

## Strategist's cognitive perspectives, innovation, and competitive advantage: An empirical study in Vietnam\*

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### Abstract

*The main aim of this study is to investigate the relationship between strategists' intuitive and analytical thinking, innovation, and corporate competitive advantage. This study not only proposes the new model to the academic world but also provides the empirical investigation on the direct and indirect effect of a strategist's analytic reasoning perspective and strategist's generative reasoning perspective on innovation and competitive advantage as well as the mediating role of innovation between the strategist's cognitive perspective of reasoning and corporate competitive advantage. This study conducted questionnaires of 382 samples in state-owned*

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*companies, FDI, and private companies in Vietnam. Structure equation modelling was applied through smart PLS to analyse the valid data. The results provide substantial evidence of significant relationships between strategists' cognitive perspectives of reasoning, innovation, and competitive advantage in the context of State own, FDI, and private companies in Vietnam. Besides, the findings also show that there are non-relationships in the direct effect between product innovation and competitive advantage and between marketing innovation and competitive advantage. Moreover, the research results imply various managerial implications regarding how organizations successfully increase their competitive advantage by increasing their leader's cognition in management.*

**Keywords:** *a strategist's analytical reasoning perspective, a strategist's generative reasoning perspective, innovation, competitive advantage*

**JEL classification:** *M12, O15, O30*

## 1. Introduction

In the global marketplace, competitiveness is inevitable; as a result, every achievement should be made to stay informed about what is occurring in the economy, what clients desire, and how the financial world is changing to be a contestant with the others (Kuncoro and Suriani, 2018). As a result, an endeavor must always be made to grasp what and how to handle various options possessed to beat other competitors and get a competitive advantage. One strategy to gain competitiveness is developing our products through product innovation, process innovation or marketing innovation (OECD, 2018). As a result, businesses must develop different perspectives, strategies, and products to win over competitors in the marketplace. On the other hand, thinking differently in a strategic way is a strategic topic on which every manager should have their viewpoint. Strategists should offer insight into what defines deliberate reasoning, what approaches are most productive and how they might enhance their strategic abilities. Superior productivity could be achieved through strategy development inside the organization.

According to Meyer (2007), the strategist's thinking is a complicated and intriguing mechanism that never ceases to amaze and dazzle on the one hand while also disappointing and frustrating on the other. We are frequently astounded by the individual brain's capacity but similarly astounded by its limits. It is not required to untangle all the secrets underlying the working of the human mind for this debate, but a summary of the human mind's powers and limitations can tremendously assist in understanding the subject of strategic reasoning.

Many previous articles have suggested the paradox of managers' intuitive and rational thinking (Langley, 1989; Langley, 1995; Meyer, 2007); some academics argue that more given study is necessary, while others disagree (Isenberg, 1984; Schoemaker and Russo, 1993). There is a widespread belief that CEOs must use both generative and analytic reasoning, especially if they are opposed.

The primary purpose of this research is to comprehend the link between logical thinking and generative thinking of strategists, innovation, and those impacts on the competitive advantage inside the organizations. The authors hope to test the direct effect of a strategist's analytic reasoning perspective and a strategist's generative reasoning perspective on innovation and competitive advantage, as well as the indirect effect of innovation between the relationship of a strategist's cognitive perspective of reasoning and corporate competitive advantage, by presenting the new model to the scientific community. With this in mind, we propose the following research hypotheses:

- H1: *Strategist's analytical reasoning perspective positively affects competitive advantage.*
- H2: *Strategist's generative reasoning perspective positively affects competitive advantage.*
- H3: *Strategist's analytical reasoning perspective positively affects innovation.*
- H4: *Strategist's generative reasoning perspective positively affects innovation.*
- H5: *Innovation positively affects competitive advantage.*
- H6: *The effect of strategist's analytic reasoning perspective on competitive advantage is mediated by innovation.*
- H7: *The effect of strategist's generative reasoning perspective on competitive advantage is mediated by innovation.*

The first section presents the background literature review, the authors' perspectives on this subject matter, the previous research findings. The second section deals with the purpose and the methodology used in this research, including how primary data was collected, interpreted, and appraised. The finding part is separated into four sections, each of which focuses on describing the results in the context of Vietnam, evaluating the results, verifying the results, and emphasizing the mediating role of innovation, the relationship between the strategist's cognitive perspective of reasoning, and corporate competitive advantage. Last but not least, the discussion and conclusion parts propose some discussions, implications, and limitations of this research for the future scientific world.

## 2. Literature review

In this section, the research theoretical foundation will be clarified. The concept of competitive advantage, strategist's cognitive perspectives (strategist's analytical reasoning perspective and strategist's generative reasoning perspective), innovation

(product innovation, process innovation, marketing innovation, organizational innovation) and its relationships will also be raised. In order to prepare for the theoretical basis system and build the model as well as the hypothesis of the report, the authors will list a number of concepts related to the topic as a basis for reasoning for the research.

## **2.1. Competitive advantage**

Competitive advantage indicates that an organization earns huge returns or advantages over its rivals, such as cost, technologies, branding, leadership (Barney, 1991). Recent research on competitive advantage has expanded the reach from the viewpoints of the product life cycle and future growth abilities (as stated by Piccoli and Ives, 2005), implying that competitive advantage is obtained by improving organizational circumstances and significant future growth abilities. Chen and Tsou's (2007) work made an essential contribution to these discussions by identifying two competitive advantages: external and internal advantage.

According to Dirisu et al. (2013), competitive advantage can be obtained by opening new rivals, the danger of replacement goods substitution, the authority of suppliers and customers to pay, and competitiveness among competitors. Competitive advantage is when a corporation has control over a commercial rivalry arena; they have advantages that are difficult to copy, allowing a company to capture and sustain market leadership.

Companies gain continuing competitive advantage through their ability to create a set of core competencies that allow them to better serve their potential clients than their rivals. Srivastava et al. (2013) stated that major competency refers to a set of distinctive competencies established in a company in its primary sectors, such as excellence, service quality, team training, innovation, adaptability, and reactivity, in order to outperform competitors.

## **2.2. Strategist's cognitive perspectives**

In the 1980s, Huff (1982) and her associates contributed the theory of cognition to strategy management studies, underlining the significance of strategy's conceptualization and separating it from the major impacts of the manager's knowledge. By proving the impacts of organizational competitive advantages and behavior patterns on the marketplace networks and industry, Porac and his partners (Porac et al., 1989; Porac and Thomas, 1990; Porac et al., 1995; Porac et al., 2011) established a new conceptual framework for strategy and competitive market research.

Although Schwenk (1988) may have been the first to adopt the term strategic cognition (SC), this concept began to occur often in the late 1990s (e.g., Hodgkinson

and Thomas, 1997) as a practical way of encapsulating the theoretical frame in strategy formulation. SC concentrates on the connections between *cognitive structures* and decision-making processes in strategic management in terms of strategic planning (Porac and Thomas, 2002). Top management's opinions about the surroundings, direction, close corporation, and business condition are among the cognitive structures (as stated by Porac and Thomas, 2002). These cognitive structures facilitate realizing the importance and interpreting procedures during the distinct stages of strategic planning, diagnosis, and choosing. During execution, organizational members participate in sense-making practices, which are defined as the effect in relation of information search, meanings designation, and deeds (Thomas et al., 1993) – similar to management behavioral processes efforts involving the use of signs and labeling to form meaning, both contribute to a collective understanding of choices and, ultimately, to execution.

According to Evans (1984; 1989), the original generative and analytical theory of thinking was considered as the most suitable concept. The theory was conducted to describe the common occurrence of cognitive perspective in thinking tests, as well as the perplexing aspect that rational ability exhibited on one activity frequently did not translate to the other (for a consideration of similar cases, see Evans, 1989). According to the generative-analytical theory, two different types of cognitive perspective were entailed: generative procedures that formed selected models of trouble information and analytical procedures that generated conclusions or assessments from these models.

Many leadership theories have observed that the opposites of perception and research cause conflict for leaders (e.g., Langley, 1989; 1995). While some scholars argue for more detailed logic (e.g., Isenberg, 1984; Schoemaker and Russo, 1993), there is widespread agreement that CEOs must use both intuition and reason, even if they are opposed. Without being unplanned, incomplete, and informal, rational thought serves to make the strategy's thinking more reasonable – thorough, complete, and regular. Besides, doing in the innovative aspect aim to promote the strategic plan in becoming more creative, resulting in more unexpected discoveries, innovative notions, and unique solutions.

### ***2.2.1. Strategist's analytical reasoning perspective***

The logical thinking school of thought contends that strategic reasoning is primarily a rational endeavor (Andrews, 1987). Proponents of the logical thinking viewpoint say that it closely reflects the way people resolve the trouble issues used by chess masters (Simon, 1987). They also evaluate their aggressive situation in depth, sift through numerous choices, and determine which course of action has the highest possibility of success. As a result, chess masters' thinking processes may be utilized as an example for what goes on in the manager's head.

According to March and Simon (1993), when it comes to designing and implementing a strategy's resolution, rational thought could assist managers to avoid the pitfalls of old habits and daily activities. Daily tasks are pre-programmed scenarios created with intention but absorbed and used mechanically. Daily tasks are unconscious patterns of behavior established over time. Meyer (2007) also stated that managers could eliminate traditional habits and propose improvements to acquiring and maintaining competitiveness by openly defining possible decisions and exposing them to a proper review. Furthermore, rational reasoning can assist in distinguishing both imagination and reality. By assessing the aspects that will influence successes and failures, reasonable reasoning can help to screen out a strategy's purely speculative possibilities. Based on the thought above, the hypothesis proposed in this study is:

H1: *Strategist's analytical reasoning perspective positively affects competitive advantage.*

### **2.2.2. Strategist's generative reasoning perspective**

According to Mason and Mitroff (1981) and Rittel and Webber (1973), the evolutionary thinking paradigm emphasizes the terrible character of strategy issues that are impossible to clearly and accurately characterize, but an infinite number of perspectives could help interpret them.

The procedure of generative reasoning in all strategy reasoning movements is focused on making something more innovative rather than calculating based on a number (Liedtka, 2000). Creating new thoughts is more challenging because managers need to abandon the cognitive comfort of well-established ideas in seeking new thoughts prompted solely by their emotions. They have to be happy to develop, examine, argue, challenge, question, and live between the debris of destroyed certainty without the safety net of new certainty. Managers must like the difficulty of imagining beyond the boundaries, even if doing so disturbs the current system and is not well received by those who have their feet (stuck) on the ground.

Managers must provide a moderately unorthodox mindset according to advocates of the creative thinking viewpoint (Hurst et al., 1989) and innovative tendency (Hamel, 1996). According to Liedtka (2000), all strategy's reasoning actions are directed in a creative way to producing rather than measuring - *creating* rather than *discovering*. Therefore, we hypothesize that: H2: *Strategist's generative reasoning perspective positively affects competitive advantage.*

## 2.3. Innovation

Schumpeter coined the word *innovation* for the first time at the turn of the twentieth century (Hagedoorn, 1996). Following this, innovations are product, process, and organizational changes that do not always result from new scientific inventions but can also result from a mix of previously existing technology and their relevance in a new environment. The general study is also a source of innovation by Autant-Bernard (2001). As a result, it is feasible to conclude that, according to these definitions, innovation encompasses technical and technological advancements and practical applications and stems from the study.

Since manufacturing and service operations have become increasingly interwoven, it is more important than ever to create a shared structure for examining them rather than keeping the distinction between them (Drejer, 2004). As a result of developments in the finding of service innovation, an integrated structure of the innovation process relevant to both fields and includes all elements of the innovation process has been developed (Gallouj and Windrum, 2009). In line with this trend, the Oslo Manual (OECD, 2018), realizing that the notion of technical product and process innovation did not sufficiently capture a significant portion of service sector innovation, updated prior editions' definitions, and extended the scope of what is considered innovation. The Manual specifies four categories of innovation, each of which encompasses a large variety of alterations in a company's operations and may be used in both manufacturing and service industries (OECD, 2018): (i) product innovation, which entails the creation of new goods and services or substantial enhancements to existing ones; (ii) process innovation, which entails noteworthy alterations in manufacturing and delivery techniques; (iii) modification in product design and packing, product promotion and positioning, and pricing techniques are all examples of marketing innovation; and (iv) organizational innovation, which refers to introducing of a new organizational way in a company's business operations, workplace association, or external connections.

### 2.3.1. Product innovation

According to Yusof et al. (2015), competition is defined as the transition of understanding into new processes, products, and services. Innovation may also be described as incorporating new ideas into goods, processes, or other parts of a business. The goal of innovation is to improve the process of turning an invention into something we can utilize. New goods, new manufacturing methods, new supply sources, new exploitation, new markets, and new ways to run the business are the five forms of innovation.

Yeşil et al. (2013) describe innovation in a variety of ways, with the majority of them focusing on improving technology or developing productiveness. The ability

of innovation is defined as a company's capacity to improve overall performance through various sorts of innovation. To create new items, provide new services to customers, and assign new products to consumers, innovation must employ manufacturing and marketing technologies (Yeşil et al., 2013). According to Panigrahy and Pradhan (2015), innovation is a new concept of recombining previous ideas that are unique and may be produced domestically. The definition of a company's innovation is the creation or adoption of a new concept or new actions that may be turned into new goods or services, the manufacture of new technology, any surgical technique, or a new method or new management plan. Consequently, the following hypotheses are proposed:

*H3a: Strategist's analytical reasoning perspective positively affects product innovation.*

*H4a: Strategist's generative reasoning perspective positively affects product innovation.*

### **2.3.2. Process innovation**

According to West and Anderson (1996), the extent to which a company adds new ideas or enhancements to procedures or organizational practices is known as process innovation. It is unique to each company and is regarded as a critical performance indicator (Damanpour, 2010; Piening and Salge, 2015). The procedure of innovation literature, however, has two significant drawbacks. The first is that empirical information is scarce on the impact of process changes on productivity. The second issue is the uncertain outcome (Chiva et al., 2013; Piening and Salge, 2015), beneficial impact (Murat and Baki, 2011; He and Wong, 2004); as well as an unhelpful impact (Mavondo et al., 2005) and both helpful and unhelpful effects (Baer and Frese, 2003).

Process innovation has an inner emphasis and generally involves strategies for creating and selling products or services. It may be expressed, for instance, through lean product development procedures or performance management strategies and focuses on changes in productivity and efficiency (Piening and Salge, 2015). Process innovation, in contrast to product innovation, has received little attention. Nonetheless, process innovations, as opposed to product innovations, are conceivable in nearly all sectors, and process innovations can affect productivity (Jiménez-Jiménez and Sanz-Valle, 2011). Process innovation, for example, may provide benefits that are hard for rivals to detect and reproduce (Damanpour, 2010). Piening and Salge (2015) even argue that process innovation is one of the most significant competitive sources for businesses in active or rapid sectors due to its constant contribution to enhancing technical and administrative procedures. Consequently, the following hypotheses are proposed:



H3b: *Strategist's analytical reasoning perspective positively affects process innovation.*

H4b: *Strategist's generative reasoning perspective positively affects process innovation.*

### **2.3.3. Marketing innovation**

Marketing innovation is defined as creating substantial changes in some marketing components such as product, pricing, advertising, delivery, and marketplace. It might be based on product variety, advertising, delivery, marketplace, or expenses, such as pricing (Higgins, 1995). Changes in the environment in which goods and services are launched in the market are analyzed (Tidd and Bessant, 2005). So, marketing innovation is concerned with applying new approaches, resulting in substantial changes in product creation, packing, advertising, branding, and even price. As a result, marketing innovation tries to satisfy customers' demands by creating new markets and repositioning a company's product in the market, to increase sales (OECD, 2018). Consequently, the following hypotheses are proposed:

H3c: *Strategist's analytical reasoning perspective positively affects marketing innovation.*

H4c: *Strategist's generative reasoning perspective positively affects marketing innovation.*

### **2.3.4. Organizational innovation**

Many fields, including leadership, commerce, political science, and marketing, have investigated organizational innovativeness. According to Ries and Trout (1981), innovation is a method of education. Gopalakrishnan and Damanpour (1997) concluded that innovation is defined as anything new. According to Waterman and Peters (1982), innovation is a method through which businesses adapt to a range of environmental alterations. According to Rogers (1995), innovation is defined as a new concept, item, technique, or service implemented in companies. Consequently, whereas some academics describe innovativeness as the acceptance of new concepts, techniques, or services (Subramanian and Nilakanta, 1996), others define it differently. For example, Vigoda-Gadot et al. (2005) consider innovativeness to be a multifaceted organizational feature. Organizational innovativeness is defined as having five factors: invention, adventurousness, flexibility to change, goal clarity, and proactivity.

There are several categories of organizational innovativeness in the material. Many scholars propose an innovation separation. Subramanian and Nilakanta (1996),

for example, divide organizational innovation into two groups: (1) technological innovation, which includes goods, services, and procedures; and (2) administrative innovation, which includes organization formation, administrative procedures, and schedule.

Pacharn and Zhang, 2006 distinguish two forms of innovation: organizational innovation and technological innovation. Indeed, academics such as Desouza et al. (2007) contend that two types of innovation occur in a business setting (i.e., user innovations and organizational innovations). Furthermore, many studies categorize organizational innovation into three groups. According to Johne (1998), there are three types of innovation: market innovation, product innovation, and administration innovation. On the other hand, Popadiuk and Choo (2006) divide organizational innovation into three categories: technological innovation, market innovation, and administrative innovation. Consequently, the following hypotheses are proposed:

H3d: *Strategist's analytical reasoning perspective positively affects organizational innovation.*

H4d: *Strategist's generative reasoning perspective positively affects organizational innovation.*

#### **2.4. The relationship of innovation between strategist's cognitive perspectives and competitive advantage**

According to Meyer (2007), strategists should be highly appropriate on the top trends in the marketplace, spotting the latest chances and shifting situations to compete with their competitors. Thinking strategically concentrates on comprehending and directing the tomorrow; thus, strategists must be able to question their assumptions and alter their thoughts. They might devise new methods that are both imaginative and viable considering the changing realities.

Meyer (2007) also stated that there is an obvious necessity for both analytical and intuitive thinking. This puts managers in the problematic situation of combining two potentially incompatible ways of reasoning in one procedure of strategy's thinking. The use of rational reasoning can make strategic planning more coherent, while on the other side, generative thinking supports the strategic reasoning process in becoming more innovative. The significant difficulty in achieving an equilibrium of those opposing mindsets is that the strategic reasoning process should be essentially logical or considerably more creative. Furthermore, Fréchet and Goy (2017) examined in their research is to improve knowledge of strategy formalization in the innovation process. They proposed the argument over the benefits of strategic thinking may have been favorable to innovation.

According to Urbancova (2013), in numerous ways, innovation helps to achieve a competitive advantage. The following are the most significant considered aspects of

innovations: (i) a significant connection between high productivity in the marketplace and the product development; (ii) developing latest products give the assistant to companies retain the segmentation in the marketplace and increase profits; (iii) the growing aim to a priceless value such as designation, product standard; (iv) capability to replace out-of-date items or goods to make the production's life shorter; and (v) the innovating in the procedure help to shorten the duration in make a product and accelerate the developing of the latest items. In sum, we assume that:

H5a: *Product innovation positively affects competitive advantage.*

H5b: *Process innovation positively affects competitive advantage.*

H5c: *Marketing innovation positively affects competitive advantage.*

H5d: *Organizational innovation positively affects competitive advantage.*

Professionals and academicians also proposed a wide range of techniques and strategies that companies should use to improve their chances of favorable outcomes with innovation. Nonetheless, the function of these techniques and strategies is still up for debate. It is about the overall impact of the strategist's cognitive thinking on a company effectiveness, which has sparked a long-running discussion. In general, the adoption of strict guidelines, methods, and attitudes is referred to as a strategist's cognitive thinking (Sivadas and Dwyer, 2000; Vlaar et al., 2006). For years, scientists have been able to figure out which one benefited or hindered an organization's effectiveness, especially innovation and competitive advantage.

Martín-de Castro et al. (2013) also mentioned that technology innovation is critical for establishing and maintaining a competitive advantage for an enterprise. Accordingly, spending on investigation, innovation, and new technology launches are the key factors in attaining market dominance. Autant-Bernard et al. (2013) also emphasized the relevance of localized improvement, arguing that organizations must have unique marketing tactics and promote information flows from and to them. This is also advocated in Autant-Bernard (2001), Avadikyan et al. (2016), and Noruzy et al. (2012).

Based on previous studies, organizations' activities in innovating have a strong impact on competitive advantage built on unique talents and capabilities. Increasing competitive advantage through innovation entails generating less expensive goods and a greater standard than the competition. Therefore, the author proposes the hypotheses below:

H6: *The effect of strategist's analytic reasoning perspective on competitive advantage is mediated by innovation.*

H7: *The effect of strategist's generative reasoning perspective on competitive advantage is mediated by innovation.*

### 3. Research methodology

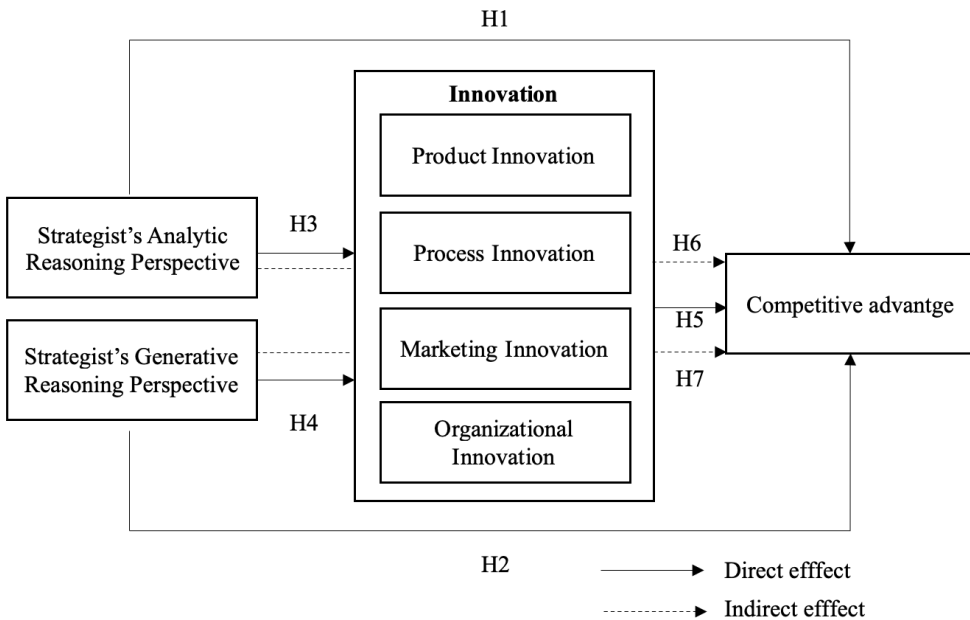
This section presented the proposed model along with the research hypotheses aimed to introduce the research process, methodologies used to evaluate the scales and quantitative research that will be utilized to collect data and analyse the research findings in the following chapter.

#### 3.1. Conceptual framework

From the above developed hypotheses, the authors propose the research model (Figure 1), which is classified up into various relationships, particularly:

- Direct effects: H1, H2, H3, H4, H5
- Mediating effects: H6, H7

Figure 1. Conceptual framework



Source: Authors’ construction

### **3.2. Research methods**

This research conducts quantitative research methods, which are carried out in two stages:

In the first stage, this research was based on integrating previous theoretical backgrounds to propose a new research model from which preliminary measurement scales were proposed. To ensure the validity of scale measurements and the understanding of interviewees, in-depth interviews and focus groups were required to verify the sentiment and language supplied in this preliminary scale. In this stage, the authors asked participants to read all the questionnaires and give their comments, then discuss the content before answering survey questions. Subsequently, the authors updated the original measurement scale and conducted an official survey. Next, before the official survey was applied, the questionnaires were conducted by a pre-test to identify and address any design issues. For the pretest, 50 respondents were chosen whose traits were sufficiently comparable with those of the questionnaire survey. Following the findings of the pre-test, the questionnaire was then modified and published.

In the second stage, the quantitative methodology was applied through an official self-administered questionnaire. To evaluate the validity of the research model and hypotheses, the authors extended the sample size to 382 observations. After the official questionnaire had been developed from the results of the qualitative research, the authors conducted official research by sending the questionnaire to State Own, FDI, and Private Companies in Ho Chi Minh City, Vietnam. Collected data will be encrypted and cleaned, then processed using Smart PLS software.

In this study, the authors aim to employ Smart-PLS analytical software (Hair et al., 2019) to facilitate the categorization and analyzing of primary data information acquired relevant to the study objective which is often used in social and economic research studies. Besides, the author uses Descriptive statistics, Cronbach's Alpha reliability test, Discriminant validity, Cross-loadings and Structural Equation Modeling (SEM).

## **4. Empirical data and analysis**

This section focuses on the interpretation of data on the relationships between a strategist's cognitive perspective of reasoning, innovation, and competitive advantage in the context of State own, FDI, and private companies in Vietnam, including descriptive statistics, reliability, and validity analysis as well as SEM analysis through smart PLS software, therefore, the discussion of the results of the process of evaluating the hypotheses formulated at the beginning of the research.

#### **4.1. Data collection and the sample**

According to Hair et al., 2010, the author gave the sample formula:  $N = 5 * \text{Items}$  (where  $N$  is the number of observations and items is the number of questions in the scale). With this formula, the minimum sample size for using EFA is 50 with a ratio of 5: 1, meaning that for every 1 measurement variable, a minimum of 5 observations will be required. Therefore, there are total 35 items from seven constructs in this study, which means we took at least  $5 * 35 = 175$  observations.

A standardized questionnaire was developed to gather data in order to evaluate the proposed study model and hypothesis development. Data gathering techniques include delivering questionnaires to respondents and creating documentation or copies of the sources of data. To find suitable participants, we used a variety of convenient sampling, maximum variation sampling, and snowball sampling techniques. To guarantee that the sample reflects a wider category in terms of skill level, professional experience, position, and so on, we employed maximum variation sampling. Authors also used snowball sampling technique to employ the respondents through our relationships.

The aim of this research is to investigate the field of state-owned companies, FDI, and private companies in Ho Chi Minh City, Vietnam. Based on our accounts with the list of members in Masterclasses at the International University in Vietnam and Ton Duc Thang University in Vietnam, they are also the leaders, supervisors, and managers in State Own, FDI, and Private Companies in Ho Chi Minh City, Vietnam. By this, we aim to take a survey with the company owner, chief executive officer, vice director, management board assistant, and head of the department in those companies. Furthermore, we could ask all the members in our classes to bring the questionnaires to their upper level in their company then we will follow up with the respondents by sending them reminder emails for collecting enough respondents. Furthermore, the authors tried to join some trade shows and trade fairs organized at SECC (Saigon Exhibition and Convention Center) in District 7, and TBECC (Tan Binh Exhibition and Convention Center) in Tan Binh District in Ho Chi Minh City. By visiting all the companies which joined in trade shows and trade fairs, we could carry out some direct interviews at the site as well as collect some name cards from the exhibition to enable sending the survey through emails. We also tried to make phone calls after sending emails to check whether they were received, and whether they fully completed the questionnaires.

In this research, the authors sent more than five hundred surveys. After reducing error data and inadequacies, the author used a sample size of 382 surveys with response's rate was almost 76%.

## 4.2. Measurement scale

The survey includes two parts:

Part 1: Demographic data such as gender, educational level, position, type of company and type of industry will be conducted to collect on respondents.

Part 2: In the second part, a question table is listed for participants to rate the agreement based on the 7-point Likert scale that are: 1. *strongly disagree*, 2. *disagree*, 3. *somewhat disagree*, 4. *neutral*, 5. *somewhat agree*, 6. *agree*, and 7. *strongly agree*.

A measurement scale that contains 35 items from seven constructs was collected based on several studies. First, a strategist's cognitive perspective of reasoning includes two constructs that are measured based on the study of Meyer (2007). To be precise, a strategist's analytic reasoning perspective includes 06 items; a strategist's generative reasoning perspective includes 06 items.

Second, innovation, which includes 04 constructs, is measured based on the study of Nieves et al. (2014). In particular, product innovation has 05 items; process innovation has 05 items; marketing innovation has 04 items; and organizational innovation has 04 items.

Third, competitive advantage is measured based on 05 items according to the studies of El-Garaihy et al. (2014), Saeidi et al. (2015) and Shore et al. (1995)

## 4.3. Data analysis

After data collection, the results of the description of the research sample are shown in Table 1.

Table 1: Sample characteristics

	Characteristics	Frequency	Percentage (%)
Gender		382	100
	Male	239	62.6
	Female	143	37.4
Educational Level		382	100
	High School and Vocational School	14	3.7
	College level	29	7.6
	University level	281	73.6
	Master level	47	12.3
	Doctoral level	11	2.9
Position		382	100
	Company owner	88	23.0
	Chief Executive Officer	47	12.3
	Vice Director	44	11.5
	Management Board Assistant	53	13.9
	Head of Department	150	39.3
Type of company		382	100
	State Own Company	132	34.6
	FDI Company	35	9.2
	Private Company	214	56.0
	Other	1	0.3
Type of industry		382	100
	Trade and Service	211	55.2
	Production	99	25.9
	Real Estate	33	8.6
	Others	39	10.2

Source: Author's calculation

The descriptive analysis in Table 1 suggested that about 62.6 percent of the interviewees were male, and 37.4 percent of the respondents were female. Regarding the type of company in those surveys, there are 214 (56.0 percent) private companies, 132 (34.6%) State Own companies, 35 (9.2 percent) FDI companies, and the other 1 (0.3 percent). According to the statistic, it is evident that the population of the Trade and Service Industry has the highest number at 55.2 percent while the production industry is noticeably lower at 25.9 percent and the Real estate industry displays the lowest at 8.6%; the others at 10.2 percent.

First, the author aims to test the reliable and valid constructs to give some solid confirmation for measurement scales. Composite reliability (CR) is a form of consistency dependability similar to Cronbach's alpha shown in Table 2. The CR and Cronbach's Alpha of all constructs were higher than 0.7, which met the rules



of thumb of Hair et al. (2013). Hair et al. (2010) also proposed that items having a minimum factor loading of 0.6 will be acceptable. Besides, the convergence's validity, assessed by using the average variance extracted (AVE), exceeded 0.5 in all variables (Fornell and Larcker, 1981). Table 2 shows that the factor loadings and the AVE of all variables were sufficient.

Table 2: Measurement Model Evaluation

Constructs	No. Items	Factor Loadings	Cronbach's Alpha	CR	AVE
Strategist's Analytic Reasoning Perspective (SARP)	6	0.666-0.836	0.841	0.887	0.613
Competitive Advantage (CA)	5	0.730-0.776	0.746	0.840	0.568
Marketing Innovation (MI)	4	0.737-0.824	0.777	0.857	0.599
Organizational Innovation (OI)	4	0.748-0.835	0.793	0.866	0.618
Process Innovation (PCI)	5	0.671-0.844	0.845	0.890	0.619
Product Innovation (PDI)	5	0.739-0.791	0.831	0.880	0.595
Strategists' Generative Reasoning Perspective (SGRP)	6	0.656-0.808	0.673	0.801	0.503

Source: Author's calculation

To measure the discriminatory validity, the cross-loadings index was applied, in which the opposition construct was not higher than the above indicator's loading (Hair et al., 2012). The square root of the AVE of every variable should have overtaken the number of the inter-correlations between the variable and others. Table 3 shows the number of variables dedicated to the discriminated validity of all the variables.

Table 3: Discriminant Validity Coefficients

		SARP	CCA	MI	OI	PI	PROI	SGRP
Analytic Reasoning Perspective	SARP	0.783						
Competitive Advantage	CA	0.410	0.753					
Marketing Innovation	MI	0.544	0.430	0.774				
Organizational Innovation	OI	0.434	0.488	0.690	0.786			
Process Innovation	PCI	0.424	0.479	0.692	0.674	0.787		
Product Innovation	PDI	0.397	0.420	0.600	0.641	0.729	0.772	
Generative Reasoning Perspective	SGRP	0.352	0.403	0.401	0.417	0.460	0.331	0.709

Source: Author's calculation

To examine the model hypotheses, we run the non-parametric bootstrapping with 2,000 samples in Smart-PLS (Wetzels et al., 2009) as shown in Figure 2. The statistic in Table 4 shows that all the path coefficients are acceptable except for H5a and H5c. The regression coefficient shows in Table 4 with H1, H2, H3a, H3b, H3c, H3d, H4a, H4b, H4c, H4d, H5b, H5d, H6, H7 at level P-value < 0.05, therefore those hypotheses are supported. Except for two hypotheses, all the hypotheses in the research model are supported. That means we may conclude that there is a relationship between strategists' cognitive perspective of reasoning, innovation, and competitive advantage in the context of State own, FDI, and, private companies in Vietnam.

Figure 2: Results of the structural model



Source: Author's elaboration

Table 4: Path coefficient and hypothesis testing

Hypothesis	Relationship	Path Coefficient	P Values	Conclusion
H1	SARP → CA	0.183	0.001	Supported
H2	SGRP → CA	0.170	0.001	Supported
H3a	SARP → PDI	0.320	0.000	Supported
H3b	SARP → PCI	0.300	0.000	Supported
H3c	SARP → MI	0.460	0.000	Supported
H3d	SARP → OI	0.328	0.000	Supported
H4a	SGRP → PDI	0.218	0.000	Supported
H4b	SGRP → PCI	0.354	0.000	Supported
H4c	SGRP → MI	0.239	0.000	Supported
H4d	SGRP → OI	0.301	0.000	Supported
H5a	PDI → CA	0.054	0.445	Not Supported
H5b	PCI → CA	0.159	0.041	Supported
H5c	MI → CA	-0.030	0.676	Not Supported
H5d	OI → CA	0.217	0.002	Supported
H6	SARP → Innovation → CA	0.122	0.000	Supported
H7	SGRP → Innovation → CA	0.126	0.000	Supported

Source: Author's calculation

The purpose of this research is to examine the relationship between a strategist's cognitive perspective of reasoning, innovation, and competitive advantage. With the unsupported results in hypotheses H5b and H5c, the author can conclude that there is a non-relationship between product innovation, marketing innovation, and competitive advantage in the context of state own, FDI, and, private companies in Viet Nam. This result could help those companies pay some attention when strategists make plans for innovating products and marketing in their future strategies.

Based on the results in Table 4, those hypotheses support the previous studies of Isenberg (1984), Schoemaker and Russo (1993), Meyer (2007). Even if logical and generative thinking is opposed, CEOs are widely agreed that they must employ both strategist's reasoning. Therefore, we have enough grounds to conclude the following relationships.

*H1*: Strategist's analytical reasoning perspective is positively related to competitive advantage ( $\beta = 0.183$ ;  $p < 0.01$ ). That means a strategist's analytic thinking could help the organization achieve competitiveness to formulate strategies that require

strong logical thinking, and managers should be highly rational in developing strategies for long-term development.

*H2*: Strategist's generative reasoning perspective is positively related to competitive advantage ( $\beta = 0.17$ ;  $p < 0.01$ )

*H3a, c, b, d*: Strategist's analytical reasoning perspective is positively related to product innovation ( $\beta = 0.32$ ), process innovation ( $\beta = 0.3$ ), marketing innovation ( $\beta = 0.46$ ) and organizational innovation ( $\beta = 0.328$ ). For more precise, the statistic shows that the relationship between strategist's analytical reasoning perspective and marketing innovation is the strongest with the path coefficient is 0.46. That means the strategist's analytical thinking plays the most indispensable role in marketing innovation than product, process, and organizational innovation.

*H4a, b, c, d*: Strategist's generative reasoning perspective is positively related to product innovation, process innovation, marketing innovation, and organizational innovation. Influential leaders rely primarily on their instinctive abilities to comprehend strategies' concerns, and crafting plans necessitates strong innovative reasoning that leads to organizational innovation.

*H5a, b, c, d*: It is evident from the information provided that process innovation (*H5b*:  $\beta = 0.159$ ;  $p < 0.05$ ) and organizational innovation (*H5d*:  $\beta = 0.217$ ;  $p < 0.01$ ) significantly impact on competitive advantage. This result also confirms with the studies of Autant-Bernard (2001), Noruzy et al. (2012) and Martín-de Castro et al. (2013). However, the impact of product innovation (*H5a*:  $\beta = 0.054$ ;  $p > 0.01$ ) and marketing innovation (*H5c*:  $\beta = -0.03$ ;  $p > 0.01$ ) on competitive advantage are not accepted. Therefore, it is noticeable that changing and developing the process and organization's structuring would better improve employee commitment, knowledge, and competence. However, actions to revolutionize product and marketing in terms of a new or improved good or service, the designing of products, the production of placement, packaging, promotion, and pricing will not help organizations enhance competitiveness. Those non-confirmed hypotheses could be explained by the period of collecting data, since the period of the COVID-19 pandemic might have notably affected numerous organizations all around the world, especially in Vietnam. This period witnessed a devastating decrease in most corporations' operations and businesses; consequently, they could not be sufficient to concentrate on product and marketing development as well.

The results also confirm the mediating impact of innovation between the relationship of strategist's analytic reasoning perspective, a strategist's generative reasoning perspective and competitive advantage through (*H6*:  $\beta = 0.122$ ;  $p < 0.01$ ; *H7*:  $\beta = 0.126$ ;  $p < 0.01$ ). These results also suggest that both logical views and creative views help make the strategy more reasonable, thorough, comprehensive, as well as helps to make the strategic reasoning process producing more unorthodox insights, imaginative ideas, and unique solutions.

## 5. Results and discussions

In this section, both theoretical and practical implications are presented. The study's findings effectively provide substantial evidence that both strategist's cognitive perspectives in terms of logical thinking and intuitive thinking positively affect product innovation, process innovation, marketing innovation, and organizational innovation. This phenomenon implies various managerial implications regarding how organizations can successfully increase their creativity in increasing their leader's cognition in management. Managers should be highly rational in developing strategy as well as strategizing should be driven by creativity and supported by analysis.

### 5.1. Theoretical implications

In terms of theory, our research significantly supports the field of strategy-as-practice by utilizing an added logical perspective to comprehend numerous levels of strategic processes. To be precise, this research successfully brings to the scientific world a new research model that can help understand the mediating effects of innovation to comprehend better the relationships between and the practical methods of a strategist's cognitive perspective in terms of logical thinking and generative thinking and competitive advantage. There is no previous study in the scientific world that demonstrated that a leader's intuition and analysis thinking affect innovation and how they behave to increase their competitiveness. Only a few previous publications sufficiently prove the relationship between how innovation affects competitive advantage (Autant-Bernard, 2001; Noruzy et al., 2012; Urbancova, 2013; Martín-de Castro et al., 2013; Avadikyan et al., 2016). This research adds more aspects in terms of the role of leaders' thinking in pursuit of that leader's cognitive also plays an indispensable role to help businesses enhance their creativity as well as competitive advantage. That is to say, our research donates a wide range of contributions to the scientific world on a strategist's cognitive perspective, innovation, and field in several different ways.

### 5.2. Practical implications

This research reflects several implications to help business executives and managers more outstandingly oversee and manage their organizations, particularly in the setting of Vietnam. First, these results suggest that both logical views and creative views help make the strategy more reasonable, thorough, and comprehensive, as well as help to make the strategic reasoning process produce more unorthodox insights, imaginative ideas, and unique solutions. Therefore, it could be a piece of strong advice to Vietnamese businesses to promote generative reasoning rather than analytical reasoning to encourage employees' innovation and business advantages. Nobody could dispute the influence of data and statistics in the technological era we are living in. In contrast, innovative process based on leaders'

knowledge and intuition has still been favored over logical thought based on facts and strict procedures, according to research findings from the Vietnam context. The innovative viewpoint of a leader helps employees as well as corporations to generate, utilize, renovate, and practice creativity to build the fundamental skills necessary for improving business advantages.

Second, the statistic shows that the relationship between a strategist's analytical reasoning perspective and marketing innovation is the strongest. That means the strategist's analytical thinking plays the most indispensable role in marketing innovation than product, process, and organizational innovation. It could be beneficial advice for Vietnamese managers to use more statistical aspects rather than their experiences in the process of implementing an innovative marketing strategy that involves substantial adjustments to product positioning, marketing, price, or aesthetics into practice.

Third, as a conclusion of the findings of this research, it acquired implications as follows: product innovation and marketing innovation have not been able to provide a competitive advantage in the context of FDI, state-owned companies, and private companies. For that matter, 55.2 percent of companies that belong to the trade and service industry could mean that companies working in the trade and service industry should be more concentrated on innovating the procedure instead of the product and marketing activities.

Last but not least, the mediating effect reported in this study imply that managers and strategists who have both creative and analytical thinking could make organizational innovation in term of creating innovative products, procedures, marketing, and organizational activities could lead the outstanding competition in the marketplace. Strategists and managers should be aware of boundary conditions that can constrain the positive impact of creativity on innovation. The results show that the percentage of males and females are almost equal, but the educational level allocated at the university level, which means creating innovation in organizations much more requires the qualification of a strategist.

## **6. Conclusions**

There is no argument that leadership thinking has a huge role in not only determining employee behavior in terms of employee creativity but also creating business advantages. Business advantages are impacted by management thinking, which forms corporate culture and directly influences employees' behaviors in the organizations. Corporate culture must be raised by leaders through communication and their career path. Moreover, in the context of Vietnamese business in our survey, both holistic and analytic thinking of managers have significant effects on business advantages through innovation. That explains why renovating the thinking of every individual in

the organization, starting with the top executives and promoters of the corporate, is essential to altering the corporation to achieve the desired business advantages.

Although the study has provided much valuable knowledge, there are still many limitations in the implementation process to complete this research, such as the time restraint, the number of samples to collect, the literature review, and statistical analyses.

This research pays attention to investigating the relationship between those factors in 03 types of industry (Trade and Service, Production, and Real Estate) in a specific country (Vietnam). The findings cannot be generally applied to other industries such as tourism and hospitality, hospital, logistics, and different geographical areas. Moreover, this research merely considers the moderating roles of the innovation variable without considering other variables. For that reason, this study fails to enumerate all the potential factors of all the mediating roles between a strategist's cognitive perspectives of thinking with a competitive advantage. However, the overall structure and process can be employed in an analysis and discussion in other areas. A possible path for future research is its repetition in other geographical/cultural settings to explore the relationships identified in this study.

The research findings reveal that product and marketing innovation did not directly influence competitive advantage. It could be explained due to the effects of the COVID-19 pandemic since the COVID-19 pandemic might have notably affected business performance in numerous organizations worldwide, especially in Vietnam. Further studies should conduct the data analysis in the new normal situation to see whether product innovation and marketing innovation may implement the competitive advantage in addition to the corporation's performance.

Furthermore, this study only focuses on the strategist's cognitive perspective of thinking to innovation and competitive advantages. Besides, the best practices in a strategist's cognitive thinking might help improve corporate performance in terms of financial performance, technological performance, and environmental performance. It might contribute to the scholars to acquire an in-depth acknowledgment of various issues occurring in the corporation in implementing the strategist's cognitive perspective of thinking and innovation.

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## Kognitivne perspektive, inovativnost i konkurentska prednost stratega: empirijska studija u Vijetnamu

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### Sažetak

Glavni cilj ove studije je istražiti odnos između intuitivnog i analitičkog razmišljanja stratega, inovativnosti i konkurentske prednosti poduzeća. Ova studija ne samo da predlaže novi model akademskom svijetu, već također pruža empirijsko istraživanje izravnog i neizravnog učinka analitičke perspektive razmišljanja stratega i perspektive generativnog razmišljanja stratega o inovacijama i konkurentske prednosti, kao i o posredničkoj ulozi inovacije između kognitivne perspektive razmišljanja stratega i konkurentske prednosti poduzeća. Ovim istraživanjem provedena je anketa s 382 uzoraka u državnim tvrtkama, izravnim stranim ulaganjima i privatnim tvrtkama u Vijetnamu. Modeliranje strukturnih jednažbi primijenjeno je putem pametnog PLS-a za analizu valjanih podataka. Rezultati pružaju bitne dokaze o značajnim odnosima između kognitivnih perspektiva razmišljanja, inovativnosti i konkurentske prednosti stratega u kontekstu državnih poduzeća, izravnih stranih ulaganja i privatnih tvrtki u Vijetnamu. Osim toga, nalazi također upućuju na ne postojanje veze s izravnom učinkom ni između inovacije proizvoda i konkurentske prednosti niti između marketinške inovacije i konkurentske prednosti. Štoviše, rezultati istraživanja upućuju na različite menadžerske implikacije o tome kako organizacije uspješno povećavaju svoju konkurentsku prednost povećanjem kognitivnih sposobnosti svog lidera u upravljanju.

**Ključne riječi:** perspektiva analitičkog razmišljanja stratega, perspektiva generativnog razmišljanja stratega, inovacija, konkurentska prednost

**JEL klasifikacija:** M12, O15, O30

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