

ORGANIZATIONAL PERFORMANCE OF INDONESIA'S MARITIME SECURITY AGENCY: A CASE STUDY ON MARITIME SECURITY COORDINATION

ADE PRASETIA

DOCTOR OF RESEARCH IN MANAGEMENT, BINUS BUSINESS SCHOOL, BINA NUSANTARA UNIVERSITY,
EMAIL: ADE.PRASETIA@BINUS.AC.ID

ENGKOS ACHMAD KUNCORO

DOCTOR OF RESEARCH IN MANAGEMENT, BINUS BUSINESS SCHOOL, BINA NUSANTARA UNIVERSITY,
EMAIL: EAKUNCORO@BINUS.AC.ID

RANO KARTONO

DOCTOR OF RESEARCH IN MANAGEMENT, BINUS BUSINESS SCHOOL, BINA NUSANTARA UNIVERSITY,
EMAIL: RANO.KARTONO@BINUS.AC.ID

GATOT SOEPRIYANTO

DOCTOR OF RESEARCH IN MANAGEMENT, BINUS BUSINESS SCHOOL, BINA NUSANTARA UNIVERSITY,
EMAIL: GSOEPRIYANTO@BINUS.EDU

Abstract: This study analyzes the influence of ambidextrous leadership and information technology (IT) adoption on strategic alliance performance and organizational performance of the Maritime Security Agency (MSA) in Indonesia. The challenge of synergizing different institutions with sectoral interests in maritime security rests solely on MSA's shoulders, which is critical to enhancing the country's national resilience. The situation describes the crude juxtaposition of “flexibility” and “assertiveness” in engaging with diverse stakeholders, which cries out for ambidextrous leadership. Moreover, the adoption of IT is regarded as equally important for the MSA's dynamic capabilities to cope with the ever-complex maritime security problems. The method followed in this work was a structural equation model using partial least squares analysis. The sample consisted of 136 employees from MSA, selected via stratified random sampling to ensure fair representation across the organization's strata. The findings revealed that strategic alliance performance, which was most critical for enhancing cooperation, received strong support from ambidextrous leadership and IT adoption. This did not hold for MSA's organizational performance, indicating that these factors were only part of the whole. Strategic alliance performance mediated the effect of ambidextrous leadership and IT adoption on organizational performance. This stance suggests the need for significant adoption of flexible leadership and technology to improve the efficiency of maritime security coordination in Indonesia. Further studies are needed on other intervening variables to provide an in-depth analysis of the factors moderating achievement.

Keywords: Organizational performance; Maritime security agency; Information technology adoption.

INTRODUCTION:

Indonesia has at least 12 maritime security agencies, so an organization is needed to coordinate all stakeholders to achieve maritime security effectiveness and efficiency. The Indonesian government established the Maritime Security Agency (MSA), one of whose duties is to synergize these agencies. MSA builds strategic alliances and collaborates with maritime security stakeholders to maintain Indonesia's maritime security. Moreover, the resources available to each maritime security agency are minimal, given the vastness of Indonesia's maritime territory. It is hoped that with the strategic alliance of maritime security stakeholders, budget efficiency can be achieved to maximize efforts to reduce violations in Indonesia's maritime area (Fita, 2025).

In terms of leadership, leadership that can synergize between when to be open to subordinate input and learn from them and when to give firm orders and demand subordinate performance is called ambidextrous leadership (Gong et al., 2025). MSA's leadership problem is an ambidextrous one because it is a coordinating institution, always facing paradoxical or conflicting situations when dealing with stakeholders, each with a sectoral ego. Ambidextrous leaders have a more generalist behavioral profile and are flexible enough to coordinate specific domains (Kafetzopoulos, 2022).

This differs from other leadership issues, such as transformational leadership, which focuses on motivating employees, and transactional leadership, which focuses on providing rewards and punishments for clear regulations (Ouyang et al., 2022). It also differs from servant leadership, which focuses on fulfilling subordinates' needs, or authentic leadership, which prioritizes transparency, justice, and morals (Gelaidan et al., 2024). The situation at

MSA requires a leader who can align diverse interests while being flexible, without being tied to a specific leadership style.

Another challenge at MSA is coordinating maritime security stakeholders, especially regarding technological issues such as interoperability. These issues are part of the technology adoption process. The thoughts and actions of people and businesses are critical, including mental factors such as the costs and benefits of using available technology (Karmaker et al., 2025). The appropriate use and integration of IT (Information Technology) within the organization can strengthen specific dynamic capabilities, exercise control over organizational value, enhance operational flexibility, and increase organizational agility and uncertainty response to challenges (Chowdhury et al., 2022). His research is about IT adoption and ambidextrous leadership.

Research on business organizations has identified that low resource complementarity, lack of experience, members' intent to hoard information, ethnocentrism, disharmonious structures, perceptions of injustice, and trust problems all contribute to the failure of strategic alliances (Gan & Korsgaard, 2022). In the context of maritime security, ambidextrous IT leadership and adoption could be the missing pieces of the puzzle of strategic alliance effectiveness. However, no studies have been conducted in this space. Hence, this paper seeks to address a critical empirical gap in the literature of strategic alliances in the context of maritime security. It examines how ambidextrous leadership, together with IT adoption, influences strategic alliance effectiveness and, subsequently, the organizational performance of MSA.

LITERATURE REVIEW

Ambidextrous leadership is the ability to be both flexible and strict simultaneously (Oluwafemi et al., 2025). This approach affects strategic partnerships, performance of innovations, and international collaboration (Fatehi & Choi, 2025). Ambidextrous leaders reduce conflict and increase alliance performance by balancing openness in the planning stage with firmness in execution (Annamalah et al., 2023).

Effective alliance leaders in a diverse environment construct in-group or relational identities and capitalize on members' unique backgrounds. Flexibility is among the top requirements of ambidextrous leaders (Tjemkes et al., 2023). Ambidextrous leaders manage in a pluralistic way by switching between formal, task-oriented governance and trust-based, informal, relational governance, depending on the situation (Malik et al., 2024). Alliance performance improves due to the increased alliance management capabilities enabled by ambidextrous leadership (Tjemkes et al., 2023).

In the context of MSA, ambidextrous leadership balances deliberation with stakeholders and firm decision-making during implementation:

H 1: Ambidextrous leadership has a positive influence on strategic alliance performance.

IT adoption evolves from survival to institutionalization, where technology becomes integral to inter-agency cooperation. It reduces uncertainty, enhances relationship management, and supports effective mission execution (Beretta et al., 2023).

Based on the explanation above, the IT adoption variable is more appropriately characterized as an independent rather than a moderating variable. Two reasons can be put forward. First, IT adoption is directly mentioned to encourage fast, decisive, effective, and efficient mission implementation. This shows that IT adoption is the primary driver of changes in mission implementation. Second, IT adoption is associated with the desired outcomes. This illustrates a strong causal relationship, where IT adoption leads to increased effectiveness and efficiency.

Technological turbulence plays an important role in alliance dynamics (Tjemkes et al., 2023). In a low-turbulence environment, an organization benefits from close relationships with alliance partners to sustain them through constructive responses that develop and diffuse strategies. A low-technology turbulence environment can be achieved, among other things, by adopting information technology. In maritime security, MSA uses external technologies such as radar and satellites, along with tools for vessel monitoring and weather prediction.

H 2: Adoption of IT has a positive influence on strategic alliance performance.

In public organizations, ambidextrous leaders can drive optimization in resource utilization (Gieske et al., 2018). In addition, public organizations can strengthen high-performance work systems, thereby strengthening ambidextrous employees (Ijigu et al., 2023). Therefore, it can be argued that ambidextrous leadership can influence the long-term performance of MSA organizations (Page et al., 2021). Ambidextrous leadership creates clarity, thus fostering performance appreciation (Backhaus et al., 2022). Moreover, ambidextrous leadership fosters innovation in performance through exploration and exploitation activities (Kjellström et al., 2022).

In the case of MSA, ambidextrous leadership can improve MSA organization performance by enabling MSA leaders to make clear, goal-oriented decisions that are responsive to the situation. Such decisions can enhance confidence within inter-institutional relations, which subsequently boosts performance. Therefore, the researcher makes the following proposition:

H 3: Ambidextrous leadership has a positive influence on MSA's organizational performance.

Previous IT adoption studies have shown that organizations can achieve positive performance gains through the use of IT. Lin and Qamruzzaman (2023) and Qureshi et al. (2023) found that IT adoption affects organizational performance across industries. When we consider the advantages of IT as a technology that helps create effectiveness and efficiency, it is clear that the more IT is used, the better the performance will be (Beretta et al., 2023).

From the perspective of resource dependency theory, weak performance results from MSA's limited ability to manage scarce resources in maritime security (Shin et al., 2020). IT adoption increases MSA's ability to compete with security violators and manage resources effectively. Therefore, IT adoption positively affects performance. In the context of MSA, adopting IT, such as VMS (Vessel Monitoring System), enhances the accuracy of MSA arrests and law enforcement in Indonesian waters. Additionally, this technology predicts security issues more accurately, allowing MSA to utilize its resources efficiently. These benefits support MSA's overall performance. Therefore, the author argues that higher IT adoption leads to better MSA performance:

H 4: Adoption of IT has a positive influence on MSA organizational performance.

At the core of stakeholder theory is the idea that stakeholder satisfaction enhances MSA's performance (Freeman et al., 2021). A strategic alliance is a form of self-coordination that requires cooperation toward a common goal by utilizing joint resources (J. He et al., 2022). The coefficients of efficiency and effectiveness of the alliances are critical for achieving organizational goals (Ozdemir et al., 2023).

MSA's performance can be derived from the strategic alliance's performance (Yu et al., 2019). For instance, enhanced collaboration between MSA and relevant stakeholders can build trust in MSA and increase arrests, thereby reducing maritime crime. Similarly, it has been shown that strategic alliances are among the best ways to improve business performance at the stakeholder level (Ryu et al., 2019). Therefore:

H 5: Strategic alliance performance has a positive influence on MSA's organizational performance.

High strategic alliance performance means alliance members are motivated to achieve common goals in a cooperative climate (Abdalkrim & Guizani, 2022). Xia et al. (2024) highlighted that organizations with strong strategic alliances perform better through frequent interactions and broader collaboration. Strategic alliance performance serves as a supportive mechanism for developing experience and learning (Rajan et al., 2023). In a suitable leadership environment, it can translate into individual organization performance (Waheed & Shafiq, 2023). The higher the performance of strategic alliances, the higher the organization's sustainable performance (Yue et al., 2022). In this study, the author argues that ambidexterity leadership positively impacts MSA organizational performance by improving national patrol strategic alliance performance. Foo et al. (2021) examined the mediating role of alliance performance in Chinese culture on leadership and sustainability performance, concluding that alliance performance does not mediate the relationship. However, this study is limited to the guanxi concept, which is a loose alliance. Therefore, the authors propose the following hypothesis:

H 6: Ambidextrous leadership has an indirect effect on MSA organizational performance through strategic alliance performance.

Strategic alliance performance is based on strategic management and stakeholder theories, emphasizing the use of strengths to cover each other's weaknesses. For example, IT strengths can help drive alliance performance. Xia et al. (2024) found that strategic alliance members use IT to explore opportunities, manage relationships, and achieve high performance. IT adoption positively influences alliance performance and institutional performance. Cancela et al. (2024) found that alliance performance positively affects organizational performance. If aligned, the research is interconnected to confirm that alliance performance is influenced by IT adoption and that IT adoption affects the individual performance of alliance members. Based on these findings, it is hypothesized that:

H 7: Adoption of IT has an indirect effect on MSA organizational performance through strategic alliance performance.

METHODOLOGY

Description of MSA

The Republic of Indonesia Maritime Security Agency (RI MSA) was established by Law Number 32 of 2014, which states in Article 59, paragraph (3), that "in the context of law enforcement in waters and jurisdictional areas, a Maritime Security Agency was established." The duties of RI MSA were stated in Article 61, namely "conducting security and safety patrols in Indonesian waters and jurisdictional areas." MSA carried out seven functions, including "synergizing and monitoring water patrols by related agencies" (Article 62 letter d). The MSA's main task was to synergize all maritime stakeholders for maritime security.

Questionnaires and Scales

Before primary data collection, the questionnaire was piloted on 30 individuals from security organizations and academia to test readability and clarity of instructions. Respondents provided feedback on unclear or irrelevant statements. Based on this input, adjustments were made to finalize the questionnaire for MSA respondents. Primary data were collected using online and offline methods. Questionnaires were distributed at the RI MSA Headquarters in Central Jakarta and to other areas online. This mixed-methods approach enabled researchers to reach more respondents, increase response rates, facilitate methodological triangulation, and adapt to field conditions (Creswell & Clark, 2017).

The fieldwork in June 2024 used stratified random sampling of MSA structural employees, targeting 196 employees. With a 5% sampling error and 95% confidence, a representative sample of 130 questionnaires was obtained. The total number of valid questionnaires was 136. The questionnaire was organized into six sections — demographic questions and sections on ambidextrous leadership, IT adoption, strategic alliance performance, and MSA performance — totaling 66 indicators. The variables were measured on a 5-point Likert scale, with 1 indicating total disagreement and 5 indicating agreement. The scales items used in this study are summarized in Table 1 below.

TABLE1 Scales used

Variable	Dimensions
Ambidextrous leadership	Openness (KA01-KA04), Closedness (KA05 – KA08), Exploration (KA09-KA15), Exploitation (KA16-KA22)
Adoption of Information Technology	IT infrastructure (AT01-AT04), strategic alignment (AT05-AT08), individual learning (AT09-AT12)
Strategic alliance performance	Community aspects (AS-1-AS03), alliance cooperation (AS04-AS08), cost aspects (AS09-AS12), internal processes (AS13-AS16), learning and growth (AS17-AS19)
MSA organizational performance	Formal performance (KB01-KB06), quantitative performance (KB07-KB09), qualitative performance (KB10-KB13)

Source: F. V. M. He et al. (2022); Pereira et al. (2023)

SEM (Structural Equation Modeling) was used to test the hypothesis in SmartPLS. Furthermore, PLS (partial least squares) was considered an appropriate method for empirical data with a complex model and did not require the normality assumption (Hair et al., 2019). The results of the PLS model were considered more reliable than those of the ordinary least squares model for data with multicollinearity, missing values, and small sample sizes. PLS-SEM included measurement models and structural models.

RESULTS AND DISCUSSION

Results

Table 2 shows the sociodemographic profile of MSA employees. 86% are male, and the remaining 14% are female. Respondents mainly have a bachelor's degree (46%) and are 21-30 (59%).

TABLE 2 Demographics of respondents (n = 136)

Variables	Frequency	Percentage
Gender		
Man	117	86
Woman	19	14
Workplace		
Headquarter	104	76
Maritime zone office	32	24
Education		
High School/Vocational School	41	30
Diploma	17	12
Bachelor degree	63	46
Master degree	13	10
Command school	2	1
Age		
21-30 years	81	59
31-40 years	42	31
41-50 years	5	4
51-60 years	8	6

Reliability and validity of the model

The loading value of each item was used as an indicator of convergent validity. An item was considered convergently valid if the outer loading value was greater than or equal to 0.708 or the AVE (average variance extracted) value of the variable/construct was greater than or equal to 0.5 (Hair et al., 2021). The outer loading value was allowed to be greater than or equal to 0.4 if the AVE of the variable/construct is greater than or equal to 0.5.

In the initial analysis of all items, several did not have a loading value of 0.708. These items were KA01 (0.656), KA05 (-0.039), KA09 (0.691), KA11 (0.703), KA12 (0.459), KA15 (0.362), KA16 (0.650), KA20 (0.585), KA21 (0.547), KA22 (0.703), AS07 (0.677), AS08 (0.561), KP04 (0.699), and KP10 (0.690). All of these items

were removed from the model to increase convergent validity. After re-analysis, items KB01 (0.421) and KA08 (0.702) were identified as having loading factors below 0.708. After re-analysis, no more items were found with loading factors below 0.708. The final results are reported in Table 3 below.

TABLE 3 Outer loading (loading factor) analysis results

No	Item	Loading Factor	Dimensions	Variables
1	KA02	0.743	Openness	Ambidextrous Leadership
2	KA03	0.719		
3	KA04	0.817		
4	KA06	0.914	Closure	
5	KA07	0.910		
6	KA10	0.743	Exploration	
7	KA13	0.833	Exploitation	
8	KA14	0.791		
9	KA17	0.785		
10	KA18	0.873		
11	KA19	0.853		
12	AT01	0.785		
13	AT02	0.799		
14	AT03	0.773		
15	AT04	0.735		
16	AT05	0.782	Strategic alignment	Strategic Alliance Performance
17	AT06	0.754		
18	AT07	0.836		
19	AT08	0.786		
20	AT09	0.713	Individual Learning	
21	AT10	0.813		
22	AT11	0.823		
23	AT12	0.783		
24	AS01	0.862	Community Aspects	
25	AS02	0.899		
26	AS03	0.835		
27	AS04	0.859		
28	AS05	0.904	Alliance Cooperation	MSA organizational performance
29	AS06	0.873		
30	AS09	0.860	Cost Aspect	
31	AS10	0.878		
32	AS11	0.787		
33	AS12	0.790		
34	AS13	0.846		
35	AS14	0.789		
36	AS15	0.724		

No	Item	Loading Factor	Dimensions	Variables
37	AS16	0.758	Learning and growth	
38	AS17	0.826		
39	AS18	0.911		
40	AS19	0.864		
41	KB02	0.797	Formal performance	
42	KB03	0.828		
43	KB04	0.731		
44	KB05	0.754		
45	KB06	0.824	Qualitative performance	
46	KB07	0.855		
47	KB08	0.899		
48	KB09	0.831		
49	KB10	0.782		
50	KB11	0.877		
51	KB12	0.900		
52	KB13	0.750		

Next, AVE was checked. AVE had to be at least 0.5. Table 4 is the convergent validity and reliability output from the SEM-PLS analysis for all variables and dimensions.

TABLE 4 Results of convergent validity and reliability tests

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
IT Adoption	0.775	0.776	0.899	0.817
Strategic Alliance	0.869	0.871	0.902	0.606
Cost Aspect	0.849	0.859	0.898	0.688
Community Aspects	0.832	0.845	0.899	0.749
Moderation Effect	1,000	1,000	1,000	1,000
Exploitation	0.788	0.816	0.875	0.700
Exploration	0.699	0.709	0.832	0.623
IT Infrastructure	0.777	0.880	0.847	0.581
Ambidextrous Leadership	0.779	0.792	0.872	0.694
Alliance Cooperation	0.853	0.882	0.910	0.771
Openness	0.658	0.826	0.787	0.557
Closure	0.798	0.805	0.908	0.831
MSA Performance	0.920	0.930	0.932	0.519
Formal Performance	0.820	0.852	0.871	0.539
Qualitative Performance	0.846	0.850	0.898	0.688
Quantitative Performance	0.827	0.830	0.897	0.743
Individual Learning	0.790	0.806	0.862	0.611
Learning and Growth	0.835	0.852	0.901	0.752
Strategic Alignment	0.799	0.847	0.867	0.621

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Strategic Alliance Internal Process	0.785	0.794	0.861	0.609

The results of the reliability analysis can also be seen in Table 4 above, namely in the Cronbach's alpha and Composite Reliability columns. All values had to be more than 0.700 to be said to meet the reliability requirements. All composite reliabilities meet these requirements, but for Cronbach's alpha, there are two constructs with reliability below 0.700, namely exploration (0.699) and openness (0.658). To detect which items need to be discarded, Cronbach's alpha analysis is used in SPSS. The following table shows the results of the Cronbach's alpha analysis for the three constructs.

TABLE 5 Cronbach's alpha test results

Dimensions	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Cronbach's alpha if the item deleted
Exploration (0.698)				
KA10	8.11	1.83	0.478	0.652
KA13	8.31	1.53	0.575	0.526
KA14	7.97	1.94	0.499	0.629
openness (0.658)				
KA02	8.00	1.90	0.545	0.464
KA03	8.15	1.77	0.517	0.500
KA04	7.77	2.35	0.36	0.694

From the results above, it appeared that even if one item was deleted, Cronbach's alpha did not improve. For example, the exploration dimension had an alpha of 0.698. It had three items, KA10, KA13, and KA14. If item KA10 was deleted, the resulting alpha was 0.652, lower than 0.698. Likewise, the openness dimension. Even so, the exploration alpha value was very close to 0.700, which is 0.698. If rounded to two decimal places, this value is 0.70. So rather than deleting this construct, it is better to maintain the construct. Likewise for the openness dimension. If item KA04 was deleted, this dimension had an alpha of 0.694, which means that if rounded to 0.70 it could be maintained. As a final result, only item KA04 was deleted.

The results of the HTMT criteria analysis used for discriminant validity show several values greater than 0.9 but almost all of them were dimension-variable relations such as IT adoption - IT infrastructure (0.935), strategic alliance - community aspects (0.987), exploitation - ambidextrous leadership (1.163), learning and growth - strategic alliance (0.989), strategic alignment - IT adoption (1.053), and internal processes of strategic alliance - strategic alliance (1.001). Because this analysis was second order, correlations between dimensions and variable items could occur and this could be ignored. After this process, it was concluded that the model was fully valid and reliable and the hypothesis testing analysis could be continued.

TABLE 6 Significance of relationship between dimensions and variables

	O	M	STDEV	O/STDEV	P Values
IT Adoption→ IT Infrastructure	0.811	0.817	0.021	39,389	0.000
IT Adoption→ Individual Learning	0.515	0.524	0.069	7,471	0.000
IT Adoption→ Strategic Alignment	0.863	0.867	0.017	50,964	0.000
Strategic Alliance→ Cost Aspect	0.642	0.648	0.058	11,049	0.000
Strategic Alliance→ Community Aspect	0.85	0.851	0.025	34,007	0.000
Strategic Alliance→ Alliance Cooperation	0.762	0.765	0.039	19,319	0.000
Strategic Alliance→ Learning and Growth	0.851	0.852	0.022	38,238	0.000
Strategic Alliance→ Internal Process of Strategic Alliance	0.827	0.828	0.026	31,948	0.000

	O	M	STDEV	O/STDEV	P Values
Ambidextrous Leadership→ Exploitation	0.943	0.945	0.008	111,397	0.000
Ambidextrous Leadership→ Exploration	0.627	0.631	0.072	8,683	0.000
Strategic Alliance→ Internal Process of Strategic Alliance	0.827	0.828	0.026	31,948	0.000
Ambidextrous Leadership→ Exploitation	0.943	0.945	0.008	111,397	0.000
Ambidextrous Leadership→ Exploration	0.627	0.631	0.072	8,683	0.000
Ambidextrous Leadership→ Openness	0.266	0.276	0.096	2,757	0.006
Ambidextrous Leadership→ Closedness	0.557	0.562	0.056	9,916	0.000
MSA Performance→ Formal Performance	0.921	0.922	0.015	60,756	0.000
MSA Performance→ Qualitative Performance	0.917	0.918	0.015	59,856	0.000
MSA Performance→ Quantitative Performance	0.868	0.87	0.028	30,527	0.000

Notes. O = Original Sample, M = Sample Mean, STDEV = Standard Deviation, and |O/STDEV| = T Statistics.

TABLE 7 Hypothesis test results

H	Connection	O	M	STDEV	O/STDEV	P Values	Conclusion
1	Ambidextrous Leadership→ Strategic Alliances	0.140	0.145	0.068	2.07	0.039	Accepted
2	IT Adoption→ Strategic Alliance	0.332	0.326	0.064	5.19	0.000	Accepted
3	Ambidextrous Leadership→ MSA Performance	0.074	0.074	0.072	1,026	0.305	Rejected
4	IT Adoption→ MSA Performance	0.075	0.078	0.086	0.866	0.386	Rejected
5	Strategic Alliance→ MSA Performance	0.478	0.486	0.097	4.944	0.000	Accepted

Notes. H = Hypothesis, O = Original Sample, M = Sample Mean, and STDEV = Standard Deviation.

TABLE 8 Mediation test results

H	Connection	O	M	STDEV	O/STDEV	P Values	Conclusion
6	Ambidextrous Leadership→ Strategic Alliance→ MSA Performance	0.067	0.069	0.034	1,958	0.050	Full mediation
7	IT Adoption→ Strategic Alliance→ MSA Performance	0.159	0.159	0.044	3,605	0.000	Full mediation

Notes. H = Hypothesis, O = Original Sample, M = Sample Mean, and STDEV = Standard Deviation.

The results of the hypothesis test shown in Table 7 indicate that there were a number of direct relationships between variables, which confirmed that ambidextrous leadership and IT adoption had a positive effect on strategic alliance performance, with coefficients of 0.140 and 0.332 respectively, with $t > 1.96$ and $p < 0.050$. This meant that the higher the ambidextrous leadership and IT adoption, the higher the performance of MSA's strategic alliance with other maritime security stakeholders.

However, ambidexterity leadership did not significantly affect MSA performance, with a coefficient of 0.074 and $t < 1.96$ and $p > 0.05$. This meant that high ambidexterity leadership did not directly improve MSA performance. Similarly, IT adoption did not show a significant relationship with MSA performance, with a coefficient of only 0.075, $t < 1.96$, and $p > 0.05$. However, strategic alliance performance was significantly related to MSA performance, confirming H5. The relationships among the variables and their p-values are illustrated in Figure 1 below.

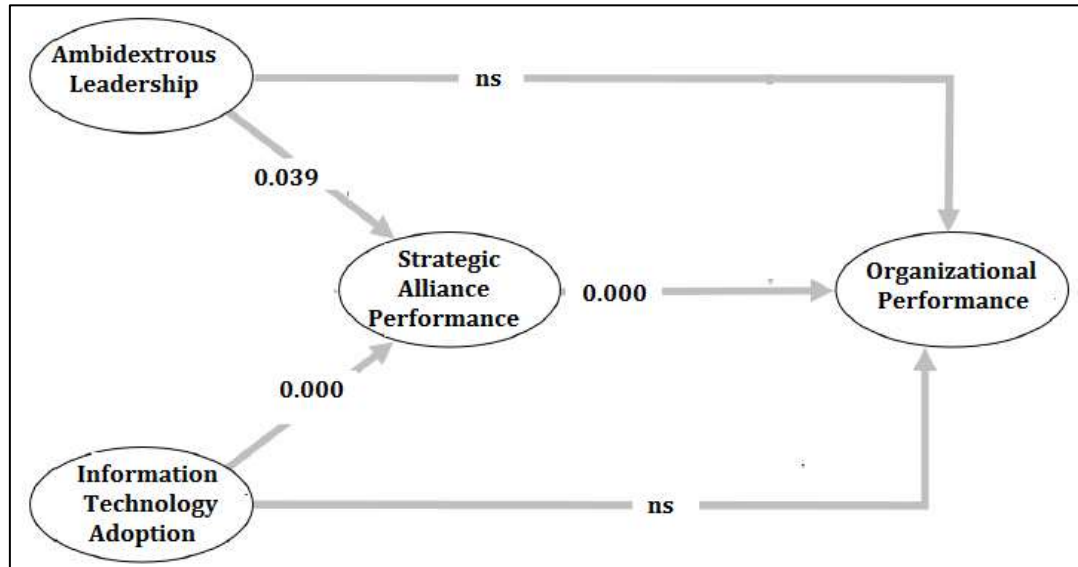


FIGURE 1 Hypothesis Test Results by Highlighting the P-value of Each Relationship
Notes. H = Not significant..

Since all independent variables did not have a significant effect on MSA organizational performance but had a significant effect on strategic alliances, strategic alliances have the potential to be a full mediator to bridge the indirect effect of ambidextrous leadership and adoption of IT on MSA organizational performance. According to the results of the statistical analysis of the indirect relationship in Table 8, strategic alliance performance mediated the effect of ambidextrous leadership on MSA organizational performance. This finding also further showed that strategic alliance performance significantly mediated between IT adoption and MSA performance with a coefficient of 0.159 and $T > 1.96$ and $p < 0.050$.

DISCUSSION

The first and second hypothesis state that the ambidextrous leadership and adoption of IT has a positive impact on strategic alliance performance and are proven. However, the third hypothesis—which states that ambidextrous leadership has a positive effect on MSA's organizational performance—is not proven. Contextual factors, such as organizational culture, may be the main reason. In security organizations such as MSA, which emphasize stability and consistency, innovation is often not encouraged, thus inhibiting the positive effects of ambidextrous leadership (Vargas-Halabi & Yagüe-Perales, 2024). In addition, a previous study shows that mediating variables, such as employee ambidexterity or inclusive leadership, can play an important role in bridging the influence of ambidextrous leadership on organizational performance (Ahmed et al., 2024).

The fourth hypothesis, which states that the adoption of IT has a positive effect on MSA's performance, is also not proven. Although dynamic capability theory suggests that IT adoption can increase organizational flexibility in responding to change (Kapoor & Aggarwal, 2020), this impact is not directly visible in the MSA context. A previous study by Agbo & Chukwuma, 2024 showed that factors such as institutional pressure and the fit between IT systems and organizational needs influenced the effectiveness of IT implementation. On the other hand, the fifth hypothesis, which states that strategic alliance performance has a positive effect on MSA performance, is confirmed. Furthermore, the sixth and seventh hypothesis about mediation role of strategic alliance performance are also confirmed.

CONCLUSION

The results of this study indicate that there is a significant relationship between ambidextrous leadership and the adoption of IT. on strategic alliance performance. The higher the ambidexterity leadership and IT adoption, the better the strategic alliance performance of MSA with stakeholders. However, neither ambidexterity leadership nor IT adoption has a significant direct effect on MSA performance. Strategic alliances are shown to play an important role as mediators. Strategic alliance performance fully mediates the indirect effect of ambidexterity leadership and IT adoption on MSA performance. This means that although ambidexterity leadership and IT adoption do not directly affect MSA performance, both have an indirect impact through improving strategic alliance performance. This finding emphasizes the importance of strategic alliances as a key element in improving MSA's organizational performance through collaboration with external parties.

REFERENCES

1. Abdalkrim, G., & Guizani, M. (2022). Analyzing external environmental, strategic alliance, and strategic alliance of Kingdom of Saudi Arabia firms - an empirical research. *Arabian Gulf Journal of Scientific Research*, 40(4), 347–363. <https://doi.org/10.1108/AGJSR-07-2022-0115>
2. Agbo, M. U., & Chukwuma, A. B. (2024). Effects of digital technologies on organizational performance (a study of federal medical center Umuahia). *Sumerian Journal of Business Management and Marketing*, 7(3), 28–38. <https://doi.org/10.47752/sjbmm.73.28.38>
3. Ahmed, F., Hu, W., Arslan, A., & Huang, H. (2024). Ambidexterity of HR practices in fortune 500 companies and employee innovation performance: mediating role of inclusive leadership. *Journal of Organizational Change Management*, 37(2), 237–254. <https://doi.org/10.1108/JOCM-05-2022-0139>
4. Annamalah, S., Paraman, P., Ahmed, S., Pertheban, T. R., Marimuthu, A., Venkatachalam, K. R., & T., R. (2023). Exploitation, exploration and ambidextrous strategies of SMES in accelerating organisational effectiveness. *Journal of Global Operations and Strategic Sourcing*, 18(2), 182–223. <https://doi.org/10.1108/JGOSS-08-2022-0090>
5. Backhaus, L., Reuber, A., Vogel, D., & Vogel, R. (2022). Giving sense about paradoxes: paradoxical leadership in the public sector. *Public Management Review*, 24(9), 1478–1498. <https://doi.org/10.1080/14719037.2021.1906935>
6. Beretta, V., Demartini, M. C., & Trucco, S. (2023). Digital accounting information system for non-financial disclosure: a case study analysis. In S. Za, R. Winter, & A. Lazazzara (Eds.), *Sustainable Digital Transformation* (pp. 11–22). Springer International Publishing. https://doi.org/10.1007/978-3-031-15770-7_2
7. Cancela, B. L., Bai, X., & Coelho, A. (2024). The relationship between green supply chain and green innovation based on the push of green strategic alliances. *Corporate Social Responsibility and Environmental Management*, 31(2), 1026–1041. <https://doi.org/10.1002/csr.2619>
8. Chowdhury, S., Budhwar, P., Dey, P. K., Joel-Edgar, S., & Abadie, A. (2022). AI-employee collaboration and business performance: integrating knowledge-based view, socio-technical systems and organisational socialisation framework. *Journal of Business Research*, 144(2022), 31–49. <https://doi.org/10.1016/j.jbusres.2022.01.069>
9. Fatehi, K., & Choi, J. (2025). International strategic alliance. In K. Fatehi & J. Choi (Eds.), *International business management: Succeeding in a culturally diverse world* (pp. 231–254). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-83295-6_8
10. Fita, G. A. (2025). Enhancing maritime security through strategic intelligence: the relevance of the global maritime axis to Indonesia's national resilience. *Security Intelligence Terrorism Journal (SITJ)*, 2(1), 118–128. <https://doi.org/10.70710/sitj.v2i1.40>
11. Foo, P., Lee, V., Ooi, K., Tan, G. W., & Sohal, A. (2021). Unfolding the impact of leadership and management on sustainability performance: green and lean practices and guanxi as the dual mediators. *Business Strategy and the Environment*, 30(8), 4136–4153. <https://doi.org/10.1002/bse.2861>
12. Freeman, R. E., Dmytriiev, S. D., & Phillips, R. A. (2021). Stakeholder theory and the resource-based view of the firm. *Journal of Management*, 47(7), 1757–1770. <https://doi.org/10.1177/0149206321993576>
13. Gan, D., & Korsgaard, S. (2022). When courtships fail: the antecedents of failure in strategic alliances between startups and incumbents. *The International Journal of Entrepreneurship and Innovation*, 1(2025), 123–136. <https://doi.org/10.1177/14657503221128015>
14. Gelaidan, H., Al-Swidi, A. K., & Al-Hakimi, M. A. (2024). Servant and authentic leadership as drivers of innovative work behaviour: the moderating role of creative self-efficacy. *European Journal of Innovation Management*, 27(6), 1938–1966. <https://doi.org/10.1108/EJIM-07-2022-0382>
15. Gieske, H., Meerkerk, I. Van, & Arwin Van Buuren. (2018). The impact of innovation and optimization on public sector performance: testing the contribution of connective, ambidextrous, and learning capabilities. *Public Performance & Management Review*, 42(2), 1–28. <https://doi.org/10.1080/15309576.2018.1470014>
16. Gong, L., Zhang, S., Guang, J., Liu, Z., & Fu, L. (2025). Where does individual ambidexterity come from under digital work context? inclusive leadership, team knowledge acquisition, and team knowledge sharing. *Journal of Knowledge Management*, 29(4), 1162–1190. <https://doi.org/10.1108/JKM-05-2024-0621>
17. Hair, J. F., Hult, T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). A primer on partial least squares structural equation modeling (PLS-SEM). In *Springer* (1st ed.). Sage Publications. <https://doi.org/10.1007/978-3-030-80519-7>
18. He, J., Hu, C., & Lin, C. C. (2022). Service innovation, inter-organizational trust, and performance in hospital platforms: social network and agency perspectives. *Frontiers in Public Health*, 10(2022), 1–9. <https://doi.org/10.3389/fpubh.2022.819371>
19. He, M., Wang, T., Xia, H., & Dai, J. (2022). Empirical research on how social capital influence inter-organizational information systems value co-creation in China. *Asia Pacific Business Review*, 28(4), 493–517. <https://doi.org/10.1080/13602381.2021.1889124>
20. Ijigu, A. W., Alemu, A. E., & Kuhil, A. M. (2023). High-performance work system and employee work performance: a moderated mediation model of ambidextrous leadership and employee ambidexterity. *International Journal of Business Science and Applied Management*, 18(1), 46–62. <https://doi.org/10.69864/ijbsam.18-1.170>

21. Kafetzopoulos, D. (2022). Ambidextrous leadership: a narrative literature review for theory development and directions for future research. *Baltic Journal of Management*, 17(2), 206–232. <https://doi.org/10.1108/BJM-01-2021-0001>
22. Kapoor, M., & Aggarwal, V. (2020). Tracing the economics behind dynamic capabilities theory. *International Journal of Innovation Science*, 12(2), 187–201. <https://doi.org/10.1108/IJIS-05-2019-0050>
23. Karmaker, S., Oishi, M. E. F., Qasem, A., Sami, S. B. S., & Noor, J. (2025). Exploring influential factors of consumer purchase behavior on the adoption of digital payment apps in Bangladesh. *Computers in Human Behavior Reports*, 17(2025), 100587. <https://doi.org/10.1016/j.chbr.2025.100587>
24. Kjellström, S., Areskoug Josefsson, K., Fabisch, A., Forsberg, C., Schneider, T., & Avby, G. (2022). Fostering exploration and exploitation behavior in management teams to enhance organizational performance: the learnovation leadership development program. *Leadership and Organization Development Journal*, 43(3), 482–500. <https://doi.org/10.1108/LODJ-04-2021-0162>
25. Lin, J., & Qamruzzaman, M. (2023). The impact of environmental disclosure and the quality of financial disclosure and IT adoption on firm performance: does corporate governance ensure sustainability? *Frontiers in Environmental Science*, 11(2023), 1–16. <https://doi.org/10.3389/fenvs.2023.1002357>
26. Malik, A., Gupta, J., Guhnani, R., Shankar, A., & Budhwar, P. (2024). Unlocking the relationship between ambidextrous leadership style and HRM practices in knowledge-intensive SMES. *Journal of Knowledge Management*, 28(5), 1366–1395. <https://doi.org/10.1108/JKM-04-2023-0339>
27. Oluwafemi, T. B., Ogundana, O. M., Dana, L. P., & Hasnaoui, J. (2025). Antecedents of ambidextrous leadership in entrepreneurship: the role of emotional intelligence and entrepreneurial leadership styles. *Strategic Change*, 1(2025), 1–14. <https://doi.org/10.1002/jsc.70001>
28. Ouyang, C., Zhu, Y., & Ma, Z. (2022). Ambidextrous leadership and employee voice behavior: the role of work motivation and ambidextrous culture. *Psychology Research and Behavior Management*, 15(2022), 2899–2914. <https://doi.org/10.2147/PRBM.S385033>
29. Ozdemir, S., Carlos Fernandez de Arroyabe, J., Sena, V., & Gupta, S. (2023). Stakeholder diversity and collaborative innovation: integrating the resource-based view with stakeholder theory. *Journal of Business Research*, 164(2023), 113955. <https://doi.org/10.1016/j.jbusres.2023.113955>
30. Page, S. B., Bryson, M., J., Icon, O., Crosby, B. C., Seo, Stone, D., & Middleton, M. (2021). Ambidexterity in cross-sector collaborations involving public organizations. *Public Performance & Management Review*, 44(6), 1161–1190. <https://doi.org/10.1080/15309576.2021.1937243>
31. Rajan, R., Dhir, S., & Sushil. (2023). Determinants of alliance productivity and performance: evidence from the automobile industry. *International Journal of Productivity and Performance Management*, 72(2), 281–305. <https://doi.org/10.1108/IJPPM-02-2020-0079>
32. Shin, D. Y., Robert, W.-M., & Chang, J. (2020). The impact of market conditions on RN staffing in hospitals: using resource dependence theory and information uncertainty perspective. *Risk Management and Healthcare Policy*, 13(2020), 2103–2114. <https://doi.org/10.2147/RMHP.S274529>
33. Tjemkes, B., Vos, P., & Burgers, K. (2023). *Strategic alliance management*. Routledge. <https://doi.org/10.4324/9781003222187>
34. Vargas-Halabi, T., & Yagüe-Perales, R. M. (2024). Organizational culture and innovation: exploring the “black box.” *European Journal of Management and Business Economics*, 33(2), 174–194. <https://doi.org/10.1108/EJMBE-07-2021-0203>
35. Viana Pereira, F., Tavares, J., & Oliveira, T. (2023). Adoption of video consultations during the COVID-19 pandemic. *Internet Interventions*, 31(4), 100602. <https://doi.org/10.1016/j.invent.2023.100602>
36. Waheed, A., & Saad Shafiq, B. M. (2023). Alliance learning process and alliance success: the moderating role of openness. *Journal of Asia Business Studies*, 17(4), 873–894. <https://doi.org/10.1108/JABS-10-2021-0409>
37. Xia, S., Song, J., Ameen, N., & Vrontis, D. (2024). What changes and opportunities does big data analytics capability bring to strategic alliance research? a systematic literature review. *International Journal of Management Reviews*, 26(1), 34–53. <https://doi.org/10.1111/ijmr.12350>
38. Yu, B., Xu, H., & Dong, F. (2019). Vertical vs. horizontal: how strategic alliance type influence firm performance? *Sustainability*, 11(23), 1–14. <https://doi.org/10.3390/su11236594>
39. Yue, L., Ye, M., & Chen, Q. (2022). The impact of partnerships and information sharing on corporate sustainable performance: a mediation model moderated by government support. *Frontiers in Psychology*, 13(2022), 1–11. <https://doi.org/10.3389/fpsyg.2022.942279>