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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 Japanese terminology (Hayes, 1981), is seen as "one of the activities whereby processes and procedures are implemented which contribute to organizational goals through the CI of work processes, work places and work interactions" (Berling, 2000).

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

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

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

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

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

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

The brief description of the development of the indicators of values of CI in PT Kitadin Site Embalut can be explained by Table 1.

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

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

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 organization and its environment. A remedial program in this

Table 1: Development of continuous improvement indicators at PT Kitadin Site Embalut of 2012-2016

No.	Year	Indicator
1.	2015	3 indicators: (Development and training, employee involvement in problem solving, quality improvement and productivity)
2.	2016	3 indicators: (Development and training, employee involvement in problem solving, quality improvement and productivity)
3.	2017	4 indicators: (Development and training, employee involvement in problem solving, improving quality and productivity, building cooperation between work teams)
4.	2018	4 indicators: (Development and training, employee involvement in problem solving, improving quality and productivity, building cooperation between work teams)
5.	2019	5. indicators: (Development and training, employee involvement in problem solving, improving quality and productivity, building cooperation between work teams, good communication)

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

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

2.2. Job Performance

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

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

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

3. DESIGN METHOD

3.1. Operational Definition

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 performance, while the independent variables used are: (1) employee development and training, (2) employee involvement in problem solving, (3) quality improvement and work productivity, (4) Building cooperation between work teams, and (5) Good communication. The operational definitions of each variable are explained below in Table 2.

3.2. Research Scope

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

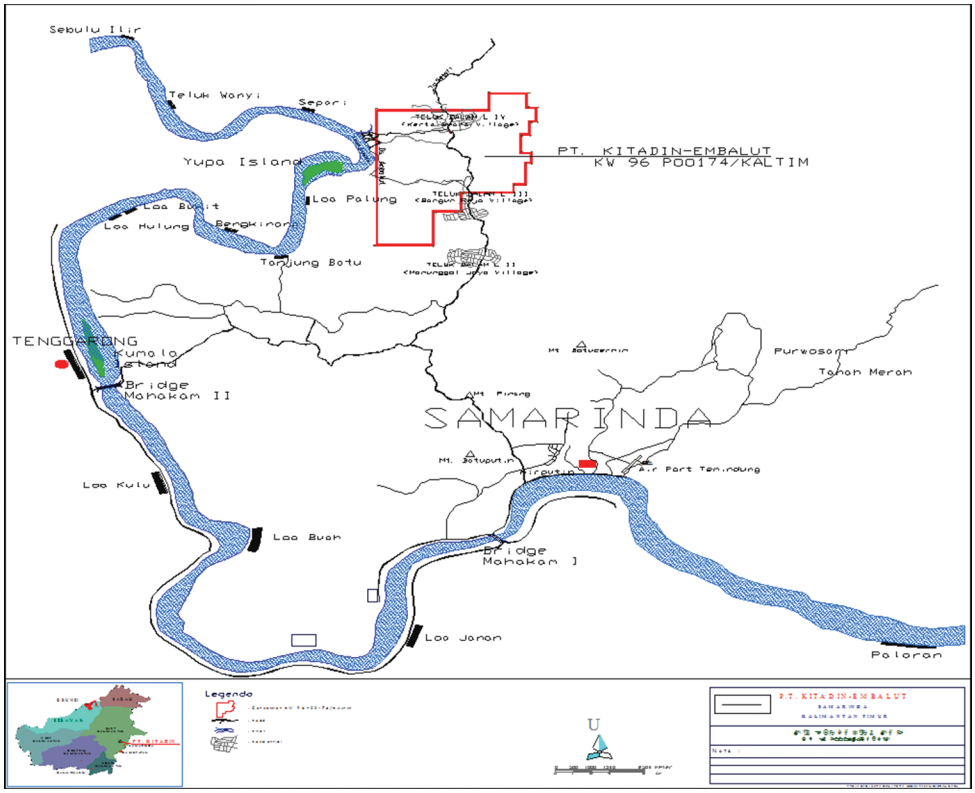
3.3. Population and Sample

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

In the Likert scale Cooper and Emory (1995) 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 on (Table 3).

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:

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

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

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

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

3.4.3. Data analysis technique

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

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

Table 2: Highlight of research variables and definitions

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 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 responsibility for decisions with involving people who have to carry it out
4.	Work quality and productivity improvement (x_3)	Improving the quality and productivity of work is a concept that describes the relationship between the results (the amount of goods and services) and the sources (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 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

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_3), building cooperation between work teams (x_4), and good communication (x_5) on employee performance (y) as the dependent variable. The formulas of the MLR model are:

$$y=a+b_1 x_1+ b_2 x_2+ b_3 x_3+ b_4 x_4+ b_5 x_5+e \quad (3)$$

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_3 = Improved quality and work productivity; x_4 = Building cooperation between work teams; x_5 = 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 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).

Table 3: Measurement of likert scale

No.	Classification	Interpretation (%)	Rating (Score)
1.	Strongly disagree	0-20	1
2.	Disagree	21-40	2
3.	Enough	41-60	3
4.	Agree	61-80	4
5.	Strongly agree	81-100	5

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

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

It is known that the majority of respondents' frequency perception data frequency is located at intervals of 14-15 reaching 22 people (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%).

The frequency distribution of variables increasing the quality and productivity of work can be seen in the following Table 7 as follows:

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

It appears that the majority of respondents' frequency perception data on good communication variables are located at intervals of 12-13 namely 29 people (48%) and the lowest is at intervals of 10-11 as many as 10 people (17%).

Referring to the results of the analysis from Table 9, it is known that the 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%).

Table 5: Frequency distribution of respondents' perceptions of employee involvement in problem solving

No.	Interval	Frequency	Percentage
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

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

4.2. Eligibility of Questionnaire Instruments

The results of the feasibility of the research questionnaire instrument in the form of a validity and reliability test. Validity shows the level/degree of data can measure what should be measured. In other words, valid data is data that when measured by other researchers will show the same measurement results as previous studies. In this regard, the content validity and construction validity tests are performed using item analysis, which is to calculate the correlation coefficient between item scores and total scores using a 5% significance level. The following are the results of the validity test on variables: 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) is presented on (Table 10).

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

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

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

No.	Interval	Frequency	Percentage
1.	10-11	10	17
2.	12-13	29	48
3.	14-15	21	35
4.	16-17	0	0
5.	18-19	0	0
6.	20-21	0	0
Total		60	100

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

Table 10: Validity test results

No.	Variable	r_{count}	r_{table}	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_3)	0.760		Valid
4.	Building cooperation between work teams (x_4)	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 items
0.866	0.874	6

Source: SPSS output, 2019

Table 12: Multiple linear regression test results

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-->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:

Table 12 shows from these results, an equation model analysis can be arranged through the value of standardized coefficients are:

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

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

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

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

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 possible to produce authentic quality goods and services that satisfy customers. The easiest way to achieve this is through the participation, motivation and CI of each and every employee in the organization. Staff participation depends on senior management commitment, clear strategies and fortitude - because kaizen is not a shortcut but a continuous process to create the desired results" (Cane, 1996).

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

REFERENCES

Anthony, R.N., Dearden, J., Bedford, N.M. (1984), Management Control Systems. Homewood, IL: Irwin.

Appelbaum, E., Bailey, T., Berg, P., Kalleberg, A.L. (2000), Manufacturing Advantage: Why High-performance Work Systems Pay off. Ithaca, New York: ILR Press.

Arthur, J.B. (1994), Effects of human resource systems on manufacturing performance and turnover. Academy of Management Journal, 37(3), 670-687.

Bakker, A.B., Demerouti, E., Verbeke, W. (2004), Using the job demands resources model to predict burnout and performance. Human Resource Management, 43(1), 83-104.

Berling, C. (2000), Continuous improvement as seen from groups and improvement agents. Total Quality Management, 11(4-6), 484-489.

Boer, H., Berger, A., Chapman, R., Gertsen, F. (2000), CI Changes: From Suggestion Box to Organizational Learning. Continuous Improvement in Europe and Australia. Aldershot, UK: Ashgate.

Campbell, J.P., McHenry, J.J., Wise, L.L. (1990), Modelling job performance in a population of jobs. Personnel Psychology, 43(2), 313-575.

Cane, S. (1996), Kaizen Strategies for Winning through People: How to Create a Human Resources Program for Competitiveness and Profitability. Harlow, United Kingdom: Pearson Education Limited.

Colquitt, J., LePine, J., Noe, R. (2000), Toward an integrative theory of training motivation: A meta-analytic path analysis of 20 years of research. Journal of Applied Psychology, 85(5), 678-707.

Cooper, D.R., Emory, C.W. (1995), Business Research Methods. 5th ed. New York: Irwin.

Farris, J.A., Van Aken, E.M., Doolen, T.L., Worley, J. (2008), Learning from less successful kaizen events: A case study. Engineering Management Journal, 20(3), 10-20.

Gaspersz, V. (2001), Total Quality Management. Jakarta: PT Gramedia Pustaka Utama.

Glover, W.J., Farris, J.A., Van Aken, E.M., Doolen, T.L. (2011), Critical success factors for the sustainability of Kaizen event human resource outcomes: An empirical study. International Journal of Production Economics, 132(2), 197-213.

Graso, M., Probst, T.M. (2012), The effect of consideration of future consequences on quality and quantity aspects of job performance. Journal of Applied Social Psychology, 42(6), 1335-1352.

Griffin, M.A., Neal, A., Parker, S.K. (2007), A new model of work role

performance: Positive behavior in uncertain and interdependent contexts. Academy of Management Journal, 50(2), 327-347.

Hair, J.F.J., Babin, B.J., Black, W., Anderson, R.E. (2006), Mutivariate Data Analysis. New Jersey: Pearson Prentice Hall.

Hansen, G.A. (1994), Automating Business Process Reengineering. New Jersey: Prentice Hall.

Hasibuan, M.S.P. (2005), Human Resource Management. Jakarta: PT Bumi Aksara.

Hasibuan, M.S.P. (2010), Organization and Motivation: Basis for Increasing Productivity. Jakarta: PT Bumi Aksara.

Hayes, R.H. (1981), Why Japanese factories work. Harvard Business Review, 59(4), 57-66.

Imai, M. (1986), Kaizen: The Key to Japan's Competitive Success. New York: McGraw-Hill.

Kenton, W. (2019), Multiple Linear Regression MLR Definition. Available from: https://www.investopedia.com/terms/m/mlr.asp. [Last accessed on 2019 Apr 14].

Lall, S. (1995), Science and technology in the new global environment: Implications for developing countries. Science and Technology Issues, 56, 52-56.

Letens, G., Farris, J., Van Aken, E.M. (2006), Development and Application of a Framework for the Design and Assessment of a Kaizen Program. Proceedings. International Annual Conference of the American Society for Engineering Management. Huntsville, Alabama.

Losonci, D., Demeter, K., Jenei, I. (2011), Factors influencing employee perceptions in lean transformations. International Journal of Production Economics, 131(11), 30-43.

Malik, S.A., YeZhuang, T. (2006), Execution of Continuous Improvement Practices in Spanish and Pakistani Industry: A Comparative Analysis. Vol. 2. Singapore: IEEE International Conference on Management of Innovation and Technology. p761-765.

Mardianto, A. (2004), Analysis of Influence of Subordinate Superior Communication and Motivation on Performance at PT Bank Pembangunan Daerah Jawa Tengah Branch Surakarta. Thesis (Published). Postgraduate Program, Muhammadiyah University, Surakarta.

Marin-Garcia, J.A., del Val, M.P., Martín, T.B. (2008), Longitudinal study ofthe results of continuous improvement in an industrial company. Team Performance Management, 14(1/2), 56-69.

Medcof, J.W. (2007), Subsidiary technology upgrading and international technology transfer with reference to China. Asia Pacific Business Review, 13(3), 451-469.

Ni, W., Sun, H. (2009), The relationship among organisational learning, continuous improvement and performance improvement: An evolutionary perspective. Total Quality Management, 20(10), 1041-1054.

Parker, S.K., Wall, T.D. (1998), Job and Work Design. London: Sage.

Pulakos, E.D., Arad, S., Donovan, M., Plamandon, K.E. (2000), Adaptability in the workplace: Development of a taxonomy of adaptive performance. Journal of Applied Psychology, 85(4), 612-624.

Randall, M.D., Cote, J.A. (1991), Interrelationships of Work Commitment Constructs. Work and Occupation, 18(2), 194-211.

Repenning, N., Sterman, J. (2003), Nobody Ever Gets Credit for Fixing Problems That Never Happened: Creating and Sustaining Process Improvement. IEEE Engineering Management Review, 30(4), 1-24.

Rotenberry, P.F., Moberg, P.J. (2007), Assessing the impact of job involvement on performance. Management Research News, 30(3), 203-215.

Samson, D., Sohal, A.S., Ramsay, E. (1993), Human resource issues in manufacturing improvement initiatives: Case study experiences in Australia. The International Journal of Human Factors in Manufacturing, 3(2), 135-152.

Sohal, A.S., Egglestone, A. (1994), Lean production: Experience among Australian organizations. International Journal of Operations and Production Management, 14(11), 35-51.

Sohal, A.S., Samson, D., Ramsay, E. (1993), JIT manufacturing: Industry analysis and a methodology for implementation. The International Journal of Operations and Production Management, 13(7), 22-56.

Sonnentag, S. (2003), Recovery, work engagement, and proactive behavior: A new look at the interface between nonwork and work. Journal of Applied Psychology, 88(3), 518-528.

Sugiyono S. (2005), Understanding Qualitative Research. Bandung: CV Alfabeta.

Sugiyono S. (2006), Quantitative, Qualitative, and R and D Research Methods. Bandung: CV Alfabeta.

Tanco, M., Mateo, R., Santos, J., Jaca, C., Viles, E. (2012), On the relationship between continuous improvement programmes and their effect on quality defects: An automotive case study. Total Quality Management and Business Excellence, 23(3), 277-290.

Turesky, E.F., Connell, P. (2010), Off the rails: Understanding the derailment of a lean manufacturing initiative. Organization Management Journal, 7, 110-132.

Varela, O.E., Landis, R.S. (2010), A general structure of job performance: Evidence from two studies. Journal of Business Psychology, 25(4), 625-638.