

---

**THE RELATIONSHIP BETWEEN FIRM RESOURCES, DYNAMIC CAPABILITIES AND FIRM PERFORMANCE OF START-UP FIRMS IN BA RIA -VUNG TAU PROVINCE.**

Tran Nha Ghi

Ba Ria -Vung Tau University, Vietnam

**ABSTRACT**

The study addresses the relationship between the firm resources, the dynamic capabilities and the firm performance of the start-up firms in Ba Ria - Vung Tau province. Based on a survey included 204 questionnaires' responses of the firms' managers, the research results show that the internal and external firm resources positively influenced the dynamic capabilities. The internal firm resources have no directly impact on the firm performance. The dynamic capabilities had positive impact on the firm performance. From the research results, the study proposed managerial implications to improve the performance of start-up firms in Ba Ria -Vung Tau province.

**Keywords:** Firm resources, Dynamic capabilities, Firm performance.

**1. INTRODUCTION**

The resource-based view of the firm (the RBV theory) by Wernerfelt (1984) is a new approach in studying enterprise competitiveness. The RBV theory is constantly developed (Barney & et al., 2001), especially as it expands in the dynamic market and forms the dynamic capability theory (Teece & et al., 1997). According to RBV theory, businesses achieve and maintain competitive advantage by arranging valuable resources (Wernerfelt, 1984). In a rapidly changing and dynamic developing market, applying RBV to predict successful startups is too simple and can be misleading (Wu, 2007).

The current number of bankruptcy or dissolution of small and medium enterprises (SMEs) increased significantly compared to the number of newly registered enterprises. The main reasons consist of global economic fluctuation and its negative effects on business activities, internal factors such as inefficient use of business resources, lack of supports, management skills, experience, relationships and capital. However, the small and medium sized enterprises (SMEs) today play an important role in economic development. The major question is how to increase

the number of SMEs while maintain their growth after the establishment? In response to the above question, a promotional campaign for star-ups was proposed in the official directions of Vietnam political report in the 12th National Party Congress, and also became the second task of the six main tasks proposed by Prime Minister Nguyen Xuan Phuc (2016). Therefore, this study addressing the relationship and analyzing the impact among firm resources, dynamic capabilities and firm performance is essential in the current particular situation. Hence, the study is to provide policy implications to improve the outcomes of start-up businesses for SMEs in Ba Ria - Vung Tau province. The units of observation of this study are firm resources, dynamic capabilities and firm performance. The scope of this study are start-up firms operating in Ba Ria - Vung Tau province, the surveyed subjects are SME owners/managers who have started their businesses within 5 years from 2010 to 2015.

## **2. LITERATURE REVIEW**

**Firm Resources:** Amit and Schoemaker (1993) defined firm resources as the available stock owned and controlled by the firm. Resources include tradable secrets (patents and licenses), financial assets or physical assets (assets and machinery), and human resources. Nguyen Dinh Tho et al. (2008) argued that enterprise resources can have tangible form such as production and product technology or invisible form such as knowledge and leadership. Intangible resources are difficult to detect and evaluate, but they often create sustainable competitive advantage and meet the VRIN requirements, so they are often considered as the dynamic capabilities of the firm.

**External cooperation:** Wu (2007) proposed the fact that external partners are willing to cooperate with startups in the initial stage by supports in raw materials, production capacity, technology and production process creates the necessary dynamic capabilities for businesses.

**Dynamic Capabilities:** According to Teece et al. (1997), dynamic capabilities are considered as the ability to integrate, build and arrange internal and external resources in order to deal with the rapid change in the business environment. Dynamic capabilities are essential in determining business performance. Without dynamic capabilities, enterprises with initial resources can quickly be exhausted, eliminated, and ineffective in transforming resources into advantages (Zollo and Winter, 2000).

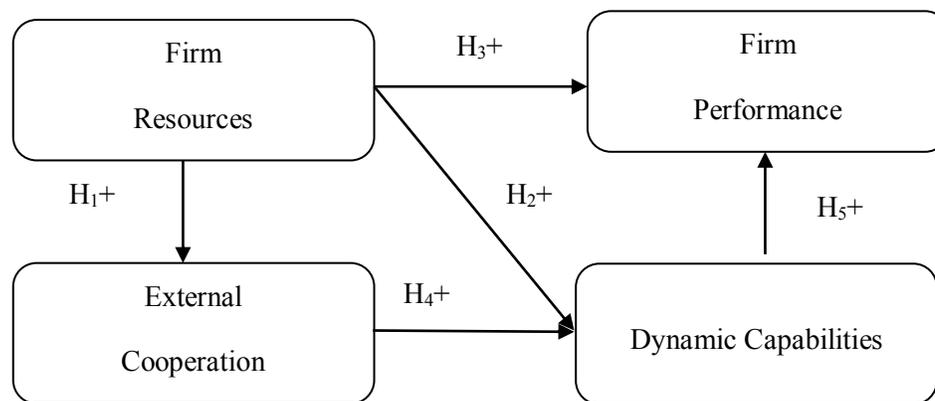
**Firm Performance:** Wu (2007) measured performance by the return on investment (ROI) within the last two years. The authors employed measurement scale such as sales growth, profit growth, market share, resource efficiency, and return on investment (Nguyen Dinh Tho et al., 2009). Ngo Quang Huan et al. (2016) measured firm performance by Likert scale.

**Relationship among firm resources, dynamic capabilities and firm performance:** Dynamic capabilities are the basis of competitive advantage and business efficiency (Eisenhardt & Martin

2000). Resources can become dynamic and provide competitive advantages when they satisfy four characteristics of VRIN (Eisenhardt & Martin (2000). The study of Wu (2007) in the relationship among firm resources, dynamic capabilities and firm performance of high-tech start-up enterprises in Taiwan also shows the positive influences of firm resources on dynamic capabilities and of dynamic capabilities on firm performance.

### 3. RESEARCH METHODOLOGY

From the empirical studies of Wu (2006) and Wu (2007), the author proposes a research model and hypothesis as follows:



**Figure 1: Proposed research model**

Bruno and Tyebjee (1985) proposed that business processes and experience are important for business success. Therefore, the connection among start-ups is important for obtaining the necessary additional funds (Deeds and Hill, 1996). Laumann (1982) believed that collaborating of firms will provide the resources to a start-up business. So the first hypothesis is stated as follows:

*Hypothesis 1: Firm resources have positive influence on external cooperation of start-up firms.*

Cohen and Levinthal (1990) suggested that initial knowledge influences the ability of firms to acquire new knowledge. Heeley (1997) argued that the ability to acquire knowledge of an enterprise consists of two main elements: the acquisition of external knowledge and the diffusion of that knowledge within the enterprise. Meanwhile, the dynamic capabilities of start-up firms include internal resources and additional resources from external partners. Therefore, one of the prerequisites for combining, changing, rearranging, and reallocating internal and external entrepreneurial resources is that resources are abundant. Hence, the second hypothesis is stated as follows:

***Hypothesis 2:*** Firm resources have positive influence on the dynamic capabilities of start-up firms.

Lin & Wu (2013) studied the extent of direct and indirect impacts on the firm performance of 1,000 Taiwanese enterprises. The author divided resources into two categories, which are VRIN and non-VRIN. The results showed that non-VRIN factors have no statistical significance in affecting the firm performance. Meanwhile, resources in VRIN category have positive influence on firm performance. Therefore, the third hypothesis is stated as follows:

***Hypothesis 3:*** Firm resources have positive influence on the firm performance of start-up firms.

Firm resources are limited and firms search for resources from their environment (Pfeffer and Salancik, 1978). Danilovic and Winroth (2005) observed that enterprises that do not have enough resources to develop can employ strategic alliance to have additional resources and support from other firms. Gulati (1999) also stated the importance of the cooperation with supporting enterprises in approaching the necessary additional funds. Start-up firms will gain more available resources by increasing the willingness to cooperate, thereby increasing the dynamic capabilities of the firms. Thus, the fourth hypotheses can be stated as:

***Hypothesis 4:*** The external cooperation has positive influence on the dynamic capabilities of start-up firms.

Teece et al. (1997) pointed out that the ability of a firm to integrate and arrange resources has a positive impact on the firm performance. Dynamic capabilities are organizational and strategic practices that managers use to transform their resources to create new strategic values (Pisano, 1994). The new strategic value is the creation, evolution, and recombination of other resources that form a competitive advantage. Toyota has used its advanced product development skills to gain competitive advantage in the auto industry (Clark and Fujimoto, 1991). In 1994, Iansiti and Clark examined the impact of knowledge integration in product development on firm performance. They proposed the result that firm performance has been consistently improved over time in the automotive and computer industries. Without dynamic capacity to transform enterprise resource advantages, firm resources will not create firm performance. Therefore, the fifth hypothesis is stated as follows:

***Hypothesis 5:*** The dynamic capabilities have positive influence on firm performance of start-up firms.

In order to evaluate and analyze the impact of scales, the SEM model and the support tool SPSS-AMOS was used. The model shows the relationship and the level of influence among firm resources, dynamic capabilities and firm performance of start-up firms. The research topic is

inherited from Wu's research (2006, 2007) and Nguyen Dinh Tho et al. (2008; 2009). Random and convenient sampling is employed. After the process of data collection and cleaning, there are 204 appropriate questionnaires included in the analysis. The five-level Likert scale is used. The scale of dynamic capabilities with 6 observation variables was adjusted from the scale of Wu (2006), the author's scale of firm performance used by Nguyen Dinh Tho et al. (2009), Ngo Quang Huan et al. (2016). The other scales of firm resources and the external cooperation are inheritances from Wu (2006, 2007).

## **4. FINDINGS AND DISCUSSION**

### **4.1 Descriptive samples**

Most of the start-up enterprises (65.2%) have been in the business for over 3 years, the remaining 34.8% of the firms have done the business in less than 3 years. Most of the companies operating in the form of limited liability companies, accounting for 35.8% of the total companies. Joint-stock companies accounts for 34.3%. The major areas of business activity are service (63.7%) and commerce (18.1%). The size of the business is measured by the number of employees. There are 44.1% of the total firms having fewer than 50 employees. There are 92.1% of the firms with managers over intermediate level, 53.9% of the managers are in male gender, 98.5% of the managers are "Kinh" ethnic group and have less than five years of experience.

### **4.2 Confirmatory Factor Analysis (CFA)**

By CFA analysis tested the convergent validity, discriminant validity, uniqueness and reliability of the scale when the components correlated independently in the critical model .

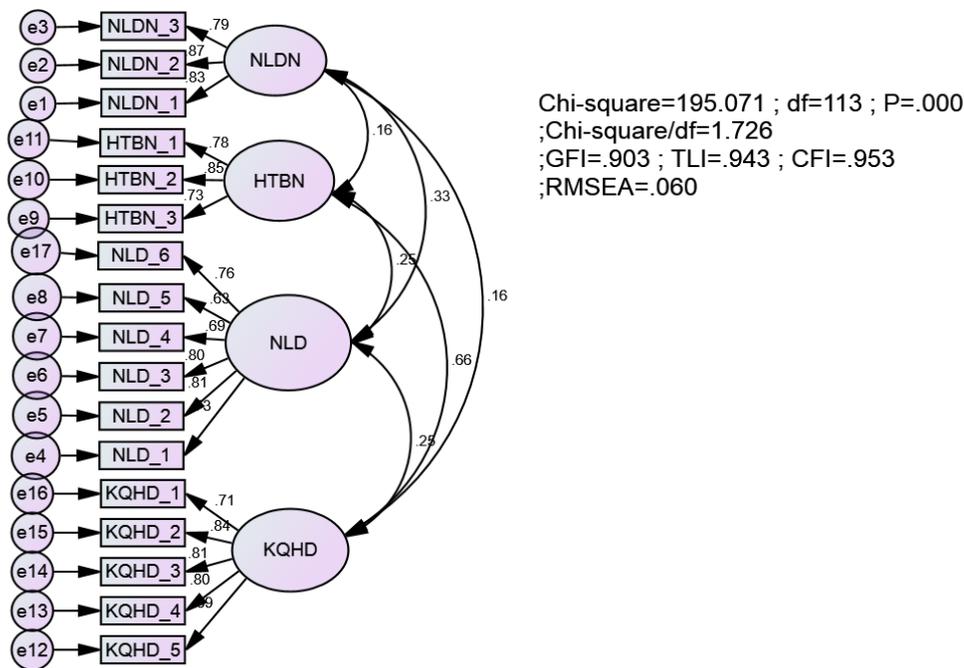


Figure 2: Confirmatory factor analysis

SEM was used to test the theoretical model and hypotheses. The proposed model received an acceptable fit to the data:  $\chi^2 [113] = 195.071$  ( $p = 0.000$ ),  $GFI = 0.903$ ,  $CFI = 0.903$ , and  $RMSEA = 0.06$  (Carmines & McIver, 1981). The reliability check indicates that all measures satisfied the requirement for Cronbach’s alpha reliability

Table 1: Cronbach's alphas, total variance extracted

Construct	item	Reliability		Total variance extracted( $\rho_{vc}$ )	Result
		Cronbach Alpha ( $\alpha$ )	Tổng hợp ( $\rho_c$ )		
Firm resources	3	0.866	0.867214	0.685561	Satisfied
External cooperation	3	0.824	0.829798	0.620491	
Dynamic capabilities	6	0.876	0.877381	0.545602	
Firm performance	5	0.874	0.87878	0.593406	

(Source: Author’s data)

The results showed that all scales used in the study satisfied the requirement for Cronbach's alpha reliability. These findings indicate that the scales measuring these constructs were unidimensional and the within-method convergent validity was achieved.

### 4.3 Structural results

SEM was used to test the theoretical model and hypotheses. The proposed model received an acceptable fit to the data:  $\chi^2 [114] = 265.208$  ( $p = 0.000$ ), GFI = 0.879, CFI = 0.913, and RMSEA = 0.081. Note that the structural model had the same degrees of freedom with the final measurement model.

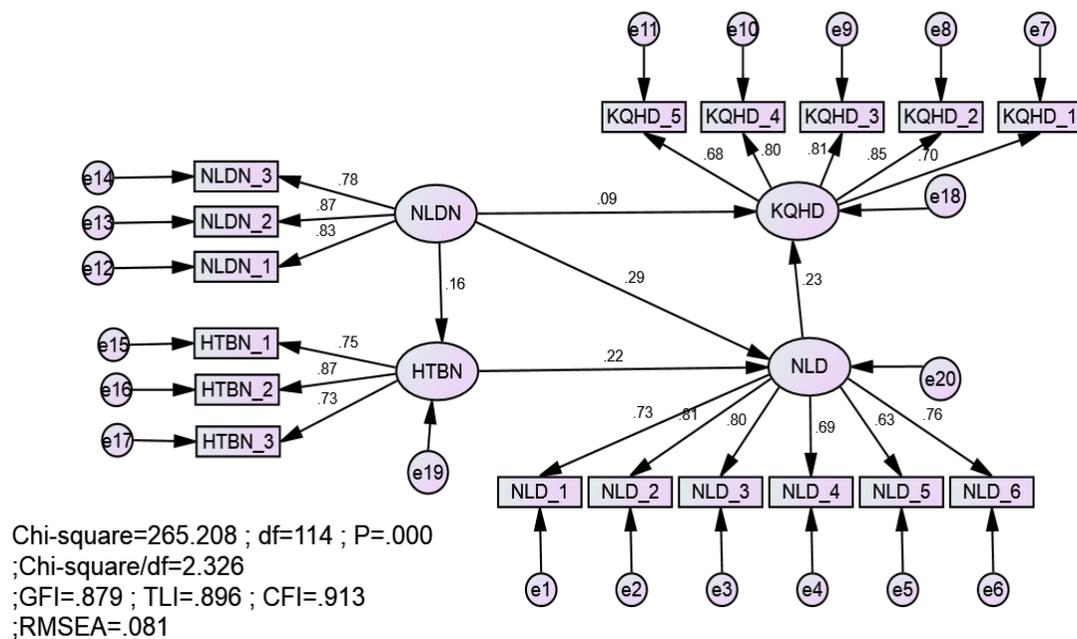


Figure 3: Structural results (unstandardized estimate)

**Table 2: Structural paths**

			Unstandardized estimates				standardized estimates	Result
			Coefficient	S.E.	C.R.	P		
Firm resources	--->	External cooperation	0.128	0.066	1.957	0.05	0.16	Accept H1
Firm resources	--->	Dynamic capabilities	0.199	0.055	3.625	***	0.29	Accept H2
Firm resources	--->	Firm performance	0.065	0.059	1.101	0.271	0.092	Reject H3
External cooperation	--->	Dynamic capabilities	0.19	0.069	2.758	0.006	0.221	Accept H4
Dynamic capabilities	--->	Firm performance	0.239	0.088	2.727	0.006	0.233	Accept H5

Firm resources have positive influence on external cooperation with  $\beta = 0.128$ .

Firm resources and external cooperation have positive influence on dynamic capabilities with  $\beta$  Firm resources  $\rightarrow$  dynamic capabilities = 0.199 and  $\beta_{\text{external cooperation} \rightarrow \text{dynamic capabilities}} = 0.19$ . The impact on dynamic capabilities of firm resources is stronger than the impact of external cooperation on dynamic capabilities.

Regarding to the influence on firm performance, research results show that dynamic capabilities have positive influence on firm performance with  $\beta = 0.239$ . Firm resources do not directly influence the firm performance ( $p\text{-value} = 0.271 > \alpha$ ), firm resources only have indirect influence on performance through the intermediate variable, dynamic capabilities.

Thus, research results propose the positive influence of firm resources and dynamic capabilities on firm performance of start-up firms in Ba Ria – Vung Tau province. This finding is consistent with other previous research’s findings, especially the empirical studies of Wu (2006, 2007); Lin and Wu (2013) conducted for Taiwan high-tech start-up enterprises in the rapidly changing environment.

**5. CONCLUSIONS AND MANAGERIAL IMPLICATIONS**

**5.1 Conclusions**

The study has synthesized theories of the concepts of enterprise resource scales, dynamic capabilities and performance. The study measured each scale by observable variables from

empirical studies inside and outside the country. In addition, the study has verified the reliability of each scale and the suitability of the model in regarding to the research data in Vietnam market. The study results are also consistent with the results of other studies in the world. However, there are some limits in this study:

Since the research was conducted in Ba Ria - Vung Tau province, its sample included start-up firms operating in the BNI association only. Hence, subsequent studies should be more comprehensive and cover larger area to show the overall nature. The sample was not categorized into specific sectors, except for those operating in the finance-banking, real estate, finance and insurance industries. This is also the limitation of research from the point of view of Nguyen Dinh Tho and Nguyen Thi Mai Trang (2008). Therefore, the next studies should address each particular sector to provide the suitable and detailed management implications. Moreover, the research did not divide the business resources into VRIN and non-VRIN categories to study their impact on external partnerships, dynamic capacity and performance in the Vietnam market.

## **5.2 Managerial implications**

The research results show that firm performance is strongly influenced by the dynamic capabilities of the firm. Therefore, to improve the firm performance, it is necessary to build the dynamic capabilities for enterprises in Ba Ria - Vung Tau province. In order to build the essential dynamic capabilities, the firm owners/managers should pay attention to the following issues:

### **Identify the firm resources for operating:**

The firm should review and modernize its business process in order to make this process become a special technological know-how. It is difficult for other competitors to imitate, learn or follow this process. This task requires the firm's dedication, creativity, and experience in long time to create a new and highly productive process. Firms should increase capital mobilization from easy-to-access sources. Companies can raise funds from the most accessible sources of capital such as relatives, friends, or other credit institutions with the lowest cost of capital. This is the source of investment capital used to make up for the initial investment and for capital construction of the enterprise.

In addition, start-up firms need to call for investment from venture capital funders of the start-up program for unique and innovative business ideas; or raise capital from other idle investors who want to contribute. After a period of operation, it is necessary to use the accumulated profits to invest instead of borrowing or mobilizing from other investors. Improving management capacity for business owners/managers is also important to manage the production and business activities effectively. In the recent integration trend, management capacity is a vital factor for every

business owners. Hence, it is necessary to regularly train, learn, improve and practice management skills to measure risks, identify challenges and opportunities in the rapidly changing environment.

**Call for external cooperation and supports from outside partners:**

Firms need to create business relationships and increase goodwill of cooperation with outside partners. The good partners are willing to provide important resources and priority for start-up business. Resources can be tangible or intangible and support strongly for the entire start-up business. Therefore, business ideas and projects must be highly feasible in order to take advantage of this factor. Businesses should intensify their comprehensive cooperation and foster new opportunities of cooperation. In order to make partners cooperate and share experience, firms must ensure benefits, equity and transparency in the cooperation. They should also be selective and look for cooperation in their weak areas of business to improve the capacity. Firms need to avoid being taken advantage by other partners to create one-side benefits, affecting the advantages and interests of the whole business.

**Continually build the dynamic capabilities needed to increase firm performance:**

Building flexible application capacity and combining internal and external resources is vital for enterprises to create the full advantages. It is necessary to reorganize and categorize the prioritized resources for the production and business process. Other needs are to identify and select appropriate information to improve internal performance and efficiency, update new policies and legal regulations relating to the business, enhance the existing relationships, look for and create links and partnerships with other partners. Creative thinking is very important to form product differentiation, reach new markets, attain production resources and enhance competitiveness of the business.

In conclusion, in order to improve the performance of business in Vung Tau City, it is necessary to identify corporate resources and increase the goodwill in cooperation of external partners. Through these steps, start-up firms can identify and build the dynamic capabilities needed to increase operational performance as well as improve competitiveness for their businesses in the current economic environment.

## REFERENCES

Amit, R. , Schoemaker, P. J. (1993). Strategic assets and organizational rent. *Strategic Management Journal*, 14(1), 33–46

Barney, J. B. (1986). Strategic factor markets: expectations, luck, and business strategy. *Strategic Factor Markets*, 32(10), 1231–1241.

Clark, K. B. , Fujimoto, T. (1991). Product development performance: strategy, organization, and management in the world auto industry. MA: *Harvard Business School Press Boston*.

Cohen, W.M, Levinthal, D. A (1990). Absorptive capacity: a new perspective on learning and innovation. *Admin Sci Q*, 35(1):128–52.

Danilovic, M. , Winroth, M. (2005). A tentative framework for analyzing integration in collaborative manufacturing network settings: a case study. *J Eng Technol Manag*, 22, 141–58.

Deeds, D.L., Hill, C.W. (1996). Strategic alliances, complimentary assets and new product development: an empirical study of entrepreneurial biotechnology firms. *J Bus Vent* ,11(1), 41–55

Eisenhardt, K. M. , Martin, J. A. (2000). Dynamic capabilities: what are they?. *Strategic Management Journal*, 21, 1105–1121.

Fornell, C., Larcker, D. K. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, Vol. 18, No. 1, 39–50.

Gulati, R. (1999). Network location and learning: the influence of network resources and firm capabilities on alliance formation. *Strat Manage J*, 20(5), 397–420.

Heeley, M. (1997). Appropriating rents from external knowledge: the impact of absorptive capability on firm sales growth and research productivity. *Frontiers of entrepreneurship research*. Babson Park, MA: Babson College.

Joreskog, K.G. (1971). Statistical analysis of sets of congeneric tests. *Psychometrika*, 36(2), 109-133

Laumann, E.O. (1982). Microstructural analysis in inter-organizational systems. *Soc Netw*, 4(4), 329–48.

Lin, L. , Wu, L. Y. , (2013). Exploring the role of dynamic capabilities in firm performance under the resource-based view framework. *Journal of Business Research*, 67, 407–413.

Nunnally, J. & Bernstein, I. H. (1994). *Psychometric Theory*, 3rd, ed., McGraw- Hill, New York.

Pfeffer, J. , Salancik, G. R. (1978). *The external control of organizations*. New York: Harper and Row.

Pisano, G.P. (1994). Knowledge, integration, and the locus of learning: an empirical analysis of process development. *Strat Manage J*, 15, 85–100.

Nguyễn Đình Thọ và Nguyễn Thị Mai Trang (2008). Năng lực động của doanh nghiệp Việt Nam trong thời kì hội nhập. *Tạp chí phát triển kinh tế*, số 208.

Nguyễn Đình Thọ và cộng sự (2009). Một số yếu tố cấu thành năng lực động của doanh nghiệp và giải pháp nuôi dưỡng. *Hội thảo năng lực cạnh tranh động DN*.

Nguyễn Xuân Phúc (2016). Cuộc trả lời phỏng vấn của báo chí sau khi nhậm chức thủ tướng vào ngày 7/4/2016.

Ngô Quang Huân (2016). Nghiên cứu về mối quan hệ giữa môi trường khởi nghiệp, năng lực của nhà khởi nghiệp đến kết quả hoạt động của doanh nghiệp vừa và nhỏ.

Teece, D. J. , Pisano, G. , Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18, 509–533.

Zollo, M. , Winter, S. G. (2000). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3), 339–351.

Wernerfelt, B. (1984). A resource-based view of the firm, *Strategic Management Journal*, Vol 5, pp.171–180.

Wu, L. Y. (2006). Resources, dynamic capabilities and performance in a dynamic environment: Perceptions in Taiwanese IT enterprises. *Information & Management*, 43, 447–454

Wu, L. Y. (2007). Entrepreneurial resources, dynamic capabilities and operating results of Taiwan's high-tech firms. *Journal of Business Research*, 60, 549–555

Wu, L. Y. (2010). Applicability of the resource-based and dynamic-capability views under environmental volatility. *Journal of Business Research*, 63, 27–31.