


Available online at
<http://hkjoss.com/index.php/journal>

Open Access Article

 <https://doi.org/10.55463/hkjss.issn.1021-3619.63.40>

Ecosystem Model and Scenario Planning for the Development of the Traditional Medicine Industry in Indonesia

Elan Eriswanto¹, Syamsul Ma'arif², Widarto Rachbini³, Ahmad Hidayat Sutawidjaya⁴

¹ Postgraduate, Pancasila University, Jakarta, Indonesia

² Postgraduate, Pancasila University, Jakarta, Indonesia

³ Postgraduate, Pancasila University, Jakarta, Indonesia

⁴ Esa Unggul University of Economics, Jakarta, Indonesia

Received: August 3, 2024 ▪ Reviewed: September 1, 2024

▪ Accepted: September 10, 2024 ▪ Published: September 30, 2024

Abstract:

This study aims to improve the performance of companies in the traditional medicine sector by utilizing an ecosystem model and scenario planning based on the TAIDA (Tracking, Analyzing, Imaging, Deciding, and Acting) framework. The objectives are to evaluate the current state of the traditional medicine industry, identify factors affecting its growth, and develop scenario planning for its future development. This research uses a mixed-methods approach, integrating quantitative techniques such as descriptive statistical analysis and SEM-PLS analysis with qualitative methods including literature review, focus group discussions, interviews, and scenario planning. The sample comprises 33 traditional medicine companies located in West Java, with company leaders serving as respondents. The findings indicate that innovation, raw material availability, networking, both external and internal environments, and agile strategies significantly enhance company performance. Additionally, government policies and the involvement of academic institutions play a crucial role in influencing these factors. This study underscores the importance of

Corresponding Author: Elan Eriswanto, Postgraduate, Pancasila University, Jakarta, Indonesia,
email: elaneriswanto@ummi.ac.id



Copyright: © 2024 by the authors. Licensee HKJSS

This article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>)

technological advancements and efficient interagency collaboration to enhance operational efficiency and resilience. The results suggest that adopting flexible and adaptive strategies that incorporate logistical, technological, and collaborative efforts can significantly benefit the traditional medicine industry. This research provides new insights into the industry's development in Indonesia and offers alternative strategies to enhance performance and adaptability during future crises. These insights can also inform strategies to strengthen national defense capabilities in similar contexts, thereby improving the industry's overall resilience and effectiveness.

Keywords: Ecosystem Model, Traditional Medicine Industry, Scenario Planning, Tracking, Analyzing, Imaging, Deciding, and Acting (TAIDA) Model

印尼传统医药产业发展的生态系统模型与情景规划

摘要:

本研究旨在利用基于 TAIDA (跟踪、分析、成像、决策和行动) 框架的生态系统模型和情景规划来提高传统医药行业内公司的绩效。目标是评估传统医药行业的现状, 确定影响其增长的因素, 并制定未来发展的情景规划。本研究采用混合方法, 将描述性统计分析和 SEM-PLS 分析等定量技术与文献综述、焦点小组讨论、访谈和情景规划等定性方法相结合。样本包括位于西爪哇的 33 家传统医药公司, 公司领导人作为受访者。研究结果表明, 创新、原材料可用性、网络、外部和内部环境以及敏捷战略显著提高了公司绩效。此外, 政府政策和学术机构的参与在影响这些因素方面发挥着至关重要的作用。本研究强调了技术进步和有效的机构间合作对于提高运营效率和弹性的重要性。结果表明, 采用灵活且适应性强的战略, 结合物流、技术和协作努力, 可以极大地造福传统医药行业。这项研究为印度尼西亚的行业发展提供了新的见解, 并提供了在未来危机中提高绩效和适应性的替代策略。这些见解还可以为在类似情况下加强国防能力的战略提供参考, 从而提高该行业的整体弹性和有效性。

关键词: 生态系统模型、传统医药行业、情景规划、跟踪、分析、成像、决策和行动 (TAIDA) 模型

1. Introduction

1.1. Background of the Problem

To improve public access to high-quality traditional medical services, the use of herbal medicines within communities has been steadily increasing each year. This research highlights several critical issues: traditional medicine production strategies have not been fully optimized, the industry lacks significant innovation, and tools and facilities in the herbal medicine sector are insufficient. Additionally, government regulations are not sufficiently supportive of traditional medicine, and there is a distinct lack of material and financial resources for the industry.

To address these challenges, it is essential for the government to enhance its support and understanding of traditional remedies, an area that has been neglected thus far. Successfully adapting to the dynamic traditional medicine industry requires swift and effective leadership. Companies must embrace an agile and adaptable approach to advanced Indonesia's traditional medicine industry. Consequently, it is vital for industry leaders to demonstrate responsiveness and dynamism in

their strategies to ensure rapid adaptation and ongoing development.

1.2. Research Purposes

The research aims to determine and assess the state of the traditional medicine sector and examine the determinants that impact the evolution of this sector. Develop scenario planning for the industry's evolution regarding traditional medicine.

The research scope can offer novelty and refreshment, particularly by presenting alternative options for the advancement and enhancement of the traditional medicine industry strategy in Indonesia.

2. Literature Review

2.1. Framework of Thinking

The importance of company strategy in increasing competitiveness because company strategy provides long-term direction for the company's goals, and helps the company adapt to changes that occur, which can help avoid company bankruptcy. This research is novel in

that it identifies networking opportunities, innovation factors, raw materials, the internal and external environment and agility strategies that can enhance the performance of the traditional medicine industry in Indonesia, in conjunction with academics' future involvement in ecosystem models and planning and government policies. Prospective trajectory of the traditional medicine sector.

2.2. Strategic Agility and Organization Performance

Strategic agility is a key advantage that enables companies to face a world full of uncertainty and change (Alfarajat, 2023). Simultaneously, there exist numerous avenues for expanding upon this notion to comprehend its comparative coherence with theories that aim to comprehend the interplay between organizational structure and change, as well as the wider socio-economic context (Ali & Deneke, 2020). The second element is the need to understand more than just when and where strategic agility can be applied (Tarba et al., 2023). Agile leadership can increase readiness to change in MSMEs. In MSMEs, the implementation of strategic agility planning can increase change readiness and facilitate workforce transformation (Kalaiganam et al., 2021; Arizqi & Kusumawati, 2023). Furthermore, workforce transformation can improve the performance of MSMEs (Arizqi & Kusumawati, 2023). Agility is a dynamic capability of organizational design that enables businesses to recognize internal and external changes as necessary, implement them frequently, and sustain superior performance (Gutterman, 2023). Agility enables companies to respond quickly to market changes driven by customer-based product and service reviews (Al Taweel & Al-Hawary, 2021). Agility is considered a significant contributor to business success, especially in dynamic environments (Kale et al., 2019). In a dynamic business environment, the ability to respond quickly and accurately to change, be flexible and adaptable, and manage uncertainty is critical for organizational survival (Sherehiy et al., 2020). Organizations in uncertain environments maintain managerial flexibility, anticipation, awareness, and sensitivity regarding their internal and external environments and proactively anticipate and prepare to manage change (Al Taweel & Al-Hawary, 2021). Uncertainties and risks must be strictly controlled (Ting et al., 2021). Therefore, agility is a key element for organizations to successfully understand and manage environmental uncertainty (Alfarajat, 2023). Strategic sensitivity refers to deliberate awareness of external trends and participation in strategic processes (Cheng & Huizingh, 2020). The dimensions of the strategic sensitivity model are prediction, experimentation, distance, and abstraction (Al Taweel & Al-Hawary, 2021). Leadership unity, or collective commitment, as it is often called, allows top management to make bold and quick decisions once a new strategy is identified

(Christensen-Salem et al., 2021). The integrated leadership model dimension consists of interacting, representing, integrating, coordinating, and maintaining resource flows, including internal capabilities to reconfigure business systems and move resources quickly (Latif et al., 2021). Resource rotation refers to the internal capability of rapidly reallocating resources and reconfigure capabilities in response to the establishment of a new strategic direction (Afifi & Murhadi, 2023). Beyond these three dimensions, additional dimensions come into play when evaluating strategic agility (Alfarajat, 2023). The aspect under consideration is communal engagement. Because of the "collective engagement" subdimension, cultural or cultural learning companions are acknowledged as vital conduits for the transmission of knowledge (Tarba et al., 2023). Strategic agility includes agility not only with allocating resources to develop and deploy dynamic capabilities and balancing those capabilities dynamically over time (Tarba et al., 2023). Research has demonstrated that the effective development and cultivation of resources essential for attaining a competitive advantage positively impacts organizational performance in the context of organizational capabilities (Ampauleng & Abdullah, 2023). However, considering the increasingly volatile business environment, strategic agility is necessary because it allows one to anticipate internal and external changes and take and implement strategic decisions quickly (Al Taweel & Al-Hawary, 2021). Strategic agility plays an important role in improving the performance of an organization, in this case private universities (Chan & Muthuveloo, 2020). Based on this, strategic agility can be positioned as a mechanism that can intervene to improve organizational performance (Chan & Muthuveloo, 2020). Strong strategic commitment helps companies gain momentum when technological disruptions, changes in market conditions, or unexpected competitors occur (Campbell & Park, 2020).

3. Research Methodology

This research uses mixed method, combining quantitative approach and causality method with SEM PLS analysis, Forum Group Discussion, Interviews, and model design using scenario planning. The population of Indonesian herbal medicine and herbal companies categorized Industry Drug Traditional as many as 129 companies throughout Indonesia, using probability sampling method criteria with Industrial Samples Drug Traditional in the region West Java as many as 33 companies with criteria respondents' company leadership. On research This source information use source key that has expertise and knowledge in the same field with study this, between other: Expert Management Strategy, Management and Leadership Industry Drug Indonesian Traditional, Government, Industry Herbal

Medicine and Herbals in Foreign Affairs and Ministries Health Republic of Indonesia.

Table 1. Variables and dimensions (developed by the authors)

Variables	Dimensions
Innovation (Fahmilia, 2018)	Process innovation
	Innovation product
Raw material (Ristono, 2013)	Safety stock
	Optimal inventory
	Customer satisfaction
Environment external (Hunger & Wheelen, 2012)	Economy
	Technology
	Regional government policies
	Sociocultural task or industrial environment
Internal environment (Wispondono, 2010)	Source power
	Company Culture
	Structure
Networking (Permana, 2020)	To front
	To behind
Strategy agility (Nurcholis, 2021)	Responsiveness
	Operational flexibility
	Business relationships
Company performance (Mardina, 2018)	Financial perspective
	Customer perspective
	Internal business process perspective
	Learning and growth perspectives
Government policy (Rohman, 2016)	Consistency
	Transparency
	Accountability
	Justice
	Effectiveness
Academics (Yuberti, 2014)	Part of the education field
	Focusing the role taken

The stages of study in this research are as follows (Figure 1):

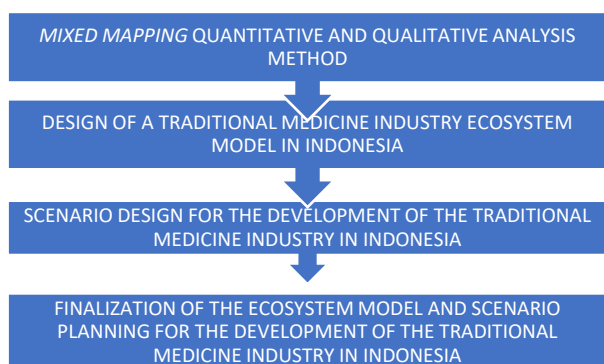


Figure 1. Stages of study (developed by the authors)

4. Results

4.1. Analysis of Research Findings

This research analyzes the responses of 33 companies with the criteria of respondents being leaders of West Java Traditional Medicine Industry companies. The researcher carried out mixed method mapping using the scenario planning method. Additionally, the researcher facilitated a group discussion forum to gather

supplementary data that would aid in the development of the marketing model and business scenario to be formulated.

4.1.1. Innovation

As creativity is defined as the capacity to generate a novel concept or an entirely original item by fusing various pre-existing elements, the majority of respondents (4,576) provided exemplary responses, which is commensurate with the notion that creativity itself constitutes this capacity. The interview results demonstrate that innovation leads to improved work processes. The results of the FGD indicate that the Indonesian herbal medicine and herbal products industry in the future is likely to be increasingly prospective in the domestic, regional, and global markets. The market niche for this local wisdom-based industrial sector is increasingly wide open, especially during the COVID-19 pandemic, which has not yet ended and is entering a new world order of life.

4.1.2. Raw Material

The average response of respondents shows that the highest for raw materials is Raw materials used 4,515 with very good answers, which shows the optimal amount of inventory, namely determining the amount of inventory that affects inventory cost efficiency and accuracy in fulfilling customer orders so that There are no problems both in terms of type and time of order fulfillment. The interview results indicate that raw material stocks must be controlled. According to the findings of the FGD, the following constitutes “raw materials for traditional medicine”: Plants or natural materials that are utilized in alternative medicine or traditional medicine may include: Simplecia or raw materials, which may consist of fresh ingredients, dried powder, or a formulation, Extracts, including tincture, galenic, fresh liquids, decoctions, and extracts; dry extract formulations, including tablets, capsules, and syrup.

4.1.3. External Environment

Based on the highest average response, participants indicated that 4,576 local areas continued to harbor skepticism regarding the effectiveness of medicinal products, as indicated by their exceptionally positive responses. Meanwhile, the interviews revealed that the public, as users, influence interest in products produced by the company; product non-acceptance can prevent long-lasting products from being on the market and may even no longer circulate. The findings from the FGD indicate that various factors impact the extent to which herbal medicine is used in low-middle and upper economic communities as an alternative to modern medicine. Consumers are influenced to purchase herbal medicines from various factors, including social,

cultural, and psychological elements and marketing mix elements.

4.1.4. *Internal Environment*

The average number of positive responses received by the employee characteristics was 4,424; this indicates that employee capabilities that align with the company's field requirements received the most positive feedback regarding the internal environment. The interview results demonstrate that a workplace environment that supports employees to be able to convey ideas, opinions, and respect employees and organizations within companies in the Traditional Medicine Industry runs smoothly without obstacles because of the clear organizational structure and job desk. Based on the results of the FGD, total sales of this herbal medicine came from the domestic market and exports from approximately 1400 herbal medicine companies, both on a large and small scale.

4.1.5. *Networking*

The results of the highest respondent responses show that consultants have an average of 4,272, so companies employ consultants to achieve company targets. Based on the results of the interviews, it is clear that as a business actor or company, there is certainly a lack of updates or knowledge about the latest regulatory rules, so there is a need for good relationships and communication. Based on the results of the FGD, it was found that consultants are experts in certain fields and work with client contacts to become partners in problem solving.

4.1.6. *Strategic Agility*

Based on the highest average respondent response for the agility strategy, it shows that consumer responsibility has 4,151 with excellent answers in the form of a company providing after-sales services to consumers. Based on the interview results, Strategy Agility demonstrates that you must be responsive in responding to customer complaints (*Responsiveness*) so that customers are not disappointed; The environment is flexible. Based on the results of the FGD, the Chairman of the Association of Herbal Medicine and Traditional Medicine Entrepreneurs stated that consumer interest in herbal medicine is still high.

4.1.7. *Government Policy*

The results of the highest response from respondents for government policy show that there are details with an average of 4,545 with a good answer, namely the company has market share in the sales process in accordance with government regulations. Based on the interview results, the findings show that government policy regarding the Traditional Medicine Industry is not yet transparent in terms of regulations in terms of violations. The results of the FGD show that local herbal

medicine entrepreneurs believe in two regulations issued by the government, namely Minister of Health Regulation (Permenkes) No. 006 of 2012 and Minister of Health Regulation No. 007 of 2012, which have hampered the development of the traditional herbal medicine industry in Indonesia. The two Perkemkes relate respectively to traditional medicine permits and traditional medicine registration.

4.1.8. *Academic*

The findings from the participants' feedback indicate that teachers received the highest mean score of 4,424 excellent responses; this suggests that the organization actively engages teachers in the recruitment process. The interview results demonstrate that the education sector is very important in terms of research and research development and increasing knowledge of product development; The role of academics in the Medicine Industry is very important in the product development process in accordance with scientific studies. The role of academics can be focused on research in the traditional medicine industry. Based on the results of the FGD, it was found that the leading herbal medicine company, Nyonya Meneer, initiated an innovation to preserve herbal plants through the world of education.

4.1.9. *Performance*

The results of the respondents' responses showed that most average was Surviving at 4,272 with a good answer; the company has a good system to maintain survival. The interview findings indicate that the organization's financial performance is commendable and consistent. Its market share aligns with the target of the Traditional Medicine Industry, and it tends to grow due to the production of community-needed products that support immune system maintenance. However, there are employees who fail to adhere to established company regulations, with one such infraction being a lack of discipline. Based on the results of the FGD, the Association of Herbal Medicine Entrepreneurs (GP Jamu) is optimistic that the herbal and traditional medicine industries will grow by more than 5% in 2020 after being relatively stagnant in 2019.

4.2. *Analysis of the Results*

This research analyzes the determinants of company performance in the traditional medicine industry using the PLS research model as follows (Figure 2):

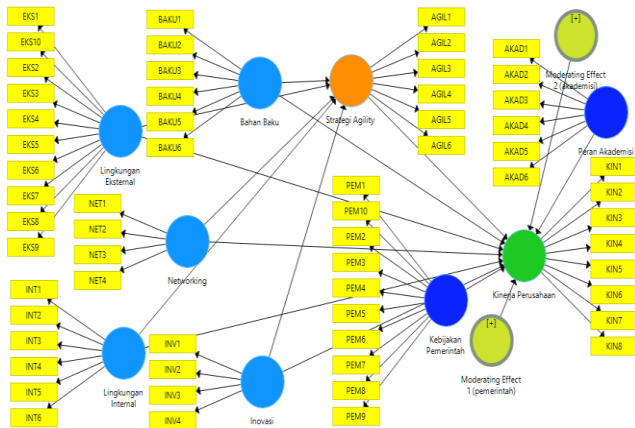


Figure 2. PLS Research model (developed by the authors)

The statistical path results show that (Table 2)

1. The agility strategy has a positive effect on performance with a p-value of less than 1.0, which means that it accepts the following hypothesis:
2. Academics have a positive effect on performance, with a p-value of less than 1.0, indicating that the hypothesis is accepted.

3. Raw materials have a positive influence on performance, with a p-value of less than 1.0, indicating that the hypothesis is accepted.

4. External forces have a negative effect on performance with a p-value of less than 1.0, which means that the hypothesis

5. Innovation has a positive effect on performance, with a p-value of less than 1.0, indicating that it accepts the following hypothesis:

6. Internal strength has a positive effect on performance, with a p-value of less than 1.0, indicating that the hypothesis is accepted.

7. Networking has a positive effect on performance with a p value of less than 1.0, meaning that the hypothesis is accepted.

8. Government has a positive effect on performance (p-value of less than 1.0, meaning it accepts the indirect influence hypothesis).

Table 2. Path statistics (developed by the authors)

	Original sample	T statistics	P values
Innovation → Company Performance	0.346	2.124	0.026
Raw Materials → Company Performance	0.242	2.644	0.052
External Environment → Company Performance	0.411	2.166	0.024
Internal Environment → Company Performance	0.309	2.667	0.051
Networking → Company Performance	0.198	2.406	0.016
Agility Strategy → Company Performance	0.368	2.573	0.057
Innovation → Agility Strategy	0.160	2.002	0.032
Raw Materials → Agility Strategy	0.190	2.490	0.014
External Environment → Agility Strategy	0.196	2.000	0.032
Internal Environment → Agility Strategy	0.116	2.531	0.060
Networking → Agility Strategy	0.063	2.447	0.015
Innovation → Agility Strategy → Company Performance	0.059	2.390	0.070
External Environment → Agility Strategy → Company Performance	0.072	2.419	0.068
Internal Environment → Agility Strategy → Company Performance	0.043	2.217	0.083
Raw Materials → Agility Strategy → Company Performance	0.070	2.500	0.062
Networking → Agility Strategy → Company Performance	0.234	2.430	0.067
Moderating effect 1 (government) → Company Performance	1.66	2.335	0.018
Moderating effect 2 (academics) → Company Performance	0.150	2.123	0.026

Table 3 Specific indirect effects (developed by the authors)

	Original sample (0)	T statistics (I0/STDEV1)	P values
--	---------------------	--------------------------	----------

Raw Materials → Agility Strategy → Company Performance	0.070	2.500	0.062
Innovation → Agility Strategy → Company Performance	0.059	2.390	0.070
External Environment → Agility Strategy → Company Performance	0.072	2.419	0.068
Internal Environment → Agility Strategy → Company Performance	0.043	2.217	0.083
Networking → Agility Strategy → Company Performance	0.234	2.430	0.067

The specific indirect effects show that (Table 3)

1. Raw materials have a positive effect on company performance through an agility strategy of 0.070.
2. Innovation has a positive effect on company performance through an agility strategy of 0.159
3. The external environment has a positive effect on company performance through an agility strategy of 0.072
4. The internal environment has a positive effect on company performance through its agility strategy of 0.043
5. Networking has a positive effect on company performance through an agility strategy of 0.234

Table 4. R Square (developed by the authors)

	R Square	R Square Adjusted
Company Performance	0.582	0.443
Agility Strategy	0.784	0.744

1. The research results show an influence of innovation, internal environment, external environment, raw materials, and networking on the agility strategy of 0.582, indicating a moderate effect.
2. The research results show an influence of innovation, internal and external environments, raw materials, and networking on agility strategies and the performance of the traditional medicine industry in Indonesia, moderated by government policy at 0.784, indicating a strong effect.
3. The research results show an influence of innovation, internal environment, external environment, raw materials, and networking on agility strategies and the performance of the traditional medicine industry in Indonesia is moderated by academics at 0.784, indicating a strong effect.
4. The research results show an influence of innovation, internal environment, external environment, raw materials, and networking on agility strategies and the performance of the traditional medicine industry in Indonesia is moderated by government and academic policies at 0.784, indicating a strong effect.

5. Discussion

5.1. The Impact of Innovation on Company Performance

Innovation is defined as the application of new ideas to create value for the business (Fahmilia, 2018). Company performance is essential for management to evaluate company performance and plan future goals (Hardiyanto et al., 2004; Kusmayadi, 2008; Mardina, 2018). The research results show that innovation has a positive effect on company performance (Fahmilia, 2018; Hardiyanto et al., 2004; Kusmayadi, 2008; Mardina, 2018). Companies with a higher level of agility tend to be able to improve their performance oriented toward on-time delivery and market release so that more agile companies can achieve higher performance than less agile companies.

5.2. The Effect of Raw Materials on Company Performance

According to Ristono (2013) and Assauri (2016), raw material supply is a commonly used model to solve problems related to efforts to control raw materials and finished goods in a company's activities. Company performance is essential for management to evaluate company performance and plan future goals (Hardiyanto et al., 2004; Kusmayadi, 2008; Mardina, 2018).

The research results show that raw materials have a positive effect on company performance (Hardiyanto et al., 2004; Kusmayadi, 2008; Mardina, 2018; Ristono, 2013; Assauri, 2016). Raw materials are the initial production for each product produced by the company. The quality raw materials are obtained from the work process of each company's research. Therefore, based on this research, it can be concluded that capital and raw materials have a direct and significant effect on company performance. Where good company performance will result in good customer satisfaction and maximum product quality.

5.3. The Influence of Internal Environment on Company Performance

The internal environment actors who are directly associated with the external environment influence the organization performance (Buchori & Saladin, 2010; Wispandono, 2010). The assessment of corporate performance is of significant importance for management to strategize for future objectives (Hardiyanto et al., 2004; Kusmayadi, 2008; Mardina, 2018).

The findings of this study indicate that, as hypothesized, the internal milieu positively influences the performance of an organization (Prayogo & Anitra, 2020; Riyanto, 2018; Wahyudi et al., 2018). Based on this explanation, it can be concluded that the internal environment has an influence on company performance. However, it can be seen that most research on the influence of internal environmental variables on company performance has not been carried out in the Traditional Medicine Industry. This shows that there are differences between the objects in this research and previous research. Therefore, this research can be unique in itself and can provide a novelty for science.

5.4. The Effect of External Environment on Company Performance

The external environment consists of opportunity and challenge variables that are outside the organization and cannot be controlled in the short term by management. Based on the dimensions of the external environment described in this research according to Hunger & Wheelen (2012) and Wispandono (2010). The assessment of corporate performance is of significant importance for management to strategize for future objectives (Hardiyanto et al., 2004; Kusmayadi, 2008; Mardina, 2018).

The research results show that the external environment has a positive effect on company performance (Riyanto, 2018; Usman et al., 2016). Based on this explanation, it can be concluded that there is an influence between the external environment and company performance. However, it can be seen that most research on the influence of internal environmental variables on company performance has not been carried out in the Traditional Medicine Industry. This shows that there are differences between the objects in this research and previous research. Therefore, this research can be unique in itself and can provide a novelty for science.

5.5. The Effect of Networking on Company Performance

As part of the socioeconomic activity of networking, entrepreneurial organizations identify, generate, and pursue business opportunities. Existing as a social network, a business network serves as the foundation for commercial operations (Permana, 2020). A period's worth of an organization's actions or activities can be summarized in the term "performance" (Hanuma, 2011).

The findings of this study indicate that networking positively impacts business performance (Kusmayadi, 2008), and a company that wants to survive and emerge as a winner in a competitive business (*comparative advantage and competitive advantage*) must create a comprehensive corporate policy pattern that not only looks at the company's current organization but is also

oriented toward achieving competitive advantage in the future. The increasingly fierce competition in the future requires the creation of new strategies in the form of specific and adequate strategy patterns.

5.6. The Effect of Agility Strategy on Company Performance

An agility strategy places significant importance on the capacity of organizations to assess circumstances and make decisions regarding the implementation of novel service strategies in a comprehensive manner while accommodating the demands and preferences of customers (Nurcholis, 2021). To enhance performance with respect to on-time delivery and market release, organizations that possess a greater degree of agility are generally capable of attaining superior results compared to those that are less agile.

5.7. The Effect of Government Policy on Company Performance

Policies are principles or ways of acting chosen to guide decision-making. The government is the power to govern a country (region of a country) or the highest body that governs a country (such as a cabinet is a government) (Narawi, 2009; Rohman, 2016). Government policy has a positive effect on company performance because there are several regulations that hinder performance. There are two Minister of Health Regulations that have hampered the development of the traditional herbal medicine industry in Indonesia, namely Minister of Health Regulation No.006 of 2012 concerning permits for traditional medicines and Minister of Health Regulation No.007 concerning registration of traditional medicines, so it is necessary to carry out significant outreach and assistance so that traditional medicines can be developed and accepted by the public.

5.8. The Influence of Academics on Company Performance

Academics in the field of marketing to promote business progress and development (Yuberti, 2014). Academics have a positive influence on performance because Academics is a system that provides service information in the form of data in matters related to academics.

5.9. Government and Academic Policies

The influence of innovation, internal and external environments, raw materials, and networking on agility strategies and the performance of the traditional medicine industry in Indonesia is moderated by government and academic policies.

Government policy has a positive effect on company performance because there are several regulations that

hinder performance. There are two Minister of Health Regulations that have hampered the development of the traditional herbal medicine industry in Indonesia, namely Minister of Health Regulation No.006 of 2012 concerning permits for traditional medicines and Minister of Health Regulation No.007 concerning registration of traditional medicines, so significant outreach and assistance are needed so that traditional medicines develop and can be accepted by the public (Fahmilia, 2018; Hardiyanto et al., 2004; Kusmayadi, 2008; Mardina, 2018).

Academics is a system that provides service information in the form of data on matters related to academics. Where in this case, the services provided are, for example, data storage and the like based on research results sourced from Ajiyati, which show that academics have a positive influence on company performance. Company performance requires several things related to academics; thus, to support good company performance, the application of academics in company performance is quite good (Fahmilia, 2018; Hardiyanto et al., 2004; Kusmayadi, 2008; Mardina, 2018).

Strategy Agility underscores the criticality of organizations to comprehensively evaluate circumstances and select courses of action to execute novel service strategies in response to evolving consumer demands and preferences (Nurcholis, 2021).

Based on this, it shows that innovation, internal and external environments, raw materials, and networking influence agility strategies and the performance of the

traditional medicine industry in Indonesia, moderated by government and academic policies.

5.10. Implementation of Strategic Agility and Business Model Innovation (BMI with the TAIDA Concept)

Based on scenario planning, it is an effective strategic planning tool for medium- and long-term planning under uncertain conditions. Meanwhile, the method used in preparing scenario planning is using the TAIDA method (Tracking, Analyzing, Imaging, Deciding and Acting) which is a framework that can be used to prepare scenario planning projects for public and private organizations so that the IoT industry can be known.

The strategy of PT Industri Jamu and Pharmacy is based on the results of the BCG matrix, which is in the *Question Marks quadrant*. This refers to a business unit or product with substantial growth potential but a relatively small market share. In many cases, revenue generated falls short of expenditures incurred (expenses exceed income). However, because the growth prospects are very rapid, so it has the potential to turn into a Star, the strategy that can be taken is to maintain the *question mark position* or become a star, namely, by building a strategy.

The expectation and reality matrix are taken from the bootstrapping value of the outer loading value, where the original sample value describes expectations, while the sample mean value describes reality using the following matrix (Table 5).

Table 5. Expectations and realities based on overloading values (developed by the authors)

	Hope	Reality		Hope	Reality
AGIL2	0.922	0.923	INV3	0.804	0.784
AGIL3	0.946	0.944	INV4	0.837	0.812
AGIL4	0.945	0.946	KIN4	0.933	0.933
AGIL5	0.879	0.862	KIN5	0.921	0.921
AGIL6	0.812	0.794	KIN6	0.857	0.856
AKAD1	0.925	0.916	KIN7	0.921	0.919
AKAD2	0.799	0.768	KIN8	0.874	0.872
AKAD3	0.886	0.849	NET1	0.715	0.673
AKAD4	0.845	0.819	NET2	0.847	0.88
BAKU1	0.964	0.963	NET3	0.755	0.723
BAKU3	0.917	0.905	PEM1	0.765	0.782
EX10	0.945	0.94	PEM10	0.784	0.728
EX5	0.793	0.792	PEM2	0.822	0.777
EX9	0.929	0.922	PEM7	0.827	0.746
INT1	0.876	0.873	PEM8	0.855	0.774
INT2	0.715	0.716	PEM9	0.724	0.653
INT4	0.877	0.874	Agility Strategy * Government Policy <- Moderating Effect 1 (government)	0.69	0.836
INT6	0.911	0.908	Agility Strategy * Role of Academics <- Moderating Effect 2 (academics)	1,135	1,088
INV2	0.882	0.875			

When drawn in graphic form

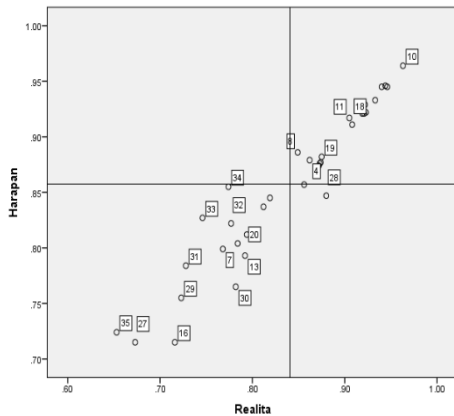


Figure 3. Graphical representation of expectation and reality (developed by the authors)

a. Market penetration strategies in the form of adjusting prices, increasing promotions, improving product quality, increasing the use of marketing campaign methods, determining appropriate distribution channels, implementing barriers to entry methods, innovating, diversifying products, and collaborating with other companies.

b. Market development strategy. The advantages of a market development strategy include getting new customers, increasing sales, and increasing company growth. If implemented successfully, this strategy can provide some companies with a competitive advantage.

c. Product development is the process of generating new ideas and concepts to create new products. Product development involves modifying existing products or introducing new products.

The relationship between the TAIDA model and the development of the traditional medicine industry with an agility strategy to improve iot performance.

This research will focus on the application of strategic agility and business model innovation (BMI) carried out using the TAIDA concept, where after carrying out statistical calculations and fgd with related parties, it shows that it is in the quadrant of *Question Marks*, which means a product or business unit that has high growth prospects but its market share is still very low.

PT Industri Jamu and Pharmacy’s strategy is based on the results of the BCG matrix, which is in the *Question Marks quadrant*, which indicates products or business units that have high growth prospects but their market share is still very low, so if they develop a reference model for implementing agile. This model provides a tool for companies to audit their companies to determine their level of agility and provides an integrative definition of agility components that can be used by managers as a guide.

To be able to implement agile successfully, there are several important factors that companies must pay attention to: government regulations, *Customer*

prosperity, People and information, cooperation, and fitness for change Reengineering.

6. Conclusions and Implications

6.1. Conclusion

This study concludes that the performance of companies in Indonesia’s traditional medicine industry can be significantly enhanced through the implementation of innovation, raw material availability, networking, and supportive external and internal environments. Agility strategies, which encompass the ability to respond swiftly and efficiently to market changes and consumer needs, also positively impact company performance. Additionally, government policies and the involvement of academic institutions play a crucial role in supporting these factors, strengthening interagency collaboration, and promoting technological advancements to boost operational efficiency and resilience.

This research emphasizes the importance of an ecosystem approach and scenario planning based on the TAIDA (Tracking, Analyzing, Imaging, Deciding, and Acting) framework for the development of the traditional medicine industry. By utilizing a mixed-methods approach that integrates descriptive statistical analysis, SEM-PLS, literature review, focus group discussions, and interviews, this study successfully identifies various factors affecting industry growth and provides alternative strategies for enhancing performance and adaptability in the future.

The findings of this research offer new insights into the development of Indonesia’s traditional medicine industry and present strategies that can strengthen the industry’s resilience and effectiveness in facing future crises. By adopting flexible and adaptive strategies that include logistical, technological, and collaborative efforts, the traditional medicine industry can improve its operational performance and resilience while also contributing to the enhancement of national defense capabilities in similar contexts.

The effectiveness of these approaches can be evidenced by several key outcomes:

- Enhanced Performance through Strategic Agility:** Adopting agility strategies, as outlined in the TAIDA framework, has been shown to improve companies’ responsiveness to market changes and consumer needs. This responsiveness is crucial in a dynamic environment, allowing companies to maintain and even enhance their market positions despite external uncertainties.

- Impact of Innovation and Networking:** This research highlights how innovation and strong networking capabilities contribute to improved company performance. By fostering a culture of continuous innovation and leveraging networks for knowledge and resource sharing, companies can

develop more effective products and services better aligned with market demands.

3. **Supportive Role of the Government and Academia:** Government policies and academic involvement have been identified as critical to supporting the traditional medicine industry. These elements provide the regulatory framework and research support necessary to drive innovation and ensure the industry can meet modern standards and consumer expectations.

5.2 Implications

This research highlights several important implications for the traditional medicine industry in Indonesia:

1. **Quality Control and Standardization:** Industry associations must implement and enforce quality standards for herbal medicines to address the proliferation of counterfeit products.

2. **Consumer Preferences and Education:** Companies should develop herbal products with flavors and packaging that attract a wider audience. Additionally, educational initiatives should be undertaken to inform consumers about the benefits and proper use of traditional medicine.

3. **Enhancing Customer Loyalty:** To boost customer loyalty, companies must employ modern, integrated marketing strategies that effectively engage and retain customers.

4. **Collaboration with the Government:** Industry leaders should work closely with the government to create and implement strategies that positively influence public perceptions of traditional medicine.

5. **Expanding Online Market:** Companies should adopt strategies to grow their customer base online by improving product variety, optimizing sales processes, offering excellent customer service, and setting competitive prices.

6. **Government Policy:** The government should focus on certification and transparency for herbal medicine industries to protect them from foreign competition. Effective collaboration with various sectors, including the traditional medicine cluster, is essential for strengthening the industry.

By addressing these implications, the traditional medicine industry in Indonesia can achieve sustainable growth and resilience, ensuring its continued relevance and competitiveness in both domestic and global markets.

Acknowledgements

We would like to express our deepest gratitude to all the individuals and organizations who contributed to the successful completion of this research. Our heartfelt thanks go to

- **Leadership and staff of traditional medicine companies in West Java** for their invaluable participation and insights during the data collection phase.
- **Dr. Syamsul Ma'arif and Dr. Widarto Rachbini** from Postgraduate Pancasila University Jakarta for their guidance and support throughout the research process.
- **Prof. Dr. Ahmad Hidayat Sutawidjaya** from the Faculty of Economics and Business, Esa Unggul University Indonesia, for his constructive feedback and continuous encouragement.
- **Government and academic institutions** for providing essential information and facilitating focus group discussions that enriched our study.

This research was supported by various stakeholders in the traditional medicine industry; this research would not have been possible without their cooperation and collaboration. We hope that our findings will contribute to the further development of the traditional medicine industry in Indonesia. Thank you for your invaluable contributions.

Data Availability Statement

The data presented in this study are available on request from the corresponding author.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

Author Contributions

EE, and SM contributed to the design and implementation of the research, WR and AHS to the analysis of the results and to the writing of the manuscript. EE and SM conceived the original and supervised the project.

Ethical Compliance

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

References

- [1] AFIFI, M. F., & MURHADI, W. R. (2023). Analysis of factors affecting business performance: Empirical study of hospitals in East Java. *Journal of*

- Entrepreneurship & Business*, 4(1), 2431. <https://doi.org/10.24123/jeb.v4i1.5362>
- [2] AL Taweel, I. R., & AL-HAWARY, S. I. (2021). The mediating role of innovation capability on the relationship between strategic agility and organizational performance. *Sustainability (Switzerland)*, 13(14), 1–14. <https://doi.org/10.3390/su13147564>
- [3] ALFARAJAT, J. M. (2023). Strategic agility and supply chain agility: Potential antecedents of SMEs' performance. *Uncertain Supply Chain Management*, 11(3), 875–884. <https://doi.org/10.5267/j.uscm.2023.5.011>
- [4] ALI, A., & DENEKE, S. (2020). Systematic literature review of soft system method use in information systems field. *African Conference on Information Systems and Technology, February 2021*. <https://digitalcommons.kennesaw.edu/acist/2020/allpapers/10>
- [5] AMPAULENG, A., & ABDULLAH, S. (2023). Organizational learning and private college performance: The role of capabilities' hierarchy. *Economics Business Accounting & Society Review*, 2(1), 10–19. <https://doi.org/10.55980/ebasr.v2i1.52>
- [6] ARIZQI, & KUSUMAWATI, D. A. (2023). The role of agile leadership and strategic agility planning in improving SMEs' performance in West Papua Indonesia Province. *Jurnal Pemikiran dan Penelitian Administrasi Bisnis dan Kewirausahaan*, 8(1), 105–123.
- [7] ASSAURI, S. (2016). *Manajemen Pemasaran*. Rajawali Pers.
- [8] BUCHORI, A., & SALADIN, D. (2010). *Manajemen Pemasaran* (1st ed.). CV Linda Karya.
- [9] CAMPBELL, J. M., & PARK, J. (2020). Extending the resource-based view: Effects of strategic orientation toward community on small business performance. *Journal of Retailing and Consumer Services*, 34, 302–308. <https://doi.org/10.1016/j.jretconser.2016.01.013>
- [10] CHAN, J. I. L., & MUTHUVELOO, R. (2020). Vital organisational capabilities for strategic agility: An empirical study. *Asia-Pacific Journal of Business Administration*, 12(3–4), 223–236. <https://doi.org/10.1108/APJBA-12-2019-0261>
- [11] CHENG, C. C. J., & HUIZINGH, E. K. R. E. (2020). When is open innovation beneficial? The role of strategic orientation. *Journal of Product Innovation Management*, 31(6), 1235–1253. <https://doi.org/10.1111/jpim.12148>
- [12] CHRISTENSEN-SALEM, A., ZANINI, M. T. F., WALUMBWA, F. O., PARENTE, R., PEAT, D. M., & PERRMANN-GRAHAM, J. (2021). Communal solidarity in extreme environments: The role of servant leadership and social resources in building serving culture and service performance. *Journal of Business Research*, 135(July), 829–839. <https://doi.org/10.1016/j.jbusres.2021.07.017>
- [13] FAHMILIA, S. F. (2018). *Pengaruh strategi inovasi terhadap kinerja operasional perusahaan pada UKM di Yogyakarta*. Universitas Islam Indonesia Yogyakarta.
- [14] GUTTERMAN, A. S. (2023). Organizational design. In *The SAGE Handbook of Organizational Behavior: Volume II - Macro Approaches* (Issue August). <https://doi.org/10.4135/9781849200455.n27>
- [15] HANUMA, S. (2011). Analisis balance scorecard sebagai alat pengukuran kinerja perusahaan X. *Inaque: Journal of Industrial and Quality Engineering*, 9(2), 109–117. <https://doi.org/10.34010/iqe.v9i2.4319>
- [16] HARDIYANTO, MARTASARI, C., & AGISMANTO, D. (2004). *Rekoleksi karekterisasi dan konversi plasma nutmah jeruk*. Lokal Penelitian Tanaman Jeruk dan Hortikultura Subtropik.
- [17] HUNGER, J. D., & Wheelen, T. (2012). *Strategic Management* (7th ed.). Prentice Hall.
- [18] KALAINANAM, K., TULI, K. R., KUSHWAHA, T., LEE, L., & GAL, D. (2021). Marketing agility: The concept, antecedents, and a research agenda. *Journal of Marketing*, 85(1), 35–58. <https://doi.org/10.1177/0022242920952760>
- [19] KALE, E., AKNAR, A., & BAŞAR, Ö. (2019). Absorptive capacity and firm performance: The mediating role of strategic agility. *International Journal of Hospitality Management*, 78(September), 276–283. <https://doi.org/10.1016/j.ijhm.2018.09.010>
- [20] KUSMAYADI, D. (2008). Pengaruh lingkungan bisnis terhadap kinerja perusahaan: Sebuah tinjauan teoritis dan empiris. *Akuntansi FE Unsil*, 3(2), 7.
- [21] LATIF, K. F., AFZAL, O., SAQIB, A., SAHIBZADA, U. F., & ALAM, W. (2021). Direct and configurational paths of knowledge-oriented leadership, entrepreneurial orientation, and knowledge management processes to project success. *Journal of Intellectual Capital*, 22(1), 149–170. <https://doi.org/10.1108/JIC-09-2019-0228>
- [22] MARDINA, T. (2018). Strategi transformasi dalam rangka meningkatkan kinerja perusahaan. *Value Journal of Management and Business*, 3(1), 392–408.
- [23] NARAWI, I. (2009). *Prilaku Administrasi Kajian Teori dan Praktis*. Itspers.
- [24] NURCHOLIS, L. (2021). *Agility dan daya saing UMKM*. Suaramerdeka.
- [25] PERMANA. (2020). *3 dimensi networking yang dimiliki pengusaha*. 123dok.
- [26] PRAYOGO, A., & ANITRA, V. (2020). Pengaruh lingkungan kerja eksternal terhadap kinerja

- karyawan pada PT. Salim Surya Phone di Samarinda. *Borneo Student Research (BSR)*, 1(3), 1999–2008.
- [27] RISTONO, A. (2013). *Manajemen Persediaan*. Graha Ilmu.
- [28] RIYANTO, S. (2018). Analisis pengaruh lingkungan internal dan eksternal terhadap keunggulan bersaing dan kinerja usaha kecil menengah (UKM) di Madiun. *Jurnal Ilmiah Manajemen Bisnis dan Inovasi Universitas Sam Ratulangi*, 5(3), 159–168. <https://doi.org/10.35794/jmbi.v5i3.21707>
- [29] ROHMAN, A. T. (2016). Implementasi kebijakan melalui kualitas pelayanan penerimaan pajak daerah dan implikasinya terhadap kepuasan masyarakat di dinas pendapatan kabupaten kuningan (Studi peraturan daerah kabupaten kuningan No. 15 Tahun 2010 tentang Pajak Daerah). *Universitas Pasundan*.
- [30] SHEREHIY, B., KARWOWSKI, W., & LAYER, J. K. (2020). A review of enterprise agility: Concepts, frameworks, and attributes. *International Journal of Industrial Ergonomics*, 37(5), 445–460. <https://doi.org/10.1016/j.ergon.2007.01.007>
- [31] TARBA, S. Y., FRYNAS, J. G., LIU, Y., WOOD, G., SARALA, R. M., & FAINSHMIDT, S. (2023). Strategic agility in international business. *Journal of World Business*, 58(2), 101411. <https://doi.org/10.1016/j.jwb.2022.101411>
- [32] TING, I. W. K., SUI, H. J., KWEH, Q. L., & NAWANIR, G. (2021). Knowledge management and firm innovative performance with the moderating role of transformational leadership. *Journal of Knowledge Management*, 25(8), 2115–2140. <https://doi.org/10.1108/JKM-08-2020-0629>
- [33] USMAN, C. M., LIANDO, D., & RUMAWAS, W. (2016). Pengaruh lingkungan internal dan eksternal organisasi terhadap kinerja pegawai (studi pada pegawai di kantor otoritas bandar udara wilayah VIII manado). *Jurnal Ilmu Sosial & Pengelolaan Sumberdaya Pembangunan*, 3(Maret-April), 19–33.
- [34] WAHYUDI, R., ADAM, M., & MAHDANI. (2018). Pengaruh kompetensi, motivasi, dan lingkungan internal terhadap minat berwirausaha serta dampaknya terhadap kinerja asosiasi pengusaha ekspor impor Aceh. *Jurnal Magister Manajemen Fakultas Ekonomi dan Bisnis Unsyiah*, 2(1), 68–77.
- [35] WISPANDONO, R. M. (2010). Pengaruh lingkungan bisnis terhadap kinerja pengrajin industri batik di Kabupaten Bangkalan. *Jurnal Mitra Ekonomi dan Manajemen Bisnis Universitas Trunojoyo*, 1(2), 152–162.
- [36] YUBERTI, M. Pd. (2014). Teori pembelajaran dan pengembangan bahan ajar dalam pendidikan. In *Psikologi Pendidikan* (Vol. 1).
- [1] AFIFI, M. F. 和 MURHADI, W. R. (2023)。影响企业绩效的因素分析：东爪哇省医院的实证研究。创业与商业杂志 · 4(1)，2431。<https://doi.org/10.24123/jeb.v4i1.5362>
- [2] AL Taweel, I. R. 和 AL-HAWARY, S. I. (2021)。创新能力在战略敏捷性和组织绩效关系中的中介作用。可持续发展 (瑞士) · 13(14)，1-14。<https://doi.org/10.3390/su13147564>
- [3] ALFARAJAT, J. M. (2023)。战略敏捷性和供应链敏捷性：中小企业绩效的潜在前因。不确定的供应链管理 · 11(3)，875-884。<https://doi.org/10.5267/j.uscm.2023.5.011>
- [4] ALI, A., 和 DENEKE, S. (2020)。信息系统领域软系统方法使用的系统文献综述。非洲信息系统和技术会议 · 2021年2月。<https://digitalcommons.kennesaw.edu/acist/2020/allpapers/10>
- [5] AMPAULENG, A., 和 ABDULLAH, S. (2023)。组织学习和私立大学绩效：能力层次结构的作用。经济学商业会计与社会评论 · 2(1)，10-19。<https://doi.org/10.55980/ebasr.v2i1.52>
- [6] ARIZQI 和 KUSUMAWATI, D. A. (2023)。敏捷领导和战略敏捷规划在提高印度尼西亚西巴布亚省中小企业绩效方面的作用。工商管理与创业思想与研究杂志 · 8(1)，105–123。
- [7] ASSAURI, S. (2016)。马纳杰门·佩玛萨兰·拉贾瓦利·佩斯
- [8] BUCHORI, A. 和 SALADIN, D. (2010)。营销管理 (第一版)。简历琳达·卡里亚。
- [9] CAMPBELL, J. M., 和 PARK, J. (2020)。扩展基于资源的观点：战略导向对社区的影响对小企业绩效的影响。零售和消费者服务杂志 · 34，302-308。<https://doi.org/10.1016/j.jretconser.2016.01.013>
- [10] CHAN, J. I. L., 和 MUTHUVELOO, R. (2020)。战略敏捷性的重要组织能力：一项实证研究。亚太工商管理杂志 · 12(3-4)，223-236。<https://doi.org/10.1108/APJBA-12-2019-0261>
- [11] CHENG, C. C. J., 和 HUIZINGH, E. K. R. E. (2020)。开放式创新何时有益？战略导向的作用。产品创新管理杂志 · 31(6)，1235–1253。<https://doi.org/10.1111/jpim.12148>

参考文献：

- [12] CHRISTENSEN-SALEM, A., ZANINI, M. T. F., WALUMBWA, F. O., PARENTE, R., PEAT, D. M. 和 PERRMANN-GRAHAM, J. (2021)。极端环境下的社区团结：仆人式领导和社会资源在建立服务文化和服务绩效中的作用。商业研究杂志 · 135(7 月) , 829-839 。
<https://doi.org/10.1016/j.jbusres.2021.07.017>
- [13] FAHMILIA, S. F. (2018) 日惹中小企业创新战略对公司运营绩效的影响。印度尼西亚伊斯兰大学日惹。
- [14] GUTTERMAN, A. S. (2023) 。组织设计。摘自《SAGE 组织行为手册：第二卷 - 宏观方法》(八 月 号) 。
<https://doi.org/10.4135/9781849200455.n27>
- [15] HANUMA, S. (2011)。平衡记分卡分析作为衡量公司绩效的工具 X. Inaque : 工业与质量工程杂志 · 9(2), 109-117 。
<https://doi.org/10.34010/iqe.v9i2.4319>
- [16] HARDYANTO , MARTASARI, C. 和 AGISMANTO, D. (2004)。橘种质的表征和转化的回顾。柑橘作物和亚热带园艺的地方研究。。
- [17] HUNGER, J. D., 和 Wheelen, T. (2012)。战略管理 (第七版)。普伦蒂斯·霍尔。
- [18] KALAI GNANAM, K. , TULI, K. R. , KUSHWAHA, T., LEE, L. 和 GAL, D. (2021)。营销敏捷性：概念、前因和研究议程。营销杂志 · 85(1) , 35-58 。
<https://doi.org/10.1177/0022242920952760>
- [19] KALE, E. , AKNAR, A. 和 BAŞAR, Ö. (2019) 。吸收能力和公司绩效：战略敏捷性的中介作用。国际酒店管理杂志 · 78 (九月) , 276-283 。
<https://doi.org/10.1016/j.ijhm.2018.09.010>
- [20] KUSMAYADI, D. (2008)。商业环境对企业绩效的影响：理论和实证回顾。Unsil FE 会计 · 3(2), 7。
- [21] LATIF, K. F. , AFZAL, O. , SAQIB, A. , SAHIBZADA, U. F. 和 ALAM, W. (2021)。知识导向型领导力、创业导向和知识管理流程通往项目成功的直接和配置路径。智力资本杂志 · 22(1), 149 - 170 。 <https://doi.org/10.1108/JIC-09-2019-0228>
- [22] MARDINA, T. (2018)。战略转型可以帮助您实现目标。管理与商业价值杂志 · 3(1), 392 - 408。
- [23] NARAWI, I. (2009) 。行政行为理论与实践研究。它的珀斯。
- [24] NURCHOLIS, L. (2021) 。中小企业的敏捷性和竞争力。独立之声。
- [25] PERMANA. (2020) 。企业家拥有的网络的三个维度。123dok。
- [26] PRAYOGO, A. 和 ANITRA, V. (2020)。外部工作环境对 PT 员工绩效的影响。三马林达的 Salim Surya 电话。婆罗洲学生研究 (BSR), 1(3), 1999 - 2008。
- [27] RISTONO, A. (2013) 。库存管理。科学之家。
- [28] RIYANTO, S. (2018)。茉莉芬市内外部环境对中小企业竞争优势和绩效的影响分析 Sam Ratulangi 大学商业管理与创新科学期刊 · 5(3), 159 - 168 。
<https://doi.org/10.35794/jmbi.v5i3.21707>
- [29] ROHMAN, A. T. (2016)。通过地区税收服务质量实施政策及其对库宁安地区税收服务社区满意度的影响 (库宁安地区关于地区税收的 2010 年第 15 号地区法规研究) 。巴顺丹大学。
- [30] SHEREHIY, B., KARWOWSKI, W. 和 LAYER, J.K. (2020)。企业敏捷性回顾：概念、框架和属性。国际工业人体工程学杂志 · 37(5), 445 - 460。
<https://doi.org/10.1016/j.ergon.2007.01.007>
- [31] TARBA, S. Y., FRYNAS, J. G., LIU, Y., WOOD, G., SARALA, R. M. 和 FAINSHMIDT, S. (2023) . 国际商务中的战略敏捷性。《世界商业杂志》 · 58(2) , 101411 。
<https://doi.org/10.1016/j.jwb.2022.101411>
- [32] TING, I. W. K., SUI, H. J., KWEH, Q. L., 和 NAWANIR, G. (2021)。知识管理与企业创新绩效以及变革型领导的调节作用。《知识管理杂志》 , 25(8) , 2115-2140 。
<https://doi.org/10.1108/JKM-08-2020-0629>
- [33] USMAN, C. M., LIANDO, D. 和 RUMAWAS, W. (2016)。组织内外部环境对员工绩效的影响 (对美娜多八区机场管理局办公室员工的研究) 。《社会科学与发展资源管理杂志》 · 3 (Maret-4 月) , 19-33。

-
- [34] WAHYUDI, R., ADAM, M., 和 MAHDANI. (2018)。能力、动机和内部环境对创业兴趣的影响及其对亚齐进出口商业协会绩效的影响。经济与商业学院管理硕士杂志 · Unsyiah, 2(1), 68 - 77。
- [35] WISPANDONO, R. M. (2010)。商业环境对邦卡兰县蜡染工业工匠绩效的影响。《经济与商业管理合作伙伴杂志》· 特鲁诺霍约大学 · 1(2), 152-162。
- [36] YUBERTI, M. Pd. (2014)。教育中的学习理论与教材开发。教育心理学 (第一卷)。