Kaizen Implementation As An Intervening In Engagement, Motivation And Competency Toward Organizational Performance Sustainability

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This study investigates the role of kaizen implementation as a mediator in the research model involving organizational involvement (KT), motivation (MT), competence (KP), implementation of kaizen (IK), and variables affecting Sustainability Performance in the Organization Department (SKO). Indicators for each variable were determined through references to prior research on the topic. The research was conducted at Yamaha Group Corporation, and data were collected through Likert scale questionnaires distributed to line managers in each of the 114 departments. Hypothesis testing utilized the covariance-based Structural Equation Modelling (SEM) with IBM SPSS AMOS software. The results indicated that the implementation of kaizen serves as a comprehensive mediator in the relationships among KT, MT, KP, IK and variables impacting SKO.

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The study also provides indicators for each variable, contributing to a better understanding and measurement of these factors. Hypothesis testing revealed that direct impacts of KT, MT and KP on SKO were not significant, possibly influenced by cultural or contextual variations. However, positive relationships between involvement, motivation, competence and kaizen implementation were supported. Moreover, kaizen was identified as a crucial intervening factor between these variables and the sustainability of organizational performance. This study's contribution lies in applying engagement, motivation, and competence variables within an organizational context, demonstrating that organizations engaged in prolonged kaizen practices directly benefit from efforts to maintain organizational performance, ensuring the sustained vitality of the organization.

Keywords: Involvement, Motivation, Competence, Implementation kaizen, Sustainability performance

1. Introduction

Business organizations are encouraged to continuously increase profits and be able to compete in maintaining their business in a dynamic environment, as well as facing various challenges both financially and non-financially (Sundharam et al., 2013). To be competitive, the organization's performance must be good in many aspects Field (Abbas et al., 2019) since an organization's success and failure rate can be seen based on its performance (Rehman et al., 2019). Organizational performance is a collection of indicators consisting of financial and non-financial aspects that assess the extent to which organizational goals and objectives are achieved (Kaplan & Norton, 1992). Therefore, comprehensive organizational performance measurement allows managers to evaluate actions taken where the company stands among competitors and see the company's development over time (Richard et al., 2009).

Today, organizations must focus on long-term goals by striving to maintain and improve the continuity of organizational performance on an ongoing basis. For this reason, sustainability is the right approach because it can balance various aspects to survive for a long time, namely economically, socially, and environmentally (Haseeb et al., 2019). These three dimensions are known as the Triple Bottom Line (TBL) concept, which balances the use of natural resources by not harming the environment, pays attention to the welfare of employees and the community, and pays attention to economic aspects of the organization (Elkington, 1998; Chardine-Baumann & Botta-Genoulaz, 2014; Habidin et al., 2015; Kuhl, Cunha, Macaneiro, & Cunha, 2016; Abdul-Rashid et al., 2017; Hourneaux Jr et al., 2018; Ghozali Hassan, Abindin and Nordin, 2018; Haseeb et al., 2019; Thirupathi, Vinodh, & Dhanasekaran, 2019). Sustainable performance is vital because organizations have broader social and environmental responsibilities than just the economic aspects of producing products and services that customers want (Hubbard, 2009). To create this sustainability, the management system must support sustainability and be connected to the functional processes of each level of management (Ciemleja & Lace, 2011). In addition, human resources as capital in the organization to carry out management processes must be adequately managed to align with sustainability goals (Wright & McMahan, 1992). An approach that can carry out the management process is kaizen (Nguyen, 2019).

Kaizen focuses on reducing waste in systems and processes (Bhuiyan et al., 2006; Tortorella et al., 2019). Thus, his contribution can be seen from the operational side and his development (Jaca et al., 2014). By practicing kaizen, there is a reduction in costs, increased efficiency, and individuals have a more developed method of thinking that increases

productivity (Jaca et al., 2014). Thus, this study will discuss kaizen as an activity that can encourage continuous organizational performance improvement based on TBL. They are implementing kaizen involves all members of the organization, including the role of management in encouraging employees to participate in kaizen activities (Zailani et al., 2015). The employees involved are formed into teams, given the opportunity to identify problems in their work, analyze them, and then propose improvements (Magnier-Watanabe, 2011). The group consists of various organizational functions, so each department's involvement dramatically affects Kaizen Field's success (Marin-Garcia et al., 2018; Vo, Kongar and Suárez Barraza, 2019).

In addition, the success of kaizen is influenced by the organization Field's motivation level (Bwemelo & Gordian, 2014; Janjić et al., 2019). In running kaizen, changes will always occur because kaizen carries out continuous improvement activities so that strong organizational motivation will encourage the creation of improvements (Lameijer et al., 2021). Creating a well-structured motivation system is a form of strong organizational motivation, including rewards, security guarantees, work environment conditions, and opportunities for self-development (Cerasoli et al., 2014). Therefore, motivation becomes a factor that influences the success of implementing kaizen.

Another critical factor in implementing kaizen is found in the literature that organizations with high competence will lead to superior performance (Kumar Khanna & Gupta, 2014). Organizational competence refers to the skills, attitudes, and behaviors of individuals given some training methods, performance appraisals, and change programs (Murray, 2003). The ability of the organization to manage the implementation of improvement programs with various changes that occur is a critical need (Huq et al., 2019). Based on the explanation above, this study is critical because it aims to ensure efforts to maintain and improve the sustainability of organizational performance, the application of corporate practices and the variables that can support it. In addition, few studies have investigated the sustainability of organizational performance from a human resource point of view. Based on the explanation above, researchers hypothesize that the implementation of kaizen (IK) that encourages sustainability can be an intervention of competence, involvement (KT) and motivation (MT) to improve the sustainability of organizational performance (SKO).

2. Material and methods

The term organization is seen as an institution with a structure chart including sections or departmental organizations to divide work, break down tasks into subtasks, and coordinate activities (Burton & Obel, 2004). Organizational characteristics are explained based on several things, including simply having a single head hierarchy for coordination, communication, and decision making; functional i.e. grouping based on a particular specialty; Bureaucracy is a routine operational task, has formal regulations, and has an administrative structure (Burton & Obel, 2004). Every organization must have measurable goals to be monitored and compared with actual results, so every organizational leader needs to choose parameters wisely (Abubakar et al., 2019). The selection of parameters and their assessment is a series of corporate performance, and this is a critical evaluation material for the organization to make improvements and developments over time (Richard et al., 2009). Gradually, the measurement of organizational performance leads to sustainable performance

because the long-term success of an organization is influenced by factors other than financial Fields(Lee & Farzipoor Saen, 2012). Sustainable organizational performance is based on the Triple Bottom Line (TBL) concept that performance is assessed based on three dimensions, namely economic, social, and environmental Fields (Hourneaux Jr, Gabriel dan Gallardo-Vázquez, 2018). To ensure the sustainability of organizational performance, the organization must involve human resources, who are the capital of the organization (Yusliza et al., 2020). This is related to meeting the needs of human resources in quantity and quality. Suppose individuals have an excellent thinking method to be able to increase productivity. In that case, implementing kaizen as an approach that supports the sustainability of organizational performance becomes more accessible to run (Randhawa and Ahuja, 2017). Kaizen activities focus on improvement and are not limited to specific programs (Yamaguchi & Kono, 2017). Basically, kaizen is done systematically and is planned and organized throughout the organization. In addition, team involvement in the problem-solving process has an important role in successfully implementing kaizen, ultimately contributing to organizational performance (Vo, Kongar and Suárez Barraza, 2019). Management's Strong commitment and willingness to change will also influence the organization to create improvements (Marin-Garcia, Juarez-Tarraga and Santandreu-Mascarell, 2018; Lameijer et al., 2021). Then, competent individuals become a critical factor for successful kaizen implementation because they can provide change and improvement for the organization (Zailani et al., 2015). Thus, the research model developed from this study uses some of the above variables as latent variables and traces the indicators of each of these variables so that measurements can be made on the model. The variables used consist of 5 latent variables and 36 indicators, which are described in the table as follows:

Table 1: Latent Variables and Indicators

No.	Variables Laten	Indicators
1.	Involvement/ KT	Engage in target achievement activities (KT1)
		Efforts to achieve results (KT2)
		Pride in doing work (KT3)
		Passionate and enthusiastic about work (KT4)
		Focus on doing work (KT5)
2.	Motivation/ MT	Level amount of compensation and benefits (MT1)
		Level of achievement from work result (MT2)
		Job security (MT3)
		Job environment (MT4)
3.	Competence/ KP	Level of creativity (KP1)
		Ability to communicate and cooperate (KP2)
		Adaptability to workers (KP3)
		Ability to develop themselves (KP4)
		Ability in teaching and learning (KP5)
		Ability to design new things (KP6)
		Ability to direct strategy updates (KP7)
4.		Goal clarity (IK1)

No.	Variables Laten	Indicators
	Implementation kaizen /IK	Activity execution rate of training (IK2)
		Participation and awarding rates (IK3)
		Standardization completeness level (IK4)
		Find the root of the problem (IK5)
		Provide solutions (IK6)
		Activeness in giving advice (IK7)
		Visual management (IK8)
5.	Sustainability Performance Organization Department (SKO)	Achieving operating cost efficiency (SKO1)
		The level of market development (SKO2)
		Product quality improvement (SKO3)
		Resource optimization (SKO4)
		Increased productivity (SKO5)
		Training intensity and skill development (SKO6)
		The degree of suitability for the provision of ideal working hours (SKO7)
		Fair remuneration (SKO8)
		Development of a healthy working environment (SKO9)
		Reduction of energy consumption (SKO10)
		Waste reduction (SKO11)
		Use of renewable energy sources (SKO12)

This study hypotheses based on the literature found on each variable and indicator to produce a research model as shown in Figure 1. This research model produces 10 hypotheses that need to be tested, including:

H1. KT has a positive effect on SKO

H2. MT has a positive effect on SKO

H3. KP has a positive effect on SKO

H4. KT positive effect on IC

H5. MT has a positive effect on IK

H6. KP has a positive effect on IK

H7. IK has a positive effect on SKO

H8. IK has an intervening role in involvement with SKO

H9. IK has an intervening role in motivation towards SKO

H10. IK has an intervening role in competence with SKO

This study analyses the influence of organizational KT, MT and KP on SKO, as well as how it affects if IK as an intervening variable among these variables. This research model was developed based on a review of various previous studies which are described as follows:
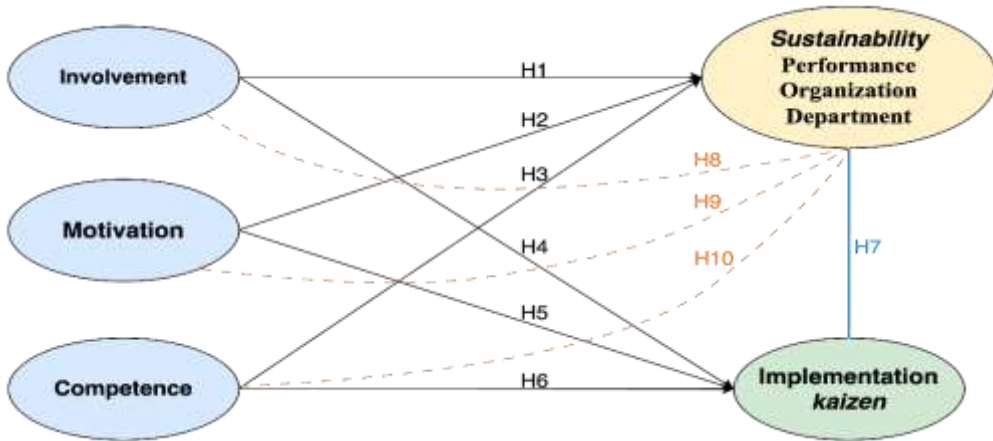
Figure 1: Developed Research Model

The research is quantitative in nature because the proposed framework is confirmed through empirical data or experiments. The source of data in research is primary data, namely the process of collecting data based on the results of survey-based questionnaires distributed with the help of Google Forms. This research was conducted on supervisors or managers who work in manufacturing at a foreign company in Indonesia, namely Yamaha Group Corporation. This group of companies was chosen because each company in this group implements a kaizen-based improvement system which is the variable studied in this study. The group of companies consists of 7 companies spread across the island of Java Indonesia with the number of research respondents totalling 114. The questionnaire scale used was the 7-point Likert scale (1 = strongly disagree; 2 = disagree; 3 = somewhat disagree; 4 = neutral; 5 = somewhat agree; 6 = agree; 7 = strongly agree) (Rogo et al., 2018). The scale does not use the number 0 that indicates the company is unrelated, does not know and does not apply the practice (Godinho Filho et al., 2016). Meanwhile, data processing in research using the SEM method (Structural Equation Modelling) Covariance-based with IBM SPSS AMOS software. This method ensures the relationship between variables proposed in the research model.

3. Results

Confirmatory Factor Analysis (CFA) was conducted to test the validity and reliability of each question item used on the questionnaire. The validity test aims to determine whether the indicators used correctly measure related variables and the reliability test aims to determine the scale used consistently measuring the same value under the same conditions. High validity indicates that they converge at one point under the condition of a standardized loading factor (SLF) must $\geq 0,5$ and construct validity with values AVE $> 0,5$. For reliability tests, the parameter used is construct reliability (CR). CR numbers that indicate good reliability are: $\geq 0,7$. The following are the results of calculations against the validity and reliability test of the research model:

Table 2: Validity and Reliability Test Results

Indicator	SLF	AVE	Result (> 0,5)	CR	Result (> 0,7)
KT1	0.777		Valid		
KT2	0.788		Valid		
KT3	0.796	0.649	Valid	0.902	Reliable
KT4	0.811		Valid		
KT5	0.854		Valid		
MT1	0.843		Valid		
MT2	0.895	0.630	Valid	0.871	Reliable
MT3	0.699		Valid		
MT4	0.721		Valid		
KP1	0.893		Valid		
KP2	0.839		Valid		
KP3	0.811		Valid		
KP4	0.879	0.763	Valid	0.958	Reliable
KP5	0.907		Valid		
KP6	0.882		Valid		
KP7	0.901		Valid		
IK1	0.829		Valid		
IK2	0.846		Valid		
IK3	0.761		Valid		
IK4	0.854		Valid		
IK5	0.901	0.751	Valid	0.960	Reliable
IK6	0.941		Valid		
IK7	0.914		Valid		
IK8	0.874		Valid		
SKO1	0.738		Valid		
SKO2	0.700		Valid		
SKO3	0.862		Valid		
SKO4	0.943		Valid		
SKO5	0.934		Valid		
SKO6	0.939		Valid		
SKO7	0.887	0.730	Valid	0.970	Reliable
SKO8	0.804		Valid		
SKO9	0.884		Valid		
SKO10	0.894		Valid		
SKO11	0.893		Valid		
SKO12	0.729		Valid		

Based on the calculation results in the table above, you can see the SLF value on all indicators ≥ 0,5 This means that it qualifies from the validity test. Furthermore, the calculation of the AVE value on the KT variable is 0,649, MT value is 0,630, KP value is 0,763, IK is 0,751,

and SKO value is 0,730. All AVE values > 0,5 Constructively all variables are declared valid. CR value for each variables KT, MT, KP, IK, dan SKO > 0,7 So that all variables have good reliability. Furthermore, tests were carried out to meet several SEM assumptions. First, a total of 114 data were tested for normality as one of the conditions to meet SEM assumptions. The results showed that the data were not normally distributed because the c.r values of the resulting skew and kurtosis were more significant than the provisions ± 2,58 (Table 1). Furthermore, an outlier evaluation was carried out to detect the observation score of the farthest data from the centroid; the result was that there were several 10 data that were discarded but did not provide expected data results (Table 2). To solve the situation, a bootstrap test will be added. The last assumption test is multicollinearity to determine if there is a correlation between independent variables. The results show no multicollinearity (Table 3) due to the value < 0,8. Then, a structural model test was carried out to determine whether the model built met the assumptions of SEM through the Goodness of Fit Test (GoFT). The test results of the structural model can be seen in Figure 2.
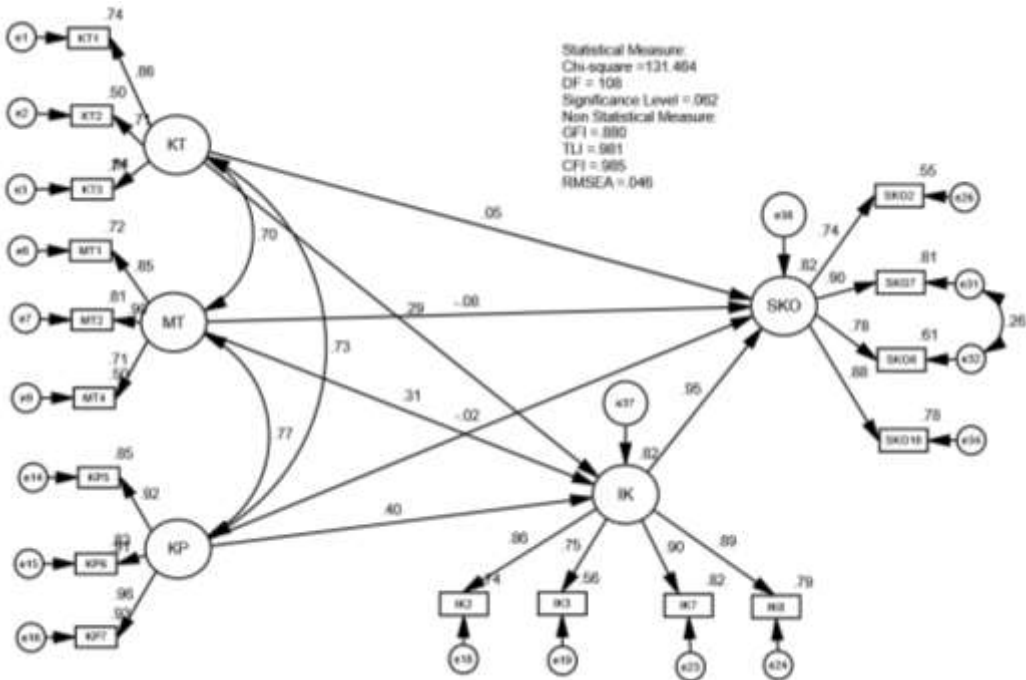

Figure 2: SEM Model Test Results

The model produced in figure 2 above is fit by meeting the Goodness of Fit Test (GoFT) criteria, including a significance probability of 0,062 (≥ 0,05); CMIN/DF value is 1,217 (< 2); RMSEA value is 0,046 (< 0,08). For the CFI, AGFI, GFI and NFI criteria already meet the assumption if ≥ 0,90 and the obtained value for CFI is 0,985; AGFI value is 0,830; GFI value is 0,880; and NFI value is 0,922. For AGFI and GFI it is slightly below the standard assumptions, but it is still allowed as long as the model is still in the development stage (Table

4). Furthermore, a determination test analysis was carried out, which aimed to determine the magnitude of the contribution of exogenous variables to endogenous by looking at the results of calculating the R square value. The results showed the influence of KT, MT, and KP variables on IK by 82%, while the effect of IK variables on SKO was 82.4%.

A bootstrap procedure was carried out to overcome data not normally distributed in this study. Suppose the bootstrapping results show the relationship between variables is the same as the test results before bootstrapping. In that case, the proposed model can be maintained consistent with the data to provide a robust estimate of the model parameters (Nevitt & Hancock, 2001). The results of the hypothesis test without bootstrapping and based on the bootstrap procedure can be seen in the following table:

Table 3: Hypothesis Test Results Before Bootstrapping

Variable	Coefficient	P	Result
IK <--- KT	.295	.004	Significant
IK <--- MT	.306	.007	Significant
IK <--- KP	.395	.000	Significant
SKO <--- IK	.950	.000	Significant
SKO <--- KT	.046	.717	Not Significant
SKO <--- KP	-.017	.899	Not Significant
SKO <--- MT	-.081	.547	Not Significant

Table 4: Results of Hypothesis Test with Bootstrap method

Variable	Coefficient	Confidence Interval		P	Result
		Lower	Upper		
IK <--- KT	.295	.070	.509	.009	Significant
IK <--- MT	.306	.073	.540	.011	Significant
IK <--- KP	.395	.180	.614	.002	Significant
SKO <--- IK	.950	.558	1.403	.002	Significant
SKO <--- KT	.046	-.254	.333	.717	Not Significant
SKO <--- KP	-.017	-.325	.281	.966	Not Significant
SKO <--- MT	-.081	-.408	.202	.613	Not Significant

In the hypothesis test results without bootstrapping, four hypotheses are significant (H4, H5, H6, and H7) and three others are insignificant (H1, H2, and H3). In the bootstrap results, confidence interval numbers are first analyzed using lower and upper values of each variable. If the value of the range between lower and upper does not include the value of 0, then the result is significant. It can be seen in the table that the results are the same as the results of the hypothesis test with the bootstrap procedure so that the results of this study can be analyzed.

4. Discussion

The results of the H1 test show a p-value of 0.717 with a > value of 0.5, which means that the hypothesis is rejected so that involvement does not directly affect the sustainability of organizational performance. These results show that the empirical data obtained at Yamaha Group Indonesia do not support this hypothesis. Yamaha implements the implementation of kaizen as an obligation that must be followed by all employees, both individually and in teams so that it has become a culture. Thus, although the organization does not create a specific program to increase employee engagement, kaizen activities involve employees in the improvement process, which may cause empirical data to show that KT does not affect SKO because the value of KT is absorbed into IK.

H2 is MT positive effect on SKO. However, the test results showed that the p-value in both variables was 0.547, which means that the hypothesis was rejected, so the MT variable did not have a positive effect on SKO directly. These results show that empirical data states that motivation does not directly affect the sustainability of organizational performance in Yamaha Group Indonesia, so it does not support the results of this study. Yamaha conducts the kaizen process as a culture that encourages employee motivation by providing various rewards to increase employee achievement. Therefore, the habits and culture carried out in kaizen activities affect the level of motivation. The MT variable is absorbed into the kaizen implementation value so that the MT variable does not affect SKO.

H3 is KP positively affects SKO, where the test results show a p-value of 0.899. Where this value is > 0.05 the hypothesis is rejected. These results show that the empirical data obtained at Yamaha Group Indonesia do not support this hypothesis. This indicates that the organizational culture in the Yamaha group Indonesia company is a factor that distinguishes this study from previous studies, where the kaizen culture that is the basis of the growth process in the company allows for surgery to prior studies where some researchers previously did not conduct research in places that have a culture such as in Yamaha Group Indonesia. Researchers suspect that the value of KP variables in this company has been absorbed into the kaizen implementation process which is continuously carried out as a culture and this is what causes the results of this study not to be the same as previous researchers.

H4 is KT has a positive effect on IK. The test results show that the p-value in both variables is 0.004 < 0.05, so the hypothesis is accepted. Thus, the KT variable has a positive effect on IK. The results of this study support previous research Jin and Doolen (2014), Knechtges and Decker (2014), Stadnicka and Sakano (2017), dan Vo, Kongar and Suárez Barraza (2019). One of the keys to the success of IC is to involve all participants from all levels of the organization, including staff and top managers (Vo et al., 2019). The involvement can be seen in implementing QCC, shop floor management, and kaizen events (Ma et al., 2018). QCC is an improvement activity that requires 5 to 15 people, where the elected members have passed several conditions and have received support from upper management. QCC activities are, broadly speaking, identifying, analyzing, evaluating and providing solutions to the problems raised. Shop floor management maintains the work area's current technological, managerial and operating standards. Meanwhile, kaizen events are in teams held at certain times. Overall, it can be seen that IK involves people being able to carry out kaizen activities (Ma et al., 2018).

H5 is MT positively affecting IK. The test results show a p-value of 0.007, which means the hypothesis is accepted; then, the MT variable positively affects IK. These results support previous research conducted by Jaca et al. (2012), Jurburg et al. (2017), Stadnicka and Sakano (2017), Sanchez-Ruiz, Blanco and Diaz (2019). The implementation of kaizen consists of a series of activities planned to carry out commitments in the improvement (Basu & Dan, 2018). Therefore, a vigorous drive becomes a success factor in implementing Kaizen. Organizations can provide different types of motivation based on employee needs and expectations (Stadnicka & Sakano, 2017). For example, employees who get job security and job satisfaction will contribute highly to implementing kaizen (Marinova et al., 2015). In addition, motivation in the form of organizational support, training, self-efficacy, social influence, rewards and recognition such as rewards, letters of praise, certifications and others can also increase contributions to the implementation of kaizen (Schuring & Luijten, 2001; Jaca et al., 2012; Jurburg et al., 2017). Thus, the higher the organization's motivation, the higher the influence on achieving successful kaizen implementation.

H6 is that KP has a positive effect on IK. The resulting p-value of 0.000 means < 0,001, meaning the value is < 0.05, so the hypothesis is accepted. This shows that KP has a positive effect on IK. These results support previous research conducted by Janjić, Todorović and Jovanović (2019), Nakamori et al. (2019), dan Hosono, Page and Shimada (2020). Implementing kaizen follows the PDCA (Plan, Do, Check and Act) pattern to increase productivity (Becker et al., 2013). In addition, there are 5S activities that are part of the implementation of kaizen. 5S is a technique to create a more comfortable, efficient, productive, and quality organizational atmosphere to produce good performance (Randhawa & Ahuja, 2018). Implementing kaizen and 5S activities is carried out in groups, so organizations need to conduct competency-based training for all members to provide an understanding of PDCA and 5S (Kumar Khanna & Gupta, 2014). This training is continuous to improve the performance and competence of the running team. Therefore, the higher the level of competence of the team implementing kaizen, the higher the chances of achieving kaizen success.

The test result against H7, namely IK, has a positive effect on SKO resulting in a p-value of 0,000 or a value below < 0.001 so < 0.05 which means the hypothesis is accepted. This shows that IK has a positive effect on SKO. These results support some previous research conducted by Norazlan et al. (2014), Nguyen (2019) dan Morell-Santandreu, Santandreu-Mascarell and García-Sabater (2020). In Norazlan's research, the parameters for SKO are mentioned using three pillars of TBL consisting of economic, environmental, social, while in Nguyen's research, it is not explicitly stated what parameters are used. Both studies found that kaizen positively impacts sustainability performance, although the research model that Nguyen tested has exogenous kaizen implementation variables. Next, Morell-Santandreu, Santandreu-Mascarell and García-Sabater (2020) Mapping the relationship between Kaizen and sustainability and its findings confirm that Kaizen implementation will continue to develop and grow to help sustainability economically, socially, and environmentally. Based on this presentation, this study adds references and proves that the implementation of kaizen encourages the implementation of sustainable organizational performance. H8, H9 and H10 are hypotheses related to the role of intervening (mediation) between variables; a Sobel test is

used to answer this. To perform the Sobel test, a statistical analysis is used by entering the values A (coefficient of exogenous variables to intervening), B (coefficient of moderating variable to endogenous), SE_A (standard error A) and SE_B (normal error B). The results of the Sobel test give a p-value or two-tailed probability on the calculator, where if the value is < 0.05, the results are significant. The Sobel test result for H8 (Figure 1) is essential with a p-value of 0.0154, where this value is < 0.05, which shows that KT affects SKO through IK. Meanwhile, the results of the H9 Sobel test (Figure 2) are significant with a p-value of 0.0216, where this value is < 0.05, which shows that MT affects SKO through IK. The H10 Sobel test (Figure 3) is significant with a p-value of 0.0052, where this value < 0.05 indicates that KP affects SKO through IK.

5. Conclusion

The fit model is produced from research through indicator elimination until the number of indicators in the KT variable becomes three indicators, the MT variable becomes three indicators, the KP variable becomes three indicators, the IK variable becomes four indicators, and the SKO variable becomes 4. Three indicators of the KT variable that have met the assumptions in the fit model include KT1 (involved in target achievement activities), KT2 (efforts to achieve results) and KT3 (pride in doing work). The MT level is represented by indicators of the level of compensation and benefits (MT1), appreciation of work achievements (MT2), and the level of safety and comfort of work (MT4). KP variables are represented by indicators of ability in teaching and learning (KP5), ability to design new things (KP6), and ability to direct strategy updates (KP7). The IK variables are represented by indicators of the level of implementation of training activities (IK2), indicators of the status of performance of training activities (IK3), activeness in providing advice (IK7), and intensity of use of visual management tools (IK8). The SKO variables are represented by resource optimization (SKO2), structuring ideal working hours (SKO7), providing fair wages (SKO8) and efforts to reduce energy consumption (SKO10). The results of hypothesis 1 to 10 tests show that hypotheses 1, 2 and 3 are not accepted, where endogenous variables, namely KT, MT and KP do not positively affect exogenous variables, namely SKO. This shows that there are differences with the conclusions of previous researchers due to different cultures and places of research or other variables in the organization that replace them. The results of the hypothesis further show that hypotheses 4 to 10 are accepted. Hypotheses 4, 5, and 6 examine the relationship between endogenous variables and mediators, namely, KT, MT and KP positively affect IK. Meanwhile, hypotheses 8, 9 and 10 were analysed using a Sobel test with the result that IK has an intervening role between KT, MT, and KP against SKO. This research has provided additional knowledge related to the influence of IK on KT, MT and KP variables on SKO, especially on Yamaha Group Corporation in Indonesia. So, the suggestion for future research is that it can be carried out more broadly such as research respondents who cover more local or international regions and companies in Indonesia. The companies studied are expected not only Japanese companies but also companies that implement activities similar to the implementation of kaizen to strengthen the research that has been done; thus, comparative tests can be carried out such as the implementation of kaizen in local companies or compared to European companies, to clarify the influence of this kaizen implementation furthermore universally.

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