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CONTINGENCY PERSPECTIVE TO BRIDGE HUMAN CAPITAL PERCEPTION TO ACHIEVE AMBIDEXTERITY IN ENVIRONMENTAL DYNAMISM

Abstract: Environmental change and technological disruption are expanding phenomena impacting today's economic world. A dynamic business environment can inspire companies to engage in both exploitative and exploratory innovation at the same time. Traditional financial technologies have evolved substantially over the past decade. Although the environment challenges technology to adapt to business sustainability, artificial intelligence has not replaced human bankers. There is, however, a scarcity of research on the relationship between ambidextrous work and human capital, indicating that few studies have been undertaken. To better understand how banks can achieve such organizational ambidexterity, we develop a framework that investigates the combined effects of organizational human capital, environmental dynamism, and technological capacity on organizational ambidexterity. The theory of contingency is the theoretical foundation of the subject. We empirically assess this framework using multi-source data from the banking industry. This quantitative analysis used a sample size of sixty-three executives from Indonesia's banking industry and was analyzed using PLS-SEM and SPSS to determine the measurement and structural models. The results show that technological capacity and organizational human capital directly affected organizational ambidexterity, but environmental dynamism did not. We also found that firms with organizational human capital are more likely to utilize high technological capacity to promote organizational ambidexterity. The findings of this study provide practitioners with insight into how they can promote human capital and technological capacity as pillars of ambidextrous banking. This research contributes to the literature on organizational ambidexterity and offers insights to managers on how to align their knowledge practices to develop technological capacity when pursuing organizational ambidexterity.

Keywords: organizational ambidexterity, environmental dynamism, organizational human capital, technological capacity

1. Introduction

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Competition from non-banking institutions poses severe threats to the established banking industry. Due to the prevalence of mobile banking and mobile payment solutions among smartphone and internet users, FinTech has emerged (Wewege et al., 2020), slowly eroding the banking business's portion (Brand Finance, 2020). Indonesian banks struggled with low interest rates in 2019; thus, businesses turned to bonds and FinTech startups for financing. After ten years, the future of traditional banks is still a significant issue for academics studying the impact of financial technologies (Meyer et al., 2023; Parameshwar et al., 2019). The year 2019 is the pinnacle of banking challenges, as banks are required to respond to environmental dynamism and technological obstacles. The entire sector, including conventional banks, is coping with the COVID-19 pandemic, which has resulted in socially isolating policies and increased high-risk loans, which are detrimental to economic success and stability (Elnahass et al., 2021). The industry received a stimulus policy and restructured credit for COVID-19 debtors, reducing debtor bankruptcy and maintaining the banking system's stability (OJK, 2020a). On the other side, shifting public expectations for financial services have altered people's physical-to-virtual commerce and payment settlement behaviors, requiring Banks to reevaluate their competitive edge in light of technological and competitive developments (Jakšič et al., 2019).

For the bank to remain competitive, it must engage in exploration and exploitation, a trait known as ambidexterity. The topic of banking ambidexterity has been widely identified and studied concerning bank units (Jansen et al., 2012), leadership (Jansen et al., 2009; Liu et al., 2019), human resources (Hadji et al., 2022), organizational design (Marabelli et al., 2012), macroeconomics (Haldane, 2014), bank performance (Ahammad

et al., 2015; Ansah et al., 2021; Campanella et al., 2016; Kader Jilani et al., 2020; Monferrer Tirado et al., 2019), culture (Cegarra-Navarro et al., 2021), and innovation (Yun et al., 2021). In Indonesia, banks have made exploratory efforts such as open banking, collaboration with Fintech, innovation for the convenience and simplicity of consumer transactions, and expansion of international networks. Furthermore, Indonesian banks have tried to exploit this by implementing efficiency, selective lending, caution in strategic strategies, and increased control. However, banks in Indonesia are still not competitive with those in other ASEAN nations (Effendi et al., 2018) or even the Asia-Pacific region (Yang et al., 2019).

The devastating consequences of COVID-19 underscore the need for organizations to embrace the new Industry 4.0 approach (Mahmood et al., 2020) to advance the digitalization of businesses (PwC Retail Banking 2020, 2020; Soto-Acosta, 2020) and the requirement for new ideas (Alamsjah, 2022). Banks must rely on their technological capacities as the most technologically advanced financial sector (Brock et al., 2019). Compared to businesses with a lower technological capacity, those with a higher one are more capable of developing inventive products, services, and procedures (Andrade et al., 2020). Specifically, banks must ensure their retail networks can compete in an increasingly competitive landscape (Jansen et al., 2012; Mitropoulos et al., 2020).

Digital technology alone is insufficient for making strategic decisions; technical talents are also required to accelerate banking digital transformation (Hensellek, 2020). As technology permeates every aspect of business operations, digitally savvy human resources are crucial in modern business environments. Conversely, human bankers with Consumer-friendly services are considered traditional banking's strong suit (Brand Finance, 2020). Previous researchers requested an investigation into how human bankers practice being ambidextrous (Ferraris et al., 2019; Papachroni et al., 2016; Swart et al., 2019).

This study examines some of these variables in the context of the banking sector, particularly in Indonesia, to determine the predictive ability of Smart-PLS from the perspective of banking executives. We hope to make several contributions to this research. First, we contribute to the research on banking ambidexterity by elucidating the relationship between environmental dynamism (END) and organizational ambidexterity (ORA), and we incorporated technological capacity (TEC) and organizational human capital (OHC) variables into our model to strengthen this finding. Second, the study is poised to answer the question: Does technology as a mediator play a role in the relationship between human capital and ambidexterity? Third, this study examines the opposite aspect of contingency theory, in which environmental dynamism is a precursor to organizational ambidexterity.

2. Literature review

Theoretical foundations

This investigation is based on the contingency theory. The emphasis of contingency theory is on how organizations manage organizational practices based on the characteristics of the current situation (Cunliffe, 2008). The idea that there is no best method to run a business or an organization or make decisions within it is central to the behavioral theory known as contingency theory, which is also a part of the field of management studies (Anwar, 2015). Theoretically, a company can be "ambidextrous" and engage in exploration and exploitation by separating its personnel into specialized

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divisions. (Gibson et al., 2004; Gupta et al., 2006; Luger et al., 2018; Mazzelli et al., 2020; O'Reilly et al., 2013; Raisch et al., 2009, 2008; Zimmermann et al., 2015). Although some studies have shown that ambidexterity is more valuable in a dynamic environment (Wang et al., 2008). Others contend that environmental dynamism cannot accurately predict future changes in technology, revenue, or firm investment (Schilke, 2014).

By understanding the factors that influence ambidexterity in banking, it is possible to devise strategies to enhance human capital through technological capacity. With the aid of contingency theory, researchers can provide evidence-based recommendations to manage human capital, technological capacity, and environmental dynamism to continue exploitation and exploration. As a result, this theory provides a lens for looking deeper into the banking manager's perspective, supporting the researcher in recognizing the actual problem and, ultimately, assisting the researcher in addressing the research questions.

23 **Environmental Dynamism (END)**

Environmental dynamism is the degree of unpredictability and instability within a company's environment (Goll et al., 2004; Saeed et al., 2023). Human capital has an inverted U-shaped relationship with learning performance when an organization encounters environmental volatility (Dong et al., 2023). In addition to being proactive in detecting environmental signals, a company must also seize opportunities quickly (Khan et al., 2019). High technological uncertainty necessitates that businesses be able to predict, interpret constraints, and comprehend company resources. When confronted with technological uncertainty, businesses prefer to explore and innovate in the company development process, enhancing their technological innovation performance (Zhai et al., 2018). Companies operating in dynamic and complex environments at a high level tend to perceive more uncertainty and require more information processing than those operating in more straightforward markets (Syed et al., 2020). Jennings et al. (1992) state that for businesses to be successful, they must perpetually observe their environment and adapt accordingly. However, environmental observations alone will not result in improved performance, contrary to the effective use of such data in strategy formulation (Khan et al., 2019). Companies are under pressure to reorganize their business processes due to adjusting to environmental changes, rapid dissemination of information to relevant individuals within the organization, and rapid decision-making. It forces the organization to reintegrate its internal processes, which hinders its ability to investigate and exploit without interruption (Khan et al., 2019).

Mohammad (2019) found in a study of Nigerian banks that environmental dynamism tends to influence the relationship between strategic change and firm performance. Environmental dynamism differentially moderates the effectiveness of ambidexterity, according to research on European banks (Jansen et al., 2006). Similarly, Soto-Acosta et al. (2018) reported that environmental dynamism bolsters the positive impact of innovation ambidexterity on firm performance. On the other hand, the current economic crisis and the resulting increase in environmental dynamism and competitive intensity offer potential avenues for enhancing market position (González-Benito et al., 2014). In highly dynamic environments, the adverse effects of overexploitation on organizational performance are greater than those of overexploitation (Wang et al., 2008). In light of the preceding arguments, it is proposed that;

H1a: Environmental dynamism has a positive impact on the human capital of an organization.

H1b: Environmental dynamism has a significant effect on organizational ambidexterity.

H1c: Environmental dynamism has a significant effect on technological capacity.

H1d: The effect of environmental dynamism on organizational ambidexterity is mediated by technological capacity.

45 **Organizational Human Capital (OHC)**

Human capital is an employee's knowledge, skills, abilities, and personality traits that can be developed for the company's benefit (Barnes et al., 2016). Human capital refers to employees' knowledge, skills, and abilities (Dess et al., 1999; Schultz, 1961; Tseng et al., 2014). Human capital at the organizational level consists of employees' problem-solving abilities, both internally (within the company) and externally (with clients and vendors), as well as their ability to prioritize problems (Mahmood et al., 2020). At the same time, Tseng et al. (2014) define human capital as an investment made by a company in distinct and valuable talent and technology that provides a competitive advantage and must be maintained by the company. The organization's human capital level is the natural ability, intelligence, and skills of critical employees obtained from formal education and work experience (Ployhart et al., 2011).

It suggests that human capital should be firm-specific, with strategic value, and can be targeted for investment and management (Tseng et al., 2014). Therefore, human capital is the core of a valuable, rare, and defensible resource-based advantage over rivals (Campbell et al., 2012). Companies benefit when using human capital to detect new opportunities and gain competitive advantage. Companies with highly skilled and knowledgeable employees have higher levels of human capital and make the right decisions, resulting in quality organizational innovation (Hitt et al., 2001). In order to increase their ambidexterity capabilities, organizations must improve their ability to assimilate technological knowledge from outside sources (Vinding, 2006; Zahra et al., 2016). Therefore, the following hypothesis is proposed:

H2a: Organizational human capital has a significant effect on organizational ambidexterity.

H2b: Organizational human capital has a significant effect on technological capacity.

H2c: The effect of organizational human capital on organizational ambidexterity is mediated by technological capacity.

Technological Capacity (TEC)

Current literature employs the term technological capacities of companies to gain a market advantage; this includes technological capacities, R&D capabilities, and innovation capacities (Davicik et al., 2021). In the case of the Indian computer industry, technological capacity is used to map the formation of national industries that achieve domestic and international competitiveness in a swiftly changing technological environment (Brunner, 1991). In the meantime, an analysis of the impact of technology on the performance of the public sector in Estonia defines technological capacity as the ability to investigate, develop, and adapt new technological solutions in the design, delivery, and evaluation of public services (Lember et al., 2018). Technological capacity is a company's ability to mobilize new technical and scientific knowledge and innovative technological processes and to update existing technological processes and knowledge to remain competitive in a dynamic market (Andrade et al., 2020). Technological capacity refers to a company's ability to execute technical functions impacting performance. Through technological capacity, other technologies and new knowledge and techniques can be integrated (Figueiredo et al., 2018; Kahle et al., 2020). Because it facilitates updating and mobilizing knowledge, the connection between technological capacity and knowledge is crucial to creating cutting-edge technologies and forward-thinking methods. There must be a close connection between technological capacity and information because it enables knowledge to be updated and mobilizes it to create new technologies and innovative processes (Martinez-Conesa et al., 2017). Companies depend on technological capacity incorporating various exploitative and exploratory processes, such as innovation capability (Atuahene-Gima, 2005). Technology is a means of connecting businesses with their consumers (Tsou et al., 2014). The company utilizes technology to enhance its capacity to collect customer data (Bitner, Brown, & Meuter, 2000). Technical expertise, research and development (R&D) resources and a solid technological foundation can all play a significant role in developing innovative products that meet better-designed market demands (Jeong et al., 2006). Technological capacity refers to a company's level of technological knowledge and plays a crucial role in enhancing its ability to acquire external technology (Tsai et al., 2009). Possibly, as a company's technological capacity (i.e., its capacity to learn a partner's technology) increases, so will its collaboration efforts (Moon, 1998). A

company's technological capacity can be measured by comparing its research and development costs to its revenue (Moon, 1998). Understanding the significant factors influencing technological capacity development in newly industrialized nations can facilitate comprehension of the economic development process (Brunner, 1991). The pace and impact of technology vary significantly across organizations. Some organizations manage the development of dynamic technological capacity and undergo rapid and transformative change, whereas others undergo gradual change (Lember et al., 2018). Organizations with a dynamic technological capacity are adept at managing ambidexterity and pursuing new solutions while maintaining a high level of service (Lember et al., 2018). Various activities founded on knowledge, skills, competencies, product equipment, and systems comprise technological capacity (Andrade et al., 2020; Kim et al., 2009). On the basis of these facts, we can hypothesize that:

H3: Technological capacity has a significant effect on organizational ambidexterity.

3. Methods

This quantitative research based on a survey seeks to answer the question, "How does human capital in financial institutions affect ambidexterity mediated by technological capacity?". This survey uses quota sampling to collect data from 107 banks in Indonesia (OJK, 2020b). Commercial Banks were chosen as the study's sample area due to their population size and concentration of conventional banks that offer payment traffic services as part of their operations. The population consists of executives from financial institutions in Indonesia, and 217 questionnaires were disseminated to 107 banks, 63 of which were filled out in full. The response rate in this study (50.87%) was higher than the recommendation of about thirty-two percent for executive surveys (Cycyota et al., 2006). Ringle et al. (2018) found that human resource management (HRM) PLS-SEM studies may have smaller samples than other categories of business research due to demographic factors and sample quality. Earlier investigations in the banking industry had 50 or fewer participants (Hummel et al., 2021; KPMG, 2015; Scholtens, 2009; Yip et al., 2018).

The questionnaire consists of 35 questions that collect data on participants' perceptions of organizational ambidexterity (ORA), human capital (OHC), technological capacity (TEC), and environmental dynamism (END) on a 7-point scale. This investigation utilized a Microsoft form and the SMART-PLS software to collect and analyze feedback data. A Microsoft form survey was administered using banking executives' email and WhatsApp accounts to gauge their perceptions of organizational ambidexterity. To ensure instrument reliability, we relied on metrics from previous research. Four concepts were used to develop the model: organizational ambidexterity (ORA), technological capacity (TEC), organizational human capital (OHC), and environmental dynamism (END). We adopted the ORA instruments from (Jansen et al., 2006; Li, 2016; Soto-Acosta et al., 2018; Wang et al., 2014). The END instruments were acquired from (Jansen et al., 2006; Mohammad, 2019; Soto-Acosta et al., 2018). Andrade et al.(2020) were our source for the TEC instruments. Finally, we adopted the OHC instruments from Vidotto et al. (2017)

4. Results

The results of our data analysis based on a questionnaire designed specifically for this study are presented in this section. This study investigates the interrelationships between organizational ambidexterity, technological capacity, human capital, and environmental dynamism. Research related to business and management should contain numerical data that can be practically quantified to answer research questions (Frels et al., 2013). Saunders (2019) said that quantitative data generally only expresses a narrow meaning if it is not further processed and analyzed. Data will have meaning and use after being analyzed and interpreted. Analysis techniques will help in realizing the research process and objectives.

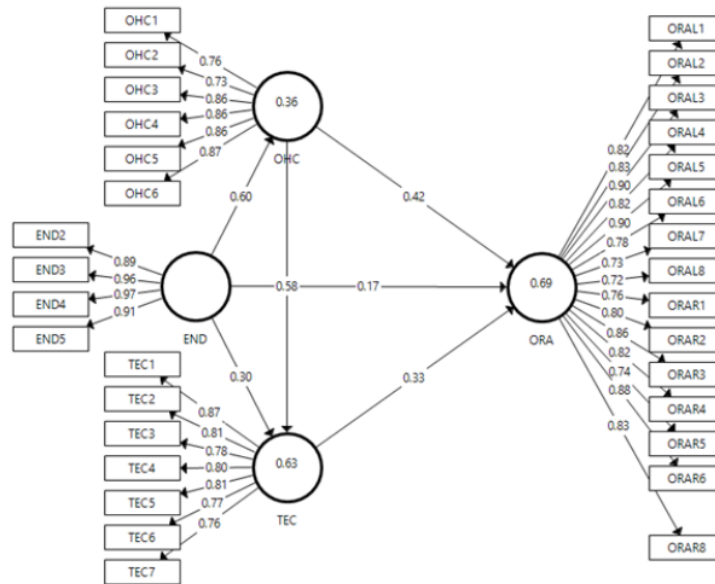


Figure 1. Analysis of path coefficients

This investigation examines the convergent validity between items and the measurement model. Low outer loading indicators were removed from the construct in Figure 1. Hair et al. (2017) state that loading factors more significant than 0.7 indicate the dependability of the indicator. These indicators were ED1 (0.0106), ED8 (0.324), and ORA7 (0.578). For these reasons, items with loadings below 0.60 were deemed unreliable for measuring constructs. Table 1 shows that ORA loadings range between 0,723 and 0,899. At the same time, TEC loadings vary between 0,763 and 0,873. END loadings range between 0,890 and 0,966. Lastly, OHC loadings vary between 0,733 and 0,869.

Cronbach's Alpha (CA) should be more than 0.7, as stated by Hair et al. (2019), while values as low as 0.6 are acceptable in exploratory studies. Higher values indicate more reliability for Cronbach's alpha and composite reliability. Composite reliability (CR) must be above 0.70, as shown in Table 3, to demonstrate internal reliability consistency (Hair et al., 2017). A value of AVE equal to or greater than 0.5 indicates that the average construct explains more than fifty percent of the indicator variance (Hair et al., 2017, 2019). Table 3 demonstrates that the AVE is more significant than 0.5 for all factors.

Table 1. Convergent validity

	Items	Loadings	CA	CR	AVE
Environmental Dynamism (END)			0,950	0,964	0,870
Variations in consumer preferences	END2	0,890			
Changes in technology affect products and services	END3	0,964			
Strategies and actions of competitive rivals	END4	0,966			
The unpredictability of alterations in the company's external environment	END5	0,910			
Organizational Human Capital (OHC)			0,906	0,928	0,682
Employee competence by their position	OHC1	0,764			
The company supports the improvement of employee qualifications	OHC2	0,733			
Employee behavior refers to the banking code of ethics	OHC3	0,860			
Skill-oriented with a strict selection system	OHC4	0,855			
Skill improvement with continuous training programs	OHC5	0,864			
Improved employee motivation (such as appropriate payroll systems and performance appraisals)	OHC6	0,869			
Technological Capacity (TEC)			0,908	0,926	0,642

Our Bank can employ a variety of technologies.	TEC1	0,873			
Our Bank can develop products more efficiently than competing businesses.	TEC2	0,811			
Our Bank can design systems more efficiently than other businesses	TEC3	0,781			
Our Bank can process transactions more efficiently than other businesses	TEC4	0,799			
Our Bank can learn new techniques.	TEC5	0,807			
Our Bank can develop innovative technological solutions.	TEC6	0,768			
Our Bank possesses innovative technology investment capabilities.	TEC7	0,763			
Organizational Ambidexterity (ORA)			0,963	0,967	0,664
Our Bank tries to get better at using the technology it has so it can be more productive.	ORAL1	0,818			
Our Bank strives to improve its ability to discover solutions to customer issues.	ORAL2	0,834			
Our Bank aims to bolster its current product development expertise.	ORAL3	0,897			
Our Bank tries to improve the product/service it already offers.	ORAL4	0,818			
Our Bank routinely makes minor but necessary modifications to existing products and services.	ORAL5	0,899			
Existing clients of our Bank are notified of product/service enhancements.	ORAL6	0,777			
Our Bank improves the effectiveness of product/service delivery.	ORAL7	0,735			
Our Bank increased services for existing clients.	ORAL8	0,723			
Our Bank can acquire cutting-edge technologies.	ORAR1	0,765			
Our Bank can establish a competent management structure.	ORAR2	0,803			
Our Bank can develop novel products and services.	ORAR3	0,860			
Our Bank research to develop novel products/services	ORAR4	0,816			
Our bank markets each new product or service.	ORAR5	0,741			
Our Bank takes advantage of new opportunities.	ORAR6	0,884			
Our Bank actively pursues and solicits new customers.	ORAR8	0,823			

This study also examines the Heterotrait-Monotrait Ratio (HTMT) to establish discriminant validity. From 0,628 to 0,815, HTMT ratio results demonstrate adequate discriminant validity (Table 2).

Table 2. Discriminant Validity (HTMT)

	1	2	3	4
1. END				
2. OHC	0,628			
3. ORA	0,658	0,815		
4. TEC	0,667	0,807	0,776	

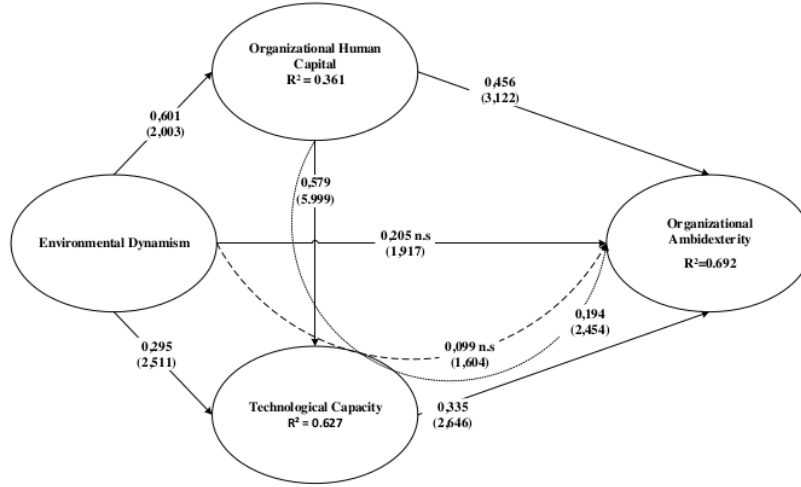


Figure 2: The structural model's Results

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The structural model analysis findings are shown in Table 3, Table 4, and 2.

Table 3. The direct effect

	β	T Statistics	P Values	Result
H1a: END → OHC	0,601	2,003	0,045	Supported
H1b: END → ORA	0,168	1,642	0,101	Rejected
H1c: END → TEC	0,295	2,511	0,012	Supported
H2a: OHC → ORA	0,423	3,122	0,002	Supported
H2b: OHC → TEC	0,579	5,999	0,000	Supported
H3 : TEC → ORA	0,335	2,646	0,008	Supported

Table 4. Indirect result

Path	β	T Statistics	P Values	Result
H1d: END → TEC → ORA	0,099	1,604	0,109	Rejected
H2c: OHC → TEC → ORA	0,194	2,454	0,014	Supported

We used Importance-performance map analysis (IPMA) to estimate path coefficients by considering the average latent variable score (Hair et al., 2017). In particular, IPMA compares the total effects of the structural model on the endogenous variable organizational ambidexterity (ORA) with the average latent variable scores of this construct's predecessors (e.g., END, OHC and TEC). Total effects represent the antecedent construct of "importance" in forming the target construct of organizational ambidexterity, while the average latent variable score represents



"performance." To identify which antecedent variables have high importance relative to the endogenous variable (constructs with strong total effects) but have relatively low performance. Constructs OHC in the lower right corner of the importance-performance map have high importance for the target construct but poor performance. As a result, there is a particularly significant potential for boosting the performance of OHC positioned in this area. Therefore, the OHC construct is most pertinent for managerial actions in the PLS path model example.

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Figure 2. Construct Importance-Performance Map for target construct Organizational Ambidexterity

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IPMA is not limited to the construct level. The use of IPMA at the indicator level to identify relevant and even more specific areas of improvement (Hair et al., 2017). More precisely, IPMA can be used to interpret unstandardized outer weights as the relative importance of an indicator compared to other indicators in the measurement model, regardless of whether the measurement model is reflective or formative. In this study, such analysis will be particularly useful for indicators of the human capital (OHC) construct due to their total solid effect on organizational ambidexterity (ORA).

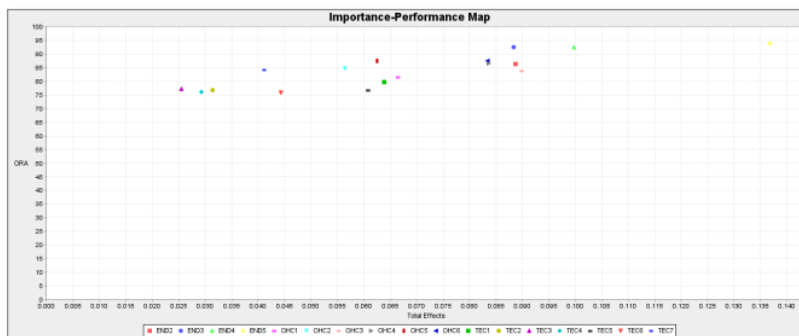


Figure 3. Importance-Performance Map Indicators for the target indicator Organizational Ambidexterity

While Figure 3 depicts IPMA, the most influential indicator contributing to ambidextrous commercial banks is the ED5 indicator, associated with "The unpredictability of changes in the company's external environment."

5. Discussion

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This study investigates how TEC influences END and OHC, ultimately leading to ORA. Hypotheses were developed and examined based on data from the banking sector to achieve this goal. The H1a: environmental dynamism and organizational human capital (END → OHC), the association between environmental dynamism and organizational human capital is strongly and significantly supported by the original sample $\beta = 0,601$, t-statistics (t) = 2,003 and significant value (p) = 0,045 show that human capital is positively and strongly influenced by END. This result aligns with Ketkar et al. (2010) that human capital mediates the effects of environmental dynamism on the commercial performance of enterprises operating in a dynamic environment. Hypothesis 1b, which postulated a significant positive correlation between END and ORA, is unsupported because the t-statistic is 1,642, and the p-value is 0,101 ($p > 0.05$). In line with previous research, the results of this study indicate that the moderating impact of environmental dynamism does not affect ambidexterity, particularly activities focused on technological capacity in small and medium-sized enterprises (SMEs) (Andrade et al., 2020). These results supported hypothesis H1c: environmental dynamism positively affects technological capacity. This

conclusion is consistent with the dynamic ecosystems described by Andrade et al. (2020), in which technological capacity can have a significant impact on discovery.

Second, we hypothesized that the variables representing OHC would have a positive correlation with ORA ($\beta = 0,423$ and $\rho < 0.05$). Following our expectations for employee competence, qualifications, and behavior outlined in the banking code of ethics, the selection system has demonstrated that OHC increases organizational ambidexterity (Mahmood et al., 2020). The organizational human capital hypothesis influences technological capacity significantly, or the hypothesis is accepted because the t-statistic is 5,999, the p-value is 0.000, and the path coefficient is 0.579. These findings answer the research query, "Does organizational human capital affect technological capacity?" This result illustrates the importance of human capital and technology in digital banking transaction operations. Excellent human resources and the company's technological expertise are the pillars of an increasingly dynamic business environment. Human resource practices assist organizations in accomplishing digital transformation and improved performance (Álvaro Nicolás-Agustín et al., 2021). It is critical to mix human resources and technology to maximize the success of the robotics transformation process (Ballestar et al., 2022). According to studies on manufacturing businesses, the success of Industry 4.0 is strongly dependent on the company's capacity to identify human resources well (Singh et al., 2022). Also accepted is the third hypothesis regarding the relationship between technological capacity and organizational ambidexterity. This hypothesis is supported by a t-statistic 2,646 times greater than the t-statistic (1.96), a p-value of 0.008, and a path coefficient of 0.335. Andrade et al. (2020) found that technological capacity has a significant positive effect on organizational ambidexterity and a statistically significant effect only in exploration, not exploitation. The results of this study are consistent with these findings.

Similarly, research by Soto-Acosta et al. (2018) on small and medium-sized businesses in Spain's manufacturing sector reveals a positive correlation between technological capability and ambidexterity. The relationship between technology and ambidexterity in small and large businesses can be re-examined based on the findings of the two studies conducted on small and medium-sized businesses that yielded the same results when applied to large corporations such as banks. It is tough to balance exploration and exploitation in the financial industry. It is anticipated that the role of technology in achieving ambidextrous commercial banks, particularly in Indonesia, will introduce new parameters.

The mediating role of technological capacity

The (END \rightarrow TEC \rightarrow ORA) hypothesis, which predicted a significant positive relationship between END and ORA via TEC, is not supported. The findings of this study corroborate those of others in that they demonstrate that ambidexterity, particularly technological capacity-centered activities in small and medium-sized enterprises (SMEs), are immune to the moderating influence of environmental dynamism (Andrade et al., 2020). H2C is the effect of technological capacity that mediates the relationship between organizational human capital and ambidexterity. Because the t-statistics value (2,454) is greater than the t (table) value (1.96) or because the p-value (0.014) is less than the significance level (0.05), the results indicate that the hypothesis is supported. This result indicates that technological capacity mediates the relationship between organizational human capital and exploration and exploitation ambidexterity. The (OHC \rightarrow TEC \rightarrow ORA) hypothesis predicted that organizational human capital would have a positive relationship with organizational ambidexterity through technological capacity ($b = 0,194$ and $\rho < 0.05$). According to Mahmood and Mubarik's (2020) research on small and medium-sized businesses, this study demonstrates that human capital substantially impacts technology assimilation capacity. This study demonstrates that human capital affects an organization's technological capacity. Although Mubarik's research was conducted in small and medium-sized businesses, it was discovered after testing that the human capital construct also positively impacted large corporations, particularly banks.

In addition, studies on adopting corporate robotics support this finding, indicating that combining technology and human resources is the key to advancing the efficiency of the

transformation process toward established technology (Ballestar et al., 2022). Human capital plays a role in accelerating technological catch-up (efficiency improvement), according to a study of 40 countries (Mastromarco et al., 2021). Mikalef et al. (2020) found that human capital as a component of extensive data analysis capabilities significantly impacts the dynamic capabilities of Norway's large businesses. The findings support the claim that human resource management practices are crucial in implementing digital transformation processes (Álvaro Nicolás-Agustín et al., 2021). Mention & Bontis (2013) contend that human capital is a facet of intellectual capital and crucial for attaining corporate innovation (Kucharska, 2022). Technological capacity in banks refers to the ability of banks to perform technical functions by adapting new technological solutions. Strengthening and optimizing digital channels is increasingly essential to create loyalty and drive corporate success. Banking as a financial services industry ranks highest in technological transformation (Brock et al., 2019).

Implication

This study establishes that ambidextrous organizations emerge when a firm's technological capacity aligns with the human capital, including improving employee qualifications and continuous training programs. Following the existing business dynamics, the expanding use of technology in the financial industry will inevitably lead to new excesses, namely security risks associated with using technology. However, superior human capital will fortify and adapt to a dynamic environment, such as confronting and being able to compete with new business models in the financial industry and fraud. Importantly, our findings also provide invaluable insights for managers in industries that heavily rely on high levels of innovation activity and the significance of knowledge assets; in fact, the banking sector shares characteristics with most high-tech and knowledge-based businesses. Thus, the Bank's focus related to organizational human capital is (a) recruiting a workforce with exceptional talent, (b) developing workers' skills through a continuous training system, and (c) working conditions with a good remuneration system and professional relationships.

6. Conclusion

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The following are the findings of this investigation. There is a significant relationship between human capital and ambidexterity through technological capacity. Therefore, it is suggested that organizations provide the necessary technological capacity for ambidexterity's effective exploitation and exploration. Human resource management practices are essential in implementing the digital transformation process. Based on the earlier findings, it has been determined that technological capacity does not support environmental dynamism to attain ambidexterity.

The limitations of this study present opportunities for future study. Our data is derived solely from the banking industry and one country, which may limit the generalizability of our findings. However, this method improves internal validity because we can control for exogenous industry variables. Other future research suggestions may also be considered. For instance, the relationship between organizational human capital and CEO ambidexterity is ascribed to its impact on exploration or exploitation or the moderating effect of cultural characteristics on organizational ambidexterity in other sectors.

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