Proceeding International Conference on Business and Entrepreneurship for Nation's Sustainability
Peneleh Research Institute
E-ISSN : 3089-3933
Volume 2, March 12,2025

THE INFLUENCE OF CREATIVITY ON ACHIEVING KAIZEN PERFORMANCE THROUGH WORK MOTIVATION IN THE PRINTING DEPARTMENT OF PT DNP INDONESIA

Supriyadi[1], Enjang Suherman[2], Rena Augia Putrie[3]
Program Studi Manajemen, Fakultas Ekonomi dan Bisnis, Universitas Buana Perjuangan Karawang
mn21.supriyadi@mhs.ubpkarawang.ac.id, enjangsuherman@ubpkarawang.ac.id,
renaaugia.ubpkarawang.ac.id

ABSTRACT

As set by the company, employees have not yet achieved their personal Kaizen target, which is one man, one Kaizen per semester. The most serious challenge to Kaizen's success is employee attitude. Various factors can influence this, including employee creativity and motivation, which are still considered suboptimal.

This study examines creativity's influence on Kaizen performance through work motivation in the Printing Department of PT DNP Indonesia. This quantitative research involved 103 employees, with a sample of 82 respondents selected randomly using Slovin's formula with a 5% margin of error. Data analysis was conducted using descriptive statistics and path analysis. The findings indicate that, in general, the levels of creativity, motivation, and Kaizen performance are high, with relatively high scores on indicators such as the desire for recognition, impactful results, and achievement recognition. Furthermore, the verification analysis shows that creativity significantly influences work motivation. Additionally, creativity affects Kaizen's performance directly and through the mediation of work motivation. The mediation effect in this study is partial, accounting for 70.3%.

Keywords: Creativity, Work Motivation, Kaizen Performance.

.

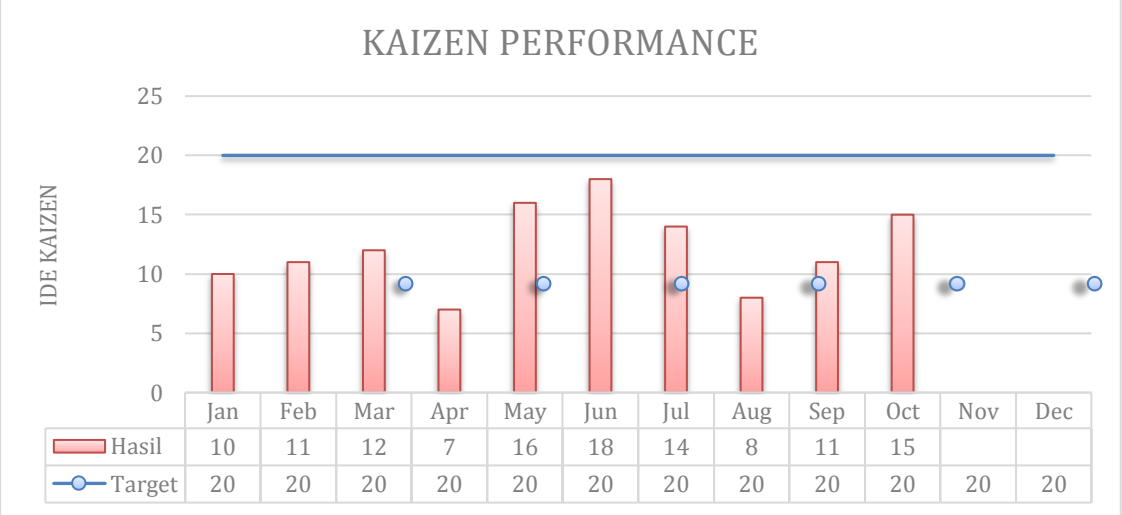
INTRODUCTION

The food and beverage industry in Indonesia will continue to grow in 2024. As of the year's first quarter, the non-oil and gas industry's GDP structure was dominated by the food and beverage sector, accounting for 39.91% or 6.47% of the total national GDP. Alongside this growth, the food packaging industry has also expanded significantly. The packaging industry's growth rate is estimated at 6%, surpassing the national economic growth target of 5% for 2024. Many businesses rely on printed product packaging, considering it a crucial aspect of marketing and branding strategies. Manufacturers can remain competitive in an increasingly complex and dynamic market by keeping up with the latest trends in printing technology and packaging design. Providing the industry with access to the latest information and cutting-edge trends in packaging and printing is essential. *(Source: Ruzka, Republika, 2024).*

Law No. 13 of 2003 on Manpower is the foundation for protecting workers' rights and ensuring their well-being, essential for employee motivation. Articles 11 and 12 of this law regulate employers' rights to develop employees' skills through training and education, supporting continuous skill improvement in alignment with the Kaizen concept. These provisions aim to enhance employee productivity and creativity in performing daily tasks. *(Law No. 13 of 2003, Articles 11 and 12).*

PT DNP Indonesia is one of the companies in Karawang Regency that is engaged in the flexible packaging industry. The company strives to stay updated with the latest trends in printing technology and packaging design by implementing the Kaizen concept as a key pillar of continuous improvement.

To foster innovation and employee participation, PT DNP Indonesia has established a platform and support system for collecting employee ideas through the Kaizen Personal initiative, with a target of "One Man One Kaizen" per semester. However, this target has not yet been fully achieved. Below is the data on Kaizen's performance achievements in the PT DNP Indonesia Printing Department.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hasil	10	11	12	7	16	18	14	8	11	15		
Target	20	20	20	20	20	20	20	20	20	20	20	20

Figure 1. Kaizen Performance Graph

Source: PT DNP Indonesia, 2024.

Based on the Kaizen Performance Graph from January to October 2024 in the Printing Department of PT DNP Indonesia, the Kaizen performance has not met the target. This is due to the difficulties employees face in implementing their creativity to generate Kaizen personal ideas that support the achievement of Kaizen's performance. According to Janjic et al. (2019), Kaizen is an endless resource for achieving business excellence. Its application leads to improved productivity, quality, efficiency, lower costs, elimination of waste, enhanced workplace safety, fast product delivery, and greater customer satisfaction. Therefore, it is essential to identify the causes of the decline in employee Kaizen performance.

Sichinsambwe et al. (2019) argue that the success of Kaizen must involve all employees being proactive in making improvements and willing to contribute in any way possible**.** The most serious challenge to Kaizen's success is employee attitude, such as employee participation, misunderstandings about Kaizen, ineffective training, and ineffective communication. On the other hand, a culture of innovation can support the effectiveness of Kaizen because innovation is inherent in the Kaizen method, with an emphasis on the

importance of using Kaizen in the innovation process to improve task efficiency (Alosani & Yusoff, 2018).

Individual creativity, supported by the development of knowledge, intellectual abilities, ways of thinking, motivation, personality, and a supportive environment, can transform creative ideas into innovations that emerge as new desires or research (Wahyuni, 2022). Previous research also states that individual creativity can influence innovative behaviour (Chaubey et al., 2021; Gumusluoglu, 2009).

Creativity can affect someone's innovation because when an individual possesses creativity, they are more confident in their knowledge and skills, enabling them to generate and implement ideas (Jan et al., 2021). Employee creativity not only influences Kaizen but also impacts work motivation. This is supported by research from Al Banin & Kinasih (2023), which states that regression analysis reveals that work creativity positively affects work motivation. This means that when employee creativity decreases, their level of work motivation will also decline.

Employees have not achieved their personal Kaizen target, which is "one man, one Kaizen per semester", as set by the company. This indicates a lack of employee motivation in performing tasks with clear targets. Ngulfa (202) analyzed various factors that influence the successful implementation of Kaizen, finding that effective communication between top management and employees, a clear company strategy, the presence of individuals driving Kaizen within the organization, good knowledge management, and employee empowerment all play significant roles. However, this review also identifies several challenges, such as resistance to change, lack of employee motivation, minimal understanding of the company strategy, and difficulties managing the continuous improvement process.

High work motivation can encourage employees to provide more Kaizen suggestions to the company. When these suggestions are valued and considered, they create a sense of employee satisfaction. Motivation can also influence innovation. Research by Susanti and Lizarti (2021) indicates that employees with high intrinsic work motivation tend to exhibit more innovative behaviour.

Since employee creativity has not been fully explored and motivation to achieve personal Kaizen targets remains low, efforts to enhance creativity and motivation are crucial in driving optimal Kaizen performance in the Printing Department of PT DNP Indonesia. The synergy between creativity and motivation will be the key to achieving company targets while fostering a sustainable and productive work culture.

Based on this phenomenon, the author finds it necessary to conduct research to understand the influence of creativity on Kaizen performance achievement, analyze the impact of work motivation on Kaizen performance, and examine the effect of creativity on Kaizen performance through work motivation in the Printing Department of PT DNP Indonesia.

LITERATURE REVIEW

Creativity

Creativity is defined as the ability to create something new. However, not all employees possess the same level of creative thinking. Individuals with strong creative skills tend to demonstrate creativity in various aspects, allowing them to contribute innovative ideas to the company (Wahyuni, 2022).

Indrajit et al. (2021) state that creativity is a concept influenced by external factors, driven by sustained interest and performance aspects that play a role in the creative process. Creativity is an individual's mental activity that generates new, innovative, and practical ideas, methods, processes, or products. The characteristics of creativity include imagination, aesthetics, flexibility, integration, and differentiation, all of which contribute to various fields in optimizing problem-solving.

Aristana et al. (2022) state that employee creativity is measured using four dimensions:

1. **Person** – Creativity depends on intelligence, knowledge enhances creativity at work, and personality supports creativity in the workplace.
2. **Process** – Includes the ability to think creatively and elaborate on ideas.
3. **Pressure** – Creativity stems from employees' enthusiasm and their intrinsic motivation.
4. **Product** – Employees can generate new works and integrate existing products through creativity.

Work Motivation

According to Susanti and Lizarti (2021), motivation is a goal-oriented driving force that rarely arises without context or reason. Terms such as needs, desires, aspirations, and drives have meanings similar to "motive," which is the root word of "motivation." Motivation emerges from employees' attitudes in responding to workplace conditions. It is an internal drive or energy within employees focused on achieving organizational goals. A positive and supportive employee mindset toward the work environment strengthens motivation, leading to optimal performance (Benny et al., 2021).

Susanti and Lizarti (2021) also state that motivation is an internal drive that compels an individual to act. A person takes action based on a specific reason to achieve a goal. Thus, motivation is an energy force influenced by objectives and rarely occurs without cause. Terms such as needs, desires, aspirations, and drives share similar meanings with "motive," the root of the word "motivation."

Yuliana (2019) states that Maslow's five needs include:

1. **Physical Needs** are basic physiological needs related to bodily conditions, such as food, clothing, and shelter.
2. **Safety Needs** – These needs are more psychological and relate to an individual's sense of security in daily life, such as fair treatment, recognition of rights and obligations, and security guarantees.
3. **Social Needs** – These needs are also psychological and often interrelated with other needs, such as being recognized as a member, invited to participate, or visiting neighbours.
4. **Esteem Needs** involve individual achievements and prestige after completing activities, such as being appreciated, praised, or trusted.
5. **Self-Actualization Needs** – The most challenging need involves personal growth and recognition of others' perspectives and truths

Kaizen Performance

Kaizen is "a continuous improvement process in which various actors participate in specific roles to identify and implement improvements that contribute to achieving company goals" (Suárez-Barraza et al., 2025). According to Alosani and Yussof (2018), Kaizen is a valuable approach institutions use to enhance all tasks and activities. As a continuous

improvement tool, Kaizen enables organizations to make their business processes more responsive to changes in economic and social conditions.

Suárez-Barraza et al. (2025) state that Kaizen is oriented toward individuals, aligning with Imai's Group and Individual Kaizen Typology. This principle encourages employees to generate ideas for improvement independently. Kaizen is framed into three distinct typologies:

1. **Manual Kaizen** – Focuses on improvements carried out directly by workers in their tasks.
2. **Kaizen for Equipment or Machinery** – After improving individual tasks, workers are encouraged to propose changes to their equipment or machinery.
3. **Kaizen for Operational Processes** – Once individual work improvements are made and machinery enhancements are supported, employees are prepared to suggest changes to overall operational processes

Suárez-Barraza et al. (2025) identify four key elements in studying individual Kaizen:

1. **Willingness to Improve (Jishusei)** – A strong desire to continuously learn, grow, and improve. Its role in Kaizen includes Recognizing self-improvement as the core of continuous improvement processes, encouraging individuals to seek creative solutions and innovations when facing challenges, and overcoming complacency by consistently striving for self-betterment in various aspects.
2. **Life Purpose (Ikigai)** is a sense of purpose in life. Its role in Kaizen includes Providing direction and meaning to improvements, ensuring individuals have a clear purpose in each step, helping individuals maintain long-term motivation by connecting their actions with deep values and meaning and enhancing satisfaction from the improvement process, not just the outcomes.
3. **A sense of Urgency** is the drive to act immediately. Its role in Kaizen includes Encouraging individuals to take swift action on improvement opportunities instead of waiting for the "perfect" moment, developing the habit of utilizing time effectively to achieve goals and ensuring focus on relevant and important priorities.
4. **Commitment to Work (Kodawari)**—Full dedication to work and responsibilities. Its role in Kaizen includes Helping individuals stay focused and consistently implement improvements, even when facing challenges. It also instils a sense of responsibility to work hard and smart by continuously improving efficiency and effectiveness and building a Kaizen culture within teams or organizations through individual role modelling.

Framework and Hypotheses

1. Employee Creativity Influences Work Motivation

High employee motivation can encourage them to be more proactive in providing Kaizen suggestions to the company. Therefore, efforts to enhance creativity and motivation are crucial in achieving optimal Kaizen performance. One factor influencing work motivation is employee creativity in performing tasks.

This is supported by the research of Al Banin and Kinasih (2023), which states that regression analysis results reveal a positive influence of work creativity on work motivation. This means that when employee creativity declines, their work motivation also decreases.

Research Hypothesis 1: Employee creativity influences work motivation.

2. Work Motivation Influences Kaizen Performance

Employees have yet to meet the company's personal Kaizen target—one man, one Kaizen per semester. This indicates that their motivation to accomplish tasks with clear objectives remains insufficient. The key challenge in achieving Kaizen success lies in employee attitudes, including low participation rates, misunderstandings about the Kaizen concept, ineffective training, and suboptimal motivation.

Research by Susanti and Lizarti (2021) states that employees with high intrinsic work motivation tend to exhibit more innovative behaviour.

Research Hypothesis 2: Work motivation influences Kaizen performance.

3. Employee Creativity Influences Kaizen Performance Through Work Motivation

Kaizen solves problems by fostering a company culture encouraging individuals to express their concerns openly. Generally, the main challenge in Kaizen implementation is the low level of individual participation in contributing ideas for innovation. Several factors influence this, including the suboptimal level of employee creativity. In reality, creativity is closely linked to innovation and the successful implementation of Kaizen.

Previous studies have shown that individual creativity can influence innovative behaviour (Chaubey et al., 2021; Gumusluoglu, 2009). Additionally, work creativity affects work motivation (Al Banin & Kinasih, 2023), influencing Kaizen's performance (Susanti & Lizarti, 2021).

Research Hypothesis 3: Employee creativity influences Kaizen performance directly and indirectly through work motivation.

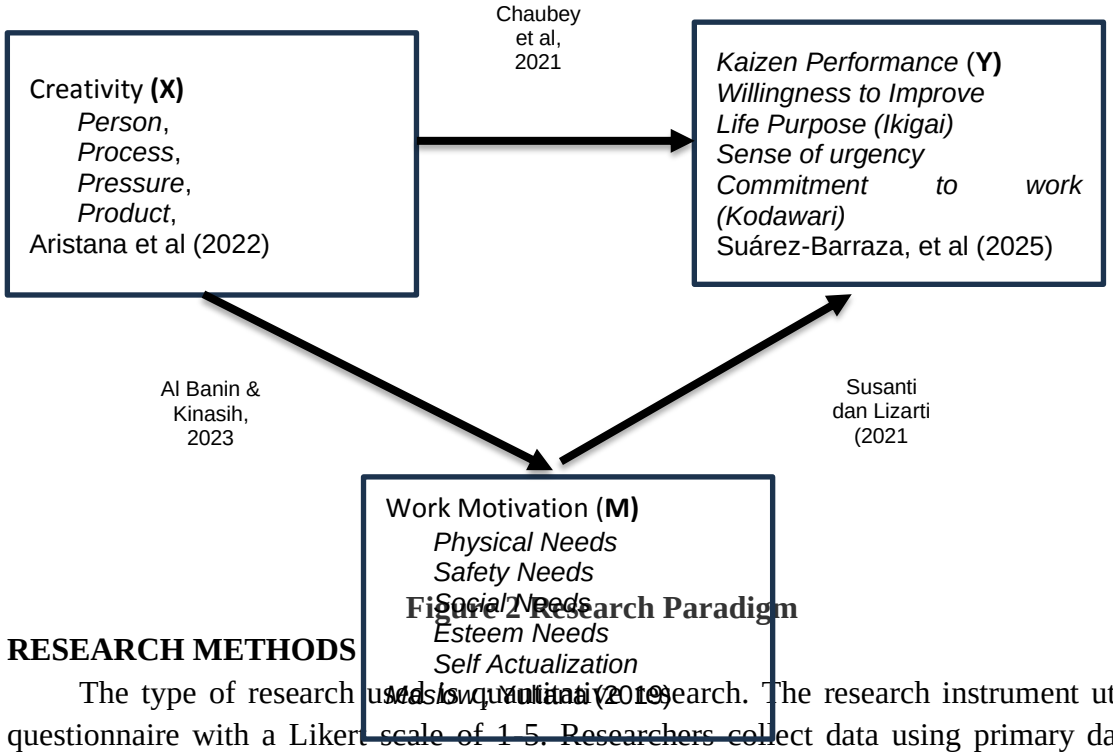


Figure 2 Research Paradigm

RESEARCH METHODS

The type of research used is quantitative research. The research instrument utilizes a questionnaire with a Likert scale of 1-5. Researchers collect data using primary data. The variables used in this study are creativity, motivation, and kaizen performance. Researchers conducted this research on PT DNP Indonesia employees in the Printing Department, KIIC, Karawang, West Java, with a population of 103 employees. A sample of 82 employees is obtained using the Slovin formula with a 5% error margin. The sampling technique applied is random sampling. The operationalization of variables is as follows:

Table 2. Operationalization of Variables

Variables	Dimension	Indictor	Scale	No. item
Creativity	Person	Intelligence	ordinal	1
		Possessing knowledge	ordinal	2
		Curious personality	ordinal	3
	Process	Creative thinking ability		4
		Ability to collaborate on ideas	ordinal	5
	Pressure	Having a strong work spirit	ordinal	6
		Desire for recognition	ordinal	7
	Product	Producing impactful new works	ordinal	8
		Combining multiple works into a product	ordinal	9
Work Motivation	Physical Needs	Meeting basic needs	ordinal	1
		Safe physical needs	ordinal	2
	Safety Needs	Financial stability security	ordinal	3
		Safe working environment	ordinal	4
	Social Needs	Being appreciated by colleagues	ordinal	5
		Feeling like part of a team	ordinal	6
	Esteem Needs	Being valued for achievements and contributions	ordinal	7
		Receiving recognition for achievements	ordinal	8
	Self Actualization	Career development opportunities	ordinal	9
		Learning and growing	ordinal	10
Kaizen's Performance	Willingness to ImproveZZZx	Desire for self-improvement	ordinal	1
		Seeking creative solutions and innovation	ordinal	2
		Overcoming complacency	ordinal	3
	Life Purpose	Providing direction and meaning	ordinal	4
		Maintaining long-term motivation	ordinal	5
		Increasing satisfaction from the improvement process	ordinal	6
	Sense of urgency	Ensuring no improvement opportunities are missed	ordinal	7
		Utilizing time effectively	ordinal	8
	Commitment to work	Staying focused and consistent in making improvements	ordinal	9
		Instilling a sense of responsibility	ordinal	10

Researchers analyze descriptive data using descriptive statistics by calculating the questionnaire data distribution's mean, standard deviation, and variance. Descriptive statistical analysis helps determine the category of a variable's condition. To classify the categories, The researchers base the analysis on the average scale range, which spans from 1 to 5.
The classification of the average scale range is as follows:

1.**Very Low Category** = 1.00 – 1.80
2.**Low Category** = 1.81 – 2.60
3.**Moderately High Category** = 2.61 – 3.40
4.**High Category** = 3.41 – 4.20

5.**Very High Category** = 4.21 – 5.00

Verificative data analysis is conducted using path analysis, following these stages:

1. **Instrument Testing**, including validity and reliability tests.
2. **Prerequisite Testing**, including the successive interval method and normality test.
3. **Analytical Testing**, including path analysis equations for Model 1 and Model 2 and determinant analysis.
4. **Hypothesis Testing**, including partial tests (t-test) for partial analysis and the Sobel test for mediation analysis.

RESULTS AND DISCUSSION

Results

Descriptive Analysis

CreativitY

Table 4 Descriptive Analysis of Creativity

Indicator	Varian	Stdv	Mean	Range mean		Category
x1	0.55	0.74	4.48	3.73	5.22	High to Very High
x2	0.43	0.65	4.35	3.70	5.01	High to Very High
x3	0.40	0.63	4.49	3.85	5.12	High to Very High
x4	0.42	0.65	4.44	3.79	5.09	High to Very High
x5	0.59	0.77	4.26	3.49	5.02	High to Very High
x6	0.37	0.61	4.43	3.82	5.04	High to Very High
x7	0.92	0.96	4.28	3.32	5.24	Moderately High to Very High
x8	0.68	0.82	4.16	3.33	4.98	Moderately High to Very High
x9	0.54	0.74	4.27	3.53	5.01	High to Very High
Total	0.55	0.74	4.35	3.61	5.09	High to Very High

Source: Data Processing 2025

Based on the descriptive analysis, the condition of creativity falls within the high to very high category, as observed from the mean calculation and the data distribution in the standard deviation. However, there are still indicators with the lowest scores.

Work Motivation

Table 4 Descriptive Analysis of Work Motivation

Indicator	Varian	Stdv	Mean	Range mean		Category
m1	0.62	0.79	4.52	3.74	5.31	High to Very High
m2	0.80	0.90	4.29	3.40	5.19	Moderately High to Very High
m3	0.59	0.77	4.40	3.63	5.17	High to Very High
m4	0.57	0.76	4.34	3.58	5.10	High to Very High
m5	0.32	0.57	4.55	3.98	5.12	High to Very High
m6	0.30	0.54	4.59	4.04	5.13	High to Very High
m7	0.64	0.80	4.27	3.47	5.07	High to Very High
m8	0.77	0.88	4.22	3.34	5.09	Moderately High to Very High
m9	0.46	0.68	4.30	3.63	4.98	High to Very High
m10	0.61	0.78	4.26	3.47	5.04	High to Very High

Total	0.58	0.76	4.37	3.61	5.14	High to Very High

Source: Data Processing 2025

The descriptive analysis shows that work motivation is in the high to very high category, as observed from the mean calculation and data distribution in the standard deviation. However, some indicators still have the lowest scores.

Kaizen Performance

Table 5 Descriptive Analysis of Kaizen Performance

Indicator	Varian	Stdv	Mean	Range mean		Category
y1	0.40	0.64	4.35	3.72	4.99	High to Very High
y2	0.64	0.80	4.26	3.46	5.05	High to Very High
y3	0.42	0.65	4.46	3.81	5.12	High to Very High
y4	0.38	0.61	4.46	3.85	5.08	High to Very High
y5	0.37	0.61	4.45	3.84	5.06	High to Very High
y6	0.37	0.61	4.44	3.83	5.05	High to Very High
y7	0.37	0.61	4.45	3.84	5.06	High to Very High
y8	0.35	0.59	4.52	3.93	5.12	High to Very High
y9	0.32	0.56	4.60	4.03	5.16	High to Very High
y10	0.28	0.53	4.54	4.01	5.06	High to Very High
Total	0.39	0.63	4.45	3.83	5.08	High to Very High

Source: Data Processing 2025

Based on the descriptive analysis, it shows that the Kaizen performance is in the high to very high category, as observed from the mean calculation and data distribution in the standard deviation. However, there are still some indicators with the lowest scores.

Analisis Verifikatif

Validity Test

Table 6 Validity Test

Indicator	Creativity			Work Motivation			Kaizen Performance		
	R result	R Critis	Category	R result	R Critis	Category	R result	R Critis	Category
1	0.70	0.30	Valid	0.77	0.30	Valid	0.63	0.30	Valid
2	0.75	0.30	Valid	0.64	0.30	Valid	0.66	0.30	Valid
3	0.82	0.30	Valid	0.79	0.30	Valid	0.72	0.30	Valid
4	0.66	0.30	Valid	0.82	0.30	Valid	0.80	0.30	Valid
5	0.79	0.30	Valid	0.76	0.30	Valid	0.85	0.30	Valid
6	0.84	0.30	Valid	0.54	0.30	Valid	0.74	0.30	Valid
7	0.72	0.30	Valid	0.84	0.30	Valid	0.82	0.30	Valid
8	0.85	0.30	Valid	0.62	0.30	Valid	0.83	0.30	Valid
9	0.88	0.30	Valid	0.85	0.30	Valid	0.84	0.30	Valid
10	xxx	xxx	xxx	0.57	0.30	Valid	0.68	0.30	Valid

The validity test analysis results show that all variables in each question item can be considered valid because the calculated r value is greater than the critical r value..

Reliability Test

Tabel 8 Reliability Test

Reliability Statistics

Variable	Cronbach's Alpha	N of Items

Creativity	0.913	9
Motivation	0.885	10
Kaizen	0.912	10

The reliability test analysis shows that all variables in each question item can be considered reliable because the calculated alpha value is greater than the critical alpha value of 0.6.

Normality Test

The results of the normality test using the Kolmogorov-Smirnov analysis show that the Asymp. Sig. (2-tailed) value is 0.2, which is greater than 0.05. Therefore, it can be concluded that the data follow a normal distribution.

Analisis Jalur

Model 1

Table 9 Path Analysis Model 1: Creativity on Motivation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.813	4.147		4.778	.000
	Creativity	.611	.105	.545	5.811	.000

a. Dependent Variable: Work Motivation

It is known that the path coefficient in Model 1 is 0.545, and the determinant coefficient is 0.297, as shown in the following table:

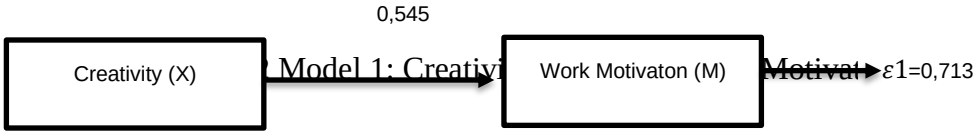
Table 10 Determinant Analysis: Creativity on Motivation

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.545[a]	.297	.288	4.39107

a. Predictors: (Constant), Creativity

Based on the analysis results, the equation $Y = \beta 1\ X + \varepsilon 1$ menjadi Y= 0,545 X + 0,713



Model 2

Table 11 Path Analysis Model 2: Creativity on Kaizen through Motivation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.942	3.487		5.146	.000
	Creativity	.288	.093	.314	3.092	.003
	Work Motivation	.350	.083	.429	4.227	.000

a. Dependent Variable: Kaizen Performance

It is known that the path coefficient in Model 2 is 0.314 for creativity influencing Kaizen performance, while the path coefficient for motivation influencing Kaizen performance is 0.429, and the determinant coefficient is 0.429, as shown in the following table:

Table 12 Determinant Analysis: Creativity and Motivation on Kaizen

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.655[a]	.429	.414	3.25674

a. Predictors: (Constant), Work Motivation, Creativity
b. Dependent Variable: Kaizen Performance

Based on the analysis results, the equation $Z = \beta 2\ X + \beta 3\ M + \varepsilon 2$ menjadi $Z = 0{,}314\ X + 0{,}429\ M + 0{,}571$

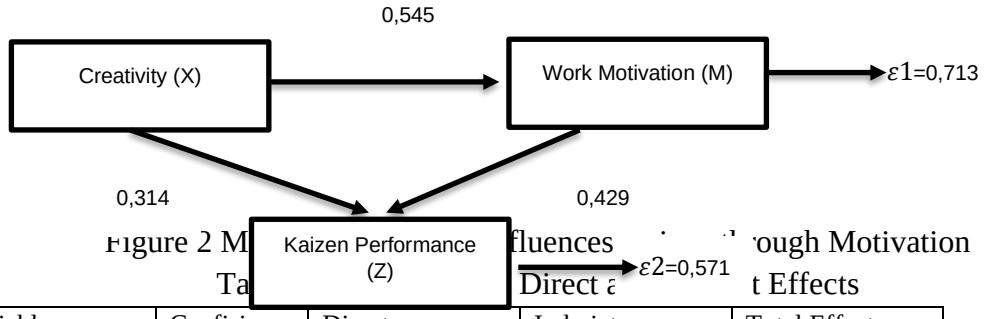


Figure 2 M fluences ough Motivation

Ta Direct a t Effects

Variable	Coefisien	Direct	Inderict	Total Effect
X □M	0,545	0,297	0	0,297
M □Z	0,429	0,184	0	0,184
X(M)□Z	0,314	0,098	0,233	0,331

To determine the magnitude of the mediation effect, the calculation is as follows $\frac{0{,}233}{0{,}331} = 0{,}703$ or 70,3%. This can be interpreted as **partial mediation**.

Hypothesis Testing

The partial hypothesis testing is conducted using the t-test based on the SPSS results:

- The t-test for the effect of work creativity on motivation is 5.811 (Table 9), which is greater than the critical t-value (1.99).
- The t-test for the effect of work motivation on Kaizen performance is 4.227 (Table 11), which is greater than the critical t-value (1.99).
- The t-test for the effect of creativity on Kaizen performance is 3.09 (Table 11), which is greater than the critical t-value (1.99).

Thus, the effects of creativity on motivation, motivation on Kaizen, and creativity on Kaizen are all significant.

To test mediation, the Sobel Z test is used.

$$= \frac{a\ x\ b}{\sqrt{(b^2 x S_a^2 + (a^2 x S_b^2}}$$

The Sobel test results are as follows:
Sobel Test Statistic = 3.366
One-tailed probability = 0.000124
Two-tailed probability = 0.000249
Since the **Sobel test Z-score** = 3.366 is greater than the **critical Z-value** = 1.96, and the probability value is below 0.05, the **mediation test is significant**.

Discussion

Descriptive Analysis

Creativity

Based on the descriptive analysis of the creativity variable, creativity generally falls within the "high to very high" category. This is based on an overall mean value of 4.35, with a standard deviation of 0.74 and an average range between 3.61 and 5.09. Each creativity indicator has different values, although most fall into the "high to very high" category. The following are key findings for each indicator:

1. Indicators x1 to x6 and x9 have mean values ranging from 4.26 to 4.49, placing them in the "high to very high" category. This indicates that the aspects measured in these indicators generally exhibit a strong level of creativity.
2. Indicators x7 and x8 have mean values of 4.28 and 4.16, respectively, falling within the "moderately high to very high" category. Although they remain relatively high, these two indicators show a slight decline in creativity compared to the others.
3. The indicators with the highest variance are x7 (0.92) and x8 (0.68), indicating more excellent data dispersion in these indicators compared to others. This suggests a broader variation in creativity levels among respondents in these aspects.
4. The indicator with the lowest variance is x6 (0.37), meaning that the level of creativity in this aspect is more homogeneous than the others.

Overall, this analysis indicates that employee creativity falls within the high category, with some indicators showing variations in data distribution. While most indicators fall within the "high to very high" category, some indicators, particularly x7 and x8, are classified as "moderately high to very high." This suggests that there are certain areas where creativity can still be further improved.

Work Motivation

Based on the descriptive analysis of the work motivation variable, in general, work motivation falls within the "high to very high" category. The overall mean value is 4.37, with a standard deviation of 0.76 and an average range between 3.61 and 5.14, indicating that employee work motivation is relatively high.

Each work motivation indicator shows varying results but remains within the high category. Below are some key findings:

1. Indicators m1, m3, m4, m5, m6, m7, m9, and m10 have mean values ranging from 4.26 to 4.59, placing them in the "high to very high" category. This suggests that these aspects demonstrate a strong level of work motivation.
2. Indicators m2 and m8 have mean values of 4.29 and 4.22, respectively, falling into the "moderately high to very high" category. These two indicators show a slight decrease compared to the others.

3. The indicator with the lowest variance is m6 (0.30), indicating that the level of work motivation in this aspect is more homogeneous than other aspects.

Overall, work motivation falls within the "high to very high" category, with some indicators showing variations in data distribution. Indicators m2 and m8 have lower mean values than others, suggesting that certain aspects require further attention to enhance overall work motivation.

Kaizen Performance

Based on the descriptive analysis of the Kaizen Performance variable, this category generally falls within the "high to very high" range. The overall mean value is 4.45, with a standard deviation of 0.63 and an average range between 3.83 and 5.08, indicating that Kaizen's Performance is strong.

Each indicator within Kaizen Performance shows consistent results, with only minor differences:

1. Indicators y1 to y10 have mean values ranging from 4.26 to 4.60, categorizing them as "high to very high."
2. The indicators with the highest mean values are y9 (4.60) and y10 (4.54), indicating that these aspects exhibit the strongest performance in the Kaizen Performance variable.
3. The indicator with the lowest variance is y10 (0.28), demonstrating a more uniform distribution than other aspects.

Overall, Kaizen's Performance falls within the "high to very high" category, with indicators showing slight variations. Indicator y2 has the highest variance, indicating more significant differences among respondents in this aspect, while indicators y9 and y10 have the highest mean values, suggesting optimal performance in these areas.

Verificative Analysis

The Influence of Creativity on Work Motivation

The first model demonstrates a significant positive relationship between creativity and work motivation. The path coefficient for creativity is 0.545, meaning that a one-unit increase in creativity leads to a 0.545-unit increase in work motivation.

The t-test results indicate that the Effect of creativity on work motivation is highly significant ($t = 5.811$, $p < 0.0001$). The coefficient of determination (R^2) is 0.297, suggesting that 29.7% of the variation in work motivation can be explained by creativity.

The equation for this model is as follows:

$Y= 0{,}545\ X + 0{,}713$

The Influence of Work Motivation on Kaizen Performance

The second model examines two pathways:

1. The Effect of creativity on work motivation
2. The Effect of work motivation on Kaizen performance

A significant positive relationship is found between work motivation and Kaizen performance, with a path coefficient of 0.429. The t-test results confirm the high significance of this relationship ($t = 4.227$, $p < 0.000$).

The coefficient of determination (R^2) is 0.184, indicating that 18.4% of the variation in Kaizen performance can be explained by work motivation**.**

The Influence of Work Creativity on Kaizen Performance Through Work Motivation

The second model involves **two influence pathways**:

1. The effect of **creativity on work motivation**
2. The effect of **work motivation on Kaizen performance**

A **significant positive relationship** is found between **creativity and Kaizen performance through work motivation**. The **direct path coefficient** of creativity significantly affecting Kaizen performance is **0.314**, as confirmed by statistical analysis (**t = 3.092, p < 0.003**).

The **direct and indirect effects** of creativity on Kaizen performance through work motivation can be calculated as follows:

1. The **direct effect** of creativity on **Kaizen performance** is **0.314**, calculated as **(0.314 × 0.314) = 0.098**.
2. The **direct effect** of work **motivation on Kaizen performance** is **0.429**, calculated as **(0.429 × 0.429) = 0.184**.
3. The **indirect effect** of **creativity on Kaizen performance** through work motivation is **0.233**, while the **total effect** is **0.331**.

Thus, the **mediation effect** can be calculated as $\frac{0,233}{0,331} = 0,703$ or 70,3% Thus, it can be interpreted as **partial mediation**. The Sobel test was used to test the mediation effect. The **Sobel test statistic** resulted in a **Z-score of 3.66**, **more significant than the critical Z-value of 1.96**, and a **p-value below 0.05**. This indicates that the mediation test is **significant**.

Conclusion

1. It can be concluded that, in general, the creativity level of employees is in the "high to very high" category, with an overall mean value of 4.35. Most indicators show fairly good results, falling within the "high to very high" category.
2. It can be concluded that employees' work motivation is generally in the "high to very high" category, with an overall mean value of 4.37. Most work motivation indicators show promising results, within the "high to very high" category.
3. It can be concluded that Kaizen's performance is generally in the "high to very high" category, with an overall mean value of 4.45. All indicators show consistent results, with minor differences, and most fall within the "high to very high" category.
4. There is a significant positive relationship between creativity and work motivation. The path coefficient of 0.545 indicates that work motivation will increase by 0.545 units for every one-unit increase in creativity.
5. There is a significant positive relationship between work motivation and Kaizen performance, with a path coefficient of 0.429. Kaizen's performance will increase by 0.429 units for every one-unit increase in work motivation.
6. A significant positive relationship exists between creativity and Kaizen performance through work motivation. The path coefficient for the direct effect of creativity on Kaizen performance is 0.314, with a mediation effect of 70.3%, indicating partial mediation.

Acknowledgements

The author would like to express sincere gratitude to all parties who have supported, assisted, and contributed to completing this research. Special thanks to Dr. Enjang Suherman, SE., MM., as the primary supervisor, and Rena Augia Putrie, SE., MM., as the co-supervisor.

The author also extends gratitude to PT DNP INDONESIA for allowing the research to be conducted and to all the respondents who took the time and effort to participate in data collection. Without their support, this research could not have been carried out effectively..

REFERENCES

Alosani, M. S., & Yusoff, R. Z. (2018) Investigating the Relationship Between Kaizen and Organizational Performance: A Conceptual Framework for Police Agencies. European Journal of Business and Management. Vol.10, No.24,

Al Banin, Q., & Kinasih, G. (2023). Implementasi Budaya Kaizen Dan Kreativitas Karyawan Dalam Meningkatkan Kinerja Karyawan Dengan Motivasi Kerja Sebagai Mediasi. *Jurnal Ilmiah Manajemen dan Bisnis (JIMBis)*, *2*(2), 125-145.

Aristana, I. N., Wisnawa, I., Sriasih, A. A. P., & Junipisa, N. M. E. (2022). Entrepreneurial Leadership and Employee Creativity: Moderation and Mediation Perspective. *Jurnal Ekonomi dan Bisnis (JEB)*, *25*(2), 199-236.

Benny, B., Nugroho, N., Hutabarat, F. A. M., Supriyanto, S., & Arwin, A. (2021, October). Motivasi Kerja Karyawan PT Abdi Wibawa Press Medan. In *Seminar Nasional Sains dan Teknologi Informasi (SENSASI)* (Vol. 3, No. 1, pp. 251-254).

Chaubey, A., Sahoo, C. K.,& Das, K. C. (2021). Examining The Effect Of Training And Employee Creativity On Organizational Innovation: A Moderated Mediation Analysis. International Journal of Organizational Analysis,30(2),1–25. https://doi.org/10.1108/IJOA-06-2020-2271

Iman, Seful. (2024). Industri Kemasan dan Percetakan Berkembang Pesat di Indonesia pada 2024. Ruzka Republikas, Oktober. https://ruzka.republika.co.id/posts/465779/industri-kemasan-dan-percetakan-berkembang-pesat-di-indonesia-pada-2024

Indrajita, I. K., Sadiartha, A. N. G., & Mahayasa, I. G. A. (2021). Pengaruh Kreativitas dan Inovasi terhadap Kinerja Karyawan pada PT. Tohpati Grafika Utama Denpasar. *WidyaAmrita: Jurnal Manajemen, Kewirausahaan dan Pariwisata*, *1*(1), 1-13.

Gumusluoglu, L., & Ilsev, A. (2009). Transformational Leadership, Creativity, And Organizational Innovation. Journal of Business Research, 62(4), 461–473. https://doi.org/10.1016/j.jbusres.2007.07.032

Jan, G., Zainal, S. R. M., & Lata, L. (2021). Enhancing Innovative Work Behaviour: The Role Of Servant Leadership And Creative Self-Efficacy. On the Horizon, 29(2), 33–51.

Janjić, V., Bogićević, J., & Krstić, B. (2019). Kaizen as a global business philosophy for continuous improvement of business performance. *Ekonomika*, *65*(2), 13-25.

Ngulfa, N. (2020). Faktor-Faktor dan Tantangan yang Berkontribusi dalam Penerapan Kaizen di Usaha Mikro Kecil dan Menengah (UMKM). UMSIDA

Susanti, F. & Lizarti (2021). Pengaruh motivasi dan kepuasan kerja terhadap perilaku inovatif karyawan kantor perwakilan Bank Indonesia Provinsi Sumatera Barat. *Jurnal Administrasi Sosial Dan Humaniora*, *5*(2), 207-214.

Sichinsambwe, C., Simasiku, P. L., Sikombe, S., & Nyimbili, H. (2023). Kaizen practices and performance improvement in Zambian manufacturing companies. *Cogent Engineering*, *10*(1), 2183590.

Suárez-Barraza, M. F., Miguel-Davila, J. Á., Yokozawa, K., & Cosme-Castorena, J. E. (2025). Individual Kaizen in Japan: an exploratory multiple case study in a micro work environment. *The TQM Journal*.

Undang-Undang Republik Indonesia Nomor 13 Tahun 2003 tentang Ketenagakerjaan. Lembaran Negara Republik Indonesia Tahun 2003 Nomor 39

Wahyuni, F. E. (2022). Pengaruh Kreativitas, Pengetahuan, dan Motivasi terhadap Inovasi Karyawan PT. Bank Pembangunan Daerah Jawa Timur Tbk Kantor Pusat Surabaya. *Jurnal Ilmu Manajemen*, *10*(1), 98-109.

Yuliana. A. (2019). Teori Abraham Maslow dalam Pengambilan Kebijakan di Perpustakaan. Libraria: Jurnal Perpustakaan, 6(2), 249. https://doi.org/10.21043/libraria.v6i2.3845