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Applying Resource-Based View for Competitive Advantage in the IT Industry: A Case Study on PT Metro Indonesian Software

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Abstract: This study examines how PT Metro Indonesian Software leverages its firm resources to build a competitive advantage in the IT industry. Using the Resource-Based View (RBV) framework and the VRIO model, the research identifies the role of physical capital, human capital, and organizational capital in shaping the company's competitive positioning. Data was collected through semi-structured interviews with key informants, including company directors and employees, as well as non-participatory observations. The study highlights that the company effectively utilizes its technological infrastructure, skilled human resources, and agile development methodologies to maintain efficiency and innovation. However, challenges such as maintaining employee discipline, adapting to fast-changing industry trends, and cybersecurity threats remain critical considerations. The findings suggest that a continuous evaluation and strategic resource allocation are essential for sustaining long-term competitive advantage in the dynamic IT sector.

Keyword: Resource-Based View, VRIO, Competitive Advantage, IT Industry, Software House, Human Capital, Organizational Strategy.

INTRODUCTION

The information technology (IT) industry is one of the sectors that plays an important role in digital transformation in Indonesia. This is marked by the rapid development of information and communication technology and increasing investment in technology by economic actors (Bachtiar et al., 2020). As one of the countries with the largest number of internet users in the world with more than 220 million users (Haryanto, 2024), the need for access to technology and information in various sectors continues to increase, ranging from education, trade, government and other sectors.

The IT industry has become the main driving force of digital transformation in Indonesia by helping rapid industrial growth, driving efficiency in government and business operations, and developing an important foundation towards a technology-based economy (Badan Pusat Statistik, 2023). This is evidenced by the increase in Indonesia's ICT Development Index (IDI) from 5.76 in 2021 to 5.85 in 2022 (Badan Pusat Statistik, 2023), which shows that improvements in Indonesia's ICT development are driven by the increasing

use of ICT by the community (Badan Pusat Statistik, 2023). This illustrates how the level of information and communication technology development, the digital divide, and the potential for ICT development in Indonesia are increasingly growing, thus showing how important this industry is in Indonesia in the future.

Table 1. Indonesia ICT Development Index and Subindex, 2021—2022

Subindex	ICT Development Index		Increase (Points)	Growth (%)
	2021	2022		
ICT Access and Infrastructure	5.76	5.80	+0.04	0.69
ICT Use	5.66	5.82	+0.16	2.83
ICT Skills	5.97	6.00	+0.03	0.50
ICT Development Index	5.76	5.85	+0.09	1.56

Source: (Badan Pusat Statistik, 2023)

As a large and growing industrial ecosystem, the IT industry has various types of sub-sectors that have different business activities, but still have a main focus on the development, implementation, and commercialization of technology (Amartha, 2024). Among the many sub-sectors in the IT industry, there are Tech Hardware, Software-as-a-Service (SaaS), Cloud Solutions Provider (CSP), Independent Software Vendor (ISV), Data Center, IT Consultant, Software House, Social Media, and E-commerce (Balius, 2023).

As one of the sub-sectors in the IT industry, software houses or software development companies have an important contribution in driving digital transformation in various other industrial sectors, because various companies rely on software houses as technology partners to implement the transformation process (Triyani et al., 2024). Software houses here play a role in providing application and web development services, custom software, and technology solutions tailored to the specific needs of clients in each project. Typically, this type of company consists of a team of software developers, UI/UX designers, system analysts, and other IT professionals who work together to design, develop, and maintain various types of software, from desktop applications to web and mobile applications. This makes human resources the most valuable asset in a software house (Małachowski, 2024).

In the midst of the important role of software houses in the development of the IT industry, they also face various challenges in operating in an increasingly competitive business environment. Among these challenges can come from within the company or from market competition conditions, such as inadequate development team expertise, a system of cooperation with various partner vendors in project development, to a constantly changing business environment that requires companies to respond to these changes quickly (Nayda, 2024). In addition, Springer & Miler (2022) explain that there are various problems that are often experienced by this software house, namely determining the value of the product needed by customers, company strategies and priorities that often change and are unclear, inappropriate team management, and lack of user research.

Various challenges, both from the internal and external environmental conditions of this company, can hinder the development of this software house, so an appropriate strategic approach is needed to face these challenges. Vigfússon et al. (2024) explained that the resource-based view (RBV) and market-based view (MBV) are the dominant and most successful theoretical perspectives in the field of strategic management. This resource-based view perspective emphasizes the importance of internal resources in achieving competitive advantage by providing a structural approach to analyzing a company's resources and capabilities (Lin & Wu, 2014). El Shafeey & Trott (2014) explained that this resource-based view perspective also refers to the VRIO model, which analyzes a company's internal resources

and capabilities based on valuable, rare, inimitable, and exploited by the organization (Barney, 2002).

The market-based view is a perspective that offers a perspective and achievement of competitive advantage that refers to Porter's Five Forces Model (Vigfússon et al., 2024). This model analyzes the company's position in the market based on five competitive forces that can shape strategy, namely the threat of new entrants, bargaining power of suppliers, bargaining power of buyers, threat of substitute products or services, and rivalry among existing competitors (Porter, 2008). The market-based view assumes that external factors are the main drivers of company performance to gain competitive advantage.

Other studies show that internal and external factors are important for creating competitive advantage (Steininger et al., 2011), which can also be a solution to various challenges for competition and business development. Vigfússon et al. (2024) explained that internal and external factors should not be separated because these two perspectives offer complementary viewpoints to develop strategic theories in creating competitive advantage. However, the perspective from the resource-based view actually uses external and internal knowledge to improve company performance by optimizing opportunities and reducing uncertainty and risk for the company (Kero & Bogale, 2023).

The resource-based view itself emerged as a response to the market-based view theory by Porter (1980). Barney (1991) argued that the resource-based approach is a better way to explain why some companies continue to survive in the long term. He criticized Porter's (1980) opinion which only focused on external environmental factors. Therefore, Barney (1991) proposed the resource-based view perspective as an evolution of the market-based view by Porter. In addition, (Estensoro et al., 2022; Ozdemir et al., 2023) explained that this resource-based view can also analyze the company's internal and external factors to achieve its competitive advantage. This shows that these two perspectives are closely related, and using the resource-based view perspective alone already covers the perspective of the market-based view.

The use of this resource-based view perspective is also in accordance with the context of software houses, where based on the explanation of the challenges faced by this sub-sector, it shows that there are internal and external factors that influence the development of this business, such as development team resources, team management, company strategy, and industry knowledge as strategic assets that can create competitive advantage. In addition, there is also the ability to respond to external market dynamics, such as the ability to adapt to market developments, competitor analysis, and business development potential viewed from a resource-based view perspective. The use of this resource-based perspective provides a balanced approach in facing internal challenges while responding to external pressures, thus becoming an effective strategy for software houses to create their respective competitiveness.

In the midst of the relevance of this perspective to the development of software house businesses, more attention needs to be paid to the local context, such as the IT ecosystem in Padang City. As the center of the economy and education in West Sumatra, Padang City has great potential to develop the IT industry, including software house companies. Badan Pusat Statistik (2023) describes the development data of the Information and Communication Technology Development Index (IDI) in West Sumatra which is increasingly growing, where the figure reached 5.92 in 2021 and 6.01 in 2022. This figure is around 2.7 percent higher than the index figure in Indonesia in general.

Table 2. West Sumatra ICT Development Index and Subindex, 2021—2022

Subindex	ICT Development Index		Increase (Points)	Growth (%)
	2021	2022		

ICT Access and Infrastructure	6.07	6.11	+0.04	0.66
ICT Use	5.43	5.61	+0.18	3.31
ICT Skills	6.59	6.6	+0.01	0.15
ICT Development Index	5.92	6.01	+0.09	1.52

Source: (Badan Pusat Statistik, 2023)

In addition, Badan Pusat Statistik Sumatera Barat (2024) also explains the potential sectors in West Sumatra that must be developed to boost the regional economy. The report explains that the information and communication sector is the second most potential sector in West Sumatra, after transportation and warehousing, where Padang City is the most potential area compared to other areas in West Sumatra for this sector. This is also supported by data from Badan Pusat Statistik Sumatera Barat (2024) where the percentage of Padang City's Gross Regional Domestic Product in the information and communication sector reached 32.38 percent, the highest among 19 cities/regencies in West Sumatra. The existence of other potential supporting sectors in Padang City also strengthens the phenomenon of the growth of the IT industry, especially the software house sub-sector to continue to grow.

Amidst the phenomenon of the growing potential of the IT industry, including the software house subsector in Padang City, PT Metro Indonesian Software is present as one of the important players in the development of this industry, which competes with other software house companies in Padang City. Established since 2023, PT Metro Indonesian Software has successfully completed dozens of IT projects for various companies, ranging from micro-sector businesses, educational institutions, government institutions, to startups in Padang City. However, the development of the company is certainly not without challenges. This company had difficulty in finding qualified IT talent due to limited technical resources in the area. However, it turns out that this phenomenon does not only occur in the company or in Padang City, but also in Indonesia in general, where Indonesia lacks IT talent of around 4 million people in 2023 according to the Ministry of Communication and Information (Mumpuni, 2024).

PT Metro Indonesian Software also experiences several other obstacles in general, such as a relatively limited local market, especially for clients from the small and medium sectors who have limited budgets in developing the IT sector. The low adoption of technology by MSMEs in this area is also a challenge that needs to be overcome in the development of this software house business, including PT Metro Indonesian Software. In addition, as a company that has only been running for almost 2 years, PT Metro Indonesian Software also experiences challenges in competing with other software house companies that have been operating for longer and already have a big name. To face these challenges, of course, this company needs to develop the right strategy so that this company can take advantage of the development of the IT sector in Padang City in particular.

Therefore, seeing these problems, this study focuses on PT Metro Indonesian Software as one of the software house companies in Padang City and is expected to contribute to the development of the company in particular and business development in this sub-sector in general. Previous studies tend to discuss the IT industry in general without paying special attention to the dynamics of sub-sectors such as software houses in particular. In fact, this sector is a very dynamic sector in its development so that a resource-based view perspective is needed that highlights the unique advantages of each company. This study aims to fill this gap by developing a strategic framework based on the application of a resource-based view that is relevant to PT Metro Indonesian Software in particular.

METHOD

This study uses a qualitative approach with a case study method to explore in depth the phenomena that occur in software house companies in Padang City. According to Sugiyono (2020), the case study method is a type of qualitative research, where researchers conduct in-depth exploration of programs, events, processes, activities, towards one or more people. The advantage of the case study method lies in its ability to combine data from various sources, such as interviews, observations, and documentation, resulting in a comprehensive and in-depth analysis. This method is particularly relevant for research that places context as a key element, as it facilitates the examination of real cases by collecting data from various sources and providing a comprehensive picture of the themes and specific details of the case (Vigfússon et al., 2024), where internal and external phenomena of the company are explored in their natural environment. In this study, the case study approach is applied to investigate contemporary phenomena in a real-life context (Shanks & Bekmamedova, 2018), namely to understand the dynamics of PT Metro Indonesian Software. By designing a single case study with a descriptive case study type, this study examines PT Metro Indonesian Software as one of the software house companies in Padang City to gain broader insights into how this company utilizes its resources and faces local challenges. This descriptive case study approach can describe the real-life phenomena and contexts that occur (Baxter & Jack, 2008) in this company more realistically. This approach is in accordance with the objectives of this study in describing how this company utilizes its resources and responds to external environmental factors in its efforts to form its competitive advantage and identify the challenges it faces.

RESULT AND DISCUSSION

Results

Evaluation of Competitive Advantage through the VRIO Model

The VRIO Model is a strategic framework developed by Barney (1991) and is used to evaluate a company's competitive advantage based on four main criteria: Valuable (V), Rare (R), Costly to Imitate (I), and Exploited by Organization (O). If a resource meets these four criteria, then the company can have a sustained competitive advantage (Barney, 1991). Based on the results of interviews with five informants and observations made, an evaluation was carried out on three main aspects of firm resources, namely Human Capital Resources, Organizational Capital Resources, and Physical Capital Resources. Each aspect of these three resources is assessed based on the VRIO Model to determine the extent to which they contribute to forming the company's competitive advantage.

Physical Capital Resources

Table 3. VRIO Model on Physical Capital Resources

Criteria	Evaluation	Description
Valuable (V)	✔	<ol style="list-style-type: none"> The latest coding technology helps improve security and makes software products more modern in terms of appearance and features. Up-to-date social media as a branding strategy and also as a means of promotion for the company.
Rare (R)	✘	<ol style="list-style-type: none"> There are several local IT companies, especially in Padang City, that are quite up to date and have a deep understanding of the latest technology in coding.

			2. Some local IT companies in Padang City are indeed less active in promoting on social media.
Costly to Imitate (I)	✗		1. The latest coding technology can be learned by competitors, although it takes time to reach the same level of expertise. 2. Social media management strategies are relatively easy to learn if competitors are aware of the effectiveness of this strategy.
Exploited by Organization (O)	✓		Companies actively utilize this technology to support their marketing and operational activities.

Physical Capital Resources in this study include physical infrastructure and technology used in the company's operations. In interviews with informants and observations conducted by researchers, it was found that the company has used the latest and safer coding technology, namely the use of programming languages with the latest frameworks and higher levels of security, such as ReactJS and Laravel. As well as the latest markup languages, such as HTML5, which are more modern and have minimal errors. In addition, the ability of active social media management and updates with the latest trends has succeeded in becoming a means of branding and promotion to the general public. This also increases productivity for the marketing activities and business operations of this company according to informants. Therefore, these resources can be said to be valuable.

However, these physical capital resources cannot be categorized as rare, because similar technology has actually been implemented by some of the company's competitors in Padang City, although in terms of social media management this company is quite superior but this is not rare because there is also one of its competitors in Padang City who is also active on social media. In addition, the technology adopted by PT Metro Indonesian Software is not classified as costly to imitate, because this technology is relatively easy to learn and access by competitors so that it can be imitated, although it takes more time for them to match the level of this company. However, this company has been able to exploit physical capital resources effectively to support its overall business operations.

Therefore, physical capital resources in this company only provide competitive parity, which means that these resources are valuable to the company in facing competition but are not rare and difficult to imitate by other competitors. This also means that this company is at an equal level of competition with competitors who have similar resources. Therefore, this company needs to explore these resources in more depth, also considering the conditions of the external environment.

Human Capital Resources

Table 4. VRIO Model on Human Capital Resources

Criteria	Evaluation	Description
Valuable (V)	✓	Employees have high skills in IT according to industry needs, which allows them to produce high-quality products. Proven by the experience of qualified employees, supported by various trainings facilitated by the company.
Rare (R)	✓	Employees are recruited through the internal IT community and also through a well-designed internship program that is difficult for competitors to implement.

Costly to Imitate (I)	✓	A well-conceived employee development system through internal communities and internship programs requires time and significant investment for competitors to imitate.
Exploited by Organization (O)	✓	The company has an adaptive, collaborative, and flexible HR management strategy, such as working hours that are adjusted to the work patterns of IT talent and a comfortable work culture for employees.

Human capital resources in this company are an important factor in creating competitive advantage. Based on the results of interviews and observations conducted by researchers, human capital resources in this company meet the criteria of valuable because the skills and expertise of the company's human resources are very relevant in creating added value. This is because this company has a high-quality workforce, most of whom are recruited through internship and community programs. Employees have skills that meet industry standards, even tending to be above standard compared to their competitors in Padang City, although many of them have not completed formal higher education.

In addition, the uniqueness of the team consisting of individuals with high experience and competence makes this resource rare in the market. In terms of costly to imitate, the company's ability to find IT talent through communities and internship programs that are well-conceived, also supported by various trainings facilitated by the company, is something that is difficult for competitors to imitate. This is mainly due to factors of experience and organizational learning, which allow the company to allocate human resources more optimally. This company has also succeeded in exploiting this advantage by implementing an effective work system, good talent management, and a sustainable HR development strategy.

Therefore, human capital resources at PT Metro Indonesian Software can be classified as resources with sustainable competitive advantage. This is because these resources fulfill the four aspects of VRIO, which allows the company to remain superior amidst industrial competition.

Organizational Capital Resources

Table 5. VRIO Model on Organizational Capital Resources

Criteria	Evaluation	Description
Valuable (V)	✓	A work culture that adopts the Agile Development method, by carrying the concept of adaptability, collaboration, and flexibility, but remains goal oriented, creating a comfortable and more efficient work environment for employees.
Rare (R)	✓	A work culture that is very flexible yet goal oriented is rarely found in other companies, even among local competitors.
Costly to Imitate (I)	✓	It takes a lot of time and effort for companies to create a work culture with this Agile method, and it also depends on the quality of the human resources recruited by a company.
Exploited by Organization (O)	✓	The company actively utilizes this system to support business growth and maintain competitive advantage.

Organizational capital resources contribute greatly to the competitive advantage of this company. These resources include the work culture, management system, and organizational structure implemented by the company. Based on the results of interviews and observations conducted by the researcher, the company has an Agile work culture, which carries the concept of adaptability, collaboration, and flexibility. This work culture allows the company to adapt to change, cooperation, and flexibility in decision making, but remains oriented towards targeted results, supported by strict control. The findings of the study also show that factors such as agile development, goal-oriented management, and project management systems help companies manage operations more effectively and efficiently. Therefore, organizational capital resources are categorized as valuable because they increase organizational productivity and effectiveness.

The rare factor in these resources is also fulfilled, because not all companies have the same project and resource management approach, especially in the implementation of agile development which allows high flexibility. Even compared to its competitors in Padang City, the work culture implemented by PT Metro Indonesian Software is not implemented by its competitors, especially in terms of flexibility of working hours. In addition, these resources are also difficult to imitate because the company culture in general tends to be more rigid, especially in terms of flexibility of working hours and workplace. This makes the resources in this company categorized as costly to imitate.

This company is also able to exploit these resources well through a system that has been implemented consistently. The company tries to instill this Agile work culture system through training its employees until they are accustomed to implementing it. Thus, the organizational capital resources owned by PT Metro Indonesian Software provide a sustainable competitive advantage because the work structure and culture are innovative and difficult to imitate.

Based on the evaluation results using the VRIO Model, Physical Capital Resources at PT Metro Indonesian Software provide competitive parity because although they are valuable to the company, these resources are not classified as rare and can also be imitated by competitors. However, this can still be improved by understanding more deeply the potential of these untapped resources, by considering external environmental factors such as competitive conditions and client needs. In addition, Human Capital Resources and Organizational Capital Resources are the main factors in creating sustainable competitive advantage in this company. With the results of this evaluation, it can be concluded that the company's main competitive advantage comes from the way they recruit, train, and manage human resources. Community-based systems and flexible work culture are foundations that are difficult for competitors to imitate, giving the company a strong position in the IT industry.

Discussion

This study was designed using a single case study method with a descriptive qualitative approach. This case study was conducted on PT Metro Indonesian Software to describe how this company utilizes firm resources, responds to external environmental factors, and faces these challenges, in its efforts to form a competitive advantage. To examine this, the researcher conducted semi-structured interviews with five informants according to predetermined criteria, by listening to the informants until they gave the same and repeated opinions, and expanding questions based on the conditions of each informant's answers, until the data became saturated. The data saturation was used by the researcher in processing the data into a conclusion, and supported by non-participant observation by the researcher at the company for several days. The data was then analyzed by the researcher using the thematic analysis method.

This study began with the preparation of a semi-structured interview guide, where each question represented all the parameters that the researcher had determined for this study. Then the questions were asked directly to the informants, assisted by a recording device to record

the conversation during the interview. The five informants in this study were three board of directors and two ordinary employees. The data obtained were then analyzed using the help of NVivo 15 software. By referring to the predetermined parameters, the researcher grouped the codes obtained from the interview results into larger themes, which were then grouped into the previous parameters.

In the data analysis process, initially the researcher obtained a word frequency query which then produced a word cloud in the form of keywords that were often expressed by all informants during the interview. Then the researcher read the data repeatedly and carefully until the researcher made 34 initial codes by considering the keywords that often appeared during the interview. Then the 34 initial codes were analyzed and reviewed so that the researcher could group them into 9 final themes that represented the 3 firm resources parameters that had been previously determined for this study. The first parameter is physical capital resources which produced 2 final themes, namely digital tools and physical tools. Then the second parameter is human capital resources which produced 3 final themes, namely background similarity, industrial needs, and training and development. And the third parameter is organizational capital resources which produced 3 final themes, namely agile development, goal oriented, and project management system.

To answer the two problem formulations in this study, the researcher conducted a data analysis that produced answers to the two problem formulations in this study, referring to the Resource-Based View (RBV). In accordance with the formulation of the problem in Chapter 1, the first question is about how PT Metro Indonesian Software utilizes internal resources and responds to external environmental factors in its efforts to form a competitive advantage.

In the context of the first formulation of the problem, the results of this study indicate that PT Metro Indonesian Software implements its business strategies by relying on the firm resources they have. Then the three parameters of firm resources used in this study are measured by the VRIO Model by Barney (1991). As a result, PT Metro Indonesian Software has a sustainable competitive advantage in terms of human capital resources and organizational capital resources, but only has competitive parity in terms of physical capital resources. This is because human capital resources and organizational capital resources meet the criteria for resources that are valuable, rare, costly to imitate, and exploited by the organization. This is different from physical capital resources, which meet the criteria for valuable and exploited by the organization but are not classified as rare and costly to imitate.

From the results of the data analysis, it shows that in terms of physical capital resources, PT Metro Indonesian Software relies on digital tools and physical tools as their physical capital resources. These digital tools include the Figma application used to create designs, markup languages using HTML5, programming languages using PHP Laravel and ReactJS for websites and Flutter and Kotlin for mobile applications, Google Calendar as a reminder of their tasks, social media and company websites as a means of promotion and building trust with clients, and applications as their entertainment in working on projects such as Spotify. The physical tools that this company uses are laptops to run the digital tools, offices as a place for employees to work on projects and meet with clients, to office locations which are supporting factors to increase the credibility of their company in the eyes of clients.

In terms of human capital resources, the results of the data analysis show that PT Metro Indonesian Software has advantages in terms of developing and managing its human resources. This company recruits employees through internship programs and IT communities, which allow them to obtain the best talent with skills that have been adjusted to industry needs. The IT community in question is the IT community that has collaborated with this company, such as the Google Development Student Club, Andalas University and also the internal community built by this company, called the Metro Institute. The employee recruitment process carried out by this company is also based on the portfolio of prospective employees in working on previous

IT projects and also based on recommendations from people they trust or also known as employee referrals.

In addition, employees who have gone through the recruitment process are then given an internal training program to create HR who are not only competent according to industry standards, but also have a deep understanding of the company's work culture. The training provided is in the form of agile training, learning paths, and other additional training at external institutions which are also facilitated by this company. The recruitment and employee development strategy carried out by PT Metro Indonesian Software is based on their understanding of the business environment and client needs in this IT industry. This deep understanding that they have is what influences them in compiling recruitment programs, training, branding strategies, and the organizational structure that they form. These strategies are what make this company's human capital resources valuable, rare, and difficult for competitors to imitate, because it takes time and large investment to build a similar system.

In terms of organizational capital resources, the results of data analysis show that PT Metro Indonesian Software also has a sustainable competitive advantage in this resource aspect. This company has an advantage in terms of work culture that can maximize its employees to give their best abilities. The work culture that adopts Agile Development allows its employees to work more flexibly in terms of work rules, such as working hours, work clothes, and work location. This company also implements a work culture that is adaptive to the development of the IT world and the different needs of clients, as well as collaboration between employees that must be well established to minimize errors in making software projects.

This work culture that adopts agile development is also supported by the principle of goal oriented, where the company implements planning for each project in allocating its resources efficiently and setting clear targets from the start for employees, as well as conducting routine controls through check-in meetings and project supervision through the Project Manager. This work system is also known as the Project Management System, where the company in each project divides the roles of employees clearly and in detail at the beginning of the project, and conducts quality control for each project they have worked on.

The work culture that this company implements has successfully helped them improve the efficiency of their resource usage, and has enabled them to innovate more easily in product development. This approach is difficult to find in local IT companies, which are competitors of PT Metro Indonesian Software. This kind of work culture is also difficult to imitate because it requires a good HR management system and large investment as well. Therefore, these organizational capital resources provide a sustainable competitive advantage for PT Metro Indonesian Software.

The advantages of both aspects of resources owned by PT Metro Indonesian Software have also been proven to have a positive impact on the development of this company. Based on information from informants and non-participant observations conducted by researchers, this company has succeeded in becoming one of the leading IT companies in Padang City within 1.5 years. This is evidenced by around 40 projects that have entered this company from various clients both in Padang City and outside West Sumatra. In addition, informants stated that this company often receives requests to distribute interns to this company, which shows that they have a good reputation in the IT industry.

Regarding the formulation of the second problem in this study, namely the challenges faced by PT Metro Indonesian Software in utilizing internal resources and responding to external environmental factors, the results of the data analysis in this study managed to describe these challenges in each parameter in this study. In the physical capital resources parameter, there is the biggest challenge faced by this company, namely cyber threat. Cyber threat is a cyber security threat carried out by irresponsible parties via the internet or computer network

(Wellium, 2023). These threats can be in the form of hacking, data theft, identity forgery, and data destruction.

The informants of this study explained that previously PT Metro Indonesian Software had experienced a hacking of its company website. This hacking caused their company's website server to go down. However, the informants explained that this hacking did not have a significant impact on the company's operations, because this company has good recovery capabilities, where they continue to try to defend the server from the many cyber attacks that come in. The informants explained that cyber threats can occur to this company because they have assets on the internet network, namely website servers. In addition, this company's website has a good SEO strategy so that it is easy to find on search engines, making their server a target for cyber threats.

In addition, in terms of human capital organization, the challenges they usually face are related to the quality of available human resources. The Board of Directors in this company felt that they initially had difficulty finding IT talent that could meet industry standards. As a result, when the talent joined the company to run a project, the employee was surprised by the gap in standards between the world of college and the world of industry. In addition, because the employees in this company are the same age, they are sometimes less disciplined. Therefore, to overcome this, this company carries out a more specific employee recruitment process, and is supported by various trainings, both to improve employee skills to meet industry standards and training to instill a work culture in this company.

As for the challenges faced by this company in terms of organizational capital resources, this company has not experienced any significant challenges. The BODs said that so far they feel they are on the right track, where they consider that the system and work culture they have built are right to compete in this industry, and have not experienced any significant obstacles. This shows that the utilization of firm resources from the aspect of organizational capital resources in this company is still running smoothly.

Then related to the results of this study, it turns out to be in line with the context of the Resource-Based View (RBV), where companies that are able to manage and utilize their internal resources well will have stronger competitiveness compared to competitors who only rely on external factors (Barney et al., 2021). Evaluation using the VRIO Model confirms that human capital resources and organizational capital resources are the main factors that provide sustained competitive advantage, while physical capital resources only provide competitive parity because they are not rare and can still be imitated by competitors.

The results of this study are also in line with the findings of previous studies on RBV in the software industry. Kamardi et al. (2022) explained the results of their research on IT companies in Iran, which showed that intangible resources, related to human capital and organizational capital resources, are the main factors for companies to achieve competitive advantage. Ahn et al. (2022) also explained that sustainable competitive advantage in the technology sector depends more on the company's internal strategy in the organization and the technology infrastructure they have. Innovation in this technology infrastructure has an important influence on companies in competing with their competitors.

In addition, the results of this study also provide a new perspective in the context of the IT industry in developing areas, especially in Padang City, where limited access to quality workers and more sophisticated technology resources is still a challenge. These findings indicate that local IT companies can build their competitiveness by focusing more on managing internal resources which can ultimately get quality IT talent, rather than only focusing on external factors such as market expansion. The results of this study also ultimately succeeded in answering both problem formulations, the results of which describe how PT Metro Indonesian Software utilizes its internal resources, in responding to external environmental factors, and identifying the challenges it faces, in its efforts to form a competitive advantage.

CONCLUSION

This study aims to examine how PT Metro Indonesian Software utilizes internal resources and responds to external environmental factors in an effort to form a competitive advantage. Using a single case study method and a descriptive qualitative approach, this study evaluates three main dimensions of firm resources, namely Physical Capital Resources, Human Capital Resources, and Organizational Capital Resources, and how the three contribute to competitive advantage based on the VRIO Model.

The findings of this study reveal that Human Capital Resources and Organizational Capital Resources play a major role in forming sustainable competitive advantage in this company. The human resources owned by the company have valuable, rare, and costly to imitate skills thanks to a portfolio-based recruitment system from internships and communities, which are also supported by strong internal training. In addition, in terms of Organizational Capital Resources, such as an organizational culture that adopts agile and goal-oriented methods, it provides high flexibility for the company in adjusting its business strategy to the dynamics of the IT industry. However, the main challenge in this aspect, especially in human capital, is the limited talent that meets industry standards so that the company needs to further optimize its recruitment strategy through internships and communities, and ensure that existing employees remain motivated to continue to develop in this company.

Meanwhile, Physical Capital Resources meet the criteria of being valuable for the company's operations, but are not entirely rare and costly to imitate. The technology and infrastructure used by the company, such as digital tools and physical tools used for project management, do provide added value to the company, but competitors can also easily imitate them with sufficient investment. Thus, Physical Capital Resources only provide competitive parity, which means that the company needs to continue to innovate in managing its infrastructure to remain competitive in the market. This is also coupled with the challenge of cyber threats that can disrupt the company's operations. However, in the end, this company still managed to overcome the existing challenges so that it could try to maximize the use of its firm resources.

The results of this study also confirm that the Resource-Based View (RBV) remains relevant in explaining how software house companies can build competitive advantages through internal resource management. However, this study also shows that in the dynamic technology industry, RBV needs to be combined with other perspectives, such as Dynamic Capabilities Theory to better understand how companies can adapt to external changes.

Overall, this study concludes that PT Metro Indonesian Software has succeeded in managing its internal resources to create competitive advantage, even though it also faces existing challenges. However, with the right strategy in utilizing Human Capital Resources and Organizational Capital Resources optimally, as well as developing a more sustainable innovation strategy, companies can maintain and strengthen their competitive position in the IT industry in general, and software houses in particular.

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