007). In short, a hopeful vision should be also attainable.

Finally, the organizational vision should be entrepreneurial. An entrepreneurial

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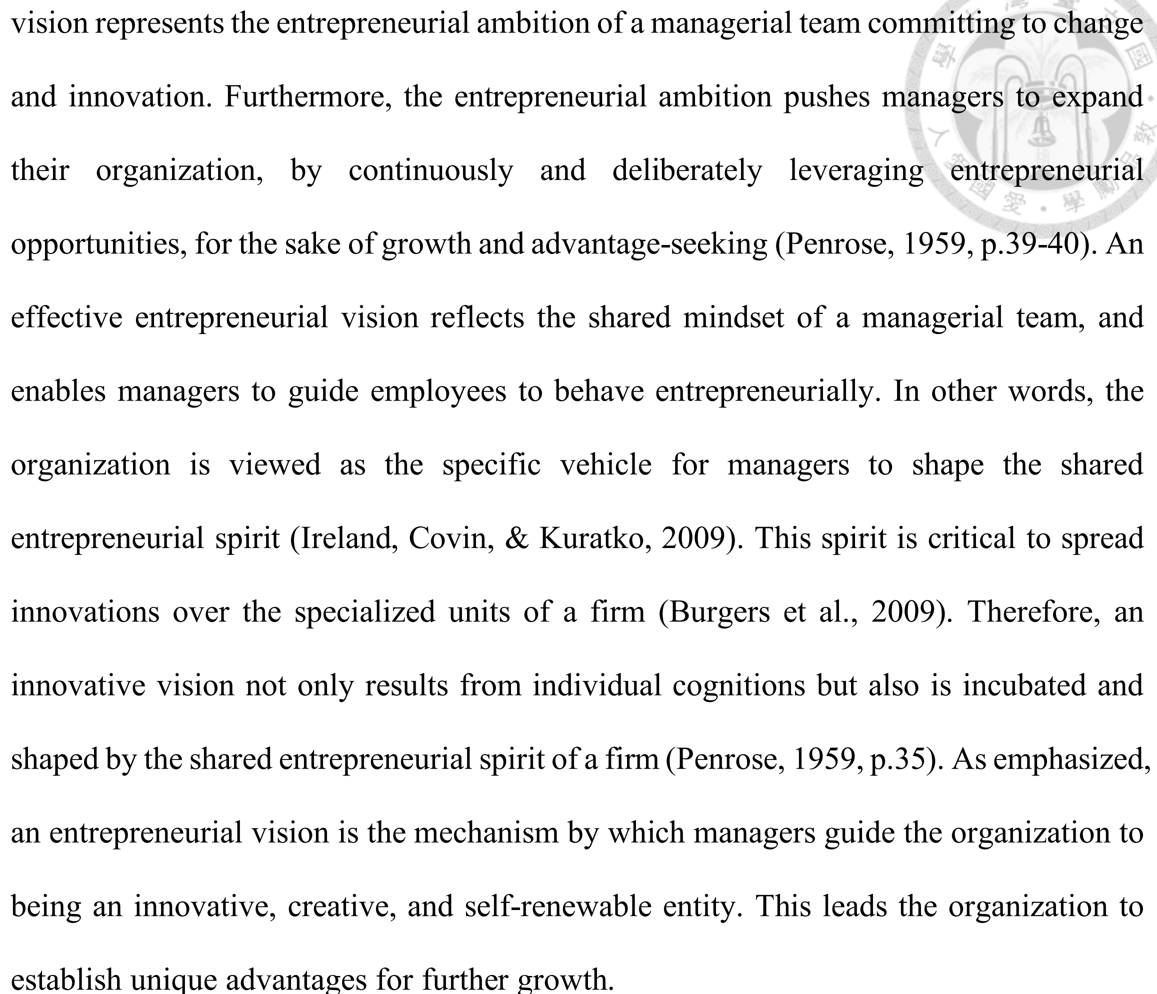

vision represents the entrepreneurial ambition of a managerial team committing to change and innovation. Furthermore, the entrepreneurial ambition pushes managers to expand their organization, by continuously and deliberately leveraging entrepreneurial opportunities, for the sake of growth and advantage-seeking (Penrose, 1959, p.39-40). An effective entrepreneurial vision reflects the shared mindset of a managerial team, and enables managers to guide employees to behave entrepreneurially. In other words, the organization is viewed as the specific vehicle for managers to shape the shared entrepreneurial spirit (Ireland, Covin, & Kuratko, 2009). This spirit is critical to spread innovations over the specialized units of a firm (Burgers et al., 2009). Therefore, an innovative vision not only results from individual cognitions but also is incubated and shaped by the shared entrepreneurial spirit of a firm (Penrose, 1959, p.35). As emphasized, an entrepreneurial vision is the mechanism by which managers guide the organization to being an innovative, creative, and self-renewable entity. This leads the organization to establish unique advantages for further growth.

As a managerial team devotes time to dealing with matters concerning the future, its members are required to boldly forecast the trend, cautiously monitor the following change, and collaboratively formulate their vision. They should consider the development of their organization, related parties, and the organizational context which is broadly defined as industries, economies, countries, and the global environment. Initially, the stated vision may be rather blurry. After the managers iteratively contemplate and exchange their thoughts, the vision becomes more clear, sensible, creative, and firm-specific. Along with increasing the distinctiveness of their vision, the strategic choices of the future development also emerge (Kotter, 2007). This progress both clarifies the image of shared vision and inspires the managerial team with the strategic choices to lead the firm toward constructing uniqueness and pursuing future growth.

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More importantly, managers are required to communicate their vision by incorporating messages into their activities, and make employees clearly perceive the shared vision (Carton et al., 2014; Kotter, 2007). As a result, organizational members with shared vision are more likely to emphasize shared interests, develop trustworthy relationships (Tsai & Ghoshal, 1998), respect different perspectives, and collaborate with other specialized units for their common purpose and organizational growth (Burgers et al., 2009).

Organizational Synergy

Synergy refers to the additive value resulting from mutual interactions of multiple entities. That is, the interaction of all entities produces the combined result which is superior to the sum of their separate results. Within an organization, synergies are generated in the forms of increasing benefits or decreasing costs, and in turn formulating the additive values (Ahuja & Novelli, 2016).

This study proposes that the first source of organizational synergies is from aligning core policies with shared vision. The core policies, such as ground rules or credos, are the vital principles of the organization and the basic guidance for employees adjusting their behaviors. Significantly aligning organizational principles (Kogut & Zander, 1992; McEvily, Perrone, & Zaheer, 2003), by which employees mutually collaborate within the organization, enables the employees to behave in the right direction for attaining the organizational vision. Such alignment directly institutionalizes organizational members to have the common justification for their actions (Ireland et al., 2009). This type of visionary alignments reduces the costs of controlling employees' divergent behaviors and enhances the benefits while strengthening organizational identity. In sum, aligning core policies with the shared vision is a type of visionary coherence and the first source of

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organizational synergies.

Aligning all organizational activities with its vision is the second source of organizational synergies. Recent literature advocates several types of synergies from an organizational diversification move, such as horizontal operating synergies, vertical operating synergies, strategic synergies, and financial synergies (Ahuja & Novelli, 2016). Yet, the down side of managing various businesses within a firm is the generation of additional costs, for example, communicating the utilization of shared resources. In a similar vein, assigning all organizational activities to separate units produces additional costs for more communication and collaboration. The increased complexity of organizational activities explicates the more necessity of cross-unit communication and collaboration. Aligning all activities with the organizational shared vision expedites effective communication and reduces the additional costs. This is the second type of visionary coherence and the other source of organizational synergies.

As noted earlier, this study proposes that the shared vision and organizational synergy are the fundamental outcomes of managerial competences. Members of a visionary team will notice their organizational and environmental changes and identify the requirements of resources for establishing advantages from coevolving with external opportunities. They broadly predict the future of their ecosystem and aggressively develop strategies to lead the trend for future growth. Moreover, a competent managerial team will pay attention to the sources of organizational synergies. By aligning core policies and organizational activities with the shared vision, organizational synergies will arise for the additive values emerging from the two types of visionary coherence.

Overall, the shared vision and organizational synergy are central to the quality of management and significantly reflect managerial competences. It is feasible to appraise the performance of managerial competences by reviewing the shared vision and

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organizational synergies. Although many financial indicators have been operated to evaluate managerial competences, the two fundamental outcomes are also applicable to the evaluation of managerial competences.

2.4 Principal Dimension of Managerial Team and Organizational Growth

The upper echelons theory postulates that managerial characteristics affect organizational outcomes (Cho & Hambrick, 2006; Hambrick & Mason, 1984). Its conceptual foundation, bounded rationality (Cyert & March, 1963), argues that complicated and ambiguous information is not objectively knowable but interpretable to managers (Hambrick, 2007). That is, managers act and make decisions on the basis of their dispositions, preferences, experiences, and other biases (Cho & Hambrick, 2006). Organizational management is presented by the managerial team's activities. Focusing on the characteristics of the top management team (TMT), rather than on individuals, provides a better explanation of organizational outcomes (Hambrick, 2007). The organizational outcomes can be viewed as the reflections of collective characteristics of top managers (Hambrick & Mason, 1984). Building on the upper echelons literature (Hambrick, 1994; Ling, Simsek, Lubatkin, & Veiga, 2008), this study identifies three principal dimensions to categorize the multiple collective characteristics of managerial teams: *composition*, *coordination*, and *compensation*. Considering these dimensions in concert synthesizes an integrative view for depicting managerial teams and incorporates the roles that managerial characteristics play in promoting the fundamental managerial outcomes.

More specifically, these dimensions denote the direction of increasing the distinctiveness of shared vision and organizational synergy. As mentioned earlier, the presence of distinctive shared vision and organizational synergy capitates the

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organization to go forward to its visionary growth by synergistically generating additive values from the visionary coherence of core policies and collaborative activities.

Composition

The composition of a managerial team refers to the collective attributes of its members (Hambrick, 1994), and is viewed as an integrated indicator contributed from each member's dispositions that a manager brings to organizational situations (Hambrick & Mason, 1984). Researchers have concentrated on the demographic composition of managerial teams. The demographic profiles of a managerial team are often applied as proxies for unmeasured psychological constructs, such as risk aversion and commitment, which are theorized to affect individual and collective strategic decision making, as well as organizational performance (Hambrick, 1994; Martin, 2011). Furthermore, the versatility of composite expertise is viewed as a predictor indicating the breadth of managerial teams' perspectives. The expertise of a member is accumulated through educational experiences, professional careers, personal adventures, and so forth (Cho & Hambrick, 2006). Namely, the various expertise possessed by team members contributes diverse information and broad perspective to develop the organizational vision. As such, a versatile managerial team is more likely to enhance the distinctiveness of their vision.

Proposition 1. The extent of versatility of a managerial team is likely to increase the distinctiveness of its organizational shared vision, which serves as the fundamental outcome of managerial competences.

However, the variety of a managerial team may impair collaboration among team members (Simsek, Veiga, Lubatkin, & Dino, 2005). The versatility is more likely to result in fragmented understanding and in turn negatively invoke defensive behaviors, thereby

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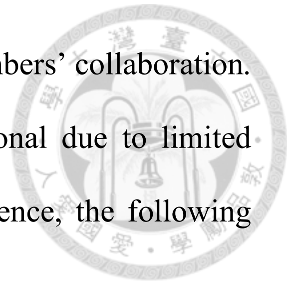

increasing the likelihood of difficulties emerging from the team members' collaboration. Consistent with this point, organizational synergies are dysfunctional due to limited mutual alignments of the team members' responsible activities. Hence, the following proposition is proposed.

Proposition 2. The extent of versatility of a managerial team is likely to decrease its organizational synergies, which serves as the fundamental outcome of managerial competences.

Coordination

As stated, in accordance with behavioral theory (Cyert & March, 1963), managers are limited by bounded rationality. Dividing a collective set of tasks into adequate portions and then assigning them to dedicated experts will improve the effectiveness of managerial teams (Chandler, 1962). Likewise, members of a managerial team facing complex situational decisions are required to be specialized with different expertise. Effective specialization means assigning tasks to the most appropriate member. Nonetheless, within a versatile team consisting of various professionals, the comparable expertise induces competition-like relations among the members. The attempt to establish superiority over other members, as well as the positive side of competition, encourages team members to promote their own performance. Yet the negative side leads to significant partition or collapse of the team. Therefore, collaborating specialized members must work together to maximize the common interests, which is important to a managerial team.

Coordination is defined as integrating heterogeneous members of a team to accomplish a set of tasks, which is a necessary approach to balance the effect of

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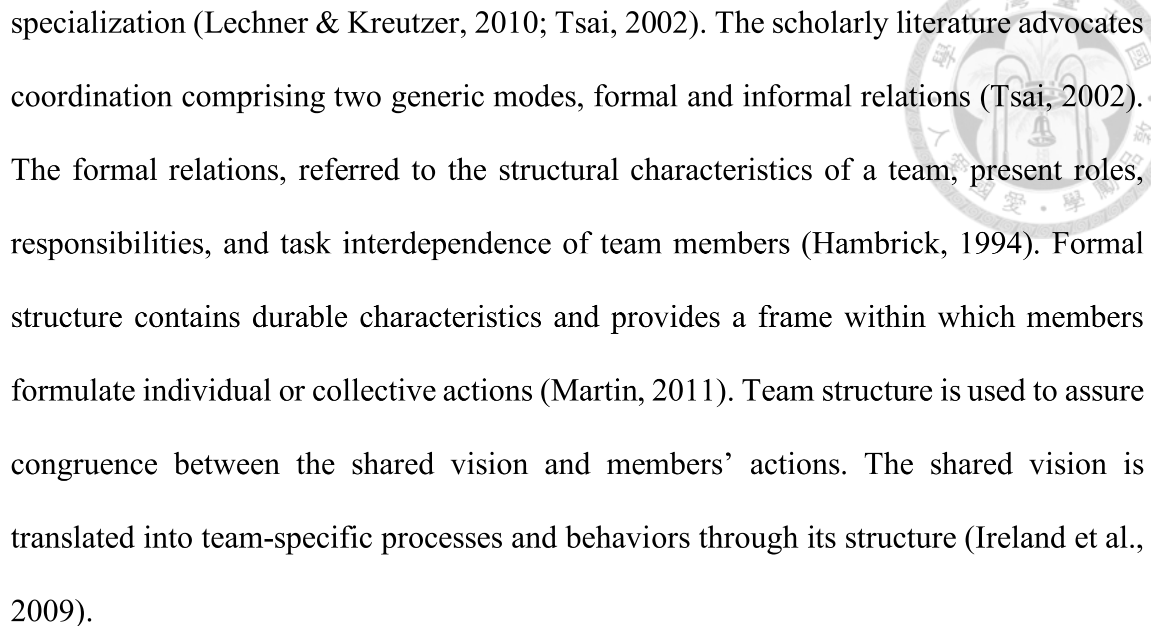

specialization (Lechner & Kreutzer, 2010; Tsai, 2002). The scholarly literature advocates coordination comprising two generic modes, formal and informal relations (Tsai, 2002). The formal relations, referred to the structural characteristics of a team, present roles, responsibilities, and task interdependence of team members (Hambrick, 1994). Formal structure contains durable characteristics and provides a frame within which members formulate individual or collective actions (Martin, 2011). Team structure is used to assure congruence between the shared vision and members' actions. The shared vision is translated into team-specific processes and behaviors through its structure (Ireland et al., 2009).

Contrasting with formal structure, informal relations are a more voluntary and private mode of coordination. The informal relations, manifesting social characteristics of a team, embody the extent of personal linkages, closeness, and connectedness among team members (Lechner & Kreutzer, 2010). Informal relations can be fostered through various activities such as cross-functional project works or internal social arrangements (Tsai, 2002). In brief, these two modes, formal and informal relations, complementarily enable the effectiveness of coordination (Lechner & Kreutzer, 2010).

Previous research explicates that structural centralization represents the parsimony in the structure domain (Tsai, 2002). This structural characteristic is able to capture the formal authority of a managerial team in making decisions. Structural centralization, as the degree of centralization of decision-making (Ling et al., 2008), reflects the locus of decision-making authority within a team (Lechner & Kreutzer, 2010). Empirical research provides evidence of the negative impact of centralization on knowledge sharing (Tsai, 2002). In a more centralized structure, members are less incentivized to share their expertise and creative endeavors to others. Such an inactive role reduces their motivation to exchange their future expectations with others. As a result, members of the managerial

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team are not effective participants in the process of configuring the organizational vision; correspondingly, their expert contributions to the distinctiveness of their vision are reduced.

Proposition 3. The extent of centralization within an organizational formal structure is likely to decrease the amount of expertise that a managerial team will contribute to the distinctiveness of its organizational shared vision, which serves as the fundamental outcome of managerial competences.

As noted above, in an organization, centralization is negatively associated with information sharing (Tsai, 2002). Furthermore, within a centralized team, managerial members have little motivation to collaborate with others because they lack the authority to make decisions. Waiting for central approval causes organizational inefficiency and increases the communicating costs (Ling et al., 2008), and in turn, the team members' responsible activities are difficult to align. Consequently, structural centralization results in low-performing collaboration of the team (Martin & Eisenhardt, 2010) and reduced organizational synergy.

Proposition 4. The extent of centralization within an organizational formal structure is likely to decrease the amount of organizational synergies a managerial team can create, which serves as the fundamental outcome of managerial competences.

On the other hand, in a managerial team, informal social relations also influence the evolution of a shared vision. Social relations act as channels for members to exchange information and open-mindedly discuss their future plans (Tsai, 2002). Members

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gradually adopt their team-specific rules and practices through the process of informal interaction. Meanwhile, team members collectively refine the current vision or create a new vision based on their mutual trust and common interests (Tsai & Ghoshal, 1998). Accordingly, by virtue of informal relations, members of the managerial team are interested in forming distinctive organizational vision with their expertise.

Proposition 5. The extent of informal relations of a managerial team is likely to increase the distinctiveness of its organizational shared vision, which serves as the fundamental outcome of managerial competences.

Empirical research yields findings that more informal interactions among team members are associated with greater knowledge sharing and resources combination (Tsai, 2002; Tsai & Ghoshal, 1998). Within a managerial team, rich social relationships stimulate the formation of common interests and mutual trust and motivate cooperation among members (Burgers et al., 2009; Tsai, 2002). Team members who socially interact with mutual trust are likely to form cooperative relations with others. Informal relations assist to establish intrinsic values within a team and increase the performance of team collaboration (Burgers et al., 2009). Consequently, the alignment of organizational activities, for which the team members are responsible, promotes additive values and organizational synergies.

Proposition 6. The extent of informal relations of a managerial team is likely to increase its organizational synergies, which serves as the fundamental outcome of managerial competences.

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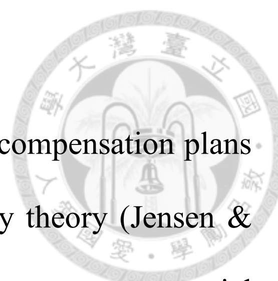

Compensation

A rich body of research has emphasized the significant role of compensation plans in organizational performance (Ireland et al., 2009), such as agency theory (Jensen & Meckling, 1976), and argued the importance of linking reward systems to managerial behaviors which are relevant to strategic decisions. Moreover, the reward systems have been empirically identified as an essential determinant of managers' tendencies to behave (Cho & Hambrick, 2006; Ling et al., 2008; Siegel & Hambrick, 2005). Within a managerial team, the compensation plan is an effective mechanism influencing the performances of individuals and the team (Hambrick, 1994; Martin & Eisenhardt, 2010).

Pay disparity, indicating the difference among individuals' rewards in a social unit, is an important characteristic of managerial teams (Hambrick, 1994). The substantial effect of pay disparity on team members' behaviors has been demonstrated (Siegel & Hambrick, 2005). In particular, individualistic compensation plans, which reward individual performance over group performance, likely encourage team members to exert their tasks for demonstrating their differential expertise and unique values (Martin & Eisenhardt, 2010). The reward system influences individual performance of a managerial team as articulating the future development and collectively creating the distinctive organizational vision. Therefore,

Proposition 7. The extent of pay disparity of a managerial team is likely to increase the distinctiveness of its organizational shared vision, which serves as the fundamental outcome of managerial competences.

As mentioned, individualistic compensation plans, depending on the individual productivity, attract managers to rewarded and more self-controllable tasks. Nevertheless,

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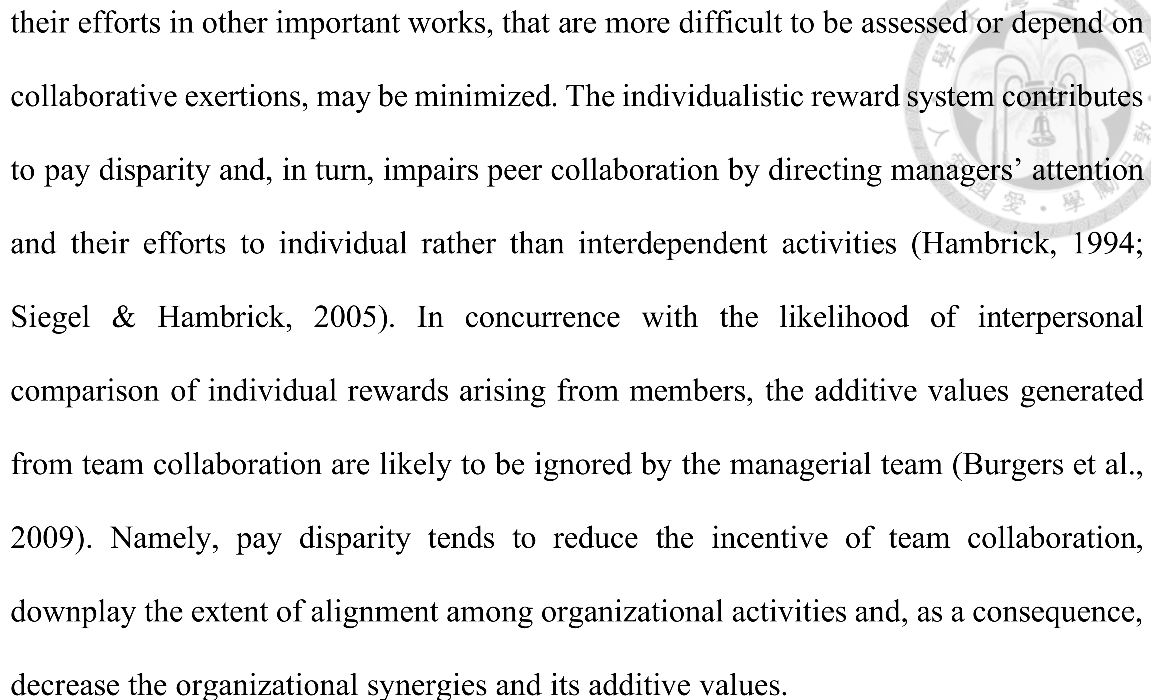

their efforts in other important works, that are more difficult to be assessed or depend on collaborative exertions, may be minimized. The individualistic reward system contributes to pay disparity and, in turn, impairs peer collaboration by directing managers' attention and their efforts to individual rather than interdependent activities (Hambrick, 1994; Siegel & Hambrick, 2005). In concurrence with the likelihood of interpersonal comparison of individual rewards arising from members, the additive values generated from team collaboration are likely to be ignored by the managerial team (Burgers et al., 2009). Namely, pay disparity tends to reduce the incentive of team collaboration, downplay the extent of alignment among organizational activities and, as a consequence, decrease the organizational synergies and its additive values.

Proposition 8. The extent of pay disparity of a managerial team is likely to decrease its organizational synergies, which serves as the fundamental outcome of managerial competences.

Organizational Growth

The shared vision, as previously noted, illuminates the direction of future development and the collective purposes of organizational members (Carton et al., 2014; Kotter, 2007). A shared vision makes the members more likely to address common interests and collaborate with differentiated units for collective purposes and organizational growth (Burgers et al., 2009; Tsai & Ghoshal, 1998). By contrast, the organizational synergies are generated from the alignment of core policies and organizational activities with the shared vision, that is, the additive values of visionary coherence (Ahuja & Novelli, 2016). In the journey of organizational growth, managers must devote their efforts to developing the distinctiveness of organizational shared vision

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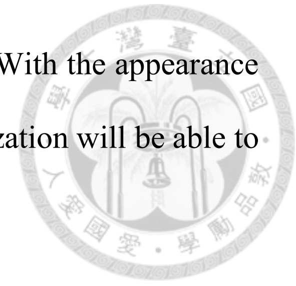

and creating organizational synergies from collaborative activities. With the appearance of distinctive shared vision and organizational synergies, the organization will be able to move toward its vision and grow synergistically.

Proposition 9. The combined effect of distinctive shared vision and organizational synergy is likely to elevate the level of organizational growth.

Insert Figure 2.1 about here

2.5 Discussion

In order to complement current knowledge on managerial competences and outcomes, this exploratory study suggests that the fundamental outcomes, shared vision and organizational synergy, are stable, patterned, and perceivable and indicate the competences of managerial teams. The present study identifies three principal dimensions of managerial teams from preceding research and elaborates them to synthesize an integrative view for categorizing the collective managerial characteristics. Furthermore, by untangling the relationship between these principal dimensions and the fundamental managerial outcomes, this study provides insight about the managerial factors that lead to the increase of managerial outcomes.

Building on previous research, this study recognizes shared vision and organizational synergy to be the fundamental outcomes of managerial competences. In this vein, the managerial outcomes are applicable to measure the extent of managerial

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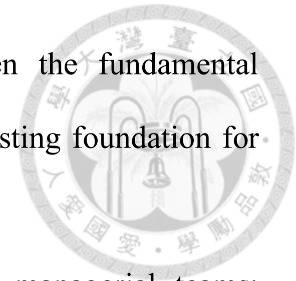

competences. Together with proposing the relationship between the fundamental outcomes and organizational growth, this study discloses an interesting foundation for researching managerial competences.

The current study identifies three principal dimensions of managerial teams: composition, coordination, and compensation. These dimensions construct an integrative view for describing managerial teams and incorporate the important roles of disparate managerial characteristics in developing the fundamental managerial outcomes. With the integrative view, the current study denotes the linkages between the principal dimensions and the managerial outcomes. Discovering the effect of collective managerial characteristics, which belong to the principal dimensions, on the managerial outcomes indicates a prominent direction for further empirical studies.

The black box of organizational demography underscores the causal gap in connecting managerial demographic characteristics with organizational performance (Lawrence, 1997). This study complements the understanding of the "black box problem" by viewing the fundamental managerial outcomes, which are the shared vision and organizational synergy, as the mediation between managerial characteristics and organizational performance. The mediating role of managerial outcomes implicates the theoretical potential to determine the chain of causality and verify the detailed relations among managerial factors, managerial outcomes, and organizational performance.

Organizational management consists of a set of combinative decisions and actions. The proposed integrative view of managerial teams manifests that the principal dimensions should be collectively contemplated as they are reciprocally related to each other. For example, replacing an individual member consequently changes the social interactions among all the members. The successful collaboration of a managerial team depends on the harmony in the principal dimensions. Excellent composition is not

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enough to make a team be visionary and synergistic. The team must also have adequately designed coordination and compensation so that the managerial team can lead its organization synergistically achieving shared vision.

With the twofold implications, this study intends to assist practitioners in their managerial actions and strategic decisions. First, the two fundamental managerial outcomes, shared vision and organizational synergy, are the linkage between managerial competences and the central concerns of strategic management. The organizational vision expresses the common purpose and guides the organization to define its scope, as well as the goal it aspires to achieve. Likewise, organizational synergy generated from the alignments with organizational vision enables itself to create additive and firm-specific values. Therefore, forming the organizational synergies is an inimitable path for achieving the common goal and establishing unique organizational advantages. Second, the shared values and distinct culture of the managerial team will gradually emerge through the process of formulating the shared vision and collaborative synergies. These additional benefits lead to a reliable partnership established within the team. Although the process of integrating divergent opinions is time-consuming, abundant results often arise from unexpected places.

2.6 Conclusion

Different streams of research on managerial competences and insufficient conceptual frameworks of managerial outcomes mystify the puzzle of fundamental outcomes of managerial teams. This exploratory study aims to shed light on the confusing puzzle by recognizing shared vision and organizational synergy as the fundamental managerial outcomes and the support of clarifying managerial competences. The presence of shared vision and organizational synergy can carry the organization on its

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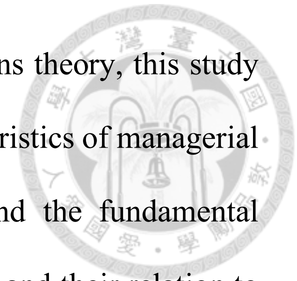
growth. In connection with the literature of RBV and upper echelons theory, this study identifies the principal dimensions to categorize the various characteristics of managerial teams and reveals the relationship between these dimensions and the fundamental managerial outcomes. The stated nature of managerial competences and their relation to the principle dimensions enlighten a novel direction for further research.



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Composition:
Versatility

P1 (+)

P2 (-)

P3 (-) , P5 (+)

Coordination:
Centralization &
Informal Relation

P4 (-) , P6 (+)

P7 (+)

Compensation:
Pay Disparity

P8 (-)

Shared
Vision

Organizational
Synergy

P9 (+)

Organizational
Growth

Principal Dimension of
Managerial Team

Fundamental Outcome of
Managerial Competence

Figure 2.1 Conceptual Framework: Relationship between Principal Dimension and Fundamental Outcome in Organizational Growth

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Chapter 3

Entrepreneurial Vision and Penrose Effect: The Role of Managerial Characteristic in Organizational Growth

3.1 Overview

Growth is a process to increase the size of a firm (Penrose, 1959, p. 88). The size of a firm is measured with respect to the present value of the total of its resources used for achieving its purpose (Penrose, 1959, p. 25). Stated differently, organizational growth reflects an increase of the total values of its resources. In the process of growing, the firm's managerial team must explore external opportunities and lead employees to utilize internal resources more efficiently to increase the total value of the firm (Penrose, 1959, p. 88). Consequently, when managerial competences are in short supply, the organizational growth, or the rate of growth, is inevitably limited.

The stagnation of organizational growth, which occurs when there is a shortage of managerial competences, has been called the Penrose effect (Kor & Mahoney, 2000; Lockett et al., 2011; Thompson, 1994) and has been broadly debated in the domain of economics for decades (Rugman & Verbeke, 2002; Slater, 1980). Similarly, managerial scholars have articulated different perspectives on the Penrose effect. Some have argued that this effect is insightful on the firm's growth processes for addressing the importance of managerial competences in discovering productive opportunities (Kor & Mahoney, 2000; Rugman & Verbeke, 2002), while others have documented that corporate growing rates are nearly random and not reconciled with the Penrose effect (Geroski, 2005). These various arguments manifest the necessity of clarifying the roles of managerial factors in mitigating the likelihood of the Penrose effect occurring.

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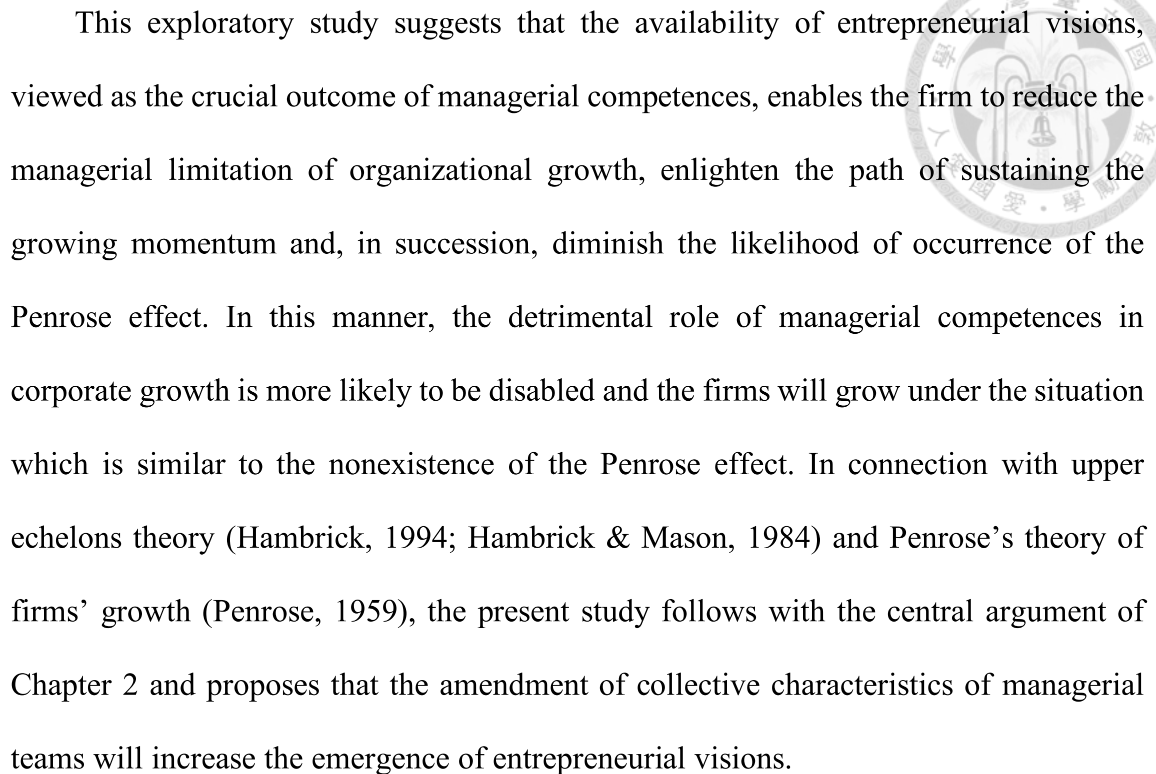

This exploratory study suggests that the availability of entrepreneurial visions, viewed as the crucial outcome of managerial competences, enables the firm to reduce the managerial limitation of organizational growth, enlighten the path of sustaining the growing momentum and, in succession, diminish the likelihood of occurrence of the Penrose effect. In this manner, the detrimental role of managerial competences in corporate growth is more likely to be disabled and the firms will grow under the situation which is similar to the nonexistence of the Penrose effect. In connection with upper echelons theory (Hambrick, 1994; Hambrick & Mason, 1984) and Penrose's theory of firms' growth (Penrose, 1959), the present study follows with the central argument of Chapter 2 and proposes that the amendment of collective characteristics of managerial teams will increase the emergence of entrepreneurial visions.

In order to complement current understanding of the Penrose effect and organizational growth, the intended contributions in this study are twofold. First, this study identifies three managerial characteristics as salient factors for enhancing the firm's availability of entrepreneurial visions in organizational growth. Applying the integrative view of Chapter 2 to the research on the Penrose effect demonstrates that these theoretical propositions are extendable to study the subjects of managerial competences and organizational growth. Second, by explicating the presence of entrepreneurial visions contributing to preventing the Penrose effect, this study sheds light on the debate of the existence of the Penrose effect and provides a new direction to explain the random rate of corporate growth.

Based on Penrose's perspective, this study starts by delineating the important roles of managerial competences in corporate growth and the occurrence of the Penrose effect. The next section expresses the crucialness of entrepreneurial visions, which is the essential quality of managerial competences for organizational growth. After identifying

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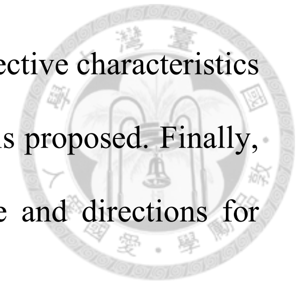

the three salient factors, the significant relationship between the collective characteristics of managerial teams and the appearance of entrepreneurial visions is proposed. Finally, the study concludes with the implications for managerial practice and directions for further research.

3.2 Penrose Effect and Organizational Growth

In *The Theory of the Growth of the Firm*, Edith Penrose advocates the roles of managerial competences in a firm's growth. On the one hand, internal inducements to growth arise from the existence of unused managerial competences (Penrose, 1959, p. 54). Organizational growth provides a way of utilizing the unused managerial competences and the excess resources which are almost zero-cost incentives (Penrose, 1959, p. 66-7). Consequently, the direction of organizational growth is attributable to its available managerial competences and unused resources (Mahoney & Pandian, 1992). The availability of managerial competences and excess resources implies the likelihood of organizational growth.

On the other hand, however, the existing managerial competences also set a limitation to organizational growth. When a growing organization faces a deficiency in managerial competences, it will suffer a consequence such as stagnating growth (Penrose, 1959, p. 45-7), the so-called Penrose effect (Kor & Mahoney, 2000; Lockett et al., 2011; Slater, 1980; Thompson, 1994). This managerial limitation is an inescapable restriction to corporate growth due to the necessity of managerial competences (Penrose, 1959, p. 48). Managerial competences critically influence the growth of firms, both in their abilities to induce growth and restrict it.

Managerial scholars have emphasized the Penrose effect, insightfully pointing out the importance of managerial competences in pursuing productive opportunities and

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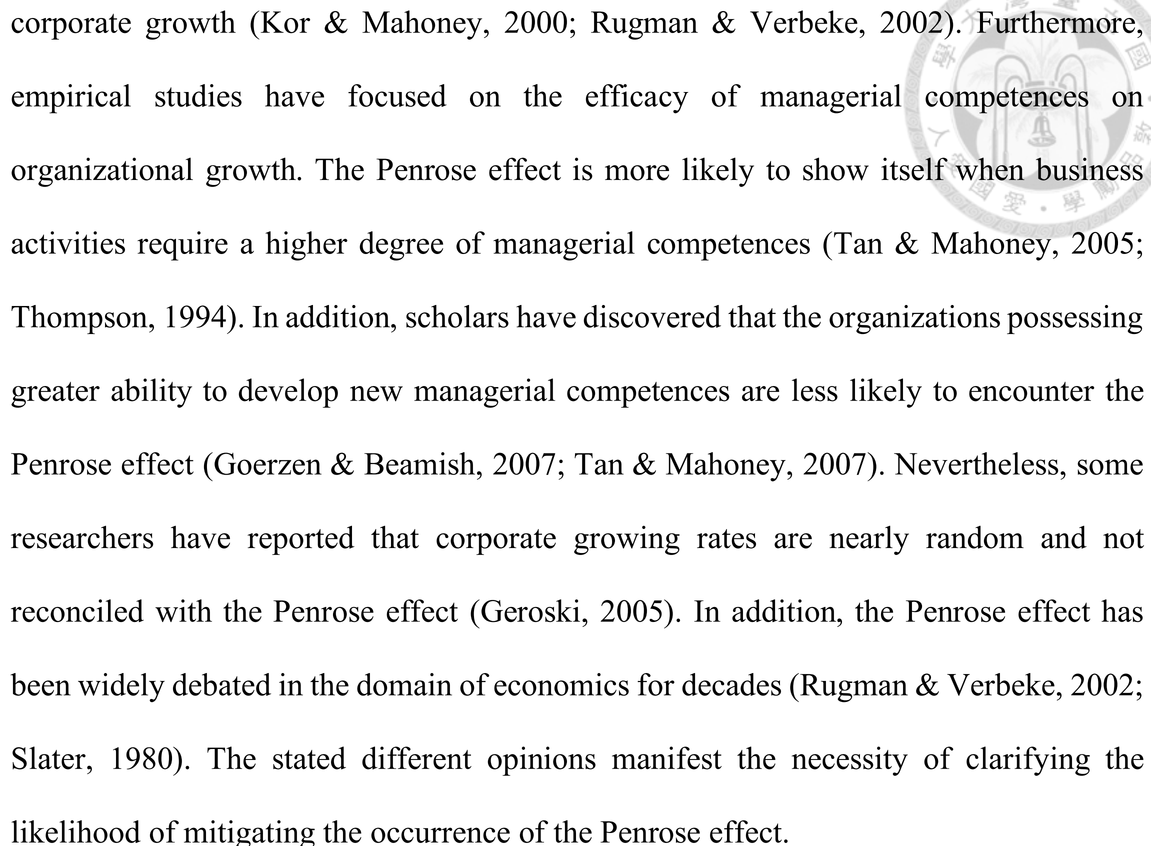

corporate growth (Kor & Mahoney, 2000; Rugman & Verbeke, 2002). Furthermore, empirical studies have focused on the efficacy of managerial competences on organizational growth. The Penrose effect is more likely to show itself when business activities require a higher degree of managerial competences (Tan & Mahoney, 2005; Thompson, 1994). In addition, scholars have discovered that the organizations possessing greater ability to develop new managerial competences are less likely to encounter the Penrose effect (Goerzen & Beamish, 2007; Tan & Mahoney, 2007). Nevertheless, some researchers have reported that corporate growing rates are nearly random and not reconciled with the Penrose effect (Geroski, 2005). In addition, the Penrose effect has been widely debated in the domain of economics for decades (Rugman & Verbeke, 2002; Slater, 1980). The stated different opinions manifest the necessity of clarifying the likelihood of mitigating the occurrence of the Penrose effect.

3.3 Entrepreneurial Vision and Managerial Competence

As mentioned in Chapter 2 of this thesis, managerial competences are considered as the collective managerial processes of increasing the distinctiveness of organizational shared vision and synergizing internal and external resources to create purposive values. The shared vision and organizational synergy are recognized as the fundamental perceivable outcomes of managerial competence. The organizational shared vision expresses its aspiration of future development (Carton et al., 2014; Tsai & Ghoshal, 1998). A competent managerial team will lead the economic organization to become a visionary and synergistic entity, and create organizational uniqueness and sustainable growth.

Specifically, for organizational growth, the managerial competences are equivalent to a function of the quality of entrepreneurial competences. The entrepreneurial competence is strategically important in determining organizational growth (Penrose,

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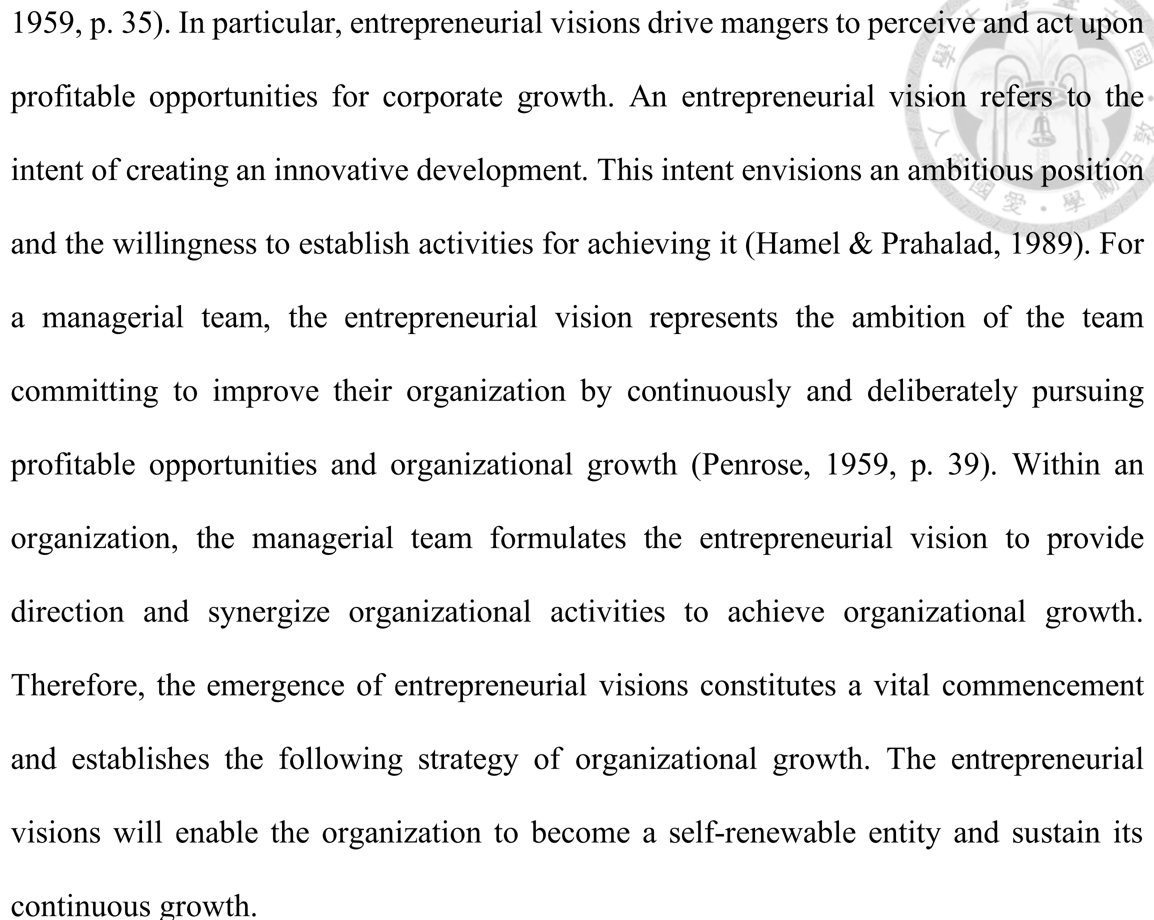

1959, p. 35). In particular, entrepreneurial visions drive mangers to perceive and act upon profitable opportunities for corporate growth. An entrepreneurial vision refers to the intent of creating an innovative development. This intent envisions an ambitious position and the willingness to establish activities for achieving it (Hamel & Prahalad, 1989). For a managerial team, the entrepreneurial vision represents the ambition of the team committing to improve their organization by continuously and deliberately pursuing profitable opportunities and organizational growth (Penrose, 1959, p. 39). Within an organization, the managerial team formulates the entrepreneurial vision to provide direction and synergize organizational activities to achieve organizational growth. Therefore, the emergence of entrepreneurial visions constitutes a vital commencement and establishes the following strategy of organizational growth. The entrepreneurial visions will enable the organization to become a self-renewable entity and sustain its continuous growth.

Additionally, the entrepreneurial vision reflects the shared innovative mindset of managerial team members and pushes them to exert themselves to realize the vision (Penrose, 1959, p. 39). Lacking entrepreneurial visions would result in the restriction of managerial teams discovering innovative opportunities for growth. Such an entrepreneurial vision is possibly initiated from individual cognitions but more likely incubated with the shared entrepreneurial spirit of the firm (Penrose, 1959, p. 35). Meanwhile, the organization is a specific vehicle for managers to shape the entrepreneurial spirit (Ireland et al., 2009). More significantly, the entrepreneurial vision enlightens the direction by which managers guide employees and lead the organization to sustain the growing momentum. As a result, the limitation of managerial competences in corporate growth is disabled and the firm will alleviate the likelihood of the Penrose effect occurring.

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3.4 Reducing Managerial Limitation

Penrose has provided an approach of reduce the managerial limitation of organizational growth, which is subdividing and decentralizing the managerial functions (Penrose, 1959, p. 55). By adjusting the organizational structure and processes to decentralize decision-making authority, the already constrained managerial competences may relieve and contribute to reducing the limitation of corporate growth. That is, amending the relative managerial factors enables firms to mitigate the likelihood of the Penrose effect occurring.

The literature of upper echelons theory has argued that organizational outcomes can be viewed as the reflections of collective characteristics of top managers (Hambrick & Mason, 1984). Furthermore, the collective characteristics of the top management team (TMT) provide a better explanation of organizational outcomes than individuals (Cho & Hambrick, 2006; Hambrick, 1994, 2007; Hambrick & Mason, 1984; Ling et al., 2008; Siegel & Hambrick, 2005). Along this line of inquiry, this study proposes that the managerial outcomes can be enhanced by adapting the collective characteristics of top managers. As suggested above, the entrepreneurial vision is the crucial outcome of managerial competences for corporate growth. Therefore, changing the characteristics of the managerial team can expedite the emergence of entrepreneurial visions and help to reduce of managerial limitation. In turn, the likelihood of the Penrose effect will diminish. Connecting to upper echelons theory and the arguments in the previous chapter, this study identifies three collective managerial characteristics: *heterogeneity, social interaction, and individualistic rewards*. The relationship between these managerial characteristics and the emergence of entrepreneurial visions is discussed below.

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Heterogeneity

The heterogeneity of a managerial team refers to the variety of its members' demographic profile (Hambrick, 1994). Scholars have generated substantial evidence that demographic profiles of managerial team members are highly associated with organizational performance (Hambrick, 2007). The heterogeneity of a managerial team is viewed as a proxy for the broadness of its perspective which affects individual and collective strategic decision making (Hambrick, 1994; Martin, 2011). In this vein, the variation of managerial demographic profiles representing the expertise possessed by team members indicates that team members can acquire diverse information and activate more innovative perspectives. As such, a heterogeneous managerial team is more likely to enhance the emergence of their entrepreneurial vision. The emergence of entrepreneurial visions can help firms to continue their growth and alleviate the likelihood of the Penrose effect occurring.

Similarly, developing individual member's various talents leads to a more heterogeneous managerial team and also positively influences the generation of entrepreneurial vision. By attending the tailor-made program of incubating managers and learning both tacit experience and firm-specific knowledge, managers become more proficient at complicated business and managerial functions. When managers incorporate newly learned experience and knowledge in their tasks, the utilization of other resources becomes more economical. A positive interaction between managers and their work produces more new knowledge and increases the efficiency of utilizing resources (Penrose, 1959, p. 76-80). Subsequently, the various expertise of individual managers is accumulated through learning and exerting knowledge in the workplace. The newly gained knowledge may stimulate team members to create new thoughts and expedite their entrepreneurial vision. In turn, firms are more likely to maintain the momentum of

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corporate growth and counterbalance the Penrose effect.

Proposition 1. The extent of heterogeneity of a managerial team will increase the likelihood of emergence of entrepreneurial vision for the organization, and hence contribute to reducing managerial limitation of continuous growth.

Social Interaction

Referring to the informal coordinative characteristics of a managerial team, the social interaction manifests a voluntary and personal mode of connection (Tsai, 2002). The informal connections pair with formal relations to mutually complement the effectiveness of coordination. Social interaction denotes the extent of private linkages and closeness among managerial team members (Lechner & Kreutzer, 2010). Along with the fostering of social relations, mutual trust and common interests enable managerial members to collaboratively originate innovative vision for future development (Tsai & Ghoshal, 1998). In consequence, social interactions act as channels for team members to reciprocally share expertise and collectively shape their entrepreneurial imagination of the future (Tsai, 2002). This contributes to the sufficient emergence of entrepreneurial visions and the reduction of managerial limitation. As a result, the firms are likely to grow under the situation which is similar to the nonexistence of the Penrose effect.

Proposition 2. The extent of social interaction of a managerial team will increase the likelihood of emergence of entrepreneurial vision for the organization, and hence contribute to reducing managerial limitation of continuous growth.

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Individualistic Reward

A considerable body of research has advocated the significant influence of linking incentive systems to managerial behaviors (Jensen & Meckling, 1976), and explicated the influence of incentive systems on organizational performance (Ireland et al., 2009). The incentive program has been empirically proved as a critical determinant affecting individual tendencies to behave within a managerial team (Cho & Hambrick, 2006; Hambrick, 1994; Ling et al., 2008; Martin & Eisenhardt, 2010; Siegel & Hambrick, 2005). Individualistic rewards, an essential managerial characteristic, refer to rewarding individual performance over team performance in a managerial team. In emphasizing individual performance, managerial team members are motivated to demonstrate their differential talents and unique values (Martin & Eisenhardt, 2010). Accordingly, the individualistic rewards encourage managers to contribute their expertise for future development and lead to the appearance of entrepreneurial visions. In turn, the appearance of entrepreneurial visions enables the firms to sustain the continuity of corporate growth and reduce the occurrence of the Penrose effect.

Proposition 3. The extent of using individualistic rewards for motivating a managerial team will increase the likelihood of emergence of entrepreneurial vision for the organization, and hence contribute to reducing managerial limitation of continuous growth.

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3.5 Discussion

This study proposes the important roles of entrepreneurial visions and managerial characteristics in corporate growth. Changing the characteristics of the managerial team enables the firm to accelerate the presence of entrepreneurial visions. With the presence of entrepreneurial visions, the firm is more likely to overcome the negative impacts of a deficiency in managerial competences and, in turn, mitigate the likelihood of occurrence of the Penrose effect.

The entrepreneurial vision facilitates the managerial team to lead employees to pursue innovative and continuous growth. By bridging upper echelons theory with the insight of Penrose's theory of firms' growth, this study follows with the integrative view proposed in Chapter 2 and identifies three collective characteristics of managerial teams as the salient factors for enhancing the firm's availability of entrepreneurial visions. An interesting avenue for future research is to investigate the influence of managerial characteristics on the appearance of entrepreneurial visions.

In regard to the debate of the existence of the Penrose effect, this exploratory study provides a new direction of explaining the random rate of corporate growth. Developing the entrepreneurial vision will support the firm to reduce its managerial limitations and continue its growth, probably at an irregular rate, which is similar to the nonexistence of the Penrose effect. Put differently, the available entrepreneurial visions enlighten the path of sustaining organizational growth, and in this manner, the detrimental role of managerial competences is likely to be disabled.

With respect to managerial practices, changing the collective managerial characteristics can promote the available entrepreneurial vision. Noticeably, altering one of the characteristics may recursively affect the others. For example, the amendment of individual incentives may reshape the social connections among team members.

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Applying these factors to design the adequate approach requires reciprocally refining the combinations of them.

As stated earlier, Penrose has noted that acquiring new managers can reduce the managerial limitation. However, managers are unable to make a meaningful contribution without the experience of working in close proximity to the other members (Penrose, 1959, p. 46-7). Regardless of whether the new managers are appointed from the inside or the outside, they have to learn to behave like a member of the team and make decisions in line with collective norms to create synergies. There is no shortcut for expanding the top management team and maintaining required coherence. Members of the managerial team must insert themselves into the participative learning mechanisms and follow with the team's growth. At the same time, these firm-specific mechanisms also facilitate the managerial team to accumulate collective experience and knowledge (Zollo & Winter, 2002). Embedded in the organization, the cumulated tacit knowledge provides the firm more options to explore new opportunities (Kogut & Zander, 1992). The abundant opportunities contribute to the presence of entrepreneurial vision and innovative growth, which guides practitioners to develop the managerial competences for continuously innovative growth.

3.6 Conclusion

The Penrose effect has been discussed for decades and its existence remains debatable. This exploratory study suggests that the adequate availability of entrepreneurial visions enables firms to sustain continuity of growth. Building on upper echelons theory and Penrose's theory of firms' growth, this study applies the integrative view of Chapter 2 and proposes that adjusting collective characteristics of managerial teams will enhance the emergence of entrepreneurial visions, reduce the limitation of

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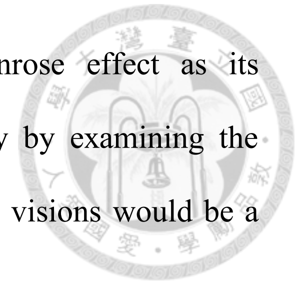
continuous growth and, in succession, counterbalance the Penrose effect as its nonexistence. Extending the theoretical propositions of this study by examining the relationship between the managerial characters and entrepreneurial visions would be a novel direction for further research.



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Chapter 4 Consequence of Spin-off: The Notable Role of Environmental Opportunity

4.1 Overview

A spin-off is a corporate divestiture approach that involves separating a subset of the parent company's assets to establish an independent child firm (Hite & Owers, 1983; López Iturriaga & Martín Cruz, 2008; Schipper & Smith, 1983), along with distributing its own shares of the new child firm to its existing shareholders (Miles & Rosenfeld, 1983; Semadeni & Cannella, 2011; Woo, Willard, & Daellenbach, 1992). Prior research has presented the rationales for companies undertaking such an approach. Financial theorists highlight the reactions of share price around the spin-off events, and relate them to the antecedents of spin-offs (Krishnaswami & Subramaniam, 1999; Maxwell & Rao, 2003; Vijh, 1994). Surrounding spin-off announcements, the mean ratio of shareholders' cumulative returns associated with the increased stock price can be larger than the fraction of the spun-off equity (Hite & Owers, 1983).

Managerial scholars underline the importance of spin-off approaches in the strategic choices of corporate diversification. Spin-offs not only enable over-diversified organizations to refocus on their core business by divesting business lines to the new spun-off firms (Bergh, Johnson, & Dewitt, 2008; Bergh & Lim, 2008; López Iturriaga & Martín Cruz, 2008), but they also provide an alternative for corporate growth with developing innovations in the new child firm due to its incompatibility with existing corporate structure (Ito, 1995; Ito & Rose, 1994; Rubera & Tellis, 2014). More specifically, spin-offs possessing the common features of corporate divestiture such as assets specialization have been signified (Parhankangas & Arenius, 2003). Also,

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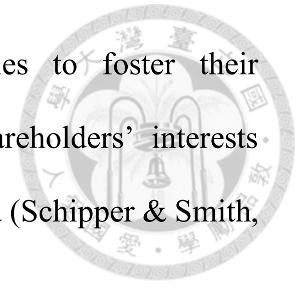

engaging in spin-offs as a growth strategy allows companies to foster their entrepreneurship for the next stage of growth and maintain shareholders' interests because there are no cash transactions and no shares are relinquished (Schipper & Smith, 1983; Seward & Walsh, 1996).

Compared with the research on divesting companies and the antecedents of spin-offs, only a few publications have concentrated on the child firms and empirically examined the critical factors affecting their performance (Daley, Mehrotra, & Sivakumar, 1997; Gertner, Powers, & Scharfstein, 2002; Seward & Walsh, 1996; Woo et al., 1992). Insufficient research has delineated the effect of the internal supportive resources on the performance of child firms (Sapienza et al., 2004; Semadeni & Cannella, 2011). More importantly, the existing literature has manifested spin-offs with internal perspectives; little attention has been directed to the influence of external environments. According to Penrose (1959, p. 31-2, 43-4), however, both the inside situations and the outside conditions are important to organizational growth. The productive activities and growing directions of a firm are governed by its reachable resource basis and the useful opportunities in the market.

In light of the stated research needs, this study emphasizes that the external opportunities, like the internal resources, significantly influence the consequences of spin-offs. This study investigates the external opportunities and the investments of parent companies' resources, which have been evidenced as the antecedent of spin-offs in earlier research (López Iturriaga & Martín Cruz, 2008), to untangle their impacts on the performance of child firms. The current study seeks to contribute to spin-off research by revealing the notable roles of environmental opportunities in the outcomes of spin-off approaches. Based on a sample of spin-off events completed between 2002 and 2007, the empirical findings indicate that the environmental opportunities of child firms and the

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supportive endowments of parent companies are critical to the profitability of child firms. These two elements, which are as noteworthy as the diversification level, should be considered by over-diversified companies which intend to spin off business so they can refocus on their core. Similarly, in addition to the diversification level and inside situations, companies considering to adopt spin-offs for organizational growth should also evaluate outside conditions.

The remaining sections are organized as follows. Starting with the distinction of various divesting types, the theoretical framework and research hypotheses are discussed. The next session describes the research settings, and the empirical results are presented in the following section. Finally, this article closes with implications and suggestions for future research.

4.2 Theory and Hypotheses

Multiple types of corporate divestiture are available when a company intends to divest a portion of its assets. This study introduces three common types and distinguishes their specialties in the following manner. First, when undertaking a split-off, the new firm emerges and some shareholders exchange the divesting company's shares for the new firm's shares. That is, shareholders of the divesting company must surrender their original shares for receiving shares of the newly created firm (Hite & Owers, 1983; Schipper & Smith, 1983).

Alternatively, a sell-off results in the exchange of operating assets for cash or other assets with no change of equity ownership. With the exchange of assets, the received assets remain under the control of the divesting company (Hite & Owers, 1983; Schipper & Smith, 1983). In most cases, the sold-off assets create under-expected value and reside in secondary and unrelated businesses relative to the primary and core lines of the

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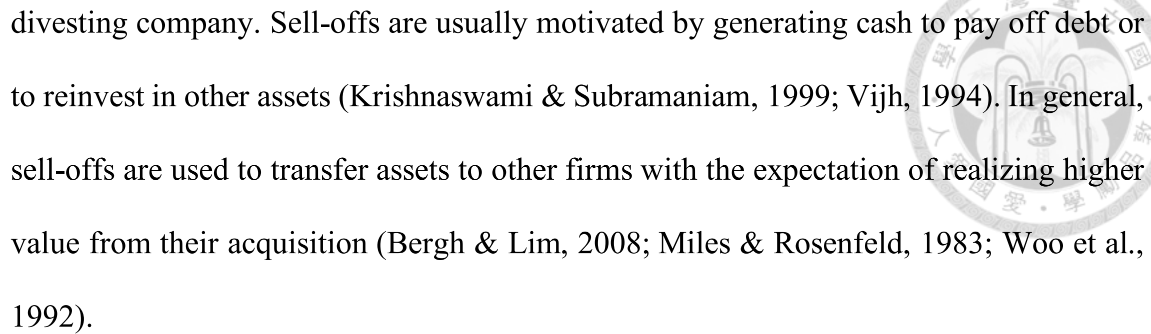

divesting company. Sell-offs are usually motivated by generating cash to pay off debt or to reinvest in other assets (Krishnaswami & Subramaniam, 1999; Vijh, 1994). In general, sell-offs are used to transfer assets to other firms with the expectation of realizing higher value from their acquisition (Bergh & Lim, 2008; Miles & Rosenfeld, 1983; Woo et al., 1992).

Finally, a spin-off legally allocates corporate assets to separate organizations without change in the proportional equity ownership claims of the divesting company's shareholders (Maxwell & Rao, 2003; Schipper & Smith, 1983). The spun-off assets are transferred to a newly organized firm with a corporate governance system, including leadership and directory boards (Seward & Walsh, 1996). The common shares of the new child firm, which are owned by the divesting company, are distributed on a pro-rata basis to the existing shareholders of the divesting company (Semadeni & Cannella, 2011). With neither a dilution of equity nor a transfer of ownership from the current shareholders, the spin-offs maintain the continuity of shareholders' ownership by no surrender of the divesting company's shares for the new ones (Hite & Owers, 1983; López Iturriaga & Martín Cruz, 2008; Vijh, 1994). Furthermore, with no exchange of cash for assets yet an enhancement of market value, spin-offs constitute a unique mode of divestiture (Bergh & Lim, 2008; Daley et al., 1997; Gertner et al., 2002; Krishnaswami & Subramaniam, 1999; Miles & Rosenfeld, 1983).

In this study, the parent firm, or simply the parent, refers to the divesting company. The new and independent spun-off firm is referred as the child firm, the spun-off firm, or the child. The term "spin-off" refers to the event itself (Daley et al., 1997; Schipper & Smith, 1983; Semadeni & Cannella, 2011). A brief summary of previous research on spin-off events containing financial and managerial perspectives is provided in Table 4.1. The main body of literature explicates the antecedents of spin-off events and associates

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them with the abnormal returns which arise from the increase of the parent firms' stock price. In contrast, barely sufficient attention is devoted to the performance of the child firms.

Insert Table 4.1 about here

Antecedent of Spin-off

On the financial academic front, a considerable body of research has explained the sources of shareholders' gains emerging from the spin-off events (Daley et al., 1997; Hite & Owers, 1983; Krishnaswami & Subramaniam, 1999; Maxwell & Rao, 2003; Miles & Rosenfeld, 1983; Schipper & Smith, 1983; Vijh, 1994). Scholars are interested in the obviously positive movements of parent firms' market value and relate them to several antecedents of spin-offs. Over various time intervals surrounding spin-off events, the shareholders of parent firm usually gain the cumulative abnormal returns (CAR) from the change of stock price. The CAR refers to the stock market return and is computed by cumulating daily return over different intervals around the spin-off events (Bergh et al., 2008; Bergh & Lim, 2008; Krishnaswami & Subramaniam, 1999). Compared with the percentage of divested equity, the magnitude of the CAR is more positive. Hite and Owers (1983) have reported that the median spun-off equity in their sample is 6.6% of the original equity value. However, the mean cumulative return is 7.0% over the period from 50 days before the announcement to the date of spin-off completion.

Applying the summary of prior research findings, the abnormal returns are attributed to the following reasons. First, regarding the elimination of negative synergies, empirical evidence supports that focusing on the core business and in turn improving managerial efficiency is positively associated with the shareholders' gains (Hite & Owers, 1983;

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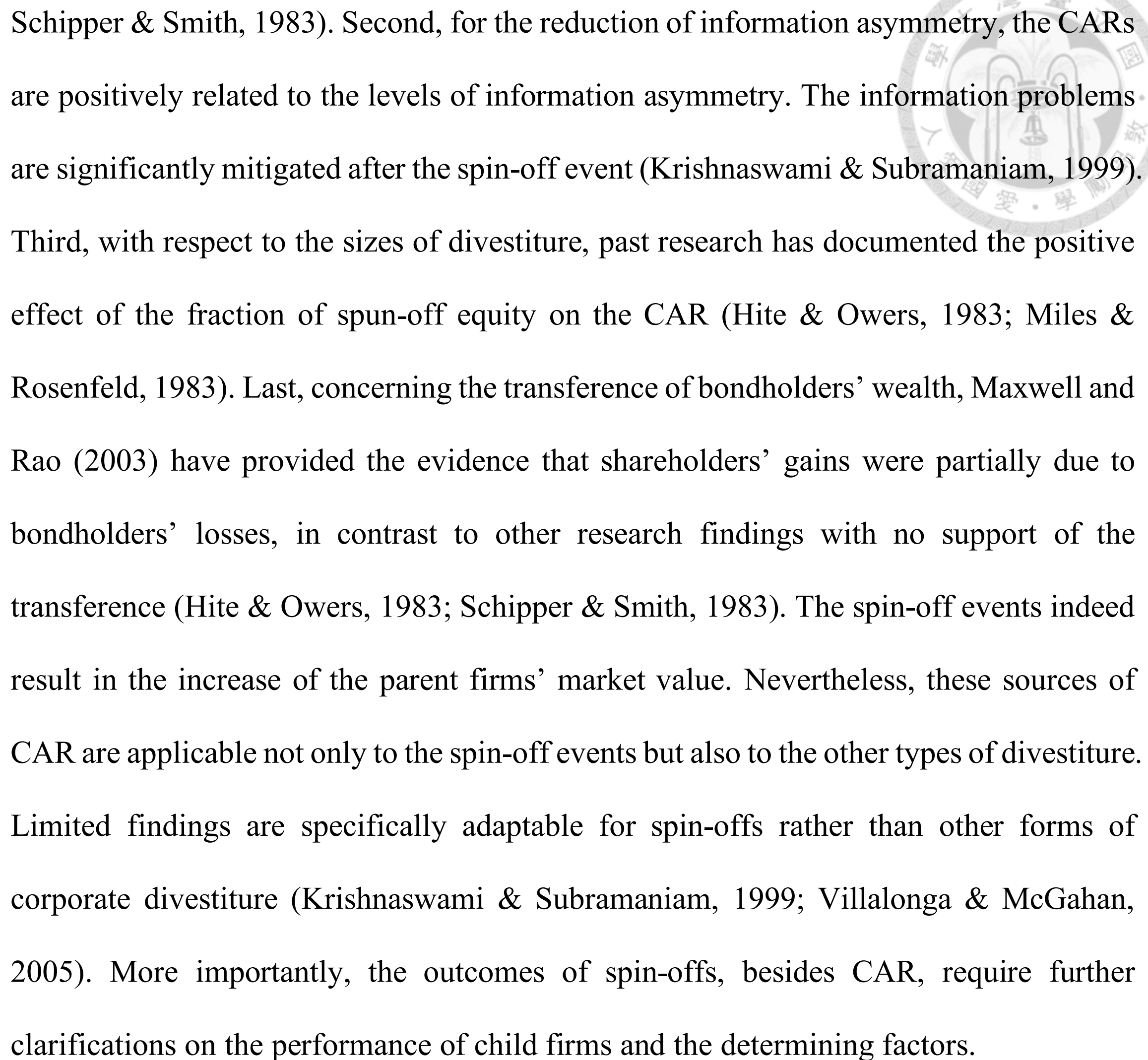

Schipper & Smith, 1983). Second, for the reduction of information asymmetry, the CARs are positively related to the levels of information asymmetry. The information problems are significantly mitigated after the spin-off event (Krishnaswami & Subramaniam, 1999). Third, with respect to the sizes of divestiture, past research has documented the positive effect of the fraction of spun-off equity on the CAR (Hite & Owers, 1983; Miles & Rosenfeld, 1983). Last, concerning the transference of bondholders' wealth, Maxwell and Rao (2003) have provided the evidence that shareholders' gains were partially due to bondholders' losses, in contrast to other research findings with no support of the transference (Hite & Owers, 1983; Schipper & Smith, 1983). The spin-off events indeed result in the increase of the parent firms' market value. Nevertheless, these sources of CAR are applicable not only to the spin-off events but also to the other types of divestiture. Limited findings are specifically adaptable for spin-offs rather than other forms of corporate divestiture (Krishnaswami & Subramaniam, 1999; Villalonga & McGahan, 2005). More importantly, the outcomes of spin-offs, besides CAR, require further clarifications on the performance of child firms and the determining factors.

From the managerial perspective, researchers argue that the spin-off is an important strategic choice of the parent firm. This strategy allows the parent firm to refocus on its core business from over-diversification (Bergh & Lim, 2008; López Iturriaga & Martín Cruz, 2008). Furthermore, it provides an alternative approach of diversification for a firm aiming to achieve corporate growth (Ito, 1995). For one thing, spin-offs facilitate organizations to restructure the linkages among business lines and improve the coordinative efficiency and earnings potential (Bergh et al., 2008; Bergh & Lim, 2008; Parhankangas & Arenius, 2003). Organizations are able to adopt the spin-off as a strategy to redefine their boundaries by redeploying physical assets and reallocating internal labor to child firms (Ito, 1995). Moreover, this strategy creates a chance for firms to reorganize

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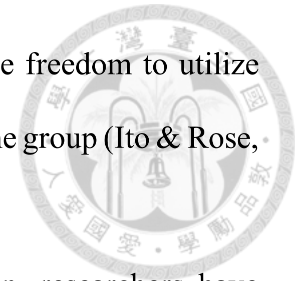

tangible and intangible resources, provides the group of firms more freedom to utilize various specialized assets, and amplifies the economic gains within the group (Ito & Rose, 1994).

Contrasting with the strategy of adjusting over-diversification, researchers have advocated that the spin-off is an alternative of corporate diversification to improve competitiveness. Instead of diversifying within a single firm, spinning off the child firm and creating a strategically connected group of firms enables the parent firm to obtain the benefits similar to scope economies while maintaining a post spin-off relationship between the parent and the child (Bergh et al., 2008; Bergh & Lim, 2008; Ito, 1995; Ito & Rose, 1994). Additionally, spin-offs provide the parent firms an option for continuously developing innovations within the child firms, rather than abandoning the growth potential for the sake of bureaucracy or structural inertia (Rubera & Tellis, 2014). With a relatively small size, the child firms are more likely to sustain entrepreneurial spirits for inventing new technologies and entering new markets (López Iturriaga & Martín Cruz, 2008; Parhankangas & Arenius, 2003). Eventually, the child firms may create new knowledge, supportively enriching the core competences of the united group and, in turn, enhancing the competitiveness of the whole group (Ito & Rose, 1994).

In summary, managerial researchers manifest the internal attributes and propensities of parent firms who undertake the spin-off strategy. Such interests, experiences, and competences are presented to be associated with the parent firms' spin-off decisions. Researchers also propose an expansive view to encompass the interactive relationship between the parent firms and the child firms. Lack of external conditions, however, results in the incompleteness of deliberating the motivation of spin-offs.

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Consequence of Spin-off

As another rudimentary cynosure of spin-off events, the performance of spun-off firms has received rather scant attention compared to that paid to the increasing stock price of parent firms and the shareholders' cumulative returns. The relatedness between the parent and the child has been identified as a determining factor of the spun-off firms' performance. Nevertheless, scholarly articles have demonstrated disparate findings of its influence.

While some researchers have reported that the performance of unrelated child firms tends to decrease after the spin-offs (Woo et al., 1992), others have documented only the unrelated spin-off events significantly creating value in CAR and improving operational performance (Daley et al., 1997). The capital allocation of unrelated child firms is also enhanced (Gertner et al., 2002). Moreover, other theorists have articulated the curvilinear effects of relatedness on the performance of spun-off firms. The child firms' efficiency of learning from the parent leads to the nonlinear effects of knowledge overlap. That is, too much or too little knowledge overlap hampers their learning and growth (Sapienza et al., 2004). Overall, the publications underscoring the effect of parent-child relatedness so far do not exhibit consistent results. Other than relatedness, the relationship between the parent and the child requires further identification as well. Semadeni and Cannella (2011) have studied the influence of parent firms' ownership and board-monitorship. The performance of the child firm positively associates with having adequate links to the parent firm.

Up to this point, the extant literature elaborates both the antecedents and the consequences of spin-offs. However, the deficiency of considering the influence of external opportunities and internal supportive resources on the child firms' performance reveals a significant literature gap, which motivates the present study to complement the

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current knowledge on spin-offs by incorporating the environmental opportunities of child firms and the supportive endowments of parent firms to examine their effects on the consequence of spin-offs.

Supportive Endowment of Parent Firm

Investments in marketing and technologies constitute tangible efforts to develop organizational knowledge and additionally produce excess resources (Kor & Mahoney, 2005). Meanwhile, the excess resources expedite innovations and then formulate further knowledge (Penrose, 1959). With extensive investments in developing technological and marketing knowledge, companies have incentives to create output from these investments (López Iturriaga & Martín Cruz, 2008). Spin-offs provide the suitable solution for firms to exploit the new knowledge within the spun-off firms and avoid the incompatibility resulting from different practices (Rubera & Tellis, 2014). Because of their size and organizational structure, the child firms tend to be more entrepreneurial and flexible to enter new markets and invent new products (Ito & Rose, 1994).

Moreover, the outcomes of spin-offs rely not only on the ability of the parent firms to deploy adequate resources to the child firms but also on their ability to support the child firms to recognize the divestiture as an opportunity for further development and to aggressively create their own competences (Ito, 1995; Moschieri, 2011). The intensive investments of the parent firm build a solid base to support the child firm, improving its performance (Ito & Rose, 1994). These supportive endowments enhance the child firm's profitability and sustain it as it establishes new competences and, in turn, the new competences capitate the child firm to support the parent firm with complementary resources.

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Hypothesis 1a. The parent firm's intensity of marketing investment is positively associated with the performance of the child firm.

Hypothesis 1b. The parent firm's intensity of technological investment is positively associated with the performance of the child firm.

Environmental Opportunity of Child Firm

As mentioned above, divested adequate resources and supportive endowments from the parents enables child firms to stabilize their organization and performance. Likewise, pursuing the emerging environmental opportunities and improving market availability accelerate the independence of spun-off firms (Parhankangas & Arenius, 2003). External opportunities combined with internal support creates the conditions for child firms advancing their profitability in multiple directions (Penrose, 1959, p.65). However, the critical role of external opportunities has been neglected. Previous research highlights the effect of intrinsic elements and gives insufficient attention to the influence of extrinsic factors.

After the separation, in addition to utilizing the supportive resources from the parent, the child firm must pursue the value-generating opportunities within its industrial environment (Brauer & Wiersema, 2012). Along with the desire to improve performance, undertaking the profitable opportunities in the environment, both of the capital market and the product market, allows the child firm to capture more financial resources and acquire more marketing advantages. As it exploits the growth potential arising from capital market, the spun-off firm gains a buffer against the risks of failure resulting from market fluctuations. Furthermore, engaging in the sales potential and introducing innovative products allows the child firm to expand either scales or scopes for attaining

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a better market position (Sapienza et al., 2004). Therefore,

Hypothesis 2a. The extent of the growth of the capital market to which the child firm is corresponding is positively associated with the performance of the child firm.

Hypothesis 2b. The extent of the growth of the product market in which the child firm is operating is positively associated with the performance of the child firm.

4.3 Methods

Sample

To identify the spin-off events and the spun-off firms from public traded Taiwanese companies, the data collection is processed as follows. With the keyword "divestiture," 194 announcements of publicly traded Taiwanese companies were found from the Market Observation Post System (MPOS) of the Taiwan Stock Exchange Corporation (TWSE). These announcements are published between 2002 and 2007. After the detailed contents were reviewed, 140 announcements regarding 49 spin-off events and 53 candidates of spin-off pairs (the parent-child pairs) were consolidated. Matching the nominated company name with the setup date of the candidates, 43 spin-off pairs relating to 39 spin-off events were identified by the Commerce Industrial Services Portal of Department of Commerce, Ministry of Economic Affairs (MOEA). The setup date of the child firm should be less than one year before the effective date of the spin-off event.

As a confirmatory step, the completions of these events were validated by the annual reports of the parent firms. Although the announcements were attached to the effective

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dates of spin-offs, the spin-off events could be either canceled or followed by merging with other companies. The details of spin-off events and financial numbers of spun-off firms were collected from the annual reports of the parent firms, downloaded from MPOS. After deducting the missing records, the sample represented 29 effective spin-off events.

Measures

The dependent variable, *Child's Operating Profit Ratio* (COPR), was defined as the averaged ratio of spun-off firms' operating profit to sales within the first two years subsequent to the spin-off event. The averaged ratio was adopted for mitigating the impact of volatile performance of newly spun-off firms.

Concerning the independent variables, this study measured the intensity of investment in intangible resources, marketing and technological resources, as the proxies of internal supportive resources from the parent. Because accumulation of these resources requires sustaining investment for a longer period, the following two variables were calculated by the records which was one-year prior to the spin-off events. *Parent's Advertising Intensity* (PAI), the measurement of marketing resources, was defined as the ratio of the parent firm's advertising expenditure to sales (Kor & Mahoney, 2005; Villalonga & McGahan, 2005). *Parent's R&D Intensity* (PRI), representing the technological resources, was measured with the ratio of the parent firm's research and development expenditure to sales (Kor & Mahoney, 2005; López Iturriaga & Martín Cruz, 2008; Sapienza et al., 2004; Villalonga & McGahan, 2005). The raw data of these two variables was collected from the Taiwan Economic Journal (TEJ) Database.

In addition, two independent variables were identified to measure the external opportunities in the capital market and the product market of the child: *Child's Stock Index Growth* (CSIG) and *Child's Industrial Production Growth* (CIPG). These variables

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reflect the attributes of the child firm's industry (Brauer & Wiersema, 2012). Based on the Industrial Stock Price Average Indices (ISPAI) of TWSE, the variable, CSIG, was defined as the percentage of growth rate of the ISPAI corresponding to the industry of the child firm. The second variable, CIPG, was measured with the percentage of growth rate of industrial productivities regarding the industry of child firm. The number was calculated by averaging the values of all industries when the child firm was involved in multiple industries. The values of yearly industrial productivities were recorded from the Directorate General of Budget, Accounting and Statistics (DGBAS) of the Executive Yuan website.

Based on preceding research, this study considered several control variables that influence the performance of child firms. First, the *transaction size* was defined as the logarithm of the total divested value (Bergh et al., 2008; Miles & Rosenfeld, 1983), and extracted from the annual reports of parent firms. The financial data of the parents were gathered from the TEJ database and calculated as the succeeding variables. Second, the profitability of the parent firm, *parent's return on equity*, was measured with the proportion of return over equity. Third, *parent's firm size* was measured with the logarithm of total asset of the parent (Bergh & Lim, 2008). Finally, *parent's Herfindahl index*, representing the degree of diversification of the parent firms (López Iturriaga & Martín Cruz, 2008), was calculated with the formula of the Herfindahl concentration index after extracting the amount of each product of the parent firm from the TEJ database.

We conducted ordinary least square (OLS) regressions to test all hypotheses. A full model of such analysis is formulated as follows:

COPR (child's operating profit ratio) = $\beta0 + \beta1 * PAI + \beta2 * PRI + \beta3 * CSIG + \beta4 * CIPG + \beta5 *$ transaction size + $\beta6 *$ parent's return on equity + $\beta7 *$ parent's firm size + $\beta8 *$ parent's Herfindahl index + ε

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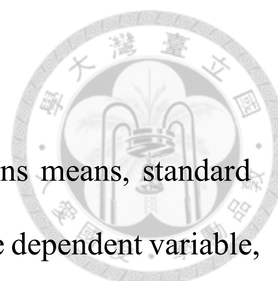

4.4 Results

Descriptive statistics are presented in Table 4.2, which contains means, standard deviations, and correlations of all variables analyzed in this study. The dependent variable, child's operating profit ratio (COPR), is significantly correlated with parent's advertising intensity (PAI), parent's R&D intensity (PRI), and child’s industrial production growth (CIPG). Additionally, Table 4.2 explicates the dispersive performance among newly spun-off firms. The standard deviation of COPR (23.13) is much greater than its mean (14.19).

Insert Table 4.2 about here

Table 4.3 reports the results of the OLS regression analysis. The coefficients in Table 4.3 are non-standardized. The standard errors are listed next to the coefficients. All of the models are operated with the same dependent variable (COPR). Model 1 presents the results of testing the full set of control variables only. Model 2 and Model 3 include the internal variables and the external variables, respectively. The last (Model 4) is a joint test of all independent variables and the controls.

Insert Table 4.3 about here

The first set of hypotheses deals with the supportive resource endowments from parent firms. Referring to the positive and significant coefficients of PAI in models 2 and 4 (1.68 [$p < .05$]; 1.35 [$p < .05$]), the invested marketing resources of the parent firm have a positive effect on the profitability of the child firm. Hypothesis 1a predicts that the

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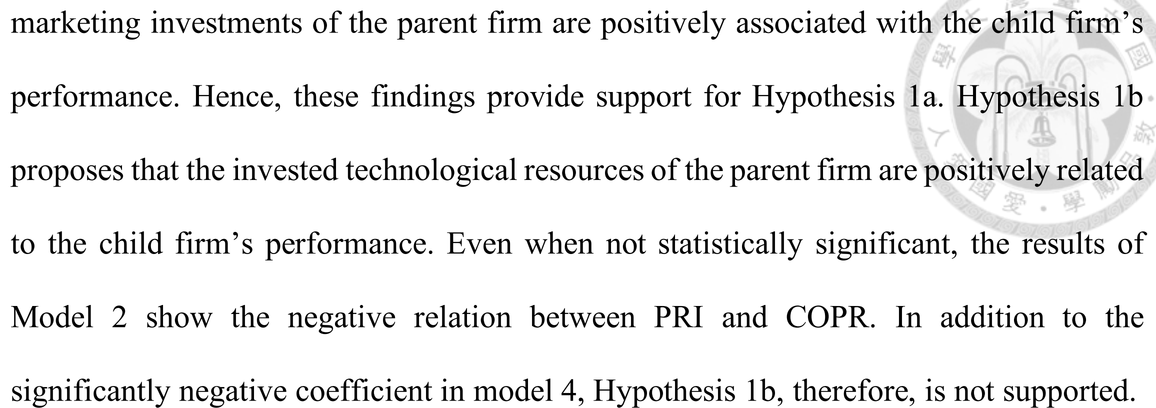

marketing investments of the parent firm are positively associated with the child firm's performance. Hence, these findings provide support for Hypothesis 1a. Hypothesis 1b proposes that the invested technological resources of the parent firm are positively related to the child firm's performance. Even when not statistically significant, the results of Model 2 show the negative relation between PRI and COPR. In addition to the significantly negative coefficient in model 4, Hypothesis 1b, therefore, is not supported.

Hypotheses 2a and 2b verify the positive effects of external environments on the child firm's performance. In models 3 and 4, the coefficients of CSIG are positive but insignificant, indicating that the effect of the growth of capital market on the child firm's profit ratio is positive but not sufficient enough to predict the child firm's performance. For this reason, Hypothesis 2a does not receive support. On the other hand, the result supports Hypothesis 2b because the coefficients of CIPG are positive and significant both in models 3 and 4 (1.77 [$p < .05$]; 1.30 [$p < .01$]). As predicted, the extent of the child firm's industrial growth is positively related to the profitability of the child firm.

4.5 Discussion

This exploratory study investigates the relationships among the performance of child firms, the supportive endowments of parent firms, and the growing opportunities in the market. The findings contribute to the literature by illuminating the ignored role of environmental elements in determining the profitability of spun-off firms. Exploiting the environmental opportunities in the market enables the newly established firms to capture marketing advantages and financial resources and, therefore, capitates them to expand their business and stabilize their performance. Proactively recognizing the environmental opportunities and designing respondent activities accelerates the future developments of spun-off firms. As previously evidenced, the external opportunities significantly affect

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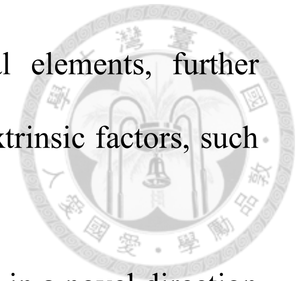

the spun-off firms' performance. Concerning the environmental elements, further research could extend this work by examining the effect of other extrinsic factors, such as competitive conditions, on the outcomes of spin-offs.

From relatedness to supportive endowments, this study extends in a novel direction to investigate the influence arising from parent-child pairs on the performance of child firms. With support from the parent firm, the child firm is more likely to utilize the amplified resource basis to formulate its distinctiveness. In return, the newly formulated competences may support the parent firm. This positive relationship between the parent and the child denotes that the spin-off approach allows the parent-child pairs to increase their synergies and competitiveness. In this vein, an interesting extension of this study would be to examine more types of parent-child relations, besides relatedness, influencing the consequence of spin-offs.

The benefits of corporate spin-offs have been expounded by scholars and practitioners for decades. Reducing the corporate diversification level for refocusing and, at the same time, clarifying the market value of separated parts have been widely studied (Krishnaswami & Subramaniam, 1999). However, this study presents that the diversification level of parent firms, a control variable in all of the models, has statistically no influence on the performance of spun-off firms, given that corporate diversity has been verified as an important antecedent of spin-offs in the literature.

The results indicate that intrinsic and extrinsic factors are critical to the consequences of spin-offs. Stated differently, taking both internal and external perspectives enhances the completeness of the spin-off decision. Starting from designing the resources to be separated, practitioners require to conduct the inside-out step by matching the allocated resources with external conditions. Next, after identifying environmental opportunities, the outside-in step must be conducted to compare the level

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of resource deployments with those required for exploiting the profitable opportunities. Conducting both of these steps will improve the outcomes of spin-offs.

4.6 Conclusion

Insufficient attention has been devoted to the influence of external elements while the extant literature manifested spin-off events with multiple internal perspectives. To complement the current knowledge on spin-offs, this study seeks to link the consequences with external factors and internal elements while empirically analyzing the critical roles of supportive endowments and environmental opportunities in determining the performance of child firms. Building on a sample of spin-off events, the findings suggest that the firms should adopt the reciprocal perspectives from inside to outside and contemplate the overall performance of the parent and the child when they evaluate spin-off approaches for organizational growth or restructuring their business.

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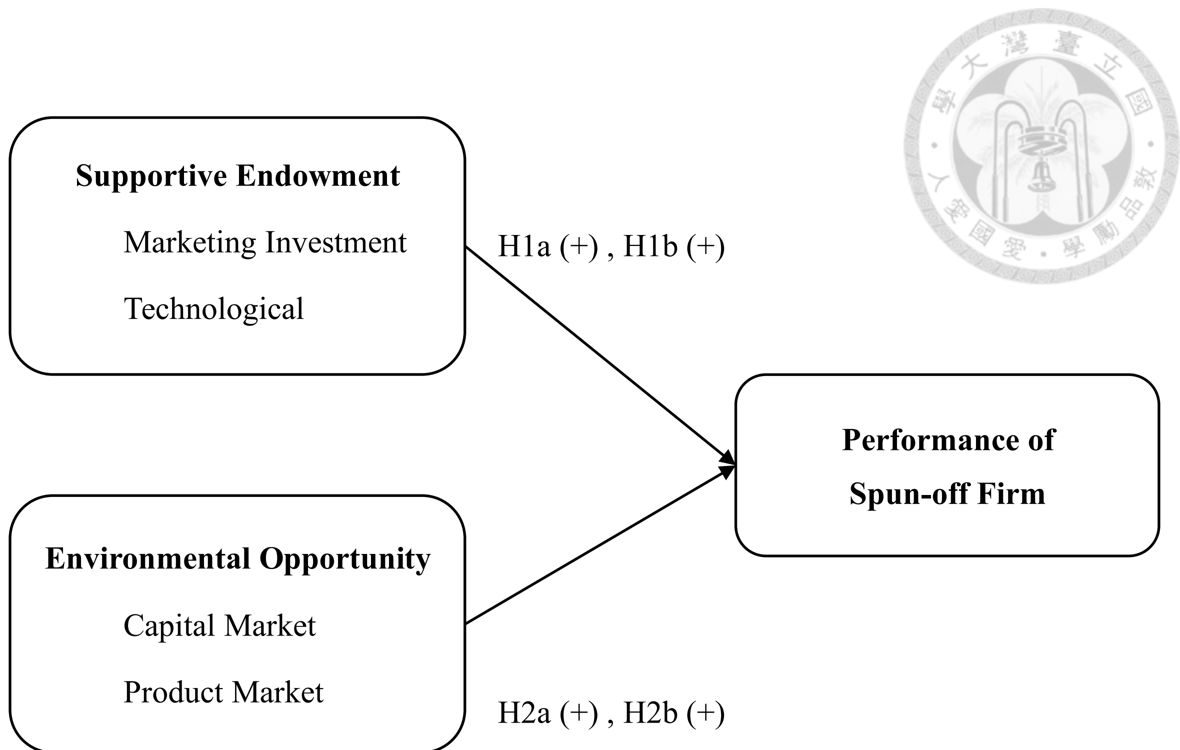

Figure 4.1 Conceptual Framework: Supportive Endowment and Environmental Opportunity

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TABLE 4.1

Previous Studies of Spin-off

Study	Research Question	Data	Major Findings
Parent firm and antecedent: Financial perspective			
Hite and Owers (1983)	the security price reactions around spin-off announcements	123 spin-off events of 116 parent firms and 53 securities of 31parent firms years 1963-1981	Spin-off events are positively associated with CARs over the broad intervals. No support is found regarding the shareholders' gains transferred from bondholders or other securityholders. The broad-interval CARs are positive related to firms spinning off following mergers or for specialization; the negative CARs are related to firms spinning off for legal or regulatory difficulties. CAR (2-day interval surrounding announcement) is positive for all above groups and positively related to the fraction of spun off equity.
Schipper and Smith (1983)	the effect of spin-off announcements on shareholder wealth the sources of shareholders' gains	93 spin-off events years 1963-1981	The share price reaction of spin-off events is significantly positive. Little evidence of shareholders' gains transferred from bondholders is provided. Shareholders' gains result from improved managerial efficiency and/or tax and regulatory advantages.
Miles and Rosenfeld (1983)	the effect of spin-off announcements on shareholder wealth	55 parent-child pairs from Moody's years 1963-1980	Spin-off announcements have a positive effect on stock prices. Large spin-off events have a stronger positive influence on shareholders' gains relative to small spin-offs (market value of child < 10% market value of parent).
Vijh (1994)	the wealth gains (from financial decisions) occurring on ex dates	113 spin-off events of 105 parent firms years 1964-1990 184 stock-for-stock mergers years 1980-1989	The excess ex-date returns arise from a variety of microstructure considerations: spin-offs leading to better valuation of each business and attraction of different investors; the merger returns earned by the target shareholders further prove the effect of microstructure considerations.
Krishnaswami and Subramaniam (1999)	the role of information asymmetry in spin-off events and the sources of shareholders' gain	126 child firms of 118 parent firms years 1978-1993	Firms engaged in spin-off events have higher degrees of information asymmetry; the information problems decrease after spin-off events. Shareholders' gains are positively associated with the levels of information asymmetry. Firms tend to spin off with higher growth opportunities and with need for external capital.
Maxwell and Rao (2003)	the evidence of wealth transferred from bondholders to shareholders	80 spin-off events years 1976-1997	Shareholders' gains are partially transferred from bondholders. Spin-off events are negatively related to the reaction of bond markets.

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TABLE 4.1 (continued)

Previous Studies of Spin-off

Study	Research Question	Data	Major Findings
Parent firm and antecedent: Managerial perspective			
Ito and Rose (1994)	the relationship of Japanese spin-off pairs	342 parent-child pairs of Japanese firms from Toyokeizai (1990)	Japanese firms use spin-offs as flexible changes with separating core competences to increase competitiveness of the spin-off pairs.
Ito (1995)	the use of spin-off as an alternative to attain Japanese corporate growth	2 examples: Furukawa Group and Toyota Group	As a corporate strategy of growth, spin-offs enable child firms to develop new competences and provide parent firms with an alternative of diversification to survive in a turbulent environment.
Parhankangas, and Arenius (2003)	the taxonomy of the relationship between the parent firm and the child firm	50 parent-child pairs of Finnish firms years 1987-1997	Three distinct groups of spin-off events are found: (1) developing new technology, (2) serving new markets, and (3) restructuring.
Bergh, Johnson, and Dewitt (2008)	manager's selection of restructuring modes (spin-offs and sell-offs) and the subsequent influence on financial performance (CAR)	204 parent firms from SDC's Worldwide M&A Database (82 spin-offs & 122 sell-offs) years 1990-1997	Firms with related assets and low diversification tend to adopt spin-offs, in turn realizing higher CAR for reducing information asymmetries. Firms with unrelated assets and high diversification tend to adopt sell-offs, in turn realizing higher CAR for reducing information asymmetries.
Bergh and Lim (2008)	the role of firm's experience of restructuring modes (spin-offs and sell-offs) in subsequent restructuring and financial performance (CAR)	205 parent firms from SDC's Worldwide M&A Database years 1990-1997	Firms with more sell-off experience are more likely to use sell-offs again, in turn increasing CAR. Firms with more recent spin-off experience are more likely to use spin-offs again, in turn increasing CAR.
López Iturriaga and Martín Cruz (2008)	the relationship between spin-off events and parent firms' resources and capabilities	166 parent firms among 3,462 Spanish firms years 1992-2002	Firms are more likely to spin off when they have intense social networks, high knowledge investments, and high diversification.

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TABLE 4.1 (continued)

Previous Studies of Spin-off

Study	Research Question	Data	Major Findings
Child firm and consequence			
Woo, Willard, and Daellenbach (1992)	the impact of spin-off events on the child firms' performance	51 child firms from S&P's on-line news service years 1975-1986	The performance of child firms is not significantly improved after spin-offs. The performance of unrelated child firms tends to decrease.
Seward and Walsh (1996)	the role of spin-off events in the design of efficient corporate control mechanisms	78 child firms of 74 parent firms from Dow Jones News Retrieval Service years 1972-1987	The design of child firms' internal control mechanisms can be seen as efficient. These control mechanisms are not strongly related to CAR.
Daley, Mehrotra, and Sivakumar (1997)	unrelated spin-off events creating more value than related ones	85 parent-child pairs years 1975-1991	Only unrelated spin-off events create significant value in CAR. The significant improvement of operating performance indicates the source of CAR and is associated with parent firms only. This is consistent with the Corporate Focus Hypothesis.
Gertner, Powers, and Scharfstein (2002)	the change in child firms' investment behavior occurring after spin-off events	160 spin-off events from SDC's M&A Database years 1982-1996	Child firms improve the allocation of capital after spin-offs for unrelated events or within a favorably reacted stock market.
Sapienza, Parhankangas, and Autio (2004)	the effects of knowledge relatedness on child firms' growth	54 child firms of 23 Finnish parent firms years 1987-1997	Maximal growth occurs when the knowledge overlap between the child and the parent is partial.
Semadeni and Cannella (2011)	the effect of post spin-off parent-child linkages on the child firm's performance	142 parent-child pairs years 1986-1997	The performance of child firms is negatively related to having too many links to the parent firm and positively related to having some links.

CAR is cumulative abnormal return associated with the movement of stock price.

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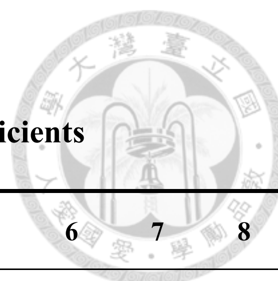

TABLE 4.2

Descriptive Statistics and Pearson Correlation Coefficients

Variable	n	Mean	s.d.	1	2	3	4	5	6	7	8
1. Child's operating profit ratio (COPR)	29	14.19	23.13								
2. Parent's advertising intensity (PAI)	29	7.35	7.88	.59†							
3. Parent's R&D intensity (PRI)	29	3.33	3.21	-.34†	-.26						
4. Child's stock index growth (CSIG)	29	20.55	44.50	.06	-.21	-.05					
5. Child's industrial production growth (CIPG)	28	10.86	6.57	.47†	.28	.08	.11				
6. Transaction size	29	12.77	14.28	.25	-.01	-.07	.34†	.11			
7. Parent's return on equity	29	13.35	1.47	-.12	-.32†	.02	.46†	.13	.11		
8. Parent's firm size	29	16.59	1.42	.17	-.08	-.16	.04	.11	.63†	.02	
9. Parent's Herfindahl index	29	0.48	0.22	-.12	-.26	.04	.07	.10	.04	-.08	.06

† $p < .10$

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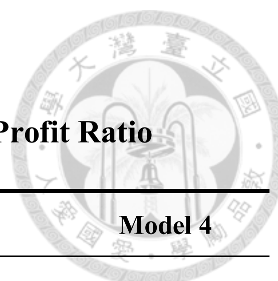

TABLE 4.3

Results of Regression Analyses: Child Firm's Operating Profit Ratio

Variable	Model 1		Model 2		Model 3		Model 4	
Control variables								
Transaction size	4.13	[4.49]	3.17	[3.46]	3.00	[4.10]	1.85	[2.95]
Parent's return on equity	-0.26	[0.34]	0.07	[0.18]	-0.47	[0.44]	-0.26	[0.24]
Parent's firm size	0.25	[3.96]	0.98	[4.05]	-0.19	[3.82]	0.06	[3.92]
Parent's Herfindahl index	-14.71	[13.58]	3.29	[10.34]	-20.23	[14.10]	-3.20	[9.47]
Independent variables								
Parent's advertising intensity (PAI)			1.68*	[0.71]			1.35*	[0.56]
Parent's R&D intensity (PRI)			-1.22	[0.90]			-1.93*	[0.86]
Child's stock index growth (CSIG)					0.04	[0.10]	0.06	[0.10]
Child's industrial production growth (CIPG)					1.77*	[0.72]	1.30**	[0.43]
Model *F*	1.21		5.13**		3.34*		7.24***	
R^2	0.10		0.44		0.35		0.62	
N	29		29		28		28	

* p < .05; ** p < .01; *** p < .001

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Chapter 5 Conclusion and Implication

Overall, this dissertation proposes that the shared vision and organizational synergy are the fundamental outcomes of managerial competences. Their perceivability provides a measurable means to evaluate the managerial competences. Also, their firm-specificity capacitates organizations to constitute unique advantages. By considering the principal dimensions of managerial teams, which are composition, coordination, and compensation, as the main factors of promoting managerial outcomes, this dissertation attempts to complement current knowledge on managerial competences. Together with exploring the relationship between managerial outcomes and organizational growth, this dissertation seeks to provide instruments for practitioners to enhance collective managerial outcomes and pursue sustainable organizational growth.

This dissertation identifies three principal dimensions synthesizing an integrative view to incorporate the important roles of disparate managerial characteristics in developing fundamental managerial outcomes. The integrative view manifests the collectivity of three principal dimensions. That is, they are reciprocally related to each other. The success of collaborating a managerial team depends on the harmony of these principal dimensions. Excellence of team composition, combined with adequate design in coordination and compensation, allows managerial team to lead the visionary organization synergistically, achieving continuous growth.

The black box of organizational demography highlights the gap of causality in associating managerial demographic profiles with organizational performance (Lawrence, 1997). This dissertation postulates that the fundamental outcomes of the managerial team, which are the shared vision and organizational synergy, are able to serve as the mediation between managerial demography profiles and organizational performance. The mediating

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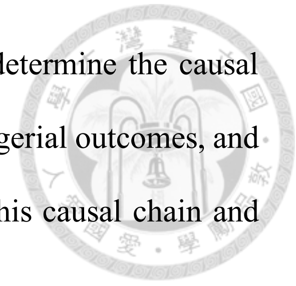

role of managerial outcomes provides the theoretical potential to determine the causal chain and to discover the relations among managerial profiles, managerial outcomes, and organizational performance, which enlightens further research on this causal chain and managerial competences.

As regards spin-offs, the managerial implications of this dissertation are twofold. First, intrinsic and extrinsic factors are equally critical to corporate spin-offs. Stated differently, the internal and external perspectives are mutually complemented for spin-off decisions. Reciprocally proceeding the inside-out and outside-in steps will complete the overall design and synergize the positive effect of internal and external factors. Second, the supportive endowments provided from the parent firm enable the child firm to utilize the expanded resource basis to establish its uniqueness and, in turn, provide complementary resources to support the parent firm. For the parent-child pair, this mutually helpful relationship will synergize their sustainability of continuous growth.

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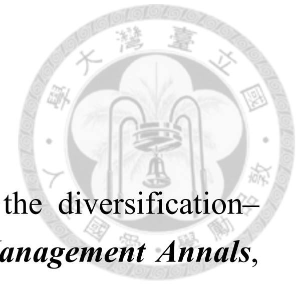
Reference



Ahuja, G., & Novelli, E. 2016. Redirecting research efforts on the diversification–performance linkage: The search for synergy. ***Academy of Management Annals***, 11(1): 342-390.

Augier, M., & Teece, D. J. 2009. Dynamic capabilities and the role of managers in business strategy and economic performance. ***Organization Science***, 20(2): 410-421.

Barney, J. B. 1991. Firm resources and sustained competitive advantage. ***Journal of Management***, 17(1): 99-120.

Bergh, D. D., Johnson, R. A., & Dewitt, R.-L. 2008. Restructuring through spin-off or sell-off: transforming information asymmetries into financial gain. ***Strategic Management Journal***, 29(2): 133-148.

Bergh, D. D., & Lim, E. N.-K. 2008. Learning how to restructure: absorptive capacity and improvisational views of restructuring actions and performance. ***Strategic Management Journal***, 29(6): 593-616.

Brauer, M. F., & Wiersema, M. F. 2012. Industry divestiture waves: How a firm's position influences investor returns. ***Academy of Management Journal***, 55(6): 1472-1492.

Burgers, J. H., Jansen, J. J. P., Van den Bosch, F. A. J., & Volberda, H. W. 2009. Structural differentiation and corporate venturing: The moderating role of formal and informal integration mechanisms. ***Journal of Business Venturing***, 24(3): 206-220.

Carton, A. M., Murphy, C., & Clark, J. R. 2014. A (blurry) vision of the future: How leader rhetoric about ultimate goals influences performance. ***Academy of Management Journal***, 57(6): 1544-1570.

Chandler, A. D. 1962. ***Strategy and structure: Chapters in the history of american industrial enterprise***. Cambridge, MA: The MIT Press.

Cho, T. S., & Hambrick, D. C. 2006. Attention as the mediator between top management team characteristics and strategic change: The case of airline deregulation. ***Organization Science***, 17(4): 453-469.

Cyert, R. M., & March, J. G. 1963. ***A behavioral theory of the firm***. New Jersey: Prentice Hall, Inc.

Daley, L., Mehrotra, V., & Sivakumar, R. 1997. Corporate focus and value creation evidence from spinoffs. ***Journal of Financial Economics***, 45(2): 257-281.

Eisenhardt, K. M., & Martin, J. A. 2000. Dynamic capabilities: What are they? ***Strategic Management Journal***, 21(10-11): 1105-1121.

Geroski, P. A. 2005. Understanding the implications of empirical work on corporate growth rates. ***Managerial and Decision Economics***, 26(2): 129-138.

doi:10.6342/NTU201900541

Gertner, R., Powers, E., & Scharfstein, D. 2002. Learning about Internal Capital Markets from Corporate Spin-offs. ***Journal of Finance***, 57(6): 2479-2506.

Goerzen, A., & Beamish, P. 2007. The Penrose effect: "Excess" expatriates in multinational enterprises. ***Management International Review***, 47(2): 221-239.

Grant, R. M. 2002. Corporate strategy: Managing scope and strategy content. In A. Pettigrew, H. Thomas, & R. Whittington (Eds.), ***Handbook of Strategy and Management***: chapter 4, 72-97. London, UK: Sage.

Hambrick, D. C. 1994. Top management groups: A conceptual integration and reconsideration of the team label. In B. M. Staw, & L. L. Cummings (Eds.), ***Research in organizational behavior***, Vol. 16: 171-214. Greenwich, CT: JAI Press.

Hambrick, D. C. 2007. Upper echelons theory: An update. ***Academy of Management Review***, 32(2): 334-343.

Hambrick, D. C., & Mason, P. A. 1984. Upper echelons: The organization as a reflection of its top managers. ***Academy of Management Review***, 9(2): 193-206.

Hamel, G., & Prahalad, C. K. 1989. Strategic intent. ***Harvard Business Review***, 67(3): 63-78.

Helfat, C. E., Fankelstein, S., Mitchell, W., Peteraf, M. A., Singh, H., Teece, D. J., & Winter, S. G. 2007. ***Dynamic capabilities: Understanding strategic change in organizations***. Oxford, UK: Blackwell.

Hite, G. L., & Owers, J. E. 1983. Security price reactions around corporate spin-off announcements. ***Journal of Financial Economics***, 12(4): 409-436.

Ireland, R. D., Covin, J. G., & Kuratko, D. F. 2009. Conceptualizing corporate entrepreneurship strategy. ***Entrepreneurship: Theory & Practice***, 33(1): 19-46.

Ito, K. 1995. Japanese spinoffs: Unexplored survival strategies. ***Strategic Management Journal***, 16(6): 431-446.

Ito, K., & Rose, E. L. 1994. The genealogical structure of Japanese firms: Parent-subsidiary relationships. ***Strategic Management Journal***, 15(S2): 35-51.

Jensen, M. C., & Meckling, W. H. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. ***Journal of Financial Economics***, 3(4): 305-360.

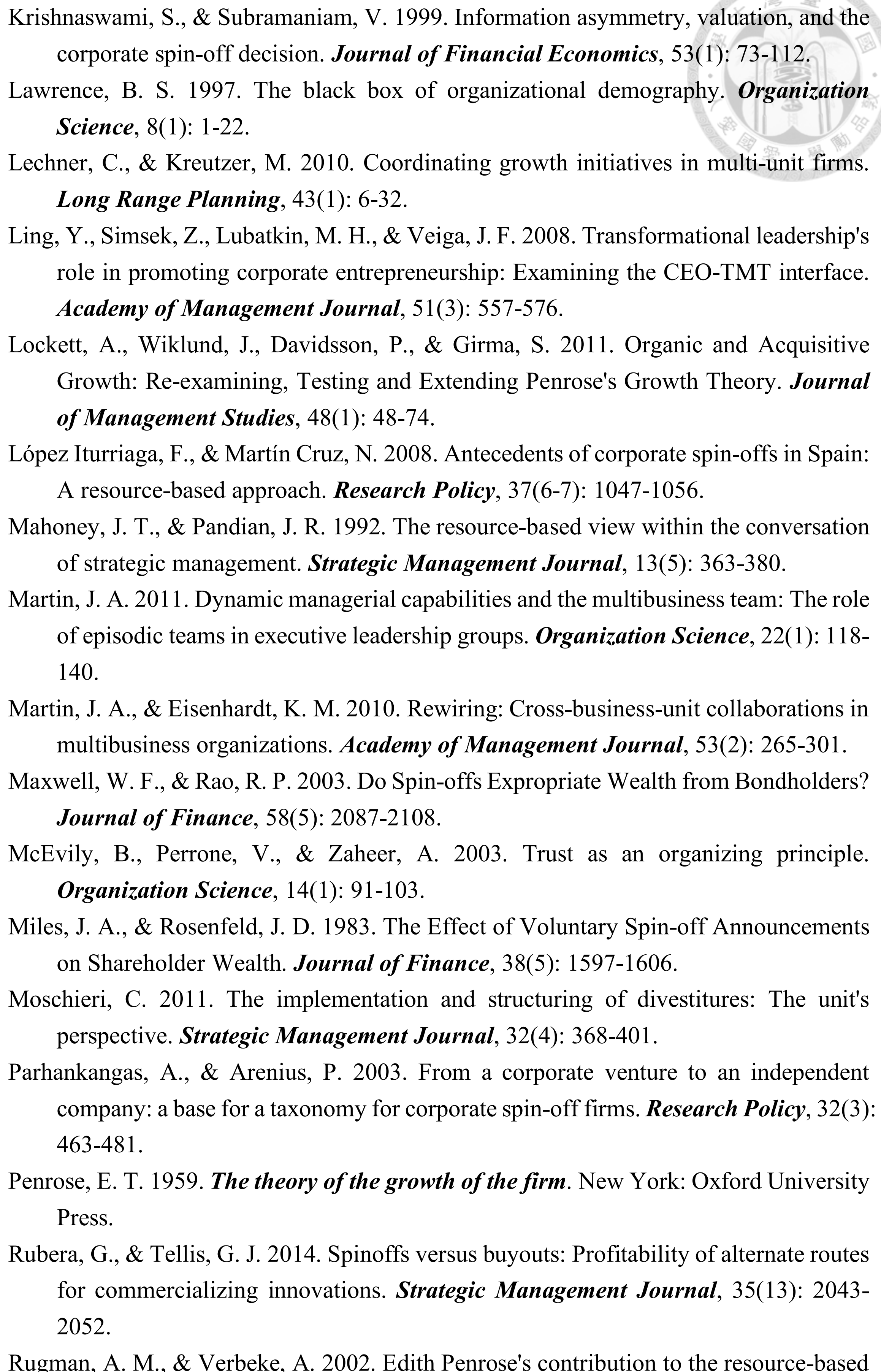
Kogut, B., & Zander, U. 1992. Knowledge of the firm, combinative capabilities, and the replication of technology. ***Organization Science***, 3(3): 383-397.

Kor, Y. Y., & Mahoney, J. T. 2000. Penrose's resource-based approach: The process and product of research creativity. ***Journal of Management Studies***, 37(1): 109-139.

Kor, Y. Y., & Mahoney, J. T. 2005. How dynamics, management, and governance of resource deployments influence firm-level performance. ***Strategic Management Journal***, 26(5): 489-496.

Kotter, J. P. 2007. Leading change: Why transformation efforts fail. ***Harvard Business Review***, 85(1): 96-103.

doi:10.6342/NTU201900541



Krishnaswami, S., & Subramaniam, V. 1999. Information asymmetry, valuation, and the corporate spin-off decision. ***Journal of Financial Economics***, 53(1): 73-112.

Lawrence, B. S. 1997. The black box of organizational demography. ***Organization Science***, 8(1): 1-22.

Lechner, C., & Kreutzer, M. 2010. Coordinating growth initiatives in multi-unit firms. ***Long Range Planning***, 43(1): 6-32.

Ling, Y., Simsek, Z., Lubatkin, M. H., & Veiga, J. F. 2008. Transformational leadership's role in promoting corporate entrepreneurship: Examining the CEO-TMT interface. ***Academy of Management Journal***, 51(3): 557-576.

Lockett, A., Wiklund, J., Davidsson, P., & Girma, S. 2011. Organic and Acquisitive Growth: Re-examining, Testing and Extending Penrose's Growth Theory. ***Journal of Management Studies***, 48(1): 48-74.

López Iturriaga, F., & Martín Cruz, N. 2008. Antecedents of corporate spin-offs in Spain: A resource-based approach. ***Research Policy***, 37(6-7): 1047-1056.

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

Martin, J. A. 2011. Dynamic managerial capabilities and the multibusiness team: The role of episodic teams in executive leadership groups. ***Organization Science***, 22(1): 118-140.

Martin, J. A., & Eisenhardt, K. M. 2010. Rewiring: Cross-business-unit collaborations in multibusiness organizations. ***Academy of Management Journal***, 53(2): 265-301.

Maxwell, W. F., & Rao, R. P. 2003. Do Spin-offs Expropriate Wealth from Bondholders? ***Journal of Finance***, 58(5): 2087-2108.

McEvily, B., Perrone, V., & Zaheer, A. 2003. Trust as an organizing principle. ***Organization Science***, 14(1): 91-103.

Miles, J. A., & Rosenfeld, J. D. 1983. The Effect of Voluntary Spin-off Announcements on Shareholder Wealth. ***Journal of Finance***, 38(5): 1597-1606.

Moschieri, C. 2011. The implementation and structuring of divestitures: The unit's perspective. ***Strategic Management Journal***, 32(4): 368-401.

Parhankangas, A., & Arenius, P. 2003. From a corporate venture to an independent company: a base for a taxonomy for corporate spin-off firms. ***Research Policy***, 32(3): 463-481.

Penrose, E. T. 1959. ***The theory of the growth of the firm***. New York: Oxford University Press.

Rubera, G., & Tellis, G. J. 2014. Spinoffs versus buyouts: Profitability of alternate routes for commercializing innovations. ***Strategic Management Journal***, 35(13): 2043-2052.

Rugman, A. M., & Verbeke, A. 2002. Edith Penrose's contribution to the resource-based

doi:10.6342/NTU201900541

view of strategic management. ***Strategic Management Journal***, 23(8): 769-780.

Sapienza, H. J., Parhankangas, A., & Autio, E. 2004. Knowledge relatedness and post-spin-off growth. ***Journal of Business Venturing***, 19(6): 809-829.

Schipper, K., & Smith, A. 1983. Effects of recontracting on shareholder wealth : The case of voluntary spin-offs. ***Journal of Financial Economics***, 12(4): 437-467.

Semadeni, M., & Cannella, A. A. 2011. Examining the performance effects of post spin-off links to parent firms: Should the apron strings be cut? ***Strategic Management Journal***, 32(10): 1083-1098.

Seward, J. K., & Walsh, J. P. 1996. The governance and control of voluntary corporate spin-offs. ***Strategic Management Journal***, 17(1): 25-39.

Siegel, P. A., & Hambrick, D. C. 2005. Pay disparities within top management groups: Evidence of harmful effects on performance of high-technology firms. ***Organization Science***, 16(3): 259-274.

Simsek, Z., Veiga, J. F., Lubatkin, M. H., & Dino, R. N. 2005. Modeling the multilevel determinants of top management team behavioral integration. ***Academy of Management Journal***, 48(1): 69-84.

Slater, M. 1980. The managerial limitation to the growth of firms. ***Economic Journal***, 90(359): 520-528.

Tan, D., & Mahoney, J. T. 2005. Examining the Penrose effect in an international business context: The dynamics of Japanese firm growth in US industries. ***Managerial and Decision Economics***, 26(2): 113-127.

Tan, D., & Mahoney, J. T. 2007. The dynamics of Japanese firm growth in U.S. industries: The Penrose effect. ***Management International Review***, 47(2): 259-279.

Thompson, R. S. 1994. The franchise life cycle and the Penrose effect. ***Journal of Economic Behavior & Organization***, 24(2): 207-218.

Tsai, W. 2002. Social structure of “coopetition” within a multiunit organization: Coordination, competition, and intraorganizational knowledge sharing. ***Organization Science***, 13(2): 179-190.

Tsai, W., & Ghoshal, S. 1998. Social capital and value creation: The role of intrafirm networks. ***Academy of Management Journal***, 41(4): 464-476.

Vijh, A. M. 1994. The Spinoff and Merger Ex-Date Effects. ***Journal of Finance***, 49(2): 581-609.

Villalonga, B., & McGahan, A. M. 2005. The choice among acquisitions, alliances, and divestitures. ***Strategic Management Journal***, 26(13): 1183-1208.

Woo, C. Y., Willard, G. E., & Daellenbach, U. S. 1992. Spin-off performance: A case of overstated expectations? ***Strategic Management Journal***, 13(6): 433-447.

Zollo, M., & Winter, S. G. 2002. Deliberate learning and the evolution of dynamic capabilities. ***Organization Science***, 13(3): 339-351.

doi:10.6342/NTU201900541