
The Effect of Millennial Transformational Leadership on IT Capability, Organizational Agility and Organizational Performance in the Pandemic Era: an Empirical Evidence of Fishery Startups in Indonesia

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Abstract

This study aims to understand: Does millennial transformational leadership influence organizational performance, organizational agility and IT capability? Does IT capability influence organizational agility? Does organizational agility influence organizational performance? The population of this study included selected fishery startups in Indonesia based on the data released by the Ministry of Marine Affairs and Fisheries of Republic of Indonesia and Digital Fishery Network. This study used the statistical method of PLS-SEM to analyze the data. The findings show that there is a positive relationship between millennial transformational leadership and organizational agility, millennial transformational leadership and IT capability, IT capability and organizational agility, and organizational agility and organizational performance. Future researches are suggested to examine the effects of several mediating variables in the proposed model.

Keywords: Brand Equity, Distributor Loyalty, B2B FMCG Industrial Market, Marketing Budget.

I. INTRODUCTION AND RESEARCH PROBLEM

The COVID-19 pandemic has forced unimaginable changes in economic activity and lifestyles around the globe, including Indonesia. Apart from protecting public health, it can also make access to income and food more precarious. Impacts of the pandemic on agriculture and fisheries sectors - as the primary sources of nutrition and employment - are now the focus of the government. One way to resolve these problems is to increase the participation of fishery startups to contribute to the community by increasing their standardized fishery products, processes with the right technology and access to the market. Interestingly, founders of the fishery startups are mostly led by young entrepreneurs under 40 years old (89.5% of all respondents). Most previous studies and papers discuss transgenerational leadership including baby boomers and generation X as leaders, and millennials as their employees. Only few studies focus on millennials as leaders [1]. Transformational leadership potentially causes performance beyond expectations [2]. However, many scholars studied by Jing and Avery [3] argue that leadership and performance relationship is not conclusive and need further research.

II. LITERATURE REVIEW AND HYPOTHESES

Millennials are nurtured in the digital era, considered as a technology savvy generation, easy to connect with other individuals, and able to access information quickly. They have e-mail and cell phones which are easy to access, and they use social media anytime and anywhere regardless of where they are. They can reduce the time wasted by doing face-to-face interactions occurring in a more typical workplace scenery. Recent studies [4] found that Millennial Transformational Leadership refers to a type of leadership which provides an understanding of the performance target of organization to their teams, opportunities for teams which are inconsistent with the decision taken for open dialogue, gives reasoning for the disagreement. This kind of leadership also strongly tolerates conflicts in a working relationship.

The organizations consider developing their IT capability as a critical in building strategic value to attain sustainable competitive advantages [5]. Mao, Liu and Zhang [6] explained the impact of IT capability in increasing organizational agility. The IT capability is defined as the ability of a company to accumulate, organize, combine, and reconfigure IT resources to upkeep and boost business strategies and work processes. Lu and Ramamurthy [7] had given a combination of frameworks by categorizing IT capability as its infrastructure capability, IT business spanning capability, and IT proactive stance.

Chen et al. [8] said that characteristics needed in agile organizations include the ease and speed of sensing and responding to changes. The organizational agility refers to the capability of organizations to understand changes in the environment and react rapidly, resourcefully, and efficiently to increase competitive advantages. The agility widens the idea of flexibility with sensing and reacting to prospects and dangers in the business setting. It can be both offensive and defensive [9], and considered as the capability of organizations to thrive in a constantly shifting and uncertain corporate context.

According to the resource-based view of the firm, organizational performance is greatly influenced by business ability to organize their ways to bundle resources effectively and efficiently [10]. It reflects almost all activities of a company including the adaptability of firms' activities in various business settings [11]. Businesses attempt to deal with customers, hasten cash flows, and accept innovative technologies to increase the firm competitiveness and outperform the competitors. Similar to the enactment of startup businesses, it can be defined as how well they raise performance of marketing and sales actions and accomplish the financial objectives [12].

Relationship Between Millennial Transformational Leadership (Mtl) and Organizational Performance

Studies on Millennial Transformational Leadership are limited. The positive impacts of transformational leadership on different outcomes are confirmed by Abouraia and Othman [13] and Malik, Javed, and Hassan [14]. Further, studies on transformational leadership have examined the effects on company performance effects, but not in the millennial context. For example, there is an empirical work studying various meta-analyses which links transformational leadership and performance [2]. Theory of transformational leadership suggests in what way and why leaders may impact their businesses' performance. The MTL may help forming their organization's performance over individualized consideration by considering individual aspiration, inspiring individual development, and contributing to organizational performance. This approach proposes that leaders greatly influence organizational results, and some researchers have suggested that it is their idealized influence that is most likely to alter the firm results, including performance outcomes.

Meanwhile, transformational leadership suggests the outcomes, such as innovative behavior, creativity, product development and organizational performance [15]. Jensen and Chaudhry [16] explained that leaders are likely to figure their companies' performance by giving sense of the company mission and becoming the role model. The leaders influence the company's performance through inspirational and stimulating expectations, and giving commitment to organizational objectives [17]. Based on previous research on the

transformational leadership and organizational performance, this study investigates the relationship between millennial transformational leadership and organizational performance in an Indonesian context, especially in fishery startups. Thus, the first hypothesis of this study that can be proposed is as follows:

H1: Millennial transformational leadership has a direct positive relationship with organizational performance.

Relationship Between Millennial Transformational Leadership (Mtl) and Organizational Agility

Today, significant changes and globalization require a new type of leadership that helps organizations achieve their goals and improve their ability. The leaders who nurture development, generate new ideas, and inspire their teams are considered accountable. They take benefits of the sustainability and accomplishment of factors driving their businesses. These leaders are prepared and eager to react once confronted, particularly in a vibrant and exciting situation, identifying, seizing, and shaping opportunities. Those plan and design the task for their subordinates to handle, take responsibility, and be a part of organizational agility by using their imaginations and suggestions can be considered to have a contemporary leadership which comprehends many practices of management and change. Meanwhile, the MTL is also included in the contemporary world. The leaders are advised through the development of a collaborative environment, inspiration, trust and cooperation with their teams to create organizational agility [18].

The organizational agility helps in corresponding transformational leadership to the altering business situation, and organizational readiness to inverse unsuccessful strategic decisions [19]. They alter the market and force businesses to make flexible plans to implement a new strategy, expecting increasing and competitive alterations to the business setting. The leaders may overcome them by meeting the expectations and needs of consumers. In a vibrant and volatile environment, businesses need transformational leadership to boost teams to maximizing their potential and change them to innovate [4]. This study tries to investigate the relationship between millennial transformational leadership and organizational agility in fishery startups in Indonesia. Therefore, the second hypothesis of this study that can be proposed is as follows:

H2: Millennial transformational leadership has a direct positive relationship with organizational agility.

Relationship Between Millennial Transformational Leadership (Mtl) and it Capability

The millennial transformational leadership (MTL) focuses on setting expectations and inspiring their team to seize any organization opportunities. Information technology (IT) is used to facilitate company communication and to improve the seek for knowledge developed by

transformational leaders to reinforce their effectiveness. Idealized influence dimensions of transformational leadership are often considered as a crucial facilitator of IT, strengthening the organizational team interactions. Additionally, a millennial transformational leader is a role model who is admired and respected by their subordinates [20].

Similarly, Yee [20] and Seyal [22] said that the leadership was such a giving example by highlighting the importance of the effective use of IT. In contrast, some scholars conducted an empirical research to discover a significant correlation between transformational leadership and the perceived quality of IT [23]. Noseworthy [24] and Chandna and Krishnan [25] also supported that there was a strategic role of transformational leadership within the success of information technology implementation in organizations. This study tries to examine the influence of Millennial Transformational Leadership on IT Capability, the following is the third hypothesis proposed:

H3: Millennial transformational leadership has a direct positive relationship with its capability.

Relationship Between it Capability and Organizational Agility

IT capability will produce competitive benefits to attain operational and strategic advantages. The correct, concurrent, and inclusive information is beneficial for creating choices expeditiously and rising organizations agility [26]. Establishing virtual communities and services increase the organization's capability to attain quickly and accurately to take advantage of unconventional prospects [27]. The IT infrastructure capability delivers a capable platform to organize knowledge in organization. The IT applications speed up communication, facilitate the observance of changes, and provide tailored products or services. The IT capability for target business processes will create organization agility.

Further, the IT capability allows the organizations to reply quickly and expeditiously to promote and to change by fine-tuning the internal business processes [8], [9]. A complete understanding of IT and business value will considerably cut back the organization's resistance to alter within the competitive surroundings. In such cases, organizational agility is reinforced and thus, the IT innovation can give several options for organizations to reply to promote changes. Thus, the fourth hypothesis of this study that can be proposed is as follows:

H4: IT capability has a direct positive relationship with organizational agility.

Relationship Between Organizational Agility and Organizational Performance

Organizational agility increases financial and non-financial results of fishery firms [28]. However, the result of organizational agility should not only focus on the financial perspective, but in modifying the internal process in the shifting market setting. In the end, it

will bring an impact to financial gain. On the other hand, Li et al. [28] claimed that the organizational agility is likely to have more potent impacts than other capabilities on the firms' performance gains. Therefore, the researchers believe that the organizational agility will affect the performance improvements, and thus, businesses can make collaboration concerning technologies, business purposes, and market needs.

It has been confirmed that the organizational agility is able to improve the firms' enactment by rapidly observing and responding to the customers' necessities. It can help businesses quickly alter operations (e.g., how to order products, in supply chain, and portion of dynamic aspects) to fulfill the buyers' needs for fishery products which also simultaneously increase the businesses' result [29]. It helps the fishery businesses to toughen their competitive performance and raise their chances of success in a competitive setting [30]. Therefore, the fifth hypothesis of this study that can be proposed is as follows:

H5: Organizational agility has a direct positive relationship with organizational performance.

Based on the previous explanation and hypotheses in the earlier sections, the following Figure 1. presents the research model proposed in this study.

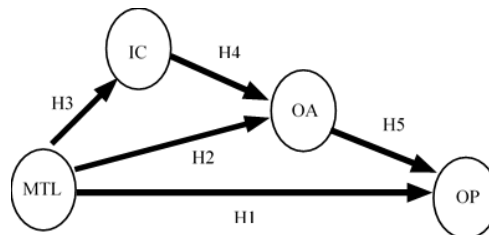


Figure 1. Research Model.

Note: MTL: Millennial Transformational Leadership; IC: IT Capability; OA: Organizational Agility; and OP: Organizational Performance.

III. METHODOLOGY

The hypotheses of this study are examined using Smart-PLS. The respondents included the founders, owners, and management of the startups in fishery businesses born in 1980-2000. The unit of analysis is the business. This study involved 23 startups in fishery business based on the data by the Ministry of Marine Affairs and Fisheries of the Republic of Indonesia and Digital Fishery Network. The data were collected through an online questionnaire with a total of 34 respondents. A 6-point Likert scale was applied, where 1=strongly disagree and 6=strongly agree. This research uses measurement based on previous studies, with some modifications to suit the current research.

The census conducted in this study is cross-sectional, where the questionnaire covers items on the relationship between: (1) millennial transformational leadership and organizational performance, (2) millennial transformational leadership and organizational agility, (3) millennial transformational leadership and IT capability (4) IT capability and organizational agility, (5) organizational agility and organizational performance of fishery startups in Indonesia.

A. Outer Model

In this stage, validity and reliability testing are done before evaluating the structural model. The validity test considers the average variance extracted (AVE) and factor loadings or outer loadings. The minimum values that must be met for AVE and outer loadings are 0.5 and 0.7 respectively [31]. Similarly, in the validity test phase, the measurement used is discriminant analysis. Hair et al. [31] stated that the requirement that must be considered is by referring to the Fornell-Larcker criterion where the AVE root value must be greater than the correlation value between constructs.

The results of data processing (Table 1.) indicate that the instrument measurements are valid. The result shows that the AVE value ranges from 0.661 to 0.736. Likewise, the value of factor loadings or outer loadings ranges from 0.725 to 0.921. Meanwhile, the outer loadings values between 0.4 to 0.7 can be considered to be maintained as long as they increase the AVE value [31]. Furthermore, the reliability test is carried out by considering to compute the composite reliability. The results show that the composite reliability value is between 0.869 to 0.946 and has met the minimum requirements of 0.7 [31].

Table 1. Reliability and Validity Test

Construct and item		Outer loading
Millennial Transformational Leadership/MTL (AVE=0.736; CR=0.917)		
MTL7	I talk enthusiastically about what needs to be accomplished.	0.871
MTL8	I express confidence that goals will be achieved.	0.773
MTL9	I get others to look at problems from many different perspectives.	0.860
MTL10	I seek different perspectives when solving problems.	0.921
Organizational Agility/OA (AVE=0.688; CR=0.869)		

OA1	My organization can make rapid responses to fulfill demands.	0.780
OA3	My organization can quickly create and implement appropriate decisions in the face of demand changes.	0.867
OA5	My organization considers market-related changes and apparent chaos as opportunities to capitalize quickly.	0.839
IT Capability/IC (AVE=0.661; CR=0.946)		
IC3	The quality of IT application and services can meet organization needs.	0.747
IC4	IT management services can coordinate the physical infrastructure and manage the relationship with business units effectively and efficiently.	0.730
IC5	My organization has a clear understanding on how IT contributes to the competitive advantages.	0.804
IC6	My organization integrates business strategic planning with IT planning.	0.820
IC7	My organization enables functional area and general management ability to understand the value of IT investment.	0.822
IC8	My organization has an effective and flexible IT planning process.	0.888
IC9	My organization constantly keeps up with new IT innovations.	0.725
IC10	My organization supports new ways of using IT.	0.903
IC11	My organization constantly seeks new ways to enhance the effectiveness of IT use.	0.854
Organizational Performance/OP (AVE=0.710; CR=0.907)		
OP4	The revenue (sales) of our company continues to grow.	0.809
OP7	Customers make repeated transactions in our company.	0.806
OP8	Complaints from our customers continue to decline.	0.877
OP9	There is an increase in old customers providing references to new customers.	0.875
Note: AVE=average variance extracted; CR=composite reliability		

Source: Result of data processing

Furthermore, Table 2. reveals that the discriminant validity test has been met where the AVE root value is greater than the correlation value between variables.

Table 2. Fornell-Larcker Criterion

	IC	MTL	OA	OP
IC	0.813			
MTL	0.517	0.858		
OA	0.669	0.658	0.830	
OP	0.386	0.451	0.657	0.842
Note: IC=IT Capability; MTL=Millennial Transformational Leadership; OA=Organizational Agility; OP=Organizational Performance				

Source: Result of data processing

B. Structural Model

In the structural model, the phase is to compute R^2 collinearity test, and hypothesis testing. The greater the value of R^2 , the better the estimation of exogenous on endogenous constructs. Table 3. describes that the constructs of IT capability, organizational agility, and organizational performance has R^2 of 26.7%, 58.1%, and 43.2% respectively. The constructs of organizational agility can be explained by the constructs of millennial transformational leadership and IT capability at 58.1%; while the rest 41.9% are explained by other constructs. In addition, the organizational agility and millennial transformational leadership describe the organizational performance constructs at 43.2%, and the other constructs define the remaining 56.8%. Finally, the construct of IT capability is explained by the millennial transformational leadership by 26.7%; and the remaining 73.3% is described by other constructs not included in the research model.

Table 3. Value of R^2

Endogenous Construct	R^2
IT Capability	0.267
Organizational Agility	0.581
Organizational Performance	0.432

Source: Result of data processing

Further, the collinearity test aims to determine whether the research model has a collinearity tendency or not. The limit of VIF value signaling a tendency for collinearity is a maximum of 5.0. If the VIF value is more than 5.0, there is a tendency for collinearity [31].

Below, Table 4. shows that the VIF value in the model is lower than 5.0. Therefore, it can be concluded that there is no collinearity.

Table 4. Collinearity Test

As Predictor of OA		As Predictor of OP	
Construct	VIF	Construct	VIF
IC	1.364	MTL	1.765
MTL	1.364	OA	1.765

Source: Result of data processing

Next, the hypothesis testing is conducted to determine whether the relationship between constructs is empirically supported or not. The statistics test results show that all hypotheses are supported except H1, indicated by the p-value < α -value (=5%). The following Table 5. shows that H1 - which states that millennial transformational leadership has a direct relationship with organizational performance – has a p-value of 43.7%. All path coefficient values have a positive sign. From the table, it can be concluded that the most influential variable on the organizational performance is organizational agility where it has the highest standardized value of 0.636. Then, it is followed by millennial transformational leadership with IT capability with a path coefficient value of 0.517. Furthermore, the influential variable on organizational agility is millennial transformational leadership and IT capability, shown by a path coefficient value of 0.426 and 0.449.

Table 5. Hypothesis test

Hypothesis	Path Coefficient	p-value	Conclusion
H ₁ : Millennial transformational leadership has a direct positive relationship with organizational performance.	0.032	0.437	Not Supported
H ₂ : Millennial transformational leadership has a direct positive relationship	0.426	0.001	Supported

with organizational agility.			
H ₃ : Millennial transformational leadership has a direct positive relationship with its capability.	0.517	0.000	Supported
H ₄ : IT capability has a direct positive relationship with organizational agility.	0.449	0.002	Supported
H ₅ : Organizational agility has a direct positive relationship with organizational performance.	0.636	0.000	Supported

Source: Result of data processing

IV. RESULT AND DISCUSSION

The results of testing the first hypothesis (H1), which states that millennial transformational leadership has a direct positive relationship with organizational performance, is not supported empirically. Although the millennial transformational leadership improved, it did not necessarily bring any impact on the organizational performance. This result is not in line with previous studies by Breevaart and Bakker [2] and Gashema and Mokua [15]. However, the management of fishery startups must maintain their leadership, such as by having in-depth discussion about what should be achieved and express confidence that their goals would be completed. The leaders who looked for different perspectives when solving problems would lead to organizational agility. This happened because the results of testing the second hypothesis (H2), which states that millennial transformational leadership has a direct positive relationship with organizational agility, is supported empirically. The better the millennial transformational leadership, the more positive the impact in increasing the organizational agility. This result is in line with

previous studies by Ahammad, Glaister and Gomes [19] and [18] which stated that the millennial transformational leadership tended to make the organization change quickly to meet the demands. Thus, the second hypothesis is also supported where the millennial transformational leadership in terms of the leaders who looked for different perspectives when solving problems, had brought a positive relationship on organizational agility. Based on the explanation above, it can be concluded that this study has successfully revealed that the leadership that acquired others to see the problems from many different viewpoints would affect the organizational agility.

In addition, the results of testing the third hypothesis (H3), which states that millennial transformational leadership has a direct positive relationship with IT capability, is supported empirically. The better the leadership, the higher the IT Capability. This hypothesis is in line with the research results by Sayyadi [20], Yee [21], Seyal [22], Schepers, Wetzels, and de Ruyter [23], Noseworthy [24], and Chandna and Krishnan [25], which confirmed that the strategic role of transformational leadership affected the success of IT capability in organizations. The millennial transformational leadership characteristics supported in this study were the enthusiastic and confidence in finding a solution with a different approach. This leadership significantly influenced the IT capability which made the organization integrated a strategic business planning with the IT planning, supported new methods of using IT, had a strong thoughtful of how the IT gave to the competitive advantages, and continually possessed up with new IT improvements.

Meanwhile, the results of testing the fourth hypothesis (H4), which states that IT capability has a direct positive relationship with organizational agility, is supported empirically. The better the IT capability, the higher the organizational agility. This hypothesis is in line with the research conducted by Chen et al. [8] and Tallon et al. [9] which found that the IT capability helped making the organization's quick response and adjusting internal business processes. These capabilities allowed the organization to have an actual and malleable IT planning procedure and ensure that the IT applications and services could meet the organization needs. Then, the IT capability helped the organization to create a quick response.

Finally, testing the fifth hypothesis (H5), which states that organizational agility has a direct positive relationship with organizational performance, is supported empirically. The increase in organizational agility brought a positive impact on the organizational performance. This result is consistent with the study of Li et al. [28] which confirmed that

the organizational agility increased the firms' performance gains. Studies by Zhou et al. [29] and Chan et al. [30] also supported that the organizational agility could help businesses to rapidly alter operations to meet the consumers' requirements for the fishery products. The organizational agility could help firms with the ability to customize the fishery products and make the revenue of the company keep growing.

V. CONCLUSION

This study has introduced a new model in transformational leadership examined the millennials as the leaders (not as the employee), and involved almost all the population or players in the fishery startups in Indonesia as the respondents. The results of hypothesis testing show that the millennial transformational leadership has no direct positive relationship with organizational performance; millennial transformational leadership has a direct positive relationship with organizational agility; millennial transformational leadership has a direct positive relationship with IT capability; IT capability has a direct positive relationship with organizational agility; organizational agility has a direct positive relationship with organizational performance in fishery startups in Indonesia during this pandemic era.

Despite the newness and robust underlying theories in the model, there are several limitations to the model proposed in this study. For example, the model does not examine mediating effects on the relationships among the main variables. Another limitation is that the statistical examination used in this study is SEM in the SmartPLS program, which is not able to test the model's feasibility. Future researches are suggested to use covariance-based-structural equation modeling which is able to test the research model's feasibility. Roles of mediating variables in addition to the main variables—for example, organizational agility as a mediating variable on the relationship between millennial transformational leadership and organizational performance – are also suggested to be examined. Despite the limitations, the model developed is still interesting to investigate and expected to enrich the literature on transformational leadership.

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