International Journal of Economics, Business and Accounting Research (IJEBAR)
Peer Reviewed – International Journal
Vol-9, Issue-4, 2025 (IJEBAR)
E-ISSN: 2614-1280 P-ISSN 2622-4771
https://jurnal.stie-aas.ac.id/index.php/IJEBAR

ABSORPTIVE CAPACITY AS MODERATOR VARIABLE IN LOGISTICS COMPANIES IN INDONESIA

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Abstract: This study aims to examine the role of Absorptive Capacity (ACAP) as a moderating mechanism in the relationship between Organizational Change Capability (OCC), Strategic Alliances (SA), and Sustainable Competitive Advantage (SCA) among logistics service companies in Indonesia. The study addresses a critical problem in the logistics industry, where firms often struggle to translate internal learning capabilities into effective strategic alliances that contribute to long-term competitiveness. A quantitative research design was employed using a survey method. Data were collected from middle managers of logistics service companies operating in major Indonesian port cities and analyzed using moderated regression analysis (MRA) with the assistance of SPSS. This approach enabled the examination of both direct relationships and the moderating effect of absorptive capacity. The results indicate that the learning dimension of OCC does not have a significant direct effect on strategic alliances, while strategic alliances have a significant relationship with sustainable competitive advantage. Furthermore, absorptive capacity plays a crucial moderating role by strengthening the relationships between learning capability and strategic alliances, as well as between strategic alliances and sustainable competitive advantage. These findings suggest that internal learning alone is insufficient to generate collaborative advantage without strong absorptive mechanisms. This study contributes to the literature on dynamic capabilities and knowledge-based theory by clarifying the role of absorptive capacity as a key mechanism linking organizational learning, inter-organizational collaboration, and sustainable competitive advantage. Practically, the findings provide insights for logistics managers on the importance of strengthening absorptive capacity to maximize the strategic value of alliances in highly competitive and dynamic environments.

Keywords: *Organizational Change Capability, Learning Capability, Strategic Alliance, Sustainable Competitive Advantage, Absorptive Capacity, Logistics*

Submitted: 2025-10-22; Revised: 2025-12-23; Accepted: 2025-12-26

1. Introduction

The Indonesian government recorded an economic growth rate of 5.04 percent in the fourth quarter of 2023, with the transportation and warehousing sector—covering logistics, land, sea, and air transport—experiencing a year-on-year growth of 13.96 percent (BPS, 2024). This sectoral expansion highlights the strategic role of logistics services in supporting national

economic performance, particularly in the trade sector, which achieved a surplus of USD 36.93 billion in 2023 (BPS, 2024). Despite this positive macroeconomic performance, the rapid growth of logistics activities has intensified competition among logistics service companies, especially in major port cities such as Surabaya, Jakarta, and Semarang. The increasing number of service providers and the acceleration of trade flows have created a highly competitive environment, where firms struggle not only to improve operational efficiency but also to sustain their competitive positions over time.

In such a competitive landscape, logistics service companies face significant challenges in maintaining long-term performance. Operational excellence alone is no longer sufficient, as competitors can quickly replicate standardized logistics processes. Consequently, firms are required to develop strategic capabilities that enable them to adapt to environmental changes, leverage knowledge effectively, and sustain superior performance. Recent studies emphasize that organizational resources must be dynamic and knowledge-intensive to remain competitive in rapidly changing industries (Nguyen et al., 2022). Similarly, Yusuf and Sunaryo (2023) argue that logistics firms must transcend mere operational efficiency and cultivate strategic capabilities to achieve sustainable competitive advantage (SCA).

The concept of Sustainable Competitive Advantage (SCA) refers to a firm's ability to consistently outperform competitors by possessing and leveraging resources and capabilities that are valuable, rare, inimitable, and non-substitutable (VRIN/VRIO) (Yusuf & Sunaryo, 2023). Rooted in the resource-based view (RBV) of the firm, SCA emphasizes the strategic importance of internal resources in generating long-term performance advantages (Ployhart & Moliterno, 2024). However, contemporary research has extended RBV by incorporating dynamic perspectives, highlighting that competitive advantage must continuously evolve in response to environmental turbulence. This shift underscores the importance of organizational capabilities that enable firms to sense, seize, and transform resources in dynamic environments.

One such capability is Organizational Change Capability (OCC), which refers to an organization's ability to initiate, manage, and sustain change in response to environmental shifts (Supriharyanti & Sukoco, 2023). OCC is widely recognized as a subset of dynamic capabilities and is commonly operationalized through three dimensions: learning, process, and context. These dimensions align closely with the core activities of dynamic capabilities—sensing, seizing, and transforming—thereby positioning OCC as a meta-capability that supports organizational adaptability and competitiveness (Supriharyanti & Sukoco, 2023). Among these dimensions, Organizational Learning Capability (OL) plays a foundational role, as it reflects the firm's ability to absorb, transform, and apply new knowledge. The process and context dimensions are built upon this learning foundation, making OL the starting point in the development of OCC (Supriharyanti & Sukoco, 2023).

Organizational learning has also been widely conceptualized as a dynamic process through which firms acquire, assimilate, transform, and exploit knowledge to build competitive capabilities (Zou, Ertug, & George, 2018). In highly competitive industries such as logistics, firms that fail to develop strong learning capabilities often struggle to adapt to rapid technological changes, shifting customer demands, and evolving regulatory environments. Accordingly, implementing OCC—particularly through the learning dimension—is essential for logistics firms seeking to become change-capable organizations and achieve optimal SCA (Supriharyanti & Sukoco, 2023). Practical initiatives such as structured employee training programs and regular knowledge-sharing meetings represent tangible mechanisms through which firms can strengthen their learning-oriented change capabilities.

Closely related to OCC and organizational learning is Absorptive Capacity (ACAP), which has been identified as a crucial determinant of both organizational change capability and competitive advantage (Lewin & Massini, 2016). ACAP refers to a firm's ability to recognize, assimilate, transform, and exploit external knowledge for commercial purposes (Liao et al., 2023). Subsequent studies have refined this concept by distinguishing between potential ACAP—comprising knowledge acquisition and assimilation—and realized ACAP, which includes knowledge transformation and exploitation processes. From both the knowledge-based view (KBV) and dynamic capability perspectives, ACAP is considered a key mechanism that enables firms to adapt and thrive in dynamic environments by effectively managing knowledge resources.

Empirical evidence suggests that investments in research and development, human capital, and organizational learning significantly enhance ACAP, thereby strengthening competitive advantage. In the logistics industry, ACAP has emerged as a critical dynamic capability that enables firms to navigate complex and rapidly changing environments (Gligor, Holcomb, & Stank, 2015). Lee and Song (2018) found that freight forwarding companies with high levels of ACAP are better able to understand new information and integrate it with existing knowledge, resulting in value-added logistics services that are difficult to imitate. Such capabilities allow logistics firms to differentiate themselves and achieve SCA through deep industry expertise and continuous learning.

In addition to internal capabilities, logistics firms increasingly rely on Strategic Alliances (SA) to address resource constraints and adapt to competitive pressures. Strategic alliances enable firms to share costs, access complementary resources, and respond more effectively to environmental changes. In the Indonesian logistics sector, alliances have become a strategic necessity due to the growing complexity of operations and the inability of firms to operate independently (Kuncoro, Saputra, Cahyadi, & Ikhsan, 2021). However, the success of strategic alliances largely depends on the firm's ACAP, as it determines the ability to assimilate external knowledge and align alliance objectives with internal systems (Kustiningsih, Tjahjadi, & Soewarno, 2022).

Several studies highlight the interconnected roles of organizational learning, ACAP, strategic alliances, and competitive advantage. Liao et al. (2016) demonstrated that ACAP positively influences organizational learning, reinforcing the learning dimension of OCC. Zou et al. (2018) further conceptualized ACAP as an organizational learning capacity that supports dynamic capability development. Without strong ACAP, firms often fail to achieve optimal organizational performance through strategic alliances, as they are unable to fully internalize and exploit shared knowledge (Kustiningsih et al., 2022). Moreover, Efrata (2023) emphasized the role of ACAP in supporting innovation ambidexterity, while Lee and Song (2018) confirmed that high ACAP enables logistics firms to combine new and existing knowledge to strengthen competitive advantage.

Despite the growing body of literature on OCC, ACAP, strategic alliances, and SCA, prior studies have predominantly examined these constructs in isolation. Limited empirical attention has been given to the integrated mechanisms through which OCC and strategic alliances jointly contribute to SCA via ACAP, particularly within the logistics service industry in emerging economies such as Indonesia. Furthermore, existing studies rarely position ACAP as a central mechanism that links organizational change capability and strategic alliances to sustainable competitive advantage. This lack of integrative and context-specific investigation highlights a critical research gap.

Therefore, this study aims to address this gap by examining the role of Organizational Change Capability and Strategic Alliances in achieving Sustainable Competitive Advantage, with Absorptive Capacity serving as a key explanatory mechanism within Indonesian logistics service companies. By adopting a dynamic capability and knowledge-based perspective, this research seeks to contribute theoretically by clarifying the interrelationships among OCC, ACAP, SA, and SCA, and practically by providing insights for logistics managers striving to sustain competitiveness in an increasingly turbulent industry environment. Therefore, this study aims to examine following hypotheses:
H1: There is a significant influence of OCC on SA
H2: There is a significant influence of SA on SCA
H3: ACAP moderates the relationship between OCC and SA
H4: ACAP moderates the relationship between SA and SCA

2. Research Method

This study employed a quantitative research approach to examine the relationships among Organizational Change Capability (OCC), Strategic Alliances (SA), Absorptive Capacity (ACAP), and Sustainable Competitive Advantage (SCA). Quantitative methods enable the testing of theoretical relationships through measurable indicators and statistical hypothesis testing, making them suitable for validating interrelationships among organizational constructs (Hair, Black, Babin, & Anderson, 2019). This approach was selected to ensure objectivity and rigor in examining causal relationships derived from dynamic capability and knowledge-based perspectives.

The research was conducted in Indonesia, focusing on logistics service companies operating in the three largest port cities: Surabaya, Jakarta, and Semarang. These cities represent Indonesia's primary logistics hubs and are characterized by high levels of competition and environmental dynamism. The logistics industry plays a strategic role in national supply chains, influencing cost structures and service efficiency across upstream and downstream industries.

The unit of analysis in this study was the organization, with middle managers serving as key informants. Middle managers were selected due to their strategic position as intermediaries between top management and operational employees, making them directly involved in organizational learning processes, strategic alliance implementation, and change initiatives that contribute to sustainable competitive advantage. The sample included both multinational and national logistics service companies that granted permission for their middle managers to participate in the study.

A total of 120 logistics service companies were contacted, resulting in 46 valid responses, corresponding to a response rate of 37.5 percent. The relatively moderate response rate was primarily due to organizational concerns regarding data confidentiality and privacy. To strengthen the validity of responses, participants were required to confirm their managerial position and work experience within the organization.

Primary data were collected using a structured questionnaire distributed electronically. Prior to participation, respondents were informed about the objectives and scope of the study and provided informed consent. The questionnaire employed a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5), generating interval-level data appropriate for parametric statistical analysis (Walliman, 2021).

The data collection process involved several steps: identifying potential respondents, screening participants based on predefined criteria, obtaining consent, distributing the

questionnaire, providing instructions for completion, reviewing submitted responses, and compiling the data into a structured dataset for analysis.

Organizational Learning Capability (LC), representing the learning dimension of Organizational Change Capability (OCC), was measured using six items capturing interdepartmental internalization routines, the ability to integrate and categorize information, effective utilization of knowledge, strategy formation, and the combination of existing and new information.

Absorptive Capacity (ACAP) was measured using thirteen items reflecting the processes of knowledge acquisition, assimilation, transformation, and exploitation. These items included aspects such as information exploration, leadership support for learning routines, responsiveness to industry developments, interdepartmental communication, knowledge structuring, formulation of new strategies, and new service development.

Strategic Alliances (SA) were measured using fourteen items focusing on alliance motives and objectives, including access to complementary resources, acquisition of external knowledge, market expansion, and enhancement of competitive positioning. Sustainable Competitive Advantage (SCA) was measured using seven items assessing superior service quality, research excellence, managerial and organizational effectiveness, brand image, and market positioning relative to competitors.

Data analysis was conducted using a multistep statistical procedure with the assistance of the **Statistical Package for the Social Sciences (SPSS)** software. First, construct validity was assessed using exploratory factor analysis, with factor loadings greater than 0.50 considered acceptable, indicating that the measurement items adequately represented their respective constructs (Hair et al., 2019). Reliability was evaluated using Cronbach's Alpha and Corrected Item–Total Correlation, with values exceeding 0.60 indicating acceptable internal consistency. After establishing the validity and reliability of the measurement instruments, hypothesis testing was performed using **Moderated Regression Analysis (MRA)** in SPSS. MRA was employed to examine both the direct relationships among the independent and dependent variables and the moderating role of Absorptive Capacity (ACAP). Interaction terms were constructed by multiplying mean-centered independent variables with the moderating variable to minimize potential multicollinearity effects. Statistical significance was evaluated at a 10 percent significance level, which is commonly adopted in exploratory studies within organizational behavior and strategic management research (Hair et al., 2019). This analytical approach enables a robust examination of moderation effects and provides empirical insights into the dynamic relationships among OCC, SA, ACAP, and SCA within the logistics service industry.

3. Results and Discussion

The nature of the learning organization (LO) is the promotion of the innovation and sustainable development of the organization through Organizational Learning (OLC) (Migdadi, 2021). Learning Capability (OLC) is often regarded as an intra-organizational learning process (Sancho-Zamora, Larraneta, Álvarez-Heras, & Moriano, 2022) or interdepartmental process (Supriharyanti & Sukoco, 2023). This study only focus on Learning Capability instead of all dimensions of OCC regarding Supriharyanti & Sukoco (2023). Learning capability refers to an organization's capacity to plan and improve its practices within a framework of ongoing change. Several prior studies have investigated the concept of Organizational Change Capability (OCC), either as a component of the broader Dynamic Capability (DC) framework or as a standalone construct. For instance, Priyono, Anjar & Halim (2019) demonstrate that

building strategic alliances functions as a dynamic capability that supports organizational transformation, particularly by helping state-owned enterprises overcome bureaucratic constraints and adapt to external demands. Other research has explored Organizational Learning Capability (OLC) within the freight industry, focusing on the relationship between OLC, performance, and efficiency, with OLC acting as a mediating variable (Bai, Qunqi, Qian, Chenlei, & Zhang, 2021). The analysis shows that the relationship between OCC (represented by OLC) and SA is not statistically significant, with a p-value above 0.10. The negative coefficient suggests that a higher level of OLC may correspond to a lower level of SA. This can be attributed to the nature of learning as an intra-organizational process, in contrast to SA, which involves inter-organizational collaboration. Many scholars describe middle managers as intermediaries, implementers, and facilitators. Despite their central role, they are not the ultimate decision-makers and may prioritize their own departments or interests over organizational strategic goals (Coombs, George, & George, 2016). The research data suggests that middle managers may require an additional interaction—moderated by Absorptive Capacity (ACAP), which is considered an individual factor by Zou et al. (2018) and Liao et al. (2023)—to effectively link learning (an internal process) with the development of strategic alliances (an external process). When ACAP is introduced as a moderating variable, the coefficient becomes positive, indicating a potential effect. This underscores the importance of ACAP in alliance building, especially at the middle or assistant manager. Furthermore, a negative coefficient suggests that higher levels of Learning might inversely correlate with SA formation. This outcome can be attributed to the inherent nature of OLC as an internal, intra-organizational learning process, which contrasts with the inter-organizational collaborative nature of SA (Dahlin & Behrens, 2018).

Strategic Alliances (SA) are often discussed as a strategic means to achieve Sustainable Competitive Advantage (SCA). In the current study, the relationship between SA and SCA shows results of a p-value below 0.10, indicating a statistically significant relationship between SA and Sustainable Competitive Advantage (SCA). This finding is consistent with previous studies that have identified a significant relationship between SA and SCA. As discussed earlier, this study focuses on middle managers as the unit of analysis, and the relationship between SA and SCA is further strengthened by the interaction effect (*Int_1*) of absorptive capacity (ACAP). Prior to introducing the interaction term, a negative coefficient was observed, indicating that higher levels of SA were associated with lower levels of SCA. Prior to the inclusion of ACAP, the relationship between SA and SCA was negative—suggesting that an increase in SA was associated with a decrease in SCA. This anomaly could stem from middle managers' tendency to prioritize short term operational concerns over long-term strategic objectives, potentially leading to a more tactical mindset and underdeveloped inter-organizational communication skills (Holcomb, Gligor, & Stank, 2020). Forming strategic alliances also requires careful partner selection. According to Lu, Yuen, Tan, & Qi (2024), in their study on success factors in forming alliances in the shipping industry, companies need to be skilled in approaching partners, acquiring accurate information, and identifying complementary resources. These capabilities are then internally transformed (Zou et al., 2018). This view is echoed by Mr. Eko Nuryono, Chairman of the East Java Regional Board of the Indonesian Logistics Practitioners Association (PPLI) for the 2025–2030 period, who stated: *"In my view, when a logistics association or alliance has too many members, the members themselves derive little to no benefit. It becomes merely a forum for gathering without yielding any tangible outcomes. By limiting membership, we hope to create a more focused and impactful alliance,"* (in Surabaya, January 21, 2025). In this study, the introduction of ACAP

as an interaction variable demonstrates that middle managers with high ACAP make SA more effective. The presence of ACAP strengthens the SA–SCA relationship. Through ACAP, managers are better able to acquire, assimilate, transform, and exploit external knowledge and resources within their departments, thereby enhancing SCA. With ACAP, middle managers can focus on absorbing relevant information and identifying complementary partners to address organizational gaps, particularly within their own units. Moreover, as mediators between operational levels and top management, they can provide external insights and feedback to inform strategic decision-making.

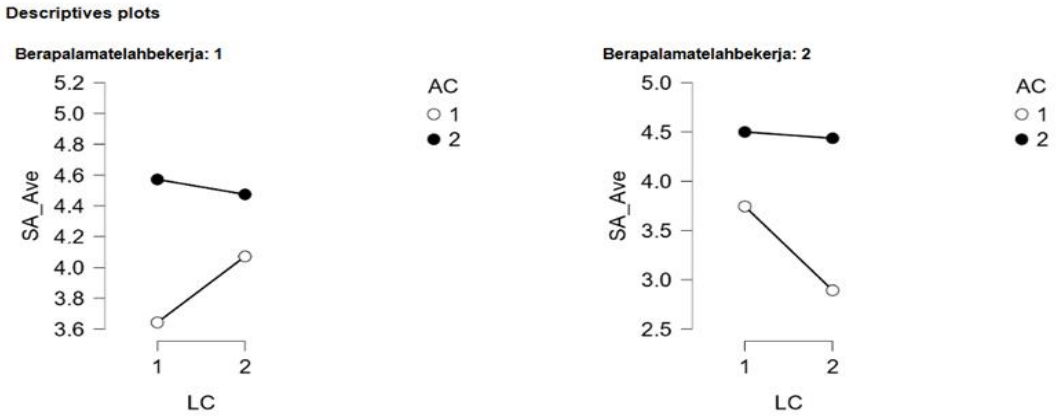

Figure 2. ACAP ANOVA Graphic
Source: SPSS Processed Data (2025)

Figure above presents an ANOVA interaction graph illustrating the role of ACAP in moderating the relationship between OCC (LC) and SA, based on tenure. The left graph represents managers with less than five years of experience, while the right graph depicts those with more than five years. Both graphs show that high SA occurs when LC is low, but ACAP is high. LC is often tied to intra-organizational learning (Supriharyanti & Sukoco, 2023) and low LC indicates difficulty in absorbing and internalizing organizational learning, possibly due to weak internal learning systems or lack of individual experience (Liao et al., 2023). As a result, individuals may seek external solutions via SA to access new resources and information. In the logistics industry, middle managers—particularly in sales—often switch jobs frequently, which may limit their LC. Hence, SA becomes a strategic necessity. Individuals with low LC tend to struggle with internal solution development and rely on external partnerships, which require strong ACAP to absorb external insights. Zou et al. (2018) argue that firms with high ACAP and low LC tend to pursue external strategies to gain competitive advantage. This phenomenon illustrates that individuals with low LC need high ACAP to effectively compensate for internal learning deficiencies. Nonetheless, the effectiveness of SA in contributing to SCA depends not on quantity but on quality and intent. This is relevant with the study by Ali et al (2021) highlights that: “The interplay between ACAP and Learning significantly determines the performance of SA, especially when moderated by individual experience and tenure in the organization (Ali, Park, & Jang, The strategic alignment of knowledge capabilities in inter-firm alliances, 2021).

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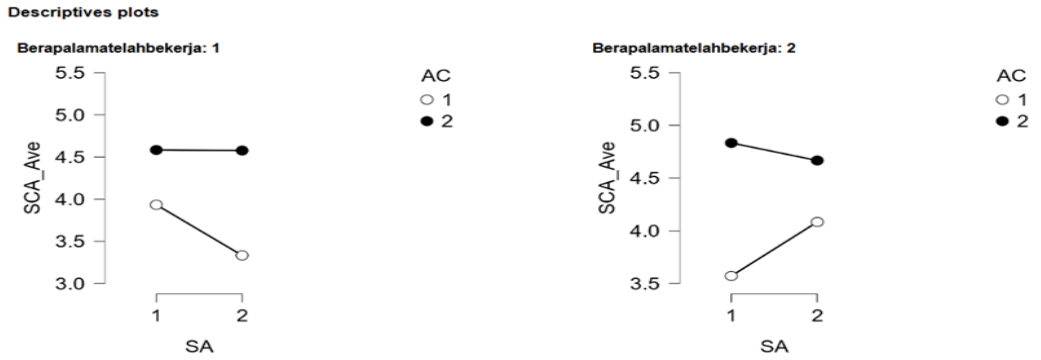

Figure 3. ACAP Anova Graphics
Source: SPSS Processed Data (2025)

Both left and right graphs show that when SA is low, SCA increases, provided ACAP is high. This finding is notable—high SA alone does not guarantee the development of SCA. Mr. Eko Nuryono's prior statement about alliance quality aligns with this result. Lu et al. (2024) emphasize that successful alliances depend on partner compatibility and complementarity. High ACAP plays a crucial role when SA is limited, helping to filter and internalize only relevant information to enhance competitiveness. Selectivity, rather than volume, becomes the key to effective SA. With fewer but well-chosen alliances, companies can focus more on leveraging internal capabilities for long-term advantage. Zou et al. (2018) found that firms with strong ACAP are better equipped to internalize knowledge, increasing their competitiveness. Thus, ACAP is highly relevant as a moderating variable. When LC is low, ACAP enables individuals to initiate and sustain strategic alliances effectively. In turn, this strengthens the quality of SA and supports the development of SCA. The graphs also show that when SA is low, SCA tends to increase—**provided that ACAP is high**. This suggests that a high number of alliances does not necessarily lead to higher competitive advantage. Mr. Eko Nuryono's earlier comment—that quality matters more than quantity in alliances—is consistent with this finding. Lu et al. (2024) emphasized that the success of an alliance depends on selecting the right, complementary partners. When SA is low, ACAP plays a crucial role in filtering and selecting only the most relevant external information, thereby enhancing competitiveness. Figures like Mr. Eko Nuryono understand that SA should be used *selectively* to pioneer SCA. A limited number of well-managed alliances allows a company to better exploit its internal capabilities, leading to more sustainable competitive advantages. According to Zou et al. (2018), firms with strong ACAP are better at managing and internalizing external knowledge, which improves overall competitiveness. ACAP, as a moderator, is highly relevant in this study. When LC is low, ACAP enables individuals within an organization to build effective SA. When SA is established with embedded ACAP, it can lead to high-quality alliances that contribute to achieving SCA. The study align with Nguyen, Luu, & Ho, (2022) findings that ACAP strengthen the positive effects of SA, particularly in more experienced individuals. High ACAP is essential.

This research introduces the substantial novelty by focusing specifically on the **Learning dimensions** of OCC, a departure from prior studies that often examine OCC holistically or through other dimensions stated by Supriharyanti & Sukoco (2023). This more focused approach allows us to delve into specific mechanisms by which an organization's internal learning capacity interacts with external dynamics. Surprisingly, initial findings reveal that the Learning dimensions of OCC does not directly exhibit a significant relationship with the

formation of SA, as reflected by a negative coefficient and a non-significant p-value in the testing of Hypothesis 1. This outcome challenges the common assumption that an increase in internal learning capacity automatically translates into improved external collaborations, indicating a potential gap between the internal orientation of learning and the external demans of alliances. However, the moderating role of ACAP also lies a big novelty in this study. When ACAP is introduced as an interaction variable, the coefficient between the Learning and SA becomes positive and significant. This phenomenon underscores that ACAP—defined as an organization's ability to acquire, assimilate, transform, and exploit external knowledge—serves as an essential bridge. In other words, while internal learning capabilities (the Learning dimensions of OCC) may not be sufficient to directly foster SA, the presence of strong ACAP enables organizations to translate these internal learning outcomes into relevant understanding and capabilities for succesfully building and managing strategic alliances. This suggests that ACAP not only mediates but also streghtens the effectiveness of the Learning dimensions of OCC in the context of SA and SCA formation, offering fresh insights into the complex of interplay of organizatonal capabilities in dynamic environments (Jansen, Volberda, & Van den Bosch, 2019).

The Influence of Organizational Change Capability on Strategic Alliances (H1)

Learning Capability (OLC) is often considered as an intra-organizational learning process (Sancho-Zamora et al., 2022) or an interdepartmental learning process (Mirza, Saeed, & Aslam, 2022). Learning Capability is the capital of a company or organization to plan and improve organizational practices in a series of changes. Several previous studies have examined the context of Organizational Change Capability (OCC) both within the scope of Dynamic Capability (DC) and as a whole as a complete OCC variable, such as the study by Kohtamäki (2023), which states that the relationship with Strategic Alliances (SA) has a significant relationship, studied from industries that are not specifically specified. Another study discussed OLC in the Freight Industry, which addressed the relationship between OLC and performance and efficiency, with OLC as a mediator (Bai, Qunqi, Qian, Xue, & Zhang, 2021).

In this study, OLC is an independent variable in relation to the relationship between Strategic Alliances (SA) in the Logistics service industry, with respondents at the managerial level. The analysis results show that OCC, represented by OLC and SA, is not significant, as seen from the P value above 0.10 with an error rate of 10%. The negative coefficient value indicates a relationship whereby the higher the OLC, the lower the SA. Learning is viewed as an intra-organizational process and SA as an inter-organizational process. When viewed from the perspective of middle managers, according to Wang (2015), middle managers have the roles of Championing Alternatives, or promoting new ideas to top management; Synthesizing Information, or integrating information from the operational level to support strategic decision-making; Facilitating Adaptability, encouraging operational adaptation to strategic changes; and Implementing Deliberate Strategy, ensuring that strategies can be implemented effectively. Middle managers also have the role of communicators, which involves interacting with external parties, interpreting strategies, filtering information, and networking (Montreuil, 2022). However, middle managers tend to build organizational silos or focus more on the interests of their own work units rather than the company's strategic objectives. The results of the processed research data indicate that middle managers may require additional interaction (int_1) in the form of Absorptive Capacity (ACAP) moderation, which according to Kohtamäki (2023) and Sancho-Zamora et al. (2022) is an individual factor in terms of applying Learning as an intra-organizational process and establishing SA as an inter-organizational process. When given

interaction in the form of Absorptive Capacity (ACAP) moderation, it can be seen that the coefficient level becomes positive, indicating the possibility of influence or role if given ACAP moderation. This indicates that the ACAP factor in relationships within an alliance, especially at the manager or assistant manager level, is a necessary factor (Kohtamäki, 2023; Mirza et al., 2022). The conditions regarding ACAP will be explained in the next subchapter.

The Influence of Strategic Alliances on Sustainable Competitive Advantage (H2)

Strategic Alliances (SA) are often discussed as a means of achieving Sustainable Competitive Advantage (SCA). When an organization or its representative forms an SA, several objectives can be achieved, including information exchange, mutual resource complementarity, and even joint ventures.

This study shows a P value below 0.10, indicating a significant relationship between the SA variable and SCA. This is in line with previous studies that state that the relationship between SA and SCA is significant. As discussed earlier, this study uses middle managers as its research subjects, so the relationship between the two is strengthened by the interaction (Int_1) from ACAP. Before the interaction, a negative coefficient occurred, indicating that the higher the SA, the lower the SCA. Middle managers often ignore the strategic objectives of the organization because they are more focused on short-term operational issues (Montreuil, 2022), so they tend to think practically and lack communication skills (Koponen et al., 2025). Establishing SA also requires careful selection of partners. According to (Lu, Yuen, Tan, & Qi, 2024), which discusses the success factors of establishing SA in the shipping industry, in establishing SA, shipping companies need expertise in approaching partners to obtain accurate information and resources that can complement their shortcomings, which can then be transformed internally (Sancho-Zamora et al., 2022; Kohtamäki, 2023). This is in line with the statement by Mr. Eko Nuryono, in his capacity as Chairman of the East Java Regional Working Committee of the Indonesian Logistics Practitioners Association (PPLI) for the 2025-2030 term, "In my opinion, when an association or alliance, especially in logistics, has too many members, the members themselves will not receive significant benefits, and it will only become a gathering place that produces nothing. By limiting the number of members, we hope to make the alliance more focused and beneficial for all," in Surabaya, January 21, 2025. In his work program, Mr. Eko Nuryono explained that PPLI will limit the number of members and strengthen its work program with the aim of empowering each member's business. In this study, there is an additional interaction, namely ACAP, which, if possessed by middle managers, will make SA more effective.

The role of ACAP can be seen with the addition of the ACAP variable, which strengthens the relationship between SA and SCA. With ACAP, the ability to acquire, assimilate, transform, and exploit within an organization or department led by middle managers will increase SCA in a company. With ACAP, Middle Managers in establishing SA are more focused on how to absorb information and find partners who complement what is needed to fill the company's gaps, especially in the division they lead. Then, middle managers, as mediators to top management, can also provide advice and input from outside to be used as material for consideration in the company's strategic plans.

The Moderating Role of Absorptive Capacity in the Relationship between OCC and SA (H3)

Figure 2. shows the interaction plot between Learning Capability (LC), Absorptive Capacity (ACAP), and length of service on Strategic Alliance (SA). Visually, for employees

with less than 5 years of service, high ACAP keeps SA values stable even though LC is low, while with low ACAP, SA increases as LC increases. Meanwhile, for employees with more than 5 years of service, high ACAP also maintains SA consistency, but with low ACAP, an increase in LC is actually followed by a decrease in SA. This pattern seems to indicate that ACAP plays a protective role in maintaining the stability of the relationship between LC and SA. However, the results of the statistical moderation test do not support these visual findings ($\beta = 0.0802$; $p = 0.7344$), with a change in R^2 of only 0.15%. This means that ACAP is not proven to moderate the relationship between LC and SA in this study.

These results differ from a number of previous studies that found ACAP to play a significant role. Duan (2021) found that ACAP acts as a moderator that strengthens the relationship between LC and innovation performance. Fernald et al. (2017) also reported that the impact of alliances and acquisitions on innovation performance only appears in companies with high ACAP levels. Hernandez-Perlines (2018) confirmed that ACAP can strengthen the relationship between entrepreneurial orientation and the international performance of family businesses, while Wu et al. (2020) showed that relational embeddedness can only be transformed into a competitive advantage when organizations have adequate ACAP. Zhou (2022) even emphasized that network conditions, such as structural holes, strengthen the role of ACAP in innovation. The difference in results between this study and previous studies is likely due to the relatively small sample size, which makes it difficult to capture the generally small moderating effects, as well as the characteristics of the logistics industry context, which differs from the manufacturing or technology sectors that have been the focus of most previous studies. Thus, although the graphical pattern supports the theory, the empirical results of this study indicate that the role of ACAP as a moderator is contextual and does not always appear consistently in every organizational setting.

The Moderating Role of Absorptive Capacity (H4)

The results of the moderation test show that Absorptive Capacity (ACAP) is not proven to significantly moderate the relationship between Strategic Alliance (SA) and Sustainable Competitive Advantage (SCA). The interaction value between SA × ACAP does not provide a meaningful additional contribution to the variance of SCA, so statistically the moderation hypothesis is not supported. However, the descriptive pattern shows that under low SA conditions, companies with high ACAP tend to have better SCA values than companies with low ACAP. This indicates that ACAP still plays an important role in helping organizations filter, internalize, and utilize external information even though the moderating effect is not empirically significant.

This finding differs from previous research that emphasizes the importance of ACAP in optimizing the benefits of alliances. Lu et al. (2024) assert that the success of strategic alliances is largely determined by the selection of appropriate and relevant partners, with ACAP playing an important role in absorbing knowledge from partners. Fernald et al. (2017) also report that ACAP functions as a moderator that strengthens the influence of alliances and acquisitions on the innovation performance of large companies. Research by Hernandez-Perlines (2018) found that ACAP plays a role in increasing the influence of entrepreneurial orientation on the international performance of family firms, while Wu et al. (2020) showed that relational embeddedness can only generate competitive advantage when ACAP is adequate. In addition, Zhou (2022) added that structural network factors, such as structural holes, can strengthen the role of ACAP in innovation.

The inconsistency of these findings with previous literature may be due to several factors. First, the quality of alliances in this study sample may not have been strong enough to translate into competitive advantage, so that ACAP did not show a significant moderating role. Second, the limited sample size made it difficult to detect moderating effects, which are generally small. Third, the logistics industry context that is the focus of this study differs from the manufacturing or technology contexts that are more commonly examined in previous studies. Therefore, although the empirical results do not support the hypothesis, this study confirms that the role of ACAP as a moderator is contextual, and future studies need to pay attention to alliance quality factors, larger sample sizes, and non-linear or moderated mediation approaches to capture the dynamics of the SA–SCA relationship more comprehensively.

4. Conclusion

The logistics service industry in Indonesia is characterized by intense competition and rapid environmental change, where firms often struggle to sustain competitive advantage despite continuous operational improvements and alliance formation. A key problem faced by logistics service companies is the inability to effectively transform internal learning into strategic outcomes through external collaborations, resulting in alliances that do not consistently contribute to sustainable competitive advantage.

This study addresses this problem by examining the learning dimension of Organizational Change Capability (OCC) (Supriharyanti & Sukoco, 2023) and identifying the pivotal role of absorptive capacity (ACAP) as a strategic mechanism. The findings demonstrate that internal learning alone is insufficient to strengthen strategic alliances unless firms possess strong absorptive capacity. ACAP functions as a critical bridge that enables organizations to recognize, assimilate, transform, and exploit knowledge gained from both internal learning processes and external alliances, thereby enhancing sustainable competitive advantage. In this regard, the study extends prior research by empirically confirming ACAP as a key explanatory mechanism linking learning-oriented change capability with alliance effectiveness and long-term competitiveness.

From a theoretical perspective, this research contributes to the dynamic capability and knowledge-based literature by clarifying how the learning dimension of OCC operates through absorptive capacity to support sustainable competitive advantage. By positioning ACAP as a moderating mechanism, this study provides a more nuanced understanding of why some strategic alliances succeed while others fail to generate strategic value, particularly in highly dynamic industries such as logistics.

From a practical standpoint, the findings suggest that logistics service companies should not rely solely on cultivating a learning-oriented organizational culture or forming strategic alliances as isolated strategies. Instead, firms must systematically strengthen absorptive capacity, especially at the middle management level, where knowledge integration and alliance implementation are most critical. Enhancing ACAP through structured knowledge acquisition, assimilation, transformation, and exploitation processes enables firms to convert learning and alliance activities into sustainable competitive advantage.

Despite its contributions, this study has limitations. The analysis focuses exclusively on the learning dimension of Organizational Change Capability and does not incorporate the process and context dimensions proposed by Supriharyanti and Sukoco (2023). Future research is encouraged to adopt a more comprehensive OCC framework by integrating these dimensions and exploring their interaction with absorptive capacity and strategic alliances. Additionally,

future studies may extend the research to other industries or employ longitudinal designs to capture the dynamic evolution of change capability and competitive advantage over time.

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