

Analysis of employee performance through productivity: The role of kaizen culture, motivation, and work discipline in the manufacturing industry

Dany Amrul Ichdan

University of Malahayati, Indonesia

dany.ichdan@mind.id



Article History

Received on 16 May 2024

1st Revision on 14 June 2024

2nd Revision on 21 June 2024

3rd Revision on 24 June 2024

Accepted on 1 July 2024

Abstract

Purpose: This study investigates the relationship between employee performance and productivity in the manufacturing industry, focusing on the impact of Kaizen culture, motivation, and work discipline on employee performance.

Research Methodology: The study employed a quantitative method approach, which involved a survey of 105 respondents from the manufacturing Industry in West Java, and the analysis of key performance indicators from several pilot case companies in Bekasi that implemented Kaizen techniques. Data were analyzed using the SmartPLS test.

Results: Kaizen culture, motivation, and work discipline are vital for improving employee performance and productivity. Employee motivation directly influences the implementation of the 5S system, and the company meets employees' needs for career development and information. Employee performance is influenced by motivation, discipline, training, and culture, with productivity as the mediator.

Limitations: The generalizability of this study is limited by its focus on a specific industry and geographic location. Future studies should replicate the study across different industries and regions to increase the scope of the findings.

Contribution: This study contributes to the current literature by examining how Kaizen culture, motivation, and work discipline boost employee performance and productivity in manufacturing. The results underscore the significance of these elements in enhancing organizational performance and offer practical suggestions for companies that aim to enhance productivity and employee engagement.

Originality: This study is unique in its thorough examination of how Kaizen culture, motivation, and work discipline affect employee performance and productivity in manufacturing. Using quantitative methods and diverse data sources enhances originality and offers a deeper understanding of these factors.

Keywords: *career adaptability, internship experience, college students*

How to Cite: Ichdan, D, A. (2024). Analysis of employee performance through productivity: The role of kaizen culture, motivation, and work discipline in the manufacturing industry. *Annals of Human Resource Management Research*, 4(1), 13-28.

1. Introduction

Employee performance is a critical determinant of organizational success, particularly in the competitive landscape of the manufacturing industry. Enhancing employee performance through

improved productivity is a key focus for many organizations striving for efficiency and effectiveness (Ichdan, Yuliansyah, & Maryani, 2023; Sari, Storyna, et al., 2021). This study delves into the pivotal role of Kaizen culture, motivation, and work discipline in shaping employee performance within the manufacturing sector (Hanafi, 2020; Vo, Kongar, & Barraza, 2019). By analyzing these factors, this study aims to provide valuable insights for organizations seeking to optimize their operations and achieve sustainable growth. Understanding how these elements interact can offer actionable strategies for enhancing employee performance and overall organizational success in a dynamic manufacturing environment (Sahoo & Yadav, 2019).

The manufacturing industry is characterized by its fast-paced and competitive nature, in which organizations constantly seek ways to streamline processes, reduce waste, and improve efficiency (Park, Jung, & Lee, 2019). Central to this effort is the concept of Kaizen, a Japanese philosophy that emphasizes continuous improvement (Vo et al., 2019). A Kaizen culture within an organization fosters a mindset of constant evolution and enhancement, encouraging employees to seek out and implement small, incremental changes that cumulatively lead to significant improvements in productivity and performance (Janjić, Todorović, & Jovanović, 2020). Motivation plays a crucial role in driving employee engagement and commitment to achieve organizational goals. When employees are motivated, they are more likely to exhibit higher levels of effort, persistence, and creativity in their work (Teneqexhi & Dollija, 2021). In the manufacturing industry, where work can be physically demanding and repetitive, maintaining high levels of motivation is essential for sustaining performance levels over time (Pham & Nguyen, 2020).

Work discipline refers to adherence to established rules, procedures, and standards within the workplace (Itang, 2015). In a manufacturing setting, where precision and consistency are paramount, the work discipline ensures that tasks are carried out efficiently and accurately (Kim, 2018). Employees with a strong work discipline are more likely to meet deadlines, maintain quality standards, and contribute to overall productivity (Marlapa & Mulyana, 2020). This study explores the intricate relationship between Kaizen culture, motivation, and work discipline in influencing employee performance in the manufacturing industry. By understanding how these factors intersect and impact each other, organizations can develop targeted strategies to enhance employee performance and achieve sustainable growth (Maarof & Mahmud, 2016; Marlapa & Mulyana, 2020). The findings of this study offer valuable insights and practical recommendations for organizations seeking to optimize their operations and maximize their competitive advantage in the dynamic manufacturing landscape (Adula, Kant, & Birbirs, 2022).

Although Kaizen culture, motivation, and work discipline are key to improving employee performance and productivity, focusing too much on them can have unintended consequences (Rizal, Putri, Aslinda, & Kasmita, 2023). Strictly adhering to Kaizen principles and constantly seeking improvement can lead to overwork and burnout (Marin-Garcia, Juarez-Tarraga, & Santandreu-Mascarell, 2018). Overemphasizing motivation may overlook other important factors such as job design and leadership (Shareef, 2018). Similarly, while work discipline is crucial, too much emphasis on rules can stifle creativity (Sipahelut, Erari, & Rumanta, 2021). To sustainably improve organizational performance, it is important to strike a balance and consider the broader context of employee performance (Hanafi, 2020).

This study is important for several reasons. Firstly, it fills a crucial gap in organizational behavior and human resource management by offering both empirical evidence and theoretical insights into how Kaizen culture, motivation, and work discipline affect employee performance in the manufacturing industry (Vento, Alcaraz, Macías, & Loya, 2016). Secondly, the findings have practical implications for manufacturing organizations, helping them develop better strategies for improving productivity and achieving operational excellence (Habidin, Hashim, Fuzi, & Salleh, 2018). Finally, the research contributes to existing knowledge by showing how these factors are interconnected and jointly influence employee performance, providing a more holistic view of organizational dynamics (Tuffaha, 2020). Future research could explore how Kaizen culture, motivation, and work discipline impact employee well-being, job satisfaction, engagement, and retention over the long term. This understanding could

help organizations create a more sustainable and supportive work environment (Janjić et al., 2020). Additionally, studying the role of technology in shaping employee performance, especially with increasing automation and digitalization in manufacturing, would be valuable (Baskaran, Lay, Ming, & Mahadi, 2020). Exploring how these technological advancements interact with the Kaizen principles and other factors could provide deeper insights (Lee, 2021). Addressing these areas in future research could build on the current study and improve our understanding of employee performance drivers in the manufacturing sector (Garza-Reyes et al., 2022).

2. Literature review

2.1 Kaizen Culture and Productivity

The connection between Kaizen culture and productivity in manufacturing is a vital aspect of organizational success (Gasper & Mwenda, 2023). Kaizen culture, which promotes ongoing improvement and employee engagement, has a notable positive impact on operational performance (Sridhar & Ponniah, 2023). Research on 248 electrical and electronics manufacturing companies in Malaysia showed that Kaizen culture significantly boosted operational performance, suggesting that nurturing this culture can halt declines in productivity (Mui, Muthuveloo, & Lyn, 2022).

Another study in Northern Ethiopia examined the implementation of Kaizen techniques in three factories, finding that companies embracing Kaizen showed genuine concern for their future, were action-oriented, upheld company values, and used employee suggestions for process improvement (Desta, Asgedom, Gebresas, & Asheber, 2014). This demonstrates that the Kaizen culture can enhance productivity by encouraging continuous improvement and involving employees (Wardhani & Realita, 2022).

Additionally, a study on the relevance of Kaizen culture in Industry 4.0 highlighted its significant link to creativity, a crucial factor for productivity in this context (Sridhar & Ponniah, 2023). This suggests that extending Kaizen culture to Industry 4.0 can stimulate creativity and knowledge enhancement. Syaputra and Aisyah (2022) highlighted that the relationship between Kaizen culture and productivity in manufacturing is positive as it promotes continuous improvement and employee engagement, which are crucial for productivity and operational performance. The proposed hypotheses are as follows:

H1: Kaizen Culture contribute positively on Productivity

2.2 Motivation and Productivity

Motivation plays an essential role in boosting employee productivity across various industries, including manufacturing (Bans-Akutey, 2022). Employees facing numerous challenges exhibit less productivity loss when they possess high levels of work motivation and commitment (Lohela-Karlsson, Jensen, & Björklund, 2022). Research has consistently indicated that motivation enhances productivity significantly. For example, a study examining the link between motivation and employee performance identified connections between wages, benefits, welfare facilities, work motivation, and employee productivity—a relationship not theoretically or empirically explored in Bangladesh (Alam, Hassan, Bowyer, & Reaz, 2020). Another study on the impact of motivation on employee performance in financial institutions found that employees who received appropriate compensation were more productive at work (Setiawan et al., 2021).

Research on the connection between situational leadership and employee motivation in Indonesian manufacturing has discovered that situational leadership positively influences employee motivation, which subsequently enhances individual performance (Hanasi, 2023). Similarly, a study on the importance of motivation for optimal employee performance in the Amendu manufacturing industry in South Africa found that both financial and non-financial motivations significantly boost employee performance (Jam-Jam & Mbukanma, 2023). The relationship between motivation and productivity was positive. Motivation is essential for improving employee productivity because it directly affects employee performance and job satisfaction.

H2: Motivation contributes positively to productivity.

2.3 Work Discipline and Productivity

The connection between work discipline and productivity in manufacturing is crucial for organizational success. Work discipline refers to adherence to rules, procedures, and standards that govern employee behavior and actions (Dharliana & Wibowo, 2022). It plays a vital role in maintaining the quality, efficiency, and productivity of the manufacturing operations. Numerous studies have demonstrated that work discipline positively impacts productivity in this sector (Khaertdinova, Maliashova, & Gadelshina, 2023). For example, research indicates that employees who adhere to work discipline standards tend to be more productive and efficient (Aniemene, 2017). Additionally, disciplined employees are more likely to be satisfied with their jobs and less likely to leave the organization (Rahmadiani, Maryani, & Pentiana, 2024).

The relationship between work discipline and motivation is also significant. Motivated employees are more likely to exhibit work discipline, leading to higher productivity and job satisfaction (Hutauruk, Matondang, & Pujangkoro, 2022). Furthermore, implementing lean manufacturing principles that emphasize work discipline can enhance efficiency and competitiveness in the industrial sector (Goshime, Kitaw, & Jilcha, 2019). Overall, work discipline is essential for maintaining quality, efficiency, and productivity in manufacturing operations and has a positive influence on employee performance and motivation.

H3: Work Discipline has positive and significant impact on Productivity

2.4 Kaizen Culture and Employee Performance

The relationship between Kaizen culture and employee performance is pivotal for organizational success (Mubarok & Hidayat, 2024). Kaizen, emphasizing continual improvement and employee engagement, significantly enhances employee performance by nurturing a culture of ongoing enhancement crucial for productivity and operational success (Ekhsan, Parashakti, Religia, & Moulana, 2023). Research has consistently demonstrated a positive impact of Kaizen culture on employee performance. For instance, Rizal et al. (2023) revealed a strong relationship between Kaizen culture and employee performance. Another study focusing on Kaizen culture and leadership found that these variables significantly influence employee performance, with job satisfaction as an intermediary factor (Lubis, 2017).

In addition, research on the PT. Mandom Indonesia indicated that Kaizen culture positively affects productivity, subsequently enhancing employee performance (Amini & Hidayat, 2023). Another study in the electrical and electronics industry in Malaysia confirmed that Kaizen culture significantly boosted operational performance, which is a key factor in employee performance (Mui et al., 2022). In conclusion, the relationship between Kaizen culture and employee performance is beneficial, as Kaizen culture promotes continual improvement, is crucial for productivity and operational success, and substantially boosts employee performance (Limpo & Kamase, 2022).

H4: Kaizen Culture positively impact on Employee Performance

2.5 Motivation and Employee Performance

The effect of motivation on employee performance is vital for organizational success (Sugiarti, 2022). Motivation greatly improves employee performance by enhancing engagement, job satisfaction, and productivity (Milliana, Titing, & Hendrik, 2023). Motivation is generally categorized into two main types: intrinsic, originating from an individual's inner drive for achievement, and extrinsic, driven by external rewards or recognition (Riyanto, Endri, & Herlisha, 2021). Many studies have shown that motivation has a positive impact on employee performance. For instance, research in Ghana's manufacturing sector has found that motivated employees are more satisfied with their performance and less likely to leave the organization (Ackah, 2014). Similarly, a study in Indonesia indicated that situational leadership boosts employee motivation, which in turn improves individual performance (Hanasi, 2023).

A study within South Africa's manufacturing industry demonstrated that both financial and non-financial incentives considerably improve employee performance (Jam-Jam & Mbankanma, 2023). Additionally, research examining the effects of motivation, discipline, training, environment, and culture on employee performance concluded that motivation, discipline, training, and culture

significantly enhance job satisfaction, which subsequently boosts employee performance (Asri & Chanada, 2023). Motivation is essential to enhance employee performance by directly affecting engagement, job satisfaction, and productivity.

H5: Motivation has positive and significant influence on Employee Performance

2.6 Work Discipline and Employee Performance

The relationship between work discipline and employee performance in the manufacturing sector is vital for organizational success (Araffat, Ali, Bangsawan, Diarti, & Budiono, 2020). Work discipline involves the rules, procedures, and standards that govern employee behavior, which is crucial for maintaining quality, efficiency, and productivity in manufacturing operations (Bans-Akutey, 2022). Numerous studies have consistently shown a significant positive effect of work discipline on employee performance. For instance, research by Kusumiarsono, Brahmasari, and Ardiana (2022) in the manufacturing industry found that employees who adhered to work discipline standards were more productive and efficient. Another study revealed that disciplined employees are more likely to be satisfied with their jobs and less likely to leave the organization (Zysman & Alexander, 2020).

Asri and Chanada (2023) highlighted that work discipline significantly and positively affects productivity, thereby enhancing employee performance. Moreover, a study in the retail sector indicated that both financial and non-financial motivations significantly boost employee performance, which is influenced by work discipline (Maizar, Persada, & Nabella, 2023). Therefore, the relationship between work discipline and employee performance in manufacturing is positive, with work discipline playing a crucial role in maintaining quality, efficiency, and productivity, and positively impacting employee performance (Kirana, Sriathi, & Suwandana, 2022).

H6: Work Discipline positively and significantly impact on Employee Performance

2.7 Productivity and Employee Performance

The connection between productivity and employee performance is essential for organizational success. Productivity reflects how efficiently and effectively employees carry out their tasks, while employee performance encompasses broader aspects, such as job satisfaction and motivation (Wanyama & Mutsotso, 2010). This relationship is intricate and influenced by factors such as the working environment and employee-manager relationships (Saidi et al., 2019). Consistent research has highlighted a significant positive correlation between productivity and employee performance. For example, one study noted that a positive relationship with a manager correlates with increased motivation and performance, whereas a negative relationship is associated with poorer performance (Arif, 2021). Another study found that job satisfaction is linked to high levels of performance and productivity, in contrast to dissatisfied employees who exhibit lower productivity, absenteeism, and turnover (Suknunan & Bhana, 2022).

Moreover, research emphasizes the importance of a positive working environment to ensure employee productivity and to avoid unnecessary stress that can affect performance (Mubarok & Hidayat, 2024). Additionally, studies indicate that employee productivity plays a mediating role in the relationship between corporate social responsibility and financial performance (Tunio et al., 2021). In the manufacturing industry, research indicates a strong relationship between work stress and worker performance, suggesting that managing stress through measures such as flexible working hours and improved communication can enhance performance (Sari, Sinaga, et al., 2021). In conclusion, the relationship between productivity and employee performance is positive, influenced by factors such as the working environment, job satisfaction, and employee-manager relationships, and closely tied to overall employee performance (Pitino & Susanti, 2024).

H7: There is positive and significant impact of Productivity on Employee Performance

2.8 Framework Model and Hypotheses

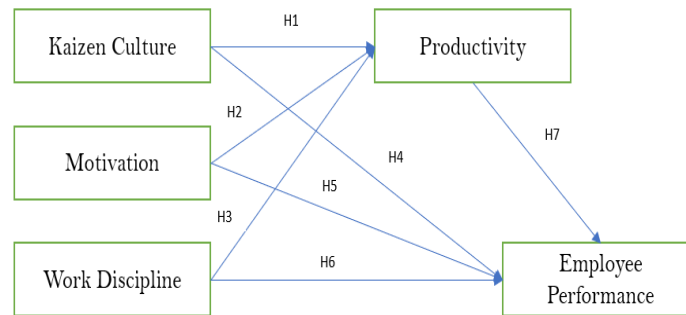


Figure 1: Conceptual Framework

Hypotheses:

- H1: Kaizen Culture positively and significantly impact on Productivity
- H2: Motivation positively and significantly impact on Productivity
- H3: Work Discipline positively and significantly impact on Productivity
- H4: Kaizen Culture positively and significantly impact on Employee Performance
- H5: Motivation positively and significantly impact on Employee Performance
- H6: Work Discipline positively and significantly impact on Employee Performance
- H7: Productivity has a positive and significant contribution on Employee Performance

3. Methodology

This study utilized a quantitative research design to evaluate employee performance through productivity, emphasizing the roles of Kaizen culture, motivation, and work discipline in the manufacturing sector. A cross-sectional survey was conducted to gather data from the employees of various manufacturing firms. To ensure a representative sample, a stratified random sampling technique was employed, covering different employee levels, such as operational staff, supervisors, and managers, with close to 165 respondents. This approach ensures that the sample accurately reflects the industry's diverse workforce (Abrigo et al., 2024).

The sample size was determined using an appropriate method to ensure statistical validity and reliability, allowing the findings to be generalized to a broader manufacturing population. Data were gathered using a structured questionnaire designed to measure key variables including employee productivity, Kaizen culture, motivation, and work discipline. The questionnaire, based on established scales, is tailored to the specific context of the manufacturing industry and includes sections on demographic information, Kaizen cultural practices, motivation levels, work discipline, and perceived productivity (Baron & Cruz, 2023).

The collected data were analyzed using the Smart PLS method, which is chosen for its ability to handle multiple relationships simultaneously and provide a comprehensive understanding of how Kaizen culture, motivation, and work discipline influence employee productivity. Descriptive statistics summarize the data, while inferential statistics, including correlation and regression analysis, test the hypotheses and explore the relationships between variables. SmartPLS specifically aids in identifying the direct and indirect effects of Kaizen culture, motivation, and work discipline on employee productivity (Hadiwijaya & Yustini, 2023).

4. Results and discussions

4.1 Result

4.1.1 Respondent Demographics

Table 1. Respondent Demographics

No	Demographics	Characteristics	Amount	%
1	Type of Gender	Male	104	63

		Female	61	37
		Total	165	100
2	Age	17-20	42	25
		21-30	57	35
		31-40	46	28
		41-50	20	12
		Total	165	100
3	Education	High School	52	33
		College Graduate	67	43
		Post Graduate	37	24
		Total	156	100
4	Position	Staff	71	46
		Supervisor	58	37
		Manager	27	17
		Total	156	100

Data: processed by researcher (2024)

Table 1 illustrates 156 respondents consisting of 104 (63%) men and 61 (37%) women, respondents who took part in this study, the majority aged 21-30 years as many as 57 (35%), and the minority aged 41-50 years (12%). Most respondents were college graduates 67 (45%) and most occupied positions as staff 71 (46%).

4.1.2 Instrument Reliability Testing

According to Hair Jr, Wolfinbarger, Money, and Samouel (2011), consistency in study findings is a key component of reliability. This proves that the research equipment is a reliable and consistent data-collection tool. Internal measurement consistency is indicated by its reliability (Hair Jr et al., 2011; Sekaran & Bougie, 2009). Therefore, if a study tool regularly evaluates the desired traits, it is considered dependable. Every study instrument passed the validity and reliability tests, demonstrating its validity and reliability, with values for Pearson's correlation and Cronbach's alpha reliability of more than 0.3 and 0.7, respectively. This attests to the validity and dependability of every research tool, indicating that the questionnaire can be employed. Detailed instrument testing was conducted and the results of the validity and reliability tests are presented in Table 2.

Table 2. Research Instrument Test Scores

<i>Variables</i>	<i>Instruments</i>	<i>Pearson Correlation</i>	<i>Cronbach's Alpha</i>	<i>Load. Factors</i>
Kaizen Culture	Employee Involvement	0.830	0.774	0.656
	Continuous Improvement Practices	0.813		0.668
	Management Support	0.859		0.773

Motivation	Recognition and Rewards	0.700	0.663	0.508
		0.738		0.677
	Career Development Opportunities	0.870		0.722
	Work-Life Balance			
Work Discipline	Attendance and Punctuality	0.839	0.703	0.661
		0.879		0.773
	Adherence to Policies and Procedures	0.689		0.501
	Professionalism			
Productivity	Production Efficiency	0.707	0.706	0.401
	Labor Productivity	0.665		0.560
	Downtime Reduction	0.786		0.703
	Inventory Turnover	0.746		0.513
Employee Performance	Efficiency	0.770	0.732	0.682
	Quality of Work	0.813		0.580
	Production Output	0.843		0.737

All the Pearson Correlation values in Table 2's validity testing findings were found to be more than 0.5, suggesting that the research instruments are appropriate for use as measuring tools. Furthermore, Table 2's reliability values demonstrate that every variable had a Cronbach's alpha value higher than 0.7, indicating the acceptability of every assessment tool. Consequently, the research tools used to examine employee performance, productivity, work discipline, motivation, and kaizen culture are regarded as legitimate and trustworthy.

Table 3. *Good of Fit Structural Model*

Suitability Measure	Cut of Value	Research Result Value	Description
<i>Degrees of Freedom</i>	≤ 1.00	0	<i>Fit</i>
<i>Chi-Square</i>	≤ 1.00	0.0	<i>Fit</i>
<i>P-Value</i>	> 0.05	1.00	<i>Fit</i>

Following the testing of the research model, the findings were assessed for model fit, and a summary of the findings is provided in Table 3. The appropriateness measures indicate that the research model fits the data well. Based on these findings, the study model can be used as a reference in both ongoing and upcoming studies.

Table 4. Summary of Correlation Values

No	Research Problem	r-values	Result
1	Kaizen Culture and Productivity	0.32	<i>Sig.</i>
2	Motivation and Productivity	0.29	<i>Sig.</i>
3	Work Discipline and Productivity	0.34	<i>Sig.</i>

4	Kaizen Culture and Employee Performance	0.69	<i>Sig.</i>
5	Motivation and Employee Performance	0.18	<i>Sig.</i>
6	Work Discipline and Employee Performance	0.09	<i>Not Sig.</i>
7	Productivity and Employee Performance	0.32	<i>Sig.</i>

Table 2 provides a summary aimed at addressing research questions one through nine. The results indicate that one of the research questions, namely, question six, does not show a significant relationship or is not suitable. However, the remaining questions demonstrate a strong relationship between the variables, and form the basis of the research model. After analyzing the T-value data, the following is a summary of the results of the hypothesis testing in the research model.

4.1.3 Research Hypothesis Testing

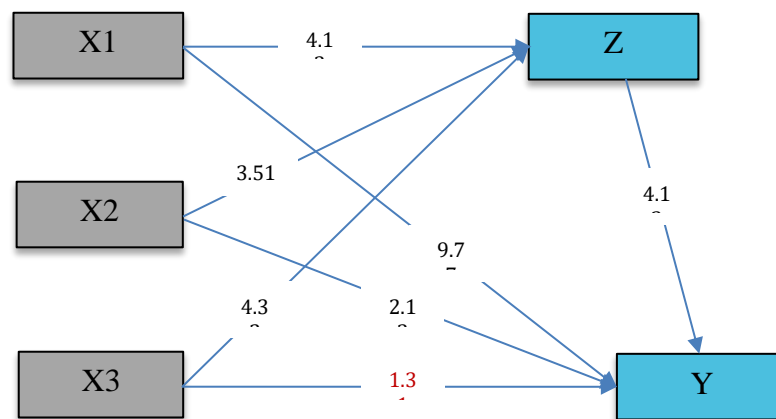


Figure 2. Hypothesis Testing

The research hypothesis test results of the research model are summarized based on the processed data pertaining to the T-value, as shown in Figure 2. Table 4 presents a comparison of the T-value outcomes. It is apparent that all other hypotheses were validated, providing important insights into the interactions between research variables; however, one hypothesis—hypothesis six— was not supported. Table 5 presents the combined results of hypothesis testing.

Table 3. Hypothesis testing

Hypothesis	Research Hypothesis Testing	Statistic result of t/f	Result
H.1	Kaizen Culture → Productivity	4.13	<i>Support</i>
H.2	Motivation → Productivity	3.51	<i>Support</i>
H.3	Work Discipline → Productivity	4.32	<i>Support</i>
H.4	Kaizen Culture → Employee Performance	9.77	<i>Support</i>
H.5	Motivation → Employee Performance	2.13	<i>Support</i>
H.6	Work Discipline → Employee Performance	1.31	<i>Not</i>
H.7	Productivity → Employee Performance	4.13	<i>Support</i>

4.2 Discussion

4.2.1 The Impact of Kaizen Culture on Productivity

Kaizen culture has a significant impact on productivity in manufacturing. Rooted in the Japanese concept of "continuous improvement," Kaizen encourages ongoing gradual enhancements in processes and products (Gasper & Mwenda, 2023). Within manufacturing, this culture nurtures a mindset that

values efficiency, quality, and innovation among workers (Lage de Sousa, Canêdo-Pinheiro, Pereira Cabral, & de Sousa Ferreira, 2020). A key aspect of Kaizen's influence on productivity is its emphasis on identifying and eliminating wasteful production practices. By motivating employees to consistently seek out inefficiencies and better methods, Kaizen enhances operational efficiency and boosts productivity (Mhone & Jin, 2021).

Kaizen culture fosters employee engagement and empowerment. It encourages workers to contribute ideas for improvement and to participate in decision-making, fostering a sense of ownership and accountability. This approach not only improves morale but also enhances productivity (Gasper & Mwenda, 2023; Rizal et al., 2023). Furthermore, Kaizen stressed the importance of standardized work processes and established clear standards and procedures. This helps to reduce variability and errors, ultimately leading to higher productivity levels (Kumar, 2019). In summary, the Kaizen culture significantly enhances productivity in manufacturing by promoting continuous improvement, empowering employees, and improving process efficiency.

4.2.2 The Impact of Motivation on Productivity

Motivation plays a crucial role in driving the productivity of the manufacturing sector. It is the drive to achieve goals and excel in tasks, influencing employee performance and overall productivity levels significantly (Funso, Sammy, & Gerryshom, 2016). Motivated employees are more likely to be actively engaged in their work, which leads to increased productivity. Motivation can stem from various sources, including intrinsic factors like a sense of achievement or purpose, and extrinsic factors such as rewards and recognition (Zakaria, Alias, & Rani, 2020). It impacts productivity by increasing the effort and energy employees invest in their work, encouraging them to tackle challenging tasks and persist in overcoming obstacles (Divkolaii, 2014). Motivation also guides employee behavior, directing efforts towards tasks aligned with organizational goals and optimizing time and resources.

Additionally, motivated employees tend to produce higher-quality work, pay attention to detail, take pride in their work, and strive for excellence (Klopotan, Mjeda, & Kurečić, 2018). To cultivate motivation in the manufacturing sector, organizations can provide growth opportunities through training programs and career advancement (Riwukore, Susanto, Pilkandis, & Habaora, 2021). Recognizing and rewarding employees' contributions can bolster morale and motivation. Overall, motivation significantly influences productivity by enhancing employee engagement, effort, focus, and the quality of work.

4.2.3 The Impact of Work Discipline on Productivity

The work discipline has a substantial impact on productivity in the manufacturing sector. Work discipline refers to adherence to rules, procedures, and standards that govern behavior and actions in the workplace (Iskamto, Yapentra, Ansori, & Jupri, 2020). Maintaining efficiency, quality, and productivity during manufacturing operations is essential. One significant way that work discipline influences productivity is to ensure consistency and reliability in work processes (Rawat, Gupta, & Juneja, 2018). When employees adhere to standards and procedures, there is less variability in output, leading to higher-quality products and services (Kamble & Wankhade, 2017). Work discipline also helps avoid errors and rework, which can waste time and resources.

Furthermore, work discipline fosters a culture of accountability and responsibility among the employees. When individuals take ownership of their work and follow through on commitments, productivity tends to increase. This is because employees are more likely to complete tasks on time and meet deadlines when disciplined in their approach. Work disciplines also contribute to a positive work environment. When everyone in the organization follows the same set of rules and standards, there is a sense of fairness and equity, which can boost morale and motivation. Additionally, a disciplined work environment can reduce conflicts and disruptions, allowing employees to focus on their tasks. In conclusion, work discipline is a critical factor for enhancing productivity in the manufacturing sector. By promoting adherence to rules and standards, organizations can improve their efficiency, quality, and overall performance.

4.2.4 The Impact of Kaizen Culture on Employee Performance

Kaizen culture significantly influences employee performance in manufacturing. Kaizen, meaning "continuous improvement" in Japanese, focuses on incremental enhancements in processes, products, and services to boost efficiency and quality (Nazliela, Jamaluddin, Tanggamani, Hussain, & Nordin, 2023). This culture instills a mindset of constant learning and betterment among employees, encouraging them to innovate and work more efficiently (Gasper & Mwenda, 2023). This approach enhances employee engagement and job satisfaction, as individuals feel empowered to meaningfully contribute to their work (Diah & Cahyadi, 2020).

Kaizen culture fosters teamwork and cooperation, prompting employees to collaborate in problem-solving and create a more cohesive work environment. Collaboration enhances communication and trust among team members, resulting in improved overall performance (Shan, Ahmad, & Nor, 2016). Kaizen culture stresses the importance of standardizing work processes, which helps reduce errors and variability and leads to higher-quality outcomes. This standardization also improves efficiency by aiding the identification and elimination of wasteful practices. Kaizen culture significantly impacts employee performance in manufacturing by promoting continuous improvement, teamwork, and standardized processes. This culture enhances employees' engagement, satisfaction, and overall performance.

4.2.5 The Impact of Motivation on Employee Performance

Motivation plays a critical role in shaping employees' performance in the manufacturing sector. Motivated employees demonstrate higher levels of engagement, productivity, and dedication to their tasks, ultimately enhancing overall performance and operational efficiency (Munawaroh, Syakur, Fitriana, & Muntaqo, 2020). One key impact of motivation is its ability to influence the effort and enthusiasm that employees invest in their work. Motivated individuals are more inclined to tackle challenging assignments, leading to increased productivity (Harsono, Munarsih, Alam, Estiana, & Karomah, 2020). Additionally, motivation steers employee behavior towards tasks aligned with organizational objectives and priorities.

Motivation contributes to the quality of the work produced. Motivated employees are more inclined to pay attention to details, take pride in their work, and strive for excellence, resulting in higher quality outputs. Motivation also fuels creativity and innovation, encouraging employees to explore new and improved methods of performing tasks. Various factors can influence employee motivation in the manufacturing sector, including recognition and rewards, opportunities for career advancement, a positive work environment, and the nature of the work itself. By recognizing and addressing these factors, organizations can enhance employee motivation, thereby improving overall performance within the manufacturing industry.

4.2.6 The Impact of Work Discipline on Employee Performance

Work discipline significantly impacts employee performance in the manufacturing industry. Work discipline refers to adherence to rules, standards, and procedures governing behavior and actions in the workplace (Maqis, Suherman, & Apriani, 2023). In manufacturing, where precision and efficiency are paramount, the work discipline plays a crucial role in ensuring smooth operations and high-quality outputs (Eka, 2018). One key impact of work discipline on employee performance is its effect on productivity. Employees who adhere to work standards and processes are more likely to complete tasks efficiently and accurately, leading to higher productivity levels (Shalsabila, Isyanto, & Yani, 2023). Work discipline also affects employee behavior and attitudes towards work. Employees with strong work discipline are more likely to exhibit punctuality, reliability, and strong work ethics, which can positively impact overall performance (Elqadri & Wardoyo, 2015).

Work discipline can enhance teamwork and collaboration between employees. When team members adhere to common standards and procedures, they foster a sense of unity and mutual respect, leading to improved communication and cooperation (Ghoni & Sopiah, 2022). This, in turn, can lead to higher performance levels as teams work together more effectively to achieve common goals. Overall, work discipline is a critical factor in determining employee performance in manufacturing industries. By

promoting and maintaining a strong work discipline, organizations can improve productivity, teamwork, and overall performance (Mohanty, Mishra, & Mall, 2017).

4.2.7 The Impact of Productivity on Employee Performance

Productivity significantly influences employee performance in the manufacturing sector. Productivity, defined as the efficiency of converting inputs such as labor and capital into outputs such as goods or services (Kamble & Wankhade, 2017), plays a pivotal role in manufacturing. It serves as a crucial gauge of the effectiveness of resource utilization in producing goods. An aspect of how productivity affects employee performance is by serving as an indicator of efficiency (Unger, Szczesny, & Holderried, 2020). Employees who can produce more output with the same amount of input are considered more productive (Marlapa & Mulyana, 2020). This can be a reflection of their skills, work ethics, and ability to effectively use resources. High productivity levels are often associated with high-performing employees who can achieve more in less time (Tangen, 2005).

Productivity has the potential to affect employee morale and motivation significantly. When employees witness tangible outcomes of their efforts through increased productivity, they may experience a sense of achievement and pride in their work (Yusuf & Suwardana, 2023). This sense of accomplishment can foster higher levels of motivation and job satisfaction, subsequently positively influencing the overall performance. Additionally, productivity can impact employee engagement and retention (Alanizan, 2023). Employees who perceive their work as meaningful and contribute to the organization's objectives are more likely to actively engage in their tasks. Moreover, heightened productivity can cultivate a positive work atmosphere in which employees feel valued and supported, resulting in increased retention rates. Overall, productivity plays a crucial role in determining employee performance in the manufacturing industry. By focusing on improving productivity, organizations can enhance employee performance, motivation, and engagement, leading to better overall performance.

5. Conclusion

5.1. Conclusion

This study highlights the crucial role of Kaizen culture, motivation, and work discipline in improving employee performance through productivity in the manufacturing sector. The research indicated a significant positive impact of these factors on employee performance, highlighting the importance of nurturing a culture focused on continuous improvement, employee involvement, and adherence to work standards. Understanding and utilizing these elements can help organizations devise more efficient strategies to boost productivity and attain operational excellence. The study's findings have practical implications for manufacturing companies, offering valuable insights into enhancing productivity and employee engagement. Future research could delve into the long-term effects of these factors on employee well-being and job satisfaction and investigate how technology influences employee performance in manufacturing.

This study highlights the crucial role of Kaizen culture, motivation, and work discipline in improving employee performance through productivity in the manufacturing sector. By understanding and utilizing these elements, organizations can devise more efficient strategies to boost productivity and attain operational excellence. Future research should delve into the long-term effects of these factors on employee well-being and job satisfaction and investigate how technology influences employee performance in manufacturing.

5.2 Suggestion

To improve employee performance and productivity in manufacturing, it is crucial to prioritize the cultivation of a Kaizen culture, bolstering motivation, and upholding rigorous work disciplines. Companies should foster a Kaizen culture that promotes continuous improvement by involving employees in identifying and implementing small incremental changes in their work processes. Providing support for this culture through training and resources can yield benefits. Motivation plays a pivotal role in enhancing employees' performance. Therefore, companies should strive to comprehend what drives their employees and offer suitable incentives such as financial rewards, recognition, or opportunities for career advancement.

Maintaining robust work discipline is essential to ensure that employees adhere to standards and procedures. Effective communication, setting clear expectations, and providing regular feedback are the means to achieve this goal. By concentrating on these three critical areas—Kaizen culture, motivation, and work discipline—organizations can enhance employee performance and attain higher levels of productivity in the manufacturing sector.

5.3. Practical Implications

Organizations can enhance productivity by implementing a Kaizen culture, motivating employees, and maintaining high work discipline standards. This can be achieved through continuous improvement initiatives, employee recognition programs, and regular performance evaluation. By adopting these strategies, organizations can attain operational excellence by optimizing processes, improving quality, and reducing waste. This leads to increased efficiency, reduced cost, and enhanced customer satisfaction. This study emphasizes the importance of employee engagement in driving performance. Organizations can increase employee satisfaction and motivation by fostering a positive work environment, recognizing employee contributions, and providing opportunities for growth.

5.4 Recommendation

Future research on employee performance and productivity in manufacturing should focus on several areas. Long-term studies could examine how Kaizen culture, motivation, and work discipline evolve over time, and their lasting impact on organizational performance. A cross-cultural analysis could reveal how these factors vary across cultures and affect employee performance, thus benefiting multinational companies. Additionally, research could explore how technology, such as digital tools and automation, impacts employee engagement and performance within the framework of the Kaizen culture. Studying the relationship between employee well-being, including job satisfaction and work-life balance, and productivity within this context could lead to strategies for improving overall productivity.

Further research could also investigate how organizational learning processes contribute to Kaizen culture, motivation, and work discipline, informing organizations how they can create a learning culture that supports performance. Understanding the role of leadership style in fostering these factors could provide insights into effective leadership strategies for enhancing productivity. Finally, studying the link between employee engagement and performance in this context could reveal how factors such as communication and recognition contribute to productivity. This study could provide a deeper understanding of the dynamics that influence employee performance and lead to more effective strategies for enhancing organizational performance.

Acknowledgment

We are grateful to the scholars and researchers whose work has influenced this study on employee performance and productivity in the manufacturing industry. Their contributions played a crucial role in shaping the direction and focus of our research. We also wish to acknowledge the participants and organizations who graciously provided their data and insights, without which this study would not have been feasible. Additionally, we extend our appreciation to our colleagues and mentors for their guidance and support throughout this research. Their expertise and feedback were invaluable in refining the ideas and concepts presented in this study.

References

- Abrigo, J. N. F., Abrogena, A. A. A., Alcantara, D. R. E., De Gracia, N. A. V., Juliano, A. C., & Ador, Z. I. (2024). A narrative research of experiences of STEM teachers pursuing doctoral degree. *Journal of Social, Humanity, and Education*, 4(3), 153-168.
- Ackah, D. (2014). The impact of motivation on employee performance in the manufacturing industry in Ghana. *Global Journal of Management Studies and Researches*, 1(5), 291-310.
- Adula, M., Kant, S., & Birbirs, Z. A. (2022). Systematic Literature Review on Human Resource Management Effect on Organization Performance. *Annals of Human Resource Management Research*, 2(2), 131-146.

- Alam, M. N., Hassan, M. M., Bowyer, D., & Reaz, M. (2020). The effects of wages and welfare facilities on employee productivity: Mediating role of employee work motivation. *Australasian Accounting, Business and Finance Journal*, 14(4), 38-60.
- Alanizan, S. (2023). How does employee satisfaction and motivation affect productivity. *International Journal of Business and Management*, 18(2), 55-60.
- Amini, C. A., & Hidayat, R. (2023). The Influence of Kaizen Culture, Work Discipline on Productivity with Implementation of Employee Performance at PT. Mandom Indonesia. *Kontigensi: Jurnal Ilmiah Manajemen*, 11(1), 20-29.
- Aniemene, F. (2017). *Strategies for increased productivity through control of process constraints*. Walden University.
- Araffat, M. Y., Ali, H., Bangsawan, M. I., Diarti, D. K., & Budiono, A. (2020). The influence of leadership style and work discipline on employee performance in the department of transportation Dompu District. *International Journal of Multicultural and Multireligious Understanding*, 7(8), 758-767.
- Arif, F. (2021). The influence of transformational leadership, discipline, productivity on employee performance. *SCIENTIFIC JOURNAL OF REFLECTION: Economic, Accounting, Management and Business*, 4(1), 51-60.
- Asri, D. H., & Chanada, E. (2023). PENGARUH MOTIVASI, DISIPLIN, PELATIHAN, LINGKUNGAN DAN BUDAYA TERHADAP KINERJA KARYAWAN DENGAN KEPUASAN KERJA SEBAGAI MEDIASI. *Jurnal Ekonomi Pembangunan STIE Muhammadiyah Palopo*, 9(2), 445-453.
- Bans-Akutey, A. (2022). Entrepreneurship education and personality traits as predictors of entrepreneurial intention: A qualitative approach. *Annals of Management and Organization Research*, 4(2), 147-158.
- Baron, J. V., & Cruz, J. A. D. (2023). The spiral progression approach in teaching science: Its Volatilities, Uncertainties, Complexities, and Ambiguities (VUCA). *Journal of Social, Humanity, and Education*, 3(2), 89-103.
- Baskaran, S., Lay, H. S., Ming, B. S., & Mahadi, N. (2020). Technology adoption and employee's job performance: an empirical investigation. *International Journal of Academic Research in Economics and Management Sciences*, 9(1), 78-105.
- Desta, A., Asgedom, H. B., Gebresas, A., & Asheber, M. (2014). Analysis of kaizen implementation in Northern Ethiopia's manufacturing industries. *International Journal of Business and Commerce*, 3(8), 39.
- Dharliana, D., & Wibowo, S. N. (2022). THE INFLUENCE OF DISCIPLINE AND MOTIVATION ON WORK PRODUCTIVITY. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, 6(4), 1843-1851.
- Diah, Y. M., & Cahyadi, A. (2020). *Improving organizational performance through job satisfaction based on employee empowerment*. Paper presented at the 5th Sriwijaya Economics, Accounting, and Business Conference (SEABC 2019).
- Divkolaii, M. (2014). An investigation on factors influencing on human resources productivity. *Management Science Letters*, 4(5), 883-886.
- Eka, P. D. (2018). The effect of work discipline and motivation on employee performance (at PT. Bank Mandiri Ciledug Branch). *Pinisi Discretion Review*, 2(1), 61-68.
- Ekhsan, M., Parashakti, R. D., Religia, Y., & Moulana, I. (2023). Kaizen culture and employee performance in the post-COVID-19 era: does servant leadership mediate in the model? *Asian Journal of Management, Entrepreneurship and Social Science*, 3(01), 536-550.
- Elqadri, Z. M., & Wardoyo, D. T. W. (2015). The Influence of Motivation and Discipline Work against Employee Work Productivity Tona'an Markets. *Rev. Eur. Stud.*, 7, 59.
- Funso, A., Sammy, L., & Gerryshom, M. (2016). Impact of motivation on productivity of craftsmen in construction firms in Lagos, Nigeria. *International Journal of economics and Finance*, 8(4), 271.
- Garza-Reyes, J. A., Christopoulos, C., Kumar, A., Luthra, S., González-Aleu, F., Kumar, V., & Villarreal, B. (2022). Deploying Kaizen events in the manufacturing industry: an investigation into managerial factors. *Production Planning & Control*, 33(5), 427-449.

- Gasper, L., & Mwenda, B. (2023). Quantitative analysis of Kaizen philosophy on productivity improvement. *International Journal of Research in Business and Social Science* (2147-4478), 12(3), 557-562.
- Ghoni, I. A., & Sopiah, S. (2022). The effect of company work discipline: Systematic literature review.
- Goshime, Y., Kitaw, D., & Jilcha, K. (2019). Lean manufacturing as a vehicle for improving productivity and customer satisfaction: A literature review on metals and engineering industries. *International Journal of Lean Six Sigma*, 10(2), 691-714.
- Habidin, N. F., Hashim, S., Fuzi, N. M., & Salleh, M. I. (2018). Total productive maintenance, kaizen event, and performance. *International Journal of Quality & Reliability Management*, 35(9), 1853-1867.
- Hadiwijaya, H., & Yustini, T. (2023). Analysis of consumer preferences towards digital marketing and its implications on the competitive advantage of SMEs in Banyuasin Regency. *Annals of Human Resource Management Research*, 3(2), 83-96.
- Hair Jr, J. F., Wolfinbarger, M., Money, A. H., & Samouel, P. (2011). Essentials of business research methods: ME Sharpe, Inc.
- Hanafi, A. (2020). *The Effects of Organizational Culture and Leadership Style on Employee Performance Through Employee Engagement as Intervening Variable at Pt. Bank Mandiri Micro Banking Cluster Baturaja*. Paper presented at the 5th Sriwijaya Economics, Accounting, and Business Conference (SEABC 2019).
- Hanasi, R. A. (2023). Between Situational Leadership and Employee Motivation on Individual Performance in Indonesian Manufacturing Industry. *Sinergi International Journal of Management and Business*, 1(2), 126-141.
- Harsono, Y., Munarsih, M., Alam, R. N., Estiana, R., & Karomah, N. G. (2020). Pengaruh Promosi Terhadap Keputusan Memilih Sekolah Pada Orangtua Siswa Sdit Bina Cendekia–Depok. *Jurnal Ekonomi Efektif*, 2(3).
- Hutauruk, F. J., Matondang, R., & Pujangkoro, S. (2022). The Effect of Work Discipline on Employee Productivity: Employee Productivity. *Jurnal Sistem Teknik Industri*, 24(2), 221-227.
- Ichdan, D. A., Yuliansyah, & Maryani. (2023). Do mental model and creativity help employees to improve their job performance from their participation in the budgeting? *Cogent Business & Management*, 10(1), 2184228. doi:10.1080/23311975.2023.2184228
- Iskamto, D., Yapentra, A., Ansori, P. B., & Jupri, M. (2020). Effect of Working Discipline Toward Performance: An Empirical Investigation. *KnE Social Sciences*, 492–501-492–501.
- Itang. (2015). Work discipline and work competence with quality of service in the office of religious affairs (kua) district of mount kencana lebak regency of banten. *J. Mgmt. & Sustainability*, 5, 132.
- Jam-Jam, S., & Mbukanma, I. (2023). Significance of Motivation on Employee Optimal Performance: A Study of Amendu Manufacturing Industry in Mthatha, Eastern Cape, South Africa. *Journal of Educational and Social Research*, 13.
- Janjić, V., Todorović, M., & Jovanović, D. (2020). Key success factors and benefits of Kaizen implementation. *Engineering Management Journal*, 32(2), 98-106.
- Kamble, R., & Wankhade, L. (2017). Perspectives on productivity: identifying attributes influencing productivity in various industrial sectors. *International Journal of Productivity and Quality Management*, 22(4), 536-566.
- Khaertdinova, A. A., Maliashova, A. Y., & Gadelshina, S. V. (2023). Study of the discipline «Lean Manufacturing» as a condition for training specialists for the industrial sector of the economy. *Samara Journal of Science*, 12(3), 326-330.
- Kim, J. (2018). The contrary effects of intrinsic and extrinsic motivations on burnout and turnover intention in the public sector. *International journal of manpower*, 39(3), 486-500.
- Kirana, I. B. G. A., Sriathi, A. A. A., & Suwandana, I. G. M. (2022). The Effect of Work Environment, Work Discipline, and Work Motivation on Employee Performance in Manufacturing Company. *European Journal of Business and Management Research*, 7(3), 26-30.
- Klopotan, I., Mjeda, T., & Kurečić, P. (2018). Exploring the motivation of employees in a firm: A case-study. *Business Systems Research: International Journal of the Society for Advancing Innovation and Research in Economy*, 9(1), 151-160.

- Kumar, R. (2019). Kaizen a tool for continuous quality improvement in Indian manufacturing organization. *International Journal of Mathematical, Engineering and Management Sciences*, 4(2), 452.
- Kusumiartono, N., Brahmasari, I. A., & Ardiana, I. D. K. R. (2022). Analysis of the effect knowledge sharing, teamwork on employee engagement and employee performance in baristand industri surabaya the ministry of industry's work unit. *Indonesian Journal of Multidisciplinary Science*, 1(7), 779-791.
- Lage de Sousa, F., Canêdo-Pinheiro, M., Pereira Cabral, B., & de Sousa Ferreira, G. E. (2020). Impact of kaizen-like practices in the Brazilian manufacturing sector. *Workers, Managers, Productivity: Kaizen in Developing Countries*, 221-243.
- Lee, R. (2021). The effects of smart factory operational strategies and system management on the innovative performance of small-and medium-sized manufacturing firms. *Sustainability*, 13(6), 3087.
- Limpo, L., & Kamase, R. (2022). The Effect Of Kaizen Culture On The Work Performance Of The Kalla Toyota Alauddin Makassar Service Division. *JManagER*, 1(2), 34-48.
- Lohela-Karlsson, M., Jensen, I., & Björklund, C. (2022). Do attitudes towards work or work motivation affect productivity loss among academic employees? *International journal of environmental research and public health*, 19(2), 934.
- Lubis, A. S. (2017). The effect of Kaizen culture and leadership on employee performance with work satisfaction as intervening variable: Study on PT Bank Central Asia main branch office of Medan. *Proceedings of AICS-Social Sciences*, 7, 518-528.