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# **Connectivity Continuous Improvement Program and Employee Performance**

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## ABSTRACT

In a turbulent business environment, company personnel are required to always make continuous improvements (CIs) to the systems and processes used to generate value for customers and connect the performance of their employees. The purpose of the study was to analyze the extent of connectivity CI program and employee performance. The subjects of the study were employees of PT Kitadin Site Embalut located in Kutai Kartanegara Regency, East Kalimantan Province (Indonesia). Determination of the sample using probability sampling techniques totaling 60 employees and data processed through Multiple Linear Regression Analysis. The conclusions obtained based on field interviews is: employee development and training variables, improvement of work quality and productivity, and building cooperation between work teams has a significant effect on employee performance. Meanwhile, employee involvement in problem solving and good communication has no significant effect on employee performance. Employee involvement in organizational events is expected not only to the same person continuously, but in rotation. The things that need to be improved are that each employee must be able to openly communicate with fellow colleagues, as long as it is related to work related to the company. 

Keywords: Continuous Improvement Program, Employee Performance, Indonesia JEL Classifications: J24, L2

# **1. INTRODUCTION**

In an organization or company, to achieve a common goal requires a collaboration of the members in it. The importance of establishing cooperation in organizations will have a positive impact on effective performance. Organizational goals will not be realized if the members of the organization do not work together in harmony. Therefore much cooperation is needed in organizations (Anthony et al., 1984). Collaboration at all levels of the organization is a very important factor of an organization and their full involvement will enable their abilities to be used to benefit the organization (Gaspersz, 2001). 

Continuous improvement (CI), also known as Kaizen using 45 Japanese terminology (Hayes, 1981), is seen as "one of the 46 activities whereby processes and procedures are implemented 47 which contribute to organizational goals through the CI of work 48 processes, work places and work interactions" (Berling, 2000). 49 

The underlying assumption of CI is that the introduction of 51 incremental and continual changes to the standard way of work 52 will bring about long-lasting changes in the organisation leading 53 to improved performance, survival and growth (Glover et al., 54 2011; Marin-Garcia et al., 2008; Tanco et al., 2012). Still, CI 55 initiatives demand endless effort from everyone in the workplace 56 57

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1 for making improvements of the standard way of work (Malik 2 and YeZhuang, 2006). 3

4 Another important concern is how to diffuse lean production 5 concepts within the work organization and sustain the practices 6 over a longer period of time. Although some previous studies 7 provided evidence for the introduction of improvement programs 8 (e.g. Samson et al., 1993), sustainability of the practices was not 9 at satisfactory levels (Sohal et al., 1993). For example, Sohal 10 and Egglestone (1994) provided evidence where improvement 11 initiatives "faded away" or "simply died" few years after the 12 introduction. In this context, investigating the ways in which CI 13 initiatives influence employees is important in understanding 14 how to create an environment to sustain the improvement efforts 15 over a longer period of time. Such lessons would be valuable for 16 academics and practitioners alike worldwide.

18 Hence, researchers such as Losonci et al. (2011) state that 19 employees'views on how new working methods affect them at 20 the shop-floor have become very important in understanding their 21 task performance and immediate work environment. However, we 22 have not come across studies that investigated effects of CI on 23 employees' job performance in the lean production. 24

25 Employee work involvement is based on social reciprocity theory, 26 which gives certain conditions to people who want to return the 27 favor for their benefits. Employee involvement or participation in 28 work activities is important to note because with the involvement 29 of employees will cause them to be willing and happy to work 30 together, both with the leadership or with fellow colleagues. One 31 way that can be used to provoke employee involvement is to 32 provoke their participation or involvement in various decision-33 making opportunities (Randall and Cote, 1991). 34

35 PT Kitadin Site Embalut which is precisely located in the village 36 of Embalut, Tenggarong Seberang District (Kutai Kartanegara 37 Regency) is a mining company that produces and markets coal 38 which is one of the basic minerals as energy materials such as power 39 plants, iron smelting and others. The number of such companies in 40 Kalimantan, especially East Kalimantan, has resulted in company 41 faces competition. The success of company in dealing with these 42 competitors, is due to several things including development programs 43 for improving workforce competence, utilizing and empowering 44 communities around the mine, and always abiding by government 45 programs and being able to create a quality control system, so that 46 the quality of coal products is in accordance with their designation. 47 both for national energy consumption and foreign countries. 48

The brief description of the development of the indicators of values of CI in 2 3

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PT Kitadin Site Embalut can be explained by Table 1:

The development of CI indicators for 5 years has increased. This 6 is indicated by the addition of indicators in CI, which previously 7 had 3-4, to 5 items in 2019. Therefore, PT Kitadin Site Embalut is 8 a company engaged in coal mining that continues to make changes 9 and innovations in terms of improving human resource management, 10 so that in the future it will become a professional company in 11 12 accordance with predetermined principles and applied daily.

Basically the improvements made, even if they are small and 14 gradual will be able to bring big results. The results of proven 15 improvements can be used as work standards that can be 16 implemented in all areas of the company. Noting this, the effect 17 of CI programs on employee performance is important to study. 18 By knowing the factors that influence both of them are expected to 19 improve employee performance, so that ultimately it will improve 20 organizational performance. 21

## **2. LITERATURE REVIEW**

### 2.1. CI

The term CI is referred to a concept in organizational improvement, which is used as one of the basic tools for perfecting process technologies of an organization. Process technologies are sets of ideas involved in the manufacture of a product (or service), sequential steps necessary to combine materials to produce the finished product (or delivery of service), technology associated with the maintenance of the process, and the development of managerial and organizational capabilities needed to leverage resources optimally (Lall, 1995; Medcof, 2007). As a process technology, perfection is the goal of lean production with constant improvements to the standard way of work. This constant strive for perfection, also known as Kaizen in Japan, has now become well known term in other parts of the world. Imai (1986) used the English translation of kaizen as "ongoing improvement involving everyone."

Hansen (1994) argues that "CI describes changes that include open communication and the elimination of barriers between management personnel and non-management."

CI a dynamic process, focusing on improvement programs and their relationships with other organizational elements in the

Tabl	e 1: Dev	velopment of continuous improvement indicators at PT Kitadin Site Embalut of 2012-2016	4
No.	Year	Indicator	50
1.	2015	3 indicators: (Development and training, employee involvement in problem solving, quality improvement and productivity)	· 3.
2.	2016	3 indicators: (Development and training, employee involvement in problem solving, quality improvement and productivity)	34
3.	2017	4 indicators: (Development and training, employee involvement in problem solving, improving quality and productivity, building	53
		cooperation between work teams)	54
4.	2018	4 indicators: (Development and training, employee involvement in problem solving, improving quality and productivity, building	55
		cooperation between work teams)	56
5.	2019	5. indicators: (Development and training, employee involvement in problem solving, improving quality and productivity,	57
		building cooperation between work teams, good communication)	57
			- 58

Source: Human Resources Division (PT Kitadin Embalute Site), 2019

organization and its environment. A remedial program in this
 case, understood as an attempt at change induced, is focused
 on increasing the effectiveness of the organization's existing
 processes (Repenning and Sterman, 2003).

# 6 2.2. Job Performance

7 Job performance is viewed as a key variable in the organizational 8 context (Campbell et al., 1990; Graso and Probst, 2012; Griffin 9 et al., 2007; Pulakos et al., 2000; Varela and Landis, 2010). 10 Campbell et al. (1990) proposed eight job activities to describe 11 job performance in any work context although it is not a must to 12 have all the dimensions in a particular job. These dimensions are 13 job-specific task proficiency, non-job-specific task proficiency, 14 written and oral communication, demonstrating effort, maintaining 15 personal discipline, facilitating performance, supervision, 16 leadership, and administration. Some other researchers such as 17 Pulakos et al. (2000) argued that job performance should represent 18 employees' response to technological advances in the workplace. 19 In a recent study, Graso and Probst (2012) argued that the most 20 important indicators of job performance are quality and quantity. 21 Griffin et al. (2007) argued that in dynamic organizational contexts, 22 job performance should reflect not only proficiency with which 23 an employee carried out job tasks but also the interdependence 24 of work activities and adaptive and proactive behaviour of 25 job holders. 26

27 When building on the resource-based view of the firm, CI 28 initiatives at work contribute to the performance of firm by 29 leveraging on discretionary effort and desired knowledge, skills, 30 attitudes and the behaviour of its employees (Arthur, 1994). The 31 argument behind this reasoning is that employees' job performance 32 is the direct outcome of how firms manage their workforce, 33 which in turn may contribute to firm performance although the 34 firm performance is not simply the aggregate of individual job 35 performance (Appelbaum et al., 2000). 36

37 The literature agrees that sustained CI has a positive impact on 38 performance improvement while requiring little capital investment 39 (e.g., Boer et al., 2000; Ni and Sun, 2009). Therefore, the ways in 40 which CI initiatives are adopted could have an effect on effort direction, 41 duration and the intensity of employees (Farris et al., 2008). The 42 operations management literature provides evidence for associations 43 between individual level practices and job-level outcomes. For 44 example, positive effects of job enrichment on job performance, 45 team work on job performance, and training on job performance 46 (e.g., Colquitt et al., 2000; Parker and Wall, 1998). In the context of 47 quality management, Turesky and Connell (2010) provided evidence 48 that employees' perceiving CI as a very important part of their job, 49 which leads to positive outcomes in performance. In the context of 50 lean production, Letens et al. (2006) showed that Kaizen events have 51 effects on how employees perform work to improve a targeted work 52 area, with specific goals, in an accelerated timeframe. 53

# **3. DESIGN METHOD**

# 3.1. Operational Definition

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Operational definitions of variables are the factors or variables used in research. The operational definition of variables in this study are: The dependent variable used in this study is employee 1 performance, while the independent variables used are: (1) 2 employee development and training, (2) employee involvement in 3 problem solving, (3) quality improvement and work productivity, 4 (4) Building cooperation between work teams, and (5) Good 5 communication. The operational definitions of each variable are 6 explained below: 7

# 3.2. Research Scope

The study was conducted during November 2019 at PT Kitadin, 1 with an address in Embalut Village, Kutai Kartanegara Regency, 1 East Kalimantan Province, Indonesia. Does not rule out the 1 possibility that researchers will use data outside the scope of the 1 study, but this is only for reference or notes only.

PT Kitadin Embalut Site, is a subsidiary of PT Indo Tambang Megahraya. This company is a foreign investment from Thailand. The company is engaged in coal mining, as the holder of an exploration mining power permit in Indonesia.

Exploitation activities began in 1983 with a deep mining system consisting of several segments (1, 2, and 3) starting in 1984. In mine 3, it was closed in 1999, while sections 1 and 2 were closed in July 2006, and mining in open (part 1) has been resumed since January 2007. For the time being, activities have been suspended due to difficulties in land acquisition for mining activities.

In May 2009, coal mining activities resumed with the open mining system at Seam 17 (south) resuming the location of open pit mines which were temporarily suspended in 2006, given that there are still coal reserves that are possible to be mined.

The location of PT Kitadin Site Embalut is 30 km from Samarinda (the capital of East Kalimantan Province) and 25 km from Tenggarong, the capital city of Kutai Kartanegara. To get to the location, can be reached by road from Balikpapan-Samarinda-Embalut or Balikpapan-Tenggarong-Embalut with a travel time of approximately 5 h. The situation of the company's mining sites can be seen in Figure 1.

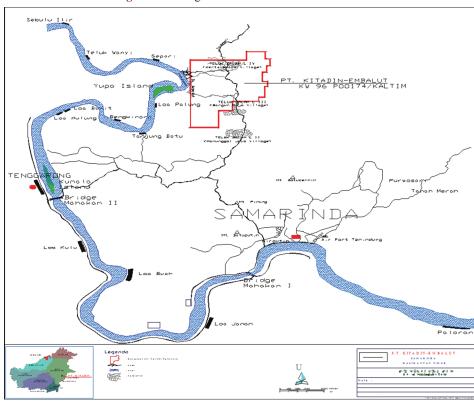
# 3.3. Population and Sample

Researchers determined the population that was the object of this study were employees of PT Embalut Site Kitadin numbered 145 people. The selection of population characteristics is done with the consideration that the population chosen is a group or individual who has close characteristics with the company.

To determine the sample that will be used in this study, researchers used probability sampling or sampling techniques that provide equal opportunities for each element (member) of the population to be selected as sample members.

The range of samples that can be taken from the Solvin technique is between 10 and 20% of the study population. The total population is 145 employees, so the percentage of leeway used is 10% or as many as 60 respondents (41%) of the total employees of PT Kitadin Site Embalut, this is done to facilitate data processing and for better testing results.

Figure 1: Mining location of PT Kitadin Site Embalut



#### 3.4. Analysis Model and Testing Hypotheses

#### 3.4.1. Variable measurement scale

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In the Likert scale Cooper and Emory (1997) generally contains five parts of the scale of the statements (statements) submitted by researchers in the questionnaire. The score of each answer from each question or statement has a gradation from very negative to very positive.

#### *3.4.2. Model feasibility test*

Validity test is the extent to which the accuracy and accuracy of a measuring instrument in carrying out its measurement function (Hair et al., 2006). The approach used to measure validity is construction validity with the product moment correlation technique. The product moment correlation formula according to Sugiyono (2005) can be seen as follows:

$$r_{xy} = \frac{n \sum xy - (\sum x)(\sum y)}{\sqrt{\{n \sum x^2 - (\sum x^2) \{n \sum y^2 - (\sum_y)^2\}}}}$$
(1)

Note:  $r_{xy}$  = Correlation coefficient; n = Number of respondents; y = Value per item; x = Total value of the respondent's questionnaire.

The condition of an instrument can be said to be valid if the value of  $r_{xy} > 0.3$ , that items that have a positive correlation with criteria (total score) and high correlation, indicate that the item has high validity too. Usually the minimum requirement to be considered eligible is if  $r_{xy} > 0.3$ , then if the price of  $r_{xy} < 0.3$  can be said the instrument is invalid (Hair et al., 2006).

Instrument reliability testing is done by using the internal consistency 28 reliability approach. The concept of reliability according to this 29 approach is the consistency between the items in the statement of 30 an instrument. To measure the reliability of internal consistency, 31 researchers can use the Cronbach alpha technique, then in this study the 32 reliability testing of the instrument was carried out using the Cronbach 33 Alpha formula. A variable is considered reliable if the alpha value is 34 above 0.6 (Hair et al., 1998). The formula can be seen as follows: 35

$$r_{11} = \left[\frac{k}{(k-1)}\right] \left[\frac{1-\sum_{k} \sigma_b^2}{\sigma_t^2}\right]$$

$$(2) \quad \begin{array}{c} 37\\ 38\\ 39\\ 40 \end{array}$$

Note:  $r_{11}$  = Reliability instruments; k = number of questions; 41  $\Sigma \sigma_b^2$  = number of item variances;  $\Sigma \sigma_t^2$  = total varians. 42

#### 3.4.3. Data analysis technique

Based on the level of explanation (level of explanation), this 45 study belongs to the category of associative research conducted 46 to determine the relationship between two or more variables. The 47 main purpose of associative research is to obtain an explanation 48 of the causal relationship of the variables designed in the study 49 (Sugiyono, 2006). 50

Multiple linear regression (MLR), also known simply as multiple 52 regression, is a statistical technique that uses several explanatory 53 variables to predict the outcome of a response variable. The goal 54 of MLR is to model the linear relationship between the explanatory 55 (independent) variables and response (dependent) variable. In 56 essence, multiple regression is the extension of ordinary least 57 square (OLS) regression that involves more than one explanatory 58 variable (Kenton, 2019).

Table 2: Summary of research variables and definitions

1401	te 2. Summary of research variables and de	
No.	Variable and symbol	Item (Parameter)
1.	Employee performance (y)	Is the performance of employees, namely the quality and quantity of work achieved by
		an employee in carrying out their duties in accordance with the responsibilities given
		to him at PT Kitadin Site Embalut. To find out the indicators of employee performance,
		parameters used are quality of work and quantity of work
2.	Employee development and training $(x_1)$	It is a learning process that involves the acquisition of expertise, concepts, regulations,
		or attitudes to improve the performance of the workforce at PT Kitadin Site Embalut. Meanwhile, development has a broader scope in efforts to improve and enhance
		knowledge, abilities, attitudes, and personality traits
3.	Employee involvement in problem solving $(x_2)$	Employee engagement is a process for involving employees at all levels of the
0.		organization in decision making and problem solving (can be ideas, suggestions,
		criticism, etc.) can be interpreted as employee engagement that is really meaningful
		(significant) on PT Kitadin Site Embalut. Employee involvement in problem
		solving can increase the likelihood of good decisions, good plans, or more effective
		improvements, because it also includes the views and thoughts of those who are
		directly related to the work situation and increases the sense of ownership and
4.	Work quality and productivity improvement	responsibility for decisions with involving people who have to carry it out Improving the quality and productivity of work is a concept that describes the
4.	$(x_3)$	relationship between the results (the amount of goods and services) and the sources
	(x <sub>3</sub> )	(the amount of labor, capital, energy, etc.) used to produce these results and the quality
		of the results sought
5.	Building cooperation between work teams $(x_{4})$	Teamwork is a form of working group of employees at PT Kitadin Site Embalut with
	+	complementary skills and is committed to achieving the mission previously agreed to
		achieve common goals effectively and efficiently. Cooperation is the amalgamation of
		various individuals into one person to achieve a common goal. A team that is very need
(	$C_{1}$	the willingness to join hands to complete the work
6.	Good communication $(x_5)$	Good communication between superiors and subordinates will have a positive impact
		on superiors and subordinates. In carrying out the task, communication is the process of moving information or ideas from superiors and subordinates, it can take place
		orally or in writing. In communicating, it is necessary to send a message, the message
		delivered, and the recipient of the message. If the results obtained are the same as
		the expected goals, then the communication results are declared effective and the
		performance is achieved at PT Kitadin Site Embalut

Source: Researcher design, 2019

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The model was chosen to determine the effect of employee development and training  $(x_1)$ , employee involvement in problem solving  $(x_2)$ , improvement of work quality and productivity  $(x_{2})$ , building cooperation between work teams  $(x_{2})$ , and good communication  $(x_{\epsilon})$  on employee performance (y) as the dependent variable. The formulas of the MLR model are:

$$y=a+b_1x_1+b_2x_2+b_3x_3+b_4x_4+b_5x_5+e$$
 (3)

Note: y = Employee performance; a = Constant (intercept);  $b_{1,2,3,4,5}$  = Regression coefficient (slope);  $x_1$  = Employee development and training;  $x_2$  = Employee involvement in problem solving;  $x_1 =$  Improved quality and work productivity;  $x_1 =$  Building cooperation between work teams;  $x_5 = \text{Good communication}$ ; e =Other factors (confounding factors).

# 4. EMPIRICAL FINDINGS

## 4.1. Descriptive Evaluation of Respondents

To determine the number of interval classes, the formula is the number of classes =  $1 + 3.3 \log n$ , where n is the number of samples or respondents. From the calculation, it is known that n = 60, so that obtained many classes  $1 + 3.3 \log 60 = 6.07$  or rounded up to 6 class intervals. The range of data is calculated by the formula of the maximum value minus the minimum value, so that the obtained range of data is 15 - 6 = 9. Meanwhile, the

Table	able 3: Likert scale					
No.	Classification	Interpretation (%)	Rating (Score)	34		
1.	Strongly disagree	0-20	1	35		
2.	Disagree	21-40	2	36		
3.	Enough	41-60	3			
4.	Agree	61-80	4	37		
5.	Strongly agree	81-100	5	38		

#### Table 4: Frequency distribution of respondents' perceptions of employee development and training

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No.	Interval	Frequency	Percentage
1.	6-7	2	3
2.	8-9	6	10
3.	10-11	12	20
4.	12-13	18	30
5.	14-15	22	37
6.	16-17	0	0
Total		60	100

Source: Interview results, 2019

class length is the range/number of classes (9/6 = 1.5) rounded to 1. Frequency distribution of employee development and training variables (Table 4).

It is known that the majority of respondents' frequency perception 57 data frequency is located at intervals of 14-15 reaching 22 people 58 (37%) and at least in intervals of 6-7 as many as 3 people (3%).

The frequency distribution of employee involvement variables in solving problems can be seen in Table 5.

Based on the results of interviews, the majority of respondents' frequency of perception data on employee involvement variables in problem solving is located at intervals of 11-12 reaching 26 people (43%) and at least in intervals of 9-10 or reaching 4 people (7%).

Table 6 shows that most of the respondents' perception of frequency data on the variable of quality improvement and work productivity lies in the 12-13 interval reaching 22 people (37%) and the lowest is the 8-9 interval of 1 person (2%).

14 The frequency distribution of variables increasing the quality and 15 productivity of work can be seen in the following Table:

17 The majority of respondents' frequency perception data on the 18 variables building cooperation between work teams is located at 11 19 and 12 intervals reaching 25 people (42%) and the lowest at 9 and 10 20 intervals of 3 people (5%). The frequency distribution of variables 21 increasing work quality and productivity is shown in Table 8. 22

23 It appears that the majority of respondents' frequency perception 24 data on good communication variables are located at intervals of

Table 5: Frequency distribution of respondents' 26 of amplayee involvement in problem colving

No.	Interval	Frequency	Percenta
1.	9-10	4	7
2.	11-12	26	43
3.	13-14	15	25
4.	15-16	15	25
5.	17-18	0	0
6.	19-20	0	0
Total		60	100

Source: Interview results, 2019 36

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## Table 6: Frequency distribution of respondents' perceptions of work quality and productivity improvement

No.	Interval	Frequency	Percentage
1.	8-9	1	2
2.	10-11	20	33
3.	12-13	22	37
4.	14-15	17	28
5.	16-17	0	0
6.	18-19	0	0
Total		60	100

Source: Interview results, 2019

#### **Table 7:** Frequency distribution of respondents' perceptions of building cooperation between work teams

No.	Interval	Frequency	Percentage
1.	9-10	3	5
2.	11-12	25	42
3.	13-14	16	27
4.	15-16	16	27
5.	17-18	0	0
6.	19-20	0	0
Total		60	100

Source: Interview results, 2019

12-13 namely 29 people (48%) and the lowest is at intervals of 1 10-11 as many as 10 people (17%). 2

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Referring to the results of the analysis, it is known that the 4 majority of the frequency of respondents' perceptions of employee performance variables lies in the 11-12 interval reaching 33 people (55%) and the smallest in the 9-10 interval is 6 people (10%).

#### 4.2. Eligibility of Questionnaire Instruments

The results of the feasibility of the research questionnaire 10 instrument in the form of a validity and reliability test. Validity 11 shows the level/degree of data can measure what should be 12 measured. In other words, valid data is data that when measured 13 by other researchers will show the same measurement results 14 as previous studies. In this regard, the content validity and 15 construction validity tests are performed using item analysis, which 16 is to calculate the correlation coefficient between item scores and 17 total scores using a 5% significance level. The following are the 18 results of the validity test on variables: employee development 19 and training  $(x_1)$ , employee involvement in problem solving  $(x_2)$ , 20 improved quality and work productivity  $(x_{1})$ , building cooperation 21 22 between work teams  $(x_{4})$ , good communication  $(x_{5})$ , and employee performance (*y*) is presented as follows: 23

It can be concluded that the validity test is known that all 25 statements in the variable questionnaire  $(x_1, x_2, x_3, x_4, x_5 \text{ and } y)$ 26 27 are valid, because the value of  $r_{count} > r_{table}$ .

Data is said to be reliable if it can measure variables with good 29 results or can be trusted and has the reliability to be used as a tool 30 in collecting data. The data reliability test of this research is to 31 use the Cronbach Alpha coefficient and to declare the reliability 32 of instruments that are considered good are those that have a 33 reliability coefficient of 0.5 or more. The reliability test results 34 35 are presented in Table 11.

## **Table 8: Frequency distribution of respondents'** perceptions of good communication

perceptions of good communication				
No.	Interval	Frequency	Percentage	- 39 - 40
1.	10-11	10	17	
2.	12-13	29	48	41
3.	14-15	21	35	42
4.	16-17	0	0	- 43
5.	18-19	0	0	44
6.	20-21	0	0	45
Total		60	100	46

Source: Interview results, 2019

### Table 9: Frequency distribution of respondents' perceptions of employee performance

No.	Interval	Frequency	Percentage
1.	9-10	6	10
2.	11-12	33	55
3.	13-14	9	15
4.	15-16	12	20
5.	17-18	0	0
6.	19-20	0	0
Total		60	100

Source: Interview results, 2019

### AQ4 Table 10: Validity test results

No.	Variable	<b>r</b> <sub>count</sub>	<b>r</b> <sub>table</sub>	Explanation
1.	Employee development and training $(x_1)$	0.647		Valid
2.	Employee involvement in problem solving $(x_{2})$	0.666		Valid
3.	Work quality and productivity improvement $(x_2)$	0.760		Valid
4.	Building cooperation between work teams $(x_i)$	0.646		Valid
5.	Good communication $(x_5)$	0.639		Valid
6.	Employee performance $(y)$	0.690	0.254	Valid

Source: SPSS Output, 2019

#### Table 11: Reliability test results

Cronbach's alpha	Cronbach's alpha based on standardized items	No. of iter
0.866	0.874	6
Source: SPSS output, 2019		

#### AQ4 Table 12: Multiple linear regression test results

	1	0	
Model	Relationship	Influence	Interpretation
Constant	1.087	0.457	-
$x_1 - y$	0.255	0.012	Positive and significant
$x_2> y$	-0.069	0.544	Negative and insignificant
$x_3 \rightarrow y$	0.504	0.000	Positive and significant
$x_4> y$	0.326	0.005	Positive and significant
$x_5 - y$	0.183	0.151	Positive and insignificant

Source: SPSS Output, 2019

The reliability test results show that of all the variables examined in this study, 6 of them are: Employee development and training  $(x_1)$ , employee involvement in problem solving  $(x_2)$ , improved quality and work productivity  $(x_3)$ , building cooperation between work teams  $(x_4)$ , good communication  $(x_5)$ , and employee performance (y) are reliable because they have a Cronbach alpha value of 0.866 > 0.254.

## 4.3. Partial Influence between Variables

To see the partial effect of each independent variable on the dependent variable can be explained by using partial test. Based on the help of the SPSS for Windows program, the equation shows the estimation results of the MLR Analysis model as follows:

From these results, an equation model analysis can be arranged through the value of standardized coefficients are:

 $y=1.087+0.255x_1+(0.069)x_2+0.504x_3+0.326x_4+0.183x_5+0.395e$ (4)

Employee development and training  $(x_1)$  of 0.255, shows that if there is an increase in variable  $x_1$  of 1%, it will increase employee performance by 25.5%. Meanwhile, employee involvement in solving problems  $(x_2)$  of -0.069, where if there is an increase in the variable  $x_2$  by 1%, it will reduce the performance of employees reaching 6.9%. On the other hand, if there is an increase in the quality and productivity of work  $(x_3)$  and build cooperation between work teams  $(x_4)$  1%, then each variable will increase by 50.4% and 32.6%. Positive results were also seen in the good communication variable with an achievement of 0.183, if there was an increase of 1%, resulting in an increase of 18.3%.

First, employee development and training  $(x_1)$  partially has a positive and significant effect on employee performance (y). This

is seen based on the value of the beta coefficient and the level of probability. Development is an attempt to improve the technical, theoretical, conceptual, and moral abilities of employees in accordance with the needs of the job/position through education and training (Hasibuan, 2005). Employee development and training is the process of increasing employee knowledge and skills. Training may also include changing attitudes so employees can do their jobs more effectively. Training can be done at all levels in the organization. At the lower/lower level training consists of teaching how to do a task, for example operating a machine. The performance of the employees of PT Kitadin Site Embalut is good and quality, influenced by increased knowledge and skills gained from the process of training human resources.

Second, employee involvement in problem solving  $(x_2)$  partially has a negative and not significant effect on employee performance (y). One reason why these factors do not have a significant effect on employee performance is that most employees or respondents assume that without the involvement of company management and leaders in solving problems, will not change the performance that already exists, in its implementation, leaders can involve employees in various activities organization. This tends to increase employee perceptions that they are involved in organizational activities and are happier feeling as part of the organization.

In reality, this finding is certainly not in line with the results of previous studies by Rotenberry and Moberg (2007) assessing the impact of work engagement on performance, the result of work involvement of an individual, positively related to the resulting performance. Employee involvement has a positive relationship with organizational commitment, a negative relationship with the desire to stop and is believed to have an influence on performance (Bakker et al., 2004; Sonnentag, 2003).

Third, work quality and productivity  $(x_3)$  partially have a positive and significant effect on employee performance (y). Work productivity is a comparison that is owned both individually and in teams within the organization (Hasibuan, 2010). It can be concluded that productivity is the ability of an employee to manage and utilize the resources owned to obtain outputs, optimal results in the context of carrying out the tasks that have been charged to him, and the achievement of specified work results.

Fourth, building cooperation between work teams  $(x_4)$  partially has a positive and significant effect on employee performance (y). A team is a unit consisting of two or more people who interact and coordinate their work for a particular purpose. This definition has three components, namely: it takes two or more people, people on

1 a team have regular interactions, and people on a team have the 2 same performance goals. This is reinforced by Gaspersz (2001) 3 that "people at all levels of the organization are very important 4 factors of an organization and their full involvement will allow 5 their abilities to be used for the benefit of the organization." 6 The performance of employees will improve if they are actively 7 involved and participate and become part of the team in the process 8 of activities in the organizational unit where they work.

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10 Fifth, good communication  $(x_5)$  partially has positive and not 11 significant effect on employee performance (y). This means that 12 good communication affects performance, but does not have a large 13 and ongoing impact on employee performance. The existence of 14 these indications if the better or not communication at PT Kitadin 15 Site Embalut, it is not so meaningful in improving employee 16 performance, because communication is still one-way and thoughts 17 are not fully open. This empirical finding contradicts what was 18 studied by Mardianto (2004), who stated that communication had 19 a positive and significant effect on employee performance. 20

Most research respondents assume that communication at the company is going well. They think some things need to be improved, so that performance becomes better, for example an increase in production bonuses when targets are reached and an increase in employee training.

# 5. CONCLUSION AND POLICY IMPLICATION

Some conclusions that can be presented based on the objectives of the study and the results of the analysis are employee development and training variables, improvement of work quality and productivity, and building cooperation between work teams has a significant effect on employee performance. Meanwhile, employee involvement in problem solving and good communication has no significant effect on employee performance in PT Kitadin Site Embalut.

Employee involvement in organizational events is expected not only
to the same person continuously but in rotation, this can be a strategy
to foster a feeling of belonging to the organization and indirectly
committed to improving its performance within the company.

The things that need to be improved is that each employee must be able to openly communicate with fellow colleagues and as long as it is related to work related to the company. This communication must use appropriate media, if information is communicated verbally the more connections in the communication chain, the greater the opportunity for information to be reduced.

# 6. NOVELTY

Whether or not the organization's goals are achieved will mirror the performance or performance of the people in the organization. Performance on the other hand shows the quality of organization. Quality itself is dynamic, because it is related to internal and external variables of the organization, so it always requires creativity and CI. Kaizen tells us that "only by continuing to stay conscious and making hundreds of thousands of small improvements, it is 2 possible to produce authentic quality goods and services that 3satisfy customers. The easiest way to achieve this is through the 4 5 participation, motivation and CI of each and every employee in the 6 organization. Staff participation depends on senior management 7 commitment, clear strategies and fortitude - because kaizen is not 8 a shortcut but a continuous process to create the desired results" 9 (Cane, 1996).

11 In some developed countries such as the originator of the beginning 12 (Japan), there have been many studies on CI. However, what is 13 different from this study with the previous ones is the development 14 of indicators, statement items in the questionnaire, and the object of 15 research. There are not many researchers in developing countries, especially Indonesia who raise this issue in the improvement of 16 17 certain organizations or companies based on the mining sector, 18 so it is worthy of in-depth study. 19

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