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Strategic Choice of Doctoral Education and Dynamic Managerial Capabilities in Supporting Executives Performance: An Exploratory Study

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Abstract

Improving human capital through education is considered an investment decision. In Indonesia, the interest of non-academics in pursuing doctoral programs is increasingly widespread. The purpose of this study is to explore the dynamics of strategic choices in doctoral education and dynamic managerial capabilities on executive performance. The data analysis process includes a crucial stage of data coding, following Yin's approach for case studies as the research method of this study. By employing unstructured techniques with five executives, it gathered the unique insights of each participant, enabling a deeper understanding of the phenomenon. The conceptual framework of the results of the study shows the findings of conditions where dynamic managerial capabilities support executive performance and the interaction of dynamic managerial capabilities and strategic choices in doctoral education supports executive performance. The strategic choice of doctoral education supports executive performance for two informants. Instead, three informants do not support it directly because external conditions require time to be overcome or because of the motive for doctoral education itself. The practical implication provides insight into the diverse motives and levels of relevance of educational programs that provide managerial capabilities to adapt to dynamic business practices.

Keywords: Doctoral education, Dynamic managerial capability, Executives' performance, Human capital.

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1. Introduction

Improving human capital through education are considered an investment decision. In Indonesia, the interest of non-academics in taking doctoral programs is increasingly widespread. Government officials, state-owned enterprises directors, businessmen, politicians, and political party administrators are recorded as participating in this doctoral education program,

Junaedi [1], Mudzakkir [2]. Bindar [3] stated that a doctoral degree is an award for academic qualifications, an indication of mastery of high competencies, or critical thinking skills in solving complex problems. Investment decisions through interest in doctoral education are expected to obtain higher added value benefits.

This study takes one phenomenon of corporate executives who pursue doctoral education. The experience factor of human capital, according to Mincer [4], is non-linear, individual in nature, leaving an explanation for further research. Further research is strengthened by [5], who encourages new debates on the concept of human capital as a collective experience phenomenon. According to England and Folbre [6], further research leads to the formation of human capital as a response to environmental dynamics that play a role in shaping human capital.

This study is about the capabilities of corporate executives with doctoral degrees by exploring strategic choices that can explain executive productivity, hereinafter referred to as executive performance, from the ownership of that education. This research is expected to produce the development of a human capital theory that explains the relationship between education, capabilities, and performance from one practical phenomenon, as a gap in the controversy of previous research, explained by this study.

This study is expected to contribute to enriching the conceptual model for the development of human capital theory. The formulation of the proposed problem is based on the phenomenon of corporate executives who pursue doctoral education programs. The main problem formulation is described with the following research questions: How do the strategic choices of doctoral education and dynamic managerial capabilities support executive performance? Based on the formulation of the main problem of this study, the following research questions are outlined to be answered:

1. How do dynamic managerial capabilities support the improvement of the performance of executives with doctoral education?
2. How do strategic choices of doctoral education support executive performance?
3. How does the interaction of strategic choices of doctoral education and dynamic managerial capabilities support executive performance?

2. Theoretical Review

2.1. Human Capital

Knowledge, skills, and the role of education in shaping individuals contribute to what is known as human capital. This concept was initially introduced by Schultz [7] and later reinforced by Mincer [4] and Becker [8]. They emphasized that skills are acquired through workplace experience. Human capital is considered a crucial element in enhancing a company's assets, as employees use their skills to boost productivity and maintain a competitive advantage.

Gary Becker, who won the Nobel Prize in 1992, developed an economic perspective on human behavior related to education within the labor market. He argued that education is a long-term investment, with benefits that may take time to materialize. In his work from Becker [9] he further explored various individual decisions regarding the maximization of utility, rationality, and preferences. He included considerations of non-economic factors, such as culture and social interactions, all within an economic incentive framework.

Education is an investment that Individual workers invest in skills and knowledge to gain surplus payment value in the future. Increasing skills and reducing educational inequality will reduce income inequality, Goldberg and Pavcnik [10]; Lin [11]. Hanushek and Woessmann [12] stated that predictions from economic growth models based on learning outcomes are proven to be stronger than predictions of growth caused by school failure. This research is reinforced by subsequent research by Angrist et al. [13] and Jones [14]. Learning is associated with economic growth and human capital explains differences in income inequality across countries.

2.2. Dynamic Managerial Capability

Dynamic managerial capabilities are essential for driving effectiveness and achieving competitive performance advantages within a company. Rooted in the resources-based view (RBV) introduced by Wernerfelt [15], this concept emphasizes the importance of a firm's unique resources and capabilities. Central to the dynamic capability framework, as described by Teece [16], is orchestration strategically combining and aligning assets to foster innovation.

Dynamic capabilities theory highlights the importance of top management in spearheading innovation and navigating challenges [17, 18]. Companies that embrace this approach adapt to their environments, leveraging capabilities that function on multiple levels. Makadok [19] characterizes capabilities as unique, non-transferable resources intended to enhance productivity. This evolution involves individual and collective learning, as noted by Reinert [20], leading to higher profits and innovation.

Dynamic managerial capabilities shift the focus from organizational to individual managers. According to Adner and Helfat [21], organizational diversity stems from managers' ability to build and reconfigure resources. These capabilities aid firms in aligning strategies with environmental changes [22] and encompass three key areas: (i) sensing opportunities and threats; (ii) seizing market chances or addressing challenges; and (iii) reconfiguring resources to execute strategy efficiently.

The novelty proposed in this study is from the theoretical model side, where there are supporting factors for dynamic managerial capabilities in the framework of human capital theory with exploration of strategic choices of doctoral education. Child [23] in strategic choice theory states that executive response patterns are influenced by their perceptions of environmental uncertainty and their need for internal change. Doctoral education held by corporate executives certainly has learning objectives that equip executives with the intended capabilities. In its learning practices, doctoral education exposes doctoral candidates to the phenomena of various recent theoretical research with practical implications.

3. Research Method

3.1. Research Context and Design

In the realm of human capital theory, education emerges as a pivotal investment, with its returns demonstrated through enhanced productivity. This productivity is not merely a metric; it embodies the profound impact of human capabilities. These capabilities are defined as achievements that arise from favorable conditions or activities [24]. Essentially, capability acts as a conduit for fulfilling essential functions, and through education, we cultivate a diverse array of capabilities that lead to significant achievements.

A comprehensive review of existing studies highlights three critical perspectives on the relationship between education and productivity: (i) some research finds no significant relationship [13, 25, 26] (ii) other studies confirm a direct and influential relationship [27-29] and (iii) additional research suggests a complex, indirect relationship [4, 30].

This nuanced understanding reinforces the importance of education as a transformative investment in our future, underscoring its crucial role in unlocking human potential and driving productivity. This study aims to explain a phenomenon by examining a specific case example. According to Yin [31], the case study method is an empirical research approach that investigates phenomena in real-life contexts, using various sources of evidence.

3.2. Interview Protocol

The theoretical sampling for this study was designed around two main criteria. First, we selected five executives from highly competitive business sectors, all holding doctoral degrees in management. Second, each informant had at least senior manager-level experience, ensuring a strong foundation of expertise; notably, five executives had doctoral degrees. To enhance our findings, we utilized a dyadic approach by gathering feedback from the direct subordinates of these executives. This study employed interviews as the primary method for data collection. By using unstructured techniques, we gathered the unique insights of each participant, enabling a deeper understanding of the phenomenon. When in-person meetings were not feasible, we conducted the interviews via Zoom. Each session was recorded and subsequently transcribed for analysis, lasting approximately 60 minutes per participant. This approach promoted engaging dialogue and enhanced the depth of our research findings. Table 1 shows the profile of informants in this study.

Table 1.
Interview with Informant.

	Informant				
	A	B	C	D	E
Industry	Hospitality	Consumer Goods	Trading	Education	Telecommunication
Position	VP Operation	President Director/Director in-Charge	Trade Director	Education Director	VP/Senior Advisor
Tenure as an Executive	25	30	15	15	20
Graduation	2023	2015	2021	2023	2022
Direct Subordinates	5	2	2	3	2

3.3. Data Analysis

The data analysis process includes a crucial stage of data coding, following Yin's approach Yin [31] for case studies. We conducted open coding on the interview data, analyzing the language used by informants within similar topic groups. This process enabled us to distil insights into first-order themes, which were subsequently combined into second-order themes, referred to as constructs. These constructs serve as the foundation for developing theories based on comprehensive dimensions. An iterative process between the data and theory facilitated the refinement of our findings, enhancing their relevance and impact [32, 33]. During the coding process, we concentrated on the most relevant and frequently recurring themes. Overlapping themes are crucial for making meaningful generalizations. Axial coding effectively links these themes, clarifying the relationships among categories and subcategories, thereby enhancing the strength of our findings.

4. Discussion

This study clearly demonstrates that doctoral education captivates both practical and strategic interests across academic and non-academic realms. Executives pursuing this level of education uniquely navigate the challenge of managing their professional responsibilities while simultaneously engaging in intense learning. The intricate balance of managing managerial duties alongside the structured demands of doctoral studies is a formidable yet rewarding endeavor. Based on the research questions developed at the beginning of the study, the following are representative quotes by informants.

Table 2.

Dynamic Managerial Capabilities Support Executives' Performance: Representative quotes.

Dynamic Managerial Capabilities Support Executives' Performance	<i>"This is not an effort to reduce capacity, but rather to regulate. It's quite interesting; for example, we have two buildings. We might close one and continue operating the other. One building is specifically rented by a British company to quarantine its staff, as they have a project in West Papua, and all their staff come from Surabaya, Indonesia. When it comes to hotel management, things can fluctuate. Sometimes, we regulate the floors—designating one floor for smokers and another for non-smokers. This way, we remain dynamic in our operations." (Informant A)</i>
	<i>"When discussing a company, we should recognize that the goals of the company align with the goals of its employees. In marketing, the focus shifts to the consumers. Essentially, a company is defined by its purpose and intentions. A company exists to fulfil the vision of its owner, and one of the key visions is certainly to generate profit." (Informant B)</i>
	<i>"Sometimes, it's better to have no hope at all; it's just important to discuss the situation. Take the market for baby formula in Indonesia, for example. Indonesia has a large population, and when we look at the statistics, it seems like there's a high demand for baby formula. A company might think, 'If it sells well in Vietnam and Singapore, it will definitely sell in Indonesia too.' However, that's not the case. The culture, needs, and competitive landscape are all different. Therefore, effective communication is crucial." (Informant C)</i>
	<i>"The course is designed to address parents' concerns. However, if there is a traffic jam and parents have limited time, they might prefer to have everything in one location. If we recognize this opportunity, we can eliminate confusion for parents by creating a One-Stop Education Centre. This centre would offer English, Mandarin, Montessori, Math, and other subjects—all in one place." (Informant D)</i>
	<i>"It's a free technology, but we can still make money. How does it work? That's the challenge. A real challenge. Our customers don't have to pay, but we still generate revenue. Not from customers, try it." (Informant E)</i>

Table 3.

Strategic Choice of Doctoral Education Supports Executive Performance: Representative quotes.

Strategic Doctoral Supports Performance	Choice of Education Executive	<i>"The hotel industry continues to face various challenges, including government pressure and limitations. To thrive, it is essential to build relationships and leverage the advantages of location and tradition. There are several key concepts to consider, particularly in terms of dynamic capabilities and self-sufficiency. In the service industry, innovation is crucial because consumer trends are constantly evolving, especially among younger customers. In today's technological era, information can go viral quickly, making it vital for businesses to adapt. When it comes to education, I believe it is largely a personal journey. The internal motivations of individuals pursuing a doctorate should be explored further. It's interesting to note that the relevance of doctoral education to the job market is a strategic decision, indicating that the context of this choice can be quite long-term." (Informant A)</i>
		"We build on established theories, particularly in the realm of action research, which has been around for quite some time. Essentially, we return to the theory of knowledge. We understand what we know, we recognize what we don't know, and we acknowledge what we don't even know we don't know. It's important for us to gain this knowledge. In a management context, everyone is aware of what we collectively know. If there are gaps in our knowledge, we have the means to find out more. For instance, during my time at Softex, the sales were approximately 150 billion with a market share of 1.5%. When I left, sales had grown to around 7 trillion. Shortly thereafter, the company was acquired for 21 trillion and has since emerged as the market leader. Similarly, when I joined Sweetie, their sales were merely 500 million. Today, those sales have skyrocketed to around 6 trillion. Fantastic, isn't it?" (Informant B)
		"The relevance is significant because I work in the field of trade, making it very pertinent to my interests. Earlier, I presented on the economic outlook and provided insights for companies looking to enter Indonesia, discussing the necessary strategies and suitable business models. This information is crucial. Bilateral trade between Victoria and Indonesia amounts to approximately A\$2.5 billion to A\$2.8 billion. Additionally, I have observed considerable." (Informant C)
		"What I frequently integrate from the theories I've learned in my professional experience is the transformational leadership approach. I believe it's important to apply transformational leadership with my teachers to ensure their development as well. Additionally, I have noticed the steady increase in the number of students each year, as well as the expansion of Shane branches from fewer than 100 before COVID-19 to now over 100 branches." (Informant D)
		"Dynamic capability has been a theory for a long time. However, it has now been enhanced by the theory of changing customer behavior and the evolving landscape of technology adoption, which has significantly shifted. It's not what it used to be; it has changed once again. Personally, I feel that these changes are not immediately visible. This perspective is based on my own experience with personal branding. Yet, when it comes to performance, there hasn't been any noticeable change; it remains the same." (Informant E)

Table 4.

The Interaction between Dynamic Managerial Capabilities and Strategic Choices of Doctoral Education Supporting Executive Performance: Representative quotes.

Interaction between Dynamic Managerial Capabilities and Strategic Choices of Doctoral Education Supporting Executive Performance	"I believe the benefits of networking are significant. For instance, being able to connect with others in different fields enhances one's market capability as an executive, supported by strategic decisions made through doctoral education. This has been proven by the strength of a broader network that spans across industries. We are not just focusing on individuals from the hotel or tourism sectors; the approach is expanding. This broader perspective ultimately leads to a positive impact." (Informant A)
	"This experience has given me greater confidence in my ability to see the bigger picture. For instance, as we learn about the world, we realize that some behaviors can be predictably irrational. When I worked at Softex in a sales position, we had approximately 150 billion in sales with a market share of 1.5%. By the time I left, that number had grown to about 7 trillion. This journey has instilled a sense of confidence, especially since we are now discussing sales materials worth 1 trillion." (Informant B)
	"It's quite different. It turns out that the acceptance of white individuals with doctoral degrees is significantly higher. Generally, white individuals and Indonesians are often viewed as somewhat lower in status. However, when a person has a higher academic title, they tend to be listened to more and are more likely to be obeyed." (Informant C)
	"Currently, as part of my doctoral education, I frequently serve as a reference, particularly in relation to my research on the volunteer sector. I am often invited to speak at events within the educational franchise community. I have observed significant growth in the number of branches and students, even in remote areas such as Lahat, South Sumatra. As the master franchisee, I am able to effectively manage and oversee this business." (Informant D)
	"What I feel, up until now, has not been directly visible. This is just for me personally personal branding. However, regarding performance, it hasn't changed at all." (Informant E)

4.1. Inductive Approach Flow - Doctoral Education Motives

This heightened level of busyness is driven by strong motivations that propel these executives toward their academic goals. The study effectively outlines these motives, which are illustrated in Figure 1 through an inductive approach flow.

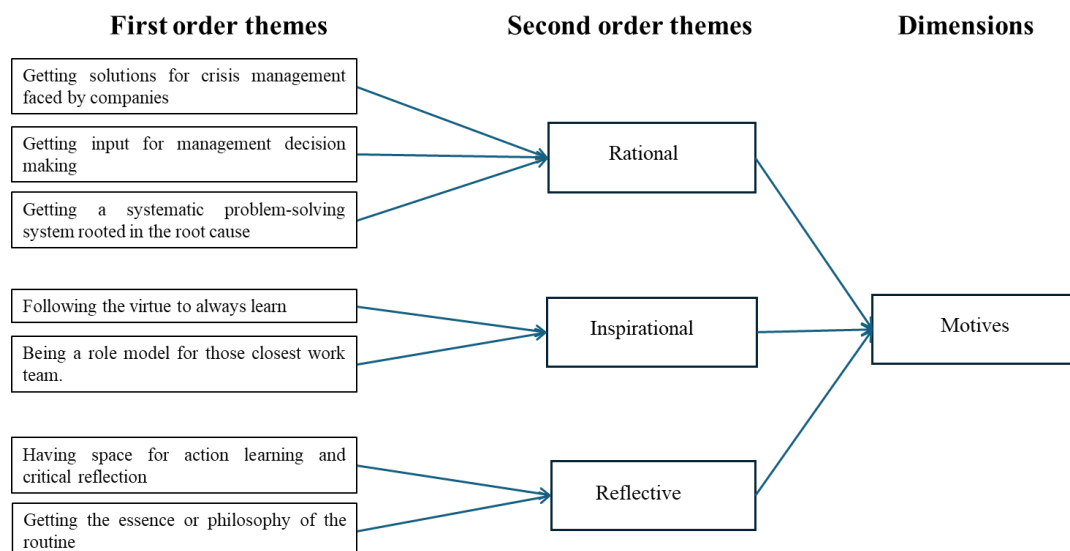


Figure 1.
Inductive Approach Flow – Doctoral Education Motives.

Based on this study, the motivations driving executives to pursue doctoral education can confidently be categorized into three distinct modes:

- **Rational mode:** participants in this mode pursue doctoral education with a clear focus on achieving tangible results. Their primary motivation lies in the quest for solutions that stem from their academic engagement, as evidenced by the motivations of Informants A.

- Inspirational mode: participants are inspired to undertake doctoral education by their work environment, ecosystem, or the success of colleagues who have earned their doctoral degrees achievements they aspire to replicate. This motivation is exemplified by Informants C and D.
- Reflection mode: participants embodying this mode pursue doctoral education to gain profound insights, validation, and critical feedback on managerial practices, all rooted in solid theoretical foundations. This motivation is evident in the experiences of Informants B and E.

4.2. Inductive Approach Flow – Dynamic Managerial Capability

Dynamic capabilities, as articulated by Teece [34], are essential entrepreneurial skills that empower businesses to identify customer needs and effectively mobilize resources for significant profitability. These capabilities not only provide competitive advantages but also establish sustainable strengths within a rapidly evolving environment. It is crucial for executives to understand environmental dynamics to recognize when transformative change is necessary.

Take Informant A, who adeptly navigated a disruptive land dispute with the government. Rather than surrendering to adversity, he proactively adapted by launching quarantine hotels and expanding online services, showcasing a forward-thinking approach. In the consumer goods sector, Informant B stands out by seamlessly integrating strategies, marketing, and human resource management to achieve impressive double-digit growth. Informant C offers localized insights to educate Australian business partners, skillfully avoiding generalized approaches in the diverse Southeast Asian market. Informant D exemplifies transformational leadership by actively involving staff in adapting to online methodologies, thereby fostering confidence with parents in a comprehensive education center. Finally, Informant E employs a structured strategic planning framework to optimize profitability in niche markets. These examples compellingly demonstrate that robust dynamic capabilities empower businesses not only to navigate challenges but also to thrive in an ever-changing marketplace. The following Figure 2 illustrates the flow of the inductive approach in dynamic managerial capabilities.

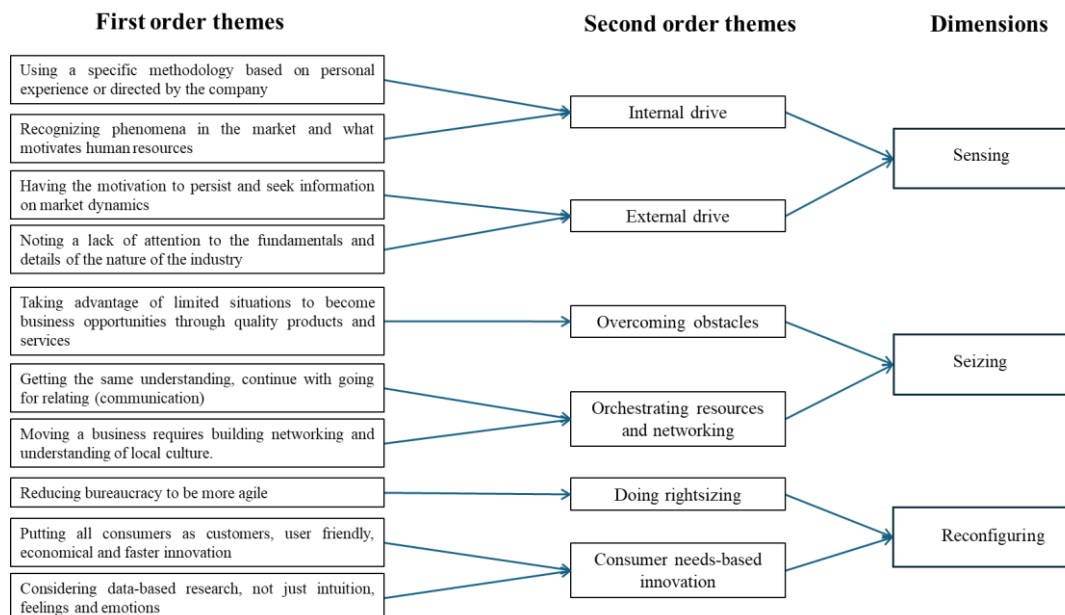


Figure 2.
Inductive Approach Flow – Dynamic Managerial Capability.

Dynamic capabilities are vital for organizations aiming to gain a competitive edge and consist of three key processes:

- Sensing, this process entails identifying technical opportunities that resonate with consumer needs. It requires a blend of external market awareness and internal foresight to anticipate competitive threats.
- Seizing opportunities, organizations mobilize resources to maximize value, transforming insights into actionable business opportunities. This involves leveraging strengths, addressing weaknesses, and skillfully coordinating resources and networks.
- Reconfiguring, this process emphasizes continuous adaptation to changing consumer preferences by restructuring resources and refining processes, ensuring that the workforce is equipped with the necessary skills for innovation.

4.3. Inductive Approach Flow - Strategic Choice of Doctoral Education

All informants have successfully reached the reconfiguring stage, showcasing how effective coordination and resource adaptation can lead to ongoing renewal in response to evolving customer demands. Informant A manages hotel operations despite challenges related to land disputes. Informant B emphasizes relationship building and a unified vision to drive high performance. Informant C improves market understanding through targeted education and recommendations. Informant D enriches insights into parental choices in the education sector. Informant E strategically places consumers at the heart of a

narrowing market niche, fostering engagement with competitors and government. By leveraging these dynamic capabilities, organizations can not only thrive but also establish themselves as resilient leaders in their industries.

The strategic choice of doctoral education is grounded in three key dimensions:

- **Relevance:** this dimension ensures that the learning materials are closely aligned with individual needs, making the pursuit of doctoral education a deliberate and meaningful response to the demands of the environment.
- **Confidence:** It fosters self-confidence and enhances capabilities, empowering individuals to reshape and improve their surroundings.
- **Added Value:** this educational path not only elevates executive performance but also offers transformative insights that drive meaningful change.

The flow of the inductive approach in the strategic choice of doctoral education is shown in Figure 3.

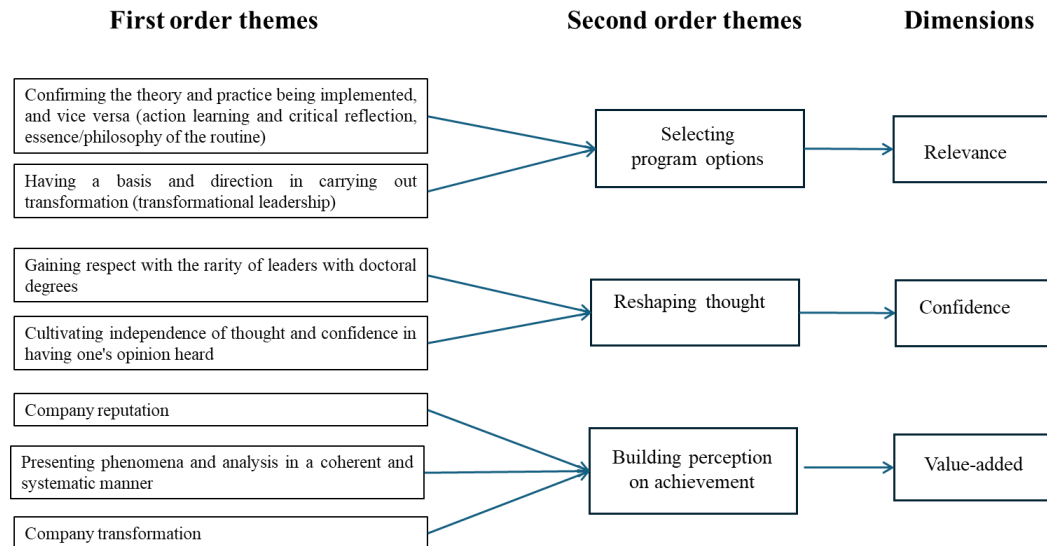


Figure 3.
Inductive Approach Flow – Strategic Choice of Doctoral Education.

Informants B and D illustrate how their experiences have generated substantial added value, enhancing both their companies' performance and their executive effectiveness. Informant B leverages critical reflection on his management practices, resulting in significant performance improvements. Informant D exemplifies transformational leadership, effectively increasing engagement among educational staff. Conversely, Informants A, C, and E appreciate their doctoral education for the recognition and confidence it fosters, even if they perceive its direct influence on their executive performance as limited.

Executive performance is assessed through diverse, industry-specific indicators. For instance, Informant A in the hotel sector focuses on occupancy rates; Informant B in consumer goods prioritizes revenue growth; Informants C measure sales revenue in trade; and Informants D and E evaluate growth in education and telecommunications through metrics such as student enrollment and market share. These insights demonstrate that while the pathways to success may differ, advanced education consistently drives executives toward greater recognition and achievement.

Figure 4 presents the positions of Informants (A, B, C, D, and E) regarding their strategic choices in doctoral education and the dynamic managerial capabilities that enhance executive performance. The analysis indicates that for Informants B, C, and D, the interplay of strategic decisions in doctoral education and dynamic capabilities significantly boosts their performance. In contrast, Informants A and E encounter challenges that hinder their attainment of added value. Informant A is facing legal issues, while Informant E is struggling with fierce competition. Notably, Informant C has improved their executive performance, even while operating at the level of confidence, implying that other factors, rather than doctoral education alone, are more crucial in explaining the success.

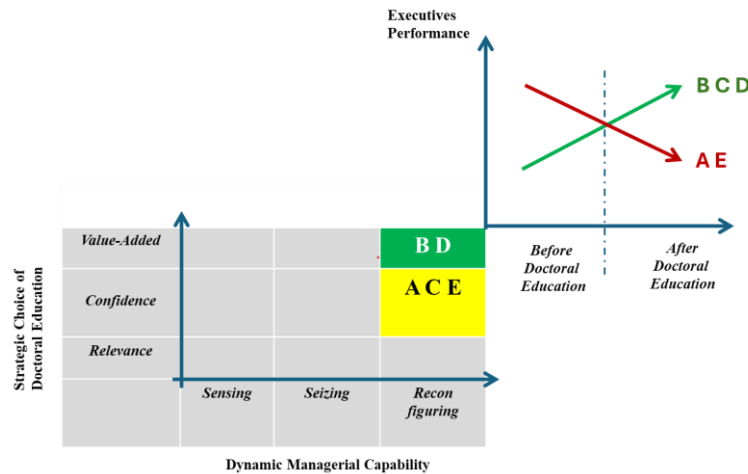


Figure 4.
Mapping Informants A, B, C, D, and E.

An analysis of human capital theory categorizes the relationship between education and productivity into three distinct groups: (i) those with no significant relationship [13, 25, 26]; (ii) those demonstrating a strong influence [27-29] and (iii) those indicating an indirect relationship [4, 30].

The insights gathered from our informants illuminate the intricate relationship between doctoral education and executive performance. Three informants, A, C, and E, believe that there is no direct connection between pursuing a doctoral degree and enhancing executive performance. Nonetheless, they acknowledge that the synergy between strategic choices and dynamic managerial capabilities plays a significant role in driving executive success, viewing doctoral education primarily as a means of personal branding that bolsters confidence. On the other hand, informants B and D assert that the strategic decision to pursue a doctoral degree does indeed support executive performance, emphasizing its beneficial interaction with dynamic managerial capabilities.

This divergence allows us to construct a compelling conceptual framework, as depicted in Figure 4. This study indicates that while B and D consider doctoral education essential for their success, A, C, and E approach it with caution, citing external challenges and personal motivations that may complicate its advantages. In summary, this analysis highlights the necessity of considering both the potential benefits of doctoral education and the various factors that influence its effectiveness in enhancing executive performance.

Based on the statements made by the informants, there are differences in terms of the condition of doctoral education supporting executive performance. In the sense that company performance is sufficient to represent executive performance, three informants directly stated that there is no relationship between the strategic choice of doctoral education and executive performance (Informants A, C, and E), but they did not deny that the interaction of strategic choices and dynamic managerial capabilities supports executive performance. Informants A, C, and E indicated that doctoral education serves more as a means of supporting personal branding, which increases trustworthiness. Informants B and D stated that the strategic choice of doctoral education supports executive performance, as well as the interaction of the strategic choice of doctoral education and dynamic managerial capabilities supporting executive performance. Based on the findings from the statements of the five informants, a conceptual framework can be built in Figure 5.

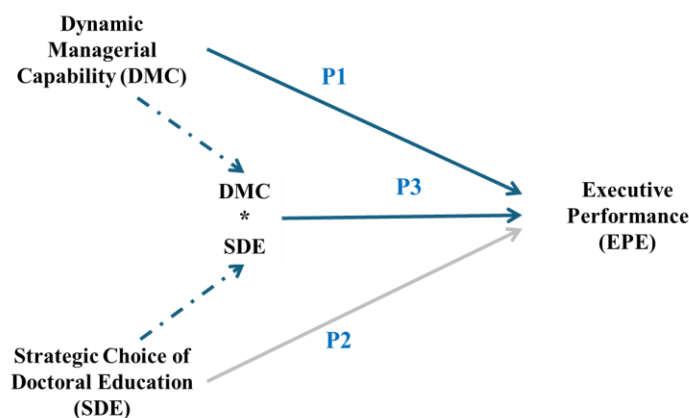


Figure 5.
Conceptual Framework.

The conceptual framework of the results of the exploratory study shows the findings of conditions where dynamic managerial capabilities support executive performance (P1). The interaction of dynamic managerial capabilities and strategic choices in doctoral education supports executive performance (P3). The strategic choice of doctoral education supports

executive performance (P2) for informants B and D, while informants A, C, and E state that they do not support it directly because external conditions require time to be overcome (Informant A) or due to the motives for doctoral education itself (Informants C, E, and H).

5. Conclusion

This study extends research on the interaction between strategic choices in doctoral education and dynamic managerial capabilities that support executive performance. The following conclusions can be described: this study fills the gap in understanding the interaction between strategic choices in doctoral education and dynamic managerial capabilities in supporting executive performance. This study enriches knowledge about the mechanisms of interaction. The informants stated that dynamic managerial capabilities can work to support executive performance, and that strategic choices in doctoral education also support executive performance. Furthermore, the interaction of dynamic managerial capabilities and strategic choices in doctoral education can enhance executive performance. Strategic choices in doctoral education can support executive performance under management practice conditions that require references in responding to business dynamics, especially to support problem-solving and decision-making. The practical implications provide insight into the diverse motives and levels of relevance of educational programs that equip managerial capabilities to adapt to dynamic business practices.

This exploratory study is subject to the following limitations arising from the case study methodology. The application of the interaction between strategic choices of doctoral education and dynamic managerial capabilities is limited in supporting executive performance, constrained to the scope of the industry in this study. The scope of the case study and findings is based on only eight informants, executives with doctoral degrees in a particular industry, which may not be generalizable to different industries.

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