

The Influence of Organizational Culture, Alliance Partners, Digital Capability on Firm Performance Mediated by Strategy Flexibility

ABSTRACT

Aims: The study examines the effects of organizational culture, alliance partners, and digital capability on firm performance, mediated by strategy flexibility in the national automotive component industry in Indonesia.

Study design: The data collection technique was non-probability sampling with purposive sampling method in which the number of samples that met the criteria to be analyzed were 228 companies.

Place and Duration of Study: The population of this study were all automotive component companies located in Jakarta, Banten and West Java, totaling 237. Each sampled company is represented by one respondent, namely a manager or senior manager of an automotive component industry company.

Methodology: Structural Equation Model (SEM)

Results: These findings suggest the importance of flexible strategies for leveraging internal and external resources to enhance performance. Strategy flexibility partially mediates the effects of organizational culture and digital capability on firm performance, and fully mediates the effect of alliance partners.

Conclusion: This study shows the results of the positive influence of Organizational culture, Alliance Partners, Digital Capability, and Strategy Flexibility toward Firm Performance. Strategy Flexibility as a mediating variable can mediate the effect of Organizational Culture, Alliance Partners and Digital Capability on Firm Performance. The implications of this research can be an input for the leaders of the national automotive component industry companies in making a strategic decision to face the challenges of increasingly complex business competition through the implementation of a flexible strategy in the services and processes of the manufacturing industry which has implications for improving company performance.

Key words: Alliance Partners, Digital Capability, Organizational Culture, Firm Performance

1. INTRODUCTION

The Indonesian government's main focus is national economic recovery after the COVID-19 pandemic. This superior program urgently needs to be implemented immediately, with a focus on creating a conducive business and investment climate. The government maintains domestic economic and political stability [1]. Development indicators show improvement, indicating optimism for accelerating economic recovery towards inclusive and sustainable economic transformation[1].

In 2020, the manufacturing industrial sector, a significant contributor of 19.88% to the Gross Domestic Product (GDP) is expected to contribute more [2]. Even though this sector experienced a contraction of 4.22% in 2020 due to the impact of

the COVID-19 pandemic, especially in Jakarta, West Java, and Banten, the government is trying to overcome restrictions on the mobility of people, goods, and services that affect the manufacturing industry[3].

The growth of motor vehicle production in Indonesia still has the potential to increase, considering the low car ownership ratio. The prospects for the automotive industry are supported by Indonesia's large population and productive age, creating opportunities for high consumption[4]. Automotive manufacturing companies need to integrate innovation and resources to increase competitiveness. Strategies such as open innovation can produce more competitive products by involving various parties such as customers, entrepreneurs, universities, and society [5].

Applying digital capabilities in manufacturing company operational strategies is the key to creating product excellence and diversification. Dynamic capability, the theory underlying this research, emphasizes an organization's ability to create, extend, or modify resources to achieve certain goals[6]. Process, position, and flow influence a company's dynamic capabilities [7].

Flexibility strategies, as an important element in dealing with environmental changes, especially during the COVID-19 pandemic, require information technology support [8]. Alliance partners can also be a significant internal resource for achieving a company's strategic goals [9]. The influence of organizational culture, alliance partners, and digital capabilities on a company's flexibility strategy is the focus of this research.

The results of previous research state that integrating corporate culture factors and internal changes affects company performance. An organizational culture that emphasizes innovation and risk can create an environment that supports the implementation of Total Quality Management (TQM) [10]. Likewise, corporate efficiency and flexibility strategies become relevant, especially in a turbulent business environment [11].

This research combines a new model by including a flexibility strategy in the relationship between organizational culture, alliance partners, digital capabilities, and company performance. Research questions include the direct influence of organizational culture, alliance partners, digital capabilities, and flexibility strategies on company performance and the mediating role of flexibility strategies in this relationship.

Hypotheses Development

Organizational culture is considered the most significant factor for all types of organizations and is the main factor in a company's success[12]. Organizational culture plays a very important role in an organization's survival in the market[12]. Meanwhile, the other research also states that organizational cultures, such as hierarchy and advertising promotions, do not predict organizational performance [13]. Furthermore, there is an influence between dimensions of organizational culture on company performance that cannot be concluded. However, the results of this research examine organizational culture from three dimensions: supportive culture, innovative culture, bureaucratic culture, and transformative culture [12]. Researchers examining companies implementing organizational culture on company performance do not know the impact.

H1: There is a positive influence of organizational culture on firm performance.

Manufacturing industry companies may improve their position through associations with alliance partners, such as in choosing relationships with alliance partners; the decision in choosing partners can influence the company's capabilities [14]. This is very important for companies with low status if the quality of their products is difficult to evaluate. In general, it can be assumed that observing affiliate relationships with business partners will make it easier to observe differences in quality [15]. Improving the product quality of low-status companies can be achieved by carrying out the same knowledge transformation; this is due to the use of almost the same technology to serve similar customer needs [16].

Similar digital access due to structural relationships can generally be achieved through trade associations [17], industry-based norms and procedures [18], and membership in the general technology community. Alliance partner relationships are divided into two, namely horizontal alliance partners and vertical alliance partners. Compared with all, they have a higher degree of redundancy in the capabilities and skills of each alliance partner contributing to the joint venture [16][19]. Companies can achieve mutual benefits if partners complement each other's weaknesses[20]. The way to complement the weaknesses of alliance partner companies is to combine and complement skills between small companies that have certain technical skills and large companies that are experienced in producing products faster and cheaper [21].

H2: There is a positive influence of alliance partners on firm performance

Large companies have a better level of digitalization and organizational digital technology competence than small and medium enterprises (SMEs). Companies must successfully embrace transformation through digital technology to improve core businesses, such as improving customer service, streamlining operations, and creating new business models to face business competition [22]. Previous research states that there is no statistically significant difference in the level of implementation of digital technology aspects in companies. The production environment of manufacturing industrial companies that can implement digital technology transformation will be tested in this research.

H3: There is a positive influence of digital capability on firm performance

Every company related to the acceptance of digital technology innovation requires technology-based instruments that play a role in decision-making and communication planning. To achieve maximum benefits from digital technology innovation carried out by a company, it is necessary to instill the right organizational culture in line with implementing innovations[23]. The need to understand that the willingness and adoption of technology acceptance depends on the user company regarding the use of technology, the expected benefits of which can highlight the need for digitalization technology[23]. Adopting technological systems used by successful manufacturing companies has a high influence on productivity, such as material handling systems. An important feature of this system focuses on the material handling system used by manufacturing industrial companies to implement changes and maximize validation and verification of the impact of the material handling system [23]. When carrying out a digital operations strategy, the theory suggests that an assessment of the technology used is to achieve predetermined company performance.

H4: Strategy flexibility has a role in mediating the influence of organizational culture on firm performance.

Innovation management in carrying out changes, such as the introduction of the latest practices, the application of knowledge that can be imitated, and the use of technological tools that support knowledge to pursue organizational competitive advantage [24]. However, special attention should be paid not only to the hard components of the introduction of technology in the organizational context but also to the process of developing strategic knowledge management systems for human resources [24]. There is no evidence of individual availability to share knowledge through systems and infrastructure until tools are built and organizational reactions can be observed.

Therefore, orientation towards digital evolution must be carried out together with changes in organizational culture. Management must realize that individuals as knowledge repositories are the key to successful knowledge digitalization procedures supported by strategy flexibility [20]. Then, to achieve organizational goals, the company needs to take concrete steps. This is because the company must prepare human resources that can embrace radical transformation and collaboration.

H5: Strategy flexibility has a role in mediating the influence of alliance partners on firm performance.

Antecedents of strategy flexibility have been identified in existing literature, especially those within the company's boundaries. According to the resource-based theory [25], these antecedents can be classified into two general categories: 1) Availability of superior resources. 2) Flexibility capabilities related to the use or expansion of the use of existing resources. Superior and timely redeployment of resources can increase a firm's overall capacity to respond to political, economic, and financial risks [26], and the accumulated use of superior organizational resources creates a buffer for managing environmental uncertainty [27].

Flexibility capabilities include the ability to innovate [28] and managerial cognition [29] that facilitate flexibility. However, focusing on the availability and utilization of resources within organizational boundaries, previous research has neglected the role of accessing knowledge across organizational boundaries to encourage strategy flexibility [30]. Meanwhile, to access resources from inter-organizational relationships to increase company capabilities and competitive advantage,[31][32] other research has examined the proactive role of external relationships in developing strategy flexibility at the company level. The moderating role of organizational structure and institutional support is an important contingency of strategic flexibility [30].

H6: Strategy flexibility has a role in mediating the influence of digital capability on firm performance.

The strategy of small companies has not received much attention in offering products related to operational strategy and company performance. This concept relates to three choices that companies can make, namely offering standard products, then offering products that are only produced to order, and offering standard products that are made to order [33].

The strategic implications of this have been discussed in the organizational theory and operations management literature. Little has been found empirically to investigate how this concept applies to the management of small-scale companies. This paper advances the literature that explains development concepts using organizational theory and tests hypotheses regarding the relationship between strategy flexibility and company performance in a large sample of small manufacturers with private ownership structures in the manufacturing industry [34]. The results show that small firms that pursue efficiency and flexibility strategies can achieve optimal performance, whereas firms that try to combine efficiency and flexibility strategies perform significantly worse[33].

H7: Strategy flexibility has a positive effect on firm performance.

2. MATERIAL AND METHODS

This research involves five main variables, namely organizational culture (X1), alliance partners (X2), digital capability (X3), strategy flexibility as a mediating variable (Z), and firm performance as the dependent variable (Y), which is sourced from [12][35]–[37]. Measurements were carried out using a Likert scale to measure responses to the questionnaire, which included elements and constructs from the research variable indicators.

Organizational culture is measured by two dimensions: consensual/clan and bureaucratic/hierarchy. Alliance partners are measured through their societal status and their partner's societal status. Digital capability only has one dimension, while strategy flexibility is measured by product flexibility and delivery flexibility. Firm performance is measured through financial (growth and profitability) and non-financial (competitiveness) indicators.

This research uses interval scale measurements with a Likert scale measurement method which measures the respondent's attitude of agreeing and disagreeing with certain subjects and objects or incidents and incidents [38]. The data collection method involved sending questionnaires via email to Gaikindo members and meeting respondents directly via WhatsApp. Data analysis was carried out using SEM-PLS. The research population consisted of 237 automotive parts and components manufacturing companies, with research carried out from August 2022 to December 2022.

Table 1. Respondent Characteristics

Characteristic	Number	Percentage (%)
Age		
< 40 years	68	29.9
41-50 years	137	60
51-60 years	16	7
≥ 61 years	7	3.1
Domicile		
DKI Jakarta	58	25.4
West Java	138	60.5
Banten	32	14.1
Job Title		
Supervisor	48	21
Assistant Manager and Manager	174	76.3
Senior Manager	6	2.7
Total Employee		
≤ 500 peoples	34	14.9
501-1000 peoples	157	68.8
≥ 1001 peoples	37	16.3
Period		
<10 years	16	7.1
11-40 years	170	74.5
>41 years	42	18.4

Respondents were divided by company domicile into DKI Jakarta, West Java, and Banten. Most work in West Java (60.5%), followed by DKI Jakarta and Banten. Manufacturing industries, especially those that are members of GAIKINDO, are dominant in West Java, especially in Cikarang and Karawang.

Structural Equation Modeling (SEM) **used** in this research to make decisions based on the analysis of the collected data. SEM is a multivariate statistical technique that can analyze manifest variables, latent variables, and variable measurement errors. The results of data analysis by SEM will be the basis for accepting or rejecting the research hypothesis. Discriminant validity was assessed using the Fornell Larcker Criterion. This traditional method compares the square root of average variance extracted (AVE) with the correlation between constructs in the model[39]. The model is valid if the square root of AVE is greater than the correlation between constructs.

Table 2. Discriminant Validity

	Alliance Partners (X2)	Digital Capability(X3)	Firm Performance (Y)	Strategy Flexibility (X4)	Organizational Culture (X1)
Alliance Partners(X2)	0.789				
Digital Capability(X3)	0.505	0.805			
Firm Performance (Y)	0.723	0.706	0.820		
Strategy Flexibility (X4)	0.666	0.613	0.730	0.846	
Organizational Culture (X1)	0.626	0.595	0.701	0.656	0.802

Source: Data processed (2023)

Indicator reliability aims to assess whether the latent variable measurement indicators are reliable or unreliable by evaluating the outer loading results of each indicator. A loading value above 0.7 indicates that the construct can explain more than 50% of the variance in the indicators[40].

Table 3. Outer Loading

	Alliance Partners (X2)	Digital Capability (X3)	Firm Performance (Y)	Strategy Flexibility (X4)	Organizational Culture (X1)
X2.1	0.819				
X2.2	0.837				
X2.3	0.717				
X2.4	0.743				
X2.5	0.772				
X2.6	0.788				
X2.7	0.803				
X2.8	0.821				
X3.1		0.744			
X3.2		0.836			
X3.3		0.761			
X3.4		0.825			
X3.5		0.830			
X3.6		0.832			
X3.7		0.784			
X3.8		0.825			
Y1			0.833		
Y2			0.792		
Y3			0.811		
Y4			0.729		
Y5			0.863		
Y6			0.886		
Y7			0.820		
X4.1				0.881	
X4.2				0.844	
X4.3				0.840	
X4.4				0.819	

X4.5	0.824	
X4.6	0.868	
X1.1		0.788
X1.2		0.855
X1.3		0.769
X1.4		0.786
X1.5		0.776
X1.6		0.812
X1.7		0.774
X1.8		0.852

The next explanation is as in the organizational culture construct (X1) where all loading values for all indicators are greater than all cross loadings to other constructs. Because all indicators have loading values on their constructs > cross loading, this model meets the requirements for discriminant validity. All items or indicators also meet the validity and reliability requirements and there is no multicollinearity between indicators.

The results of the outer model analysis to meet the model fit criteria, the SRMS value must be less than 0.05 [40]. However, based on the explanation from the SMART PLS website, the limitations or criteria for model fit include the RMS Theta or Root Mean Square Theta value < 0.079, the SRMS or Standardized root mean square value < 0.10 or < 0.08 and the NFI value < 0.9.

Table 4. Standardized Root Mean Square

Fit Summary	Saturated Model	Estimated Model
SRMR	0.085	0.085
d_ULS	5.135	5.135
d_G	110.476	110.470
Chi-Square	12637.421	12637.421
NFI	0.310	0.310
rms Theta	0.193	

The Standardized Root Mean Square (SRMR) value is 0.085, which states that the RMS Theta or Root Mean Square Theta value is 0.193 > 0.080, so the SRMR or Standardized Root Mean Square value is 0.085 < 0.10 so based on the two model assessments one of them meets criteria for model fit with research data.

3. RESULTS

Table 5. Descriptive Statistics

No	Variable/ dimension	Mean
1	Organizational culture	4.087
2	Alliance Partners	4.149
3	Digital Capability	4.256
4	Strategy Flexibility	4.180
5	Firm Performance	4.204

The results of descriptive statistical for each variable and dimension are the average of the two dimensions (consensual/clan dimension and bureaucratic/hierarchy) of organizational culture is 4,087. The alliance partners variable has two dimensions, own societal status and partners' societal status, with an overall mean of 4.149. Digital capability has a single-dimension average of 4.256, indicating a positive perception of the company's digital capabilities. Strategy flexibility, the average of the two dimensions, product flexibility, and delivery flexibility, is 4,180. The firm performance variable has an overall mean of 4.204.

The structural equation modeling (SEM) method based on partial least squares (PLS) to test the direct influence hypothesis can be explained in the following table.

Table 6. Hypotheses testing

Hypotheses	Coefficient	P-Value	Decision
H1: There is a positive influence of organizational culture on firm performance.	0.270	0.000	Accepted
H2: There is a positive influence of alliance partners on firm performance	0.310	0.000	Accepted
H3: There is a positive influence of digital capability on firm performance.	0.310	0.000	Accepted
H4: Strategy flexibility has a role in mediating the influence of organizational culture on firm performance.	0.270	0.000	Accepted
H5: Strategy flexibility has a role in mediating the influence of alliance partners on firm performance.	0.360	0.000	Accepted
H6: Strategy flexibility has a role in mediating the influence of digital capability on firm performance.	0.214	0.000	Accepted
H7: Strategy flexibility has a positive effect on firm performance	0.214	0.000	Accepted

Source: Data processed (2023)

This analysis evaluates the influence of the independent variable on the dependent variable in two models. In Model 1, the variables Organizational Culture (X1), Alliance Partners (X2), and Digital Capability (X3) have a significant effect on Strategy Flexibility (X4), with a p-value <0.05. The parameter coefficient of Organizational Culture (X1) on Strategy Flexibility (X4) is 0.270, indicating a positive influence. One unit increase in Organizational Culture (X1) increases Strategy Flexibility (X4) by 27%. The bootstrap test showed similar results, with a p-value of 0.000 < 0.05, confirming its statistical significance.

Model 2 confirms the positive influence of Organizational Culture on Firm Performance (Y), with a parameter coefficient of 0.182. One unit increase in Organizational Culture increases Firm Performance by 18.2%. The bootstrap test gave similar results, with a p-value of 0.000 < 0.05, confirming its statistical significance.

Then, analysis of indirect effects through Strategy Flexibility shows significant results. Organizational Culture (X1), Alliance Partners (X2), and Digital Capability (X3) indirectly influence Firm Performance (Y) through Strategy Flexibility (X4), with p-value <0.05, rejecting H0.

In conclusion, all variables in both models have a significant influence on Strategy Flexibility and Firm Performance. A joint analysis of the R-Square table can provide an overall picture of the influence of these variables.

Table 7. R-Square

	R Square	R Square Adjusted
Firm Performance (Y)	0.727	0.722
Strategy Flexibility (X4)	0.583	0.577

Source: Data processed (2023)

The significant R-square for the organizational culture, alliance partners, and digital capability variables on strategy flexibility reached 0.583, with an adjusted R-square of 0.577. This shows that together, these three variables influence strategy flexibility by 57.7%. Since the adjusted R-square is greater than 33%, their influence can be considered moderate. Meanwhile, the influence of organizational culture, alliance partners, digital capability, and strategy flexibility on firm performance has an R-square of 0.727 and an adjusted R-square of 0.722. Overall, these four variables influence firm performance by 72.2%. With an adjusted R-square exceeding 67%, their influence can be categorized as strong. Apart from looking at the significance of the relationship between variables, researchers should also evaluate the magnitude of the influence using effect size, with an f2 value of 0.02 considered small, 0.15 medium, and 0.35 large.

Table 8. F-Square

	Alliance Partners (X2)	Digital Capability(X3)	Firm Performance (Y)	Strategy Flexibility (X4)	Organizational Culture (X1)
Alliance Partners (X2)			0.173	0.181	

Digital Capability(X3)	0.196	0.108
Firm Performance (Y)		
Strategy Flexibility (X4)	0.070	
Organizational Culture (X1)	0.056	0.088

Source: Data processed (2023)

Based on the F-Square value table above, the large effect size is the influence of alliance partners on strategy flexibility and firm performance, digital capability on firm performance, while the other influences are in the medium category.

Discussion

This article presents the results of testing hypotheses related to the influence of organizational culture, alliance partners, digital capability, and strategy flexibility on firm performance in national automotive component industry companies.

First, the results of testing hypothesis one (H1) show a positive influence of organizational culture on firm performance. These results reflect that the company has implemented an organizational culture following GAIKINDO's business agreement, which has the potential to improve company performance.

Second, the results of testing hypothesis two (H2) show a positive influence of alliance partners on firm performance. The direct influence path coefficient value is 0.387, and respondents' answers to the two dimensions of the alliance partners variable have a mean value of 0.385. This indicates that learning with alliance partners has a positive influence on company performance.

Then, the results of testing hypothesis four (H4) indicate that strategy flexibility indirectly mediates the influence of organizational culture on firm performance. Organizational culture has a direct positive influence with a regression coefficient of 0.270 and a p-value of 0.000. The total effect of strategy flexibility on firm performance is 0.484, indicating the partial mediating role of strategy flexibility in the relationship between organizational culture and company performance.

Likewise, the results of testing hypotheses five (H5) and six (H6) show that strategy flexibility also indirectly mediates the influence of alliance partners and digital capability on firm performance with coefficients of 0.360 and 0.368, respectively. The total influence of strategy flexibility on firm performance is 0.630 (H5) and 0.678 (H6), confirming the partial mediating role of strategy flexibility in the relationship between alliance partners, digital capability, and company performance.

Finally, the results of testing hypothesis seven (H7) reveal a positive influence of strategy flexibility on firm performance, with a direct influence path coefficient value of 0.270. Respondents' answers to the strategy flexibility variable show that the company has carried out the production process according to the number of orders, with a mean value of 0.211.

Overall, this research's findings provide a positive contribution to understanding the relationship between these variables in the context of the national automotive components industry.

4. CONCLUSION

The results of the hypothesis test show that organizational culture, alliance partners, digital capability, and strategy flexibility have a direct positive influence on the company's firm performance. It was found that alliance partners have the greatest influence on strategy flexibility, followed by digital capability. Meanwhile, strategy flexibility has the greatest influence on firm performance, followed by alliance partners and digital capability.

Alliance partners have a positive influence on strategy flexibility, showing that effective learning with alliance partners can improve the company's ability to provide products that suit customer needs. Digital capability has a positive effect on strategy flexibility, showing that applying digital technology in the production process can influence the company's flexibility strategy. Organizational culture has a positive effect on strategy flexibility, indicating that a company culture that supports quality commitment can influence the company's strategic flexibility.

Alliance partners have a positive effect on firm performance, indicating that sharing resources and markets with alliance partners can increase company productivity and performance. Digital capability has a positive effect on firm performance, showing that the application and utilization of digital technology can increase the effectiveness of work processes and company performance. Organizational culture has a positive effect on firm performance, showing that employee evaluations that encourage continuous improvement can motivate employees and improve company performance. Strategy flexibility mediates the influence of alliance partners on firm performance, showing that strategy flexibility can link the indirect influence of employee work visit exchanges with increasing company performance. Strategy flexibility mediates the influence of digital capability on firm performance, showing that strategy flexibility can link the indirect influence of the application of digital technology to company performance. Strategy flexibility mediates the influence of organizational culture on firm performance, showing that strategy flexibility can link the indirect influence of a culture of continuous improvement with increasing company performance.

Implications

This research provides a theoretical contribution by including strategy flexibility as a mediating variable on the influence of organizational culture on firm performance.

Research Limitations

The limitations of this research are in the theoretical study used, namely the resource-based view and dynamic capability theory, using research variables that influence company performance, and only concentrates on implementing strategy flexibility and alliance partners, which are important in improving the performance of automotive component industry companies. However, there are still other dimensions of strategy flexibility that need to be explored. Fourth, the sample of respondents from this research only focuses on automotive component companies located in the DKI Jakarta, Banten, and West Java areas.

Suggestions/Recommendations for Further Research

To the limitations in this research, the following can be recommended for further research: First, consider the dimensions of joint learning with alliance partners to test/analyze whether they have a positive effect on company performance. Second, by using WhatsApp groups in the production process when people need to change from the strategy flexibility variable to test/analyze whether it has a positive influence on company performance. Third, include the variable application of digital process technology as an exogenous latent variable, such as the Internet of Things (IoT), which can support business processes more effectively and efficiently to achieve the expected company performance targets.

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