Effects of Working Ability, Working Condition, Motivation and Incentive on Employees Multi-Dimensional Performance

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Abstract—The purpose of this study was to empirically prove effects of working ability, working condition, motivation, and incentives on performance. In this study working ability consist of skill and ability, working experience; working condition includes supervision, organizational culture, workload, physical conditions, facilities; motivation such as perception of effort, goals, fairness, reinforcement; incentive consist of achievement, career and promotion, advancement, reward, authority and autonomy, working group, job security, financial incentives; performance in term of quantity and quality, attendance, time management. A questionnaire was designed and disseminated randomly to 150 staff of a famous university in Indonesia. Partial Least Square (PLS) was used to generate findings. The results showed that working conditions, incentives and motivation had a statistical significant effect on employee performance. Furthermore, the findings also revealed that workload, facilities, and expectancy had a negative effect on employee performance. Meanwhile, working group, salary, job security, achievement, fairness, and goals had a positive effect on employee performance.

Index Terms—Incentives, motivation, performance, PLS, working ability, working conditions.

I. INTRODUCTION

Employee is part of organization which has a significant role and impact to the performance of an organization. They have to run the operational process that led to organizational success. Therefore, we must know factors that influence employee performance [1].

Performance is considered to be in relation with the concepts of ability, opportunity and motivation. Ability is a function of ability, education, experience and training. Good performance is resulted if the employee has the ability to support their activities at work. Opportunity refers to infrastructure and facilities needed to perform a job. Motivation is a psychological process that arousing, directing, and affecting the persistence a certain course of action to achieve a goal. By studying motivation, then the employer can understand the factors that drive a person to act, what influences the choice of action and the reason they have the perseverance in acting [2].

Based on the theories of motivation, management can determine the form of incentives which can influence employee behavior and motivation to work. Incentives refers to any means that makes an employee desire to do better, try

harder and expend more energy. Condly [3] suggested that the implementation of incentive schemes in a variety of jobs and activities to improve job performance by 22%.

Previous studies have been done to measure the effect of incentives on performance [4], [5]. In those studies, two types of incentives were used, monetary incentives and nonmonetary incentives. Other studies were conducted to examine aspects related to the work such as leadership [6] and working facilities [7]. Khan [8] studies the effect of incentives, working conditions, and working facilities on performance. Tatum [9] studies the effect of ability, personal attributes and motivation on outcomes.

It is assumed that a better understanding on relationships among aspects of motivation, incentives, working ability, working conditions and performance, management can result in a better system. The better of management system will give satisfaction to the employees and improve overall organizational performance. The aim of this study was to provide empirical evidence to ascertain of the motivation, incentives, working ability and working conditions variables that have a positive significant impact on employee performance.

II. RESEARCH MODEL AND HYPOTHESIS

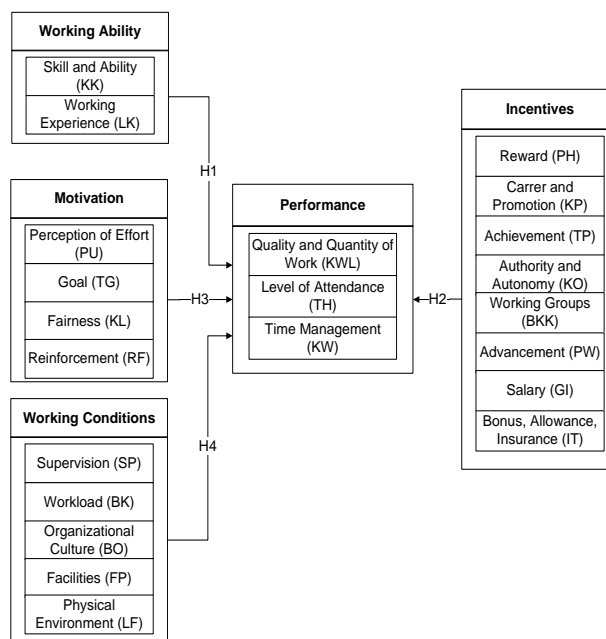Relationships among variables can be seen in a model shown in Fig. 1.

Fig. 1. Research model.

The following hypotheses were formulated in this study:
Hypothesis 1: There is a significant effect of working

ability on employee performance.

Hypothesis 2: There is a significant effect of incentives on employee performance.

Hypothesis 3: There is a significant effect of motivation on employee performance.

Hypothesis 4: There is a significant effect of performance on employee performance.

III. METHODOLOGY

A. Population and Data Collection

The sample was randomly selected from staff of a known university in Indonesian. A total of 150 questionnaires were administered to potential respondents. A total of 103 usable questionnaires were returned, giving a response rate of 69 percent. Table I shows the characteristic respondents for the study.

TABLE I: CHARACTERISTIC OF RESPONDENT

Characteristic	Category	Percentage
Working Position	Head of Working Unit	0.97%
	Head of Sub-unit	19.42%
	Head of Sub-subunit	5.83%
	Staff	73.79%
Age	> 50 years	23.30%
	40-50 years	42.72%
	30-40 years	21.36%
	20-30 years	12.62%
Gender	Man	57.28%
	Woman	42.72%
Education	Master	1.94%
	Bachelor	35.92%
	Diploma 3	12.62%
	Diploma 1	0.00%
	Senior High School	49.51%
Experience	> 10 years	63.11%
	5-10 years	21.36%
	3-5 years	5.83%
	< 3 years	9.71%
Working Unit	Faculties	49.51%
	Support Working Unit	50.49%

The questionnaire comprised two sections, the first section represents the instrument which were developed based on literature review. All items were measured using a five point Likert type scale, ranging from 1 strongly disagree to 5 strongly agree. The second section covered the demographic information consist of working position, age, gender, education, working experience, and working unit.

B. Validity and Reliability of the Data

The instrument was submitted to experts for content validity and was tested to for pilot study. After necessary modifications, construct validity of the data collected measured using Pearson correlation suggested that some item from the working conditions and incentives dimensions were eliminated.

Reliability was measured using Cronbach alpha coefficient to check item correlations of all variable in questionnaires. The test results for over all instruments are 0.719 which exceed the acceptable limit [10].

IV. DATA ANALYSIS AND RESULTS

The Partial Least Square (PLS) was used in analyzing the data. This method was chosen because not only because the researche model involves more than one dependent variable but also because it has the ability to describe the relationship between variables simultaneously. There are two stages of data processing in PLS; evaluation of measurement model and evaluation of the structural model. Evaluation of measurement model is based on convergent validity, discriminant validity and composite reliability, while evaluation of structural model is based on R-square and path coefficient.

A. Evaluation of Measurement Model

Structural model used in this study refers to research model. In the structural model, the relationship between dimensions is known. Structural model used in this data processing shown in Fig. 2.
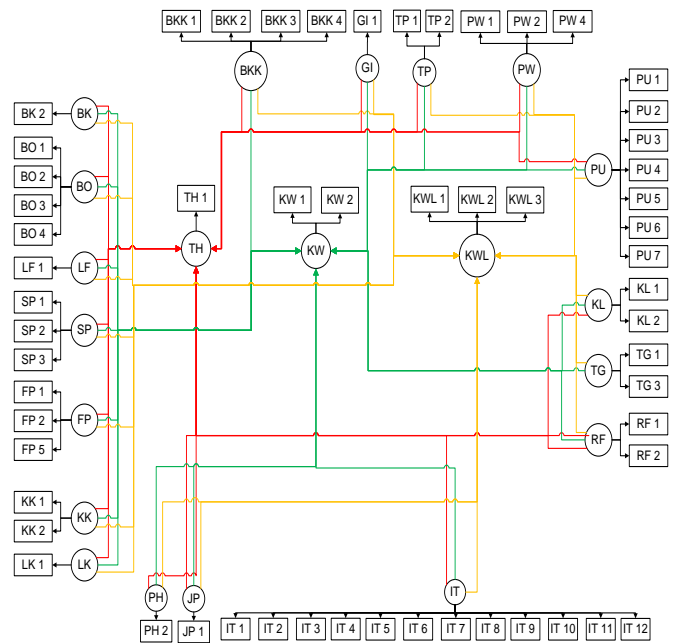

Fig. 2. Structural model.

Convergent validity of the measurement model is done by looking at the correlation or relationship between the value of the manifest variables with the value of the dimensions (latent variables) which are represented by valuing each factor loading manifest variables. Manifest variable is valid when the value of factor loading > 0.5, except that the manifest variable will be eliminated [10]. Data processing was performed by using software SmartPLS 2.0. Recapitulation of valid factor loading values shown in Table II.

Based on PLS result (Table III), the values of root AVE are greater than the value of the correlation between the latent variables. It shows that all latent variables which are estimated in the measurement model have accomplished the discriminate validity.

Reliability testing was conducted by using the composite reliability evaluation that shown in Table III. Based on the result, most of the latent variable accomplishes the composite reliability criteria (greater than 0.7).

TABLE II: VALID FACTOR LOADING VALUES

Relationship between Manifest and Dimensions	Original Sample (O)	Relationship between Manifest and Dimensions	Original Sample (O)
BK2 <- BK	1.000	KL2 <- KL	1.000
BKK1 <- BKK	0.886	KP1 <- KP	0.858
BKK2 <- BKK	0.794	KP2 <- KP	0.846
BKK3 <- BKK	0.787	KP4 <- KP	0.608
BKK4 <- BKK	0.614	KW1 <- KW	0.917
BO3 <- BO	1.000	KW2 <- KW	0.935
FP21 <- FP	0.782	KWL2 <- KWL	1.000
FP22 <- FP	0.874	LF1 <- LF	1.000
FP25 <- FP	0.707	LK1 <- LK	1.000
GI1 <- GI	1.000	PH2 <- PH	1.000
IT111 <- IT	0.809	PU1 <- PU	0.856
IT112 <- IT	0.783	PU5 <- PU	0.853
IT12 <- IT	0.672	PW1 <- PW	0.846
IT13 <- IT	0.628	PW2 <- PW	0.894
IT14 <- IT	0.845	PW4 <- PW	0.503
IT15 <- IT	0.796	RF2 <- RF	1.000
IT16 <- IT	0.892	SP2 <- SP	1.000
IT17 <- IT	0.842	TG1 <- TG	0.834
IT18 <- IT	0.816	TG3 <- TG	0.753
IT19 <- IT	0.755	TH1 <- TH	1.000
JP1 <- JP	1.000	TP1 <- TP	0.886
KK1 <- KK	1.000	TP2 <- TP	0.916

TABLE III: PLS RESULT

Latent Variable	AVE	Composite Reliability	R Square	Cronbachs Alpha
BK	1.000	1.000	0.000	1.000
BKK	0.603	0.857	0.000	0.780
BO	1.000	1.000	0.000	1.000
FP	0.625	0.832	0.000	0.705
GI	1.000	1.000	0.000	1.000
IT	0.620	0.942	0.000	0.935
JP	1.000	1.000	0.000	1.000
KK	1.000	1.000	0.000	1.000
KL	1.000	1.000	0.000	1.000
KP	0.607	0.819	0.000	0.659
KW	0.857	0.923	0.514	0.834
KWL	1.000	1.000	0.540	1.000
LF	1.000	1.000	0.000	1.000
LK	1.000	1.000	0.000	1.000
PH	1.000	1.000	0.000	1.000
PU	0.730	0.844	0.000	0.631
PW	0.589	0.803	0.000	0.606
RF	1.000	1.000	0.000	1.000
SP	1.000	1.000	0.000	1.000
TG	0.631	0.773	0.000	0.418
TH	1.000	1.000	0.313	1.000
TP	0.812	0.896	0.000	0.770

B. Evaluation of Structural Model

Evaluation of the structural model is done by looking at the value of R-square. The value of R-square shows the level of variability for each endogenous variable is determined by other variables. Based on the results on Table III, it can be seen that:

1) Endogenous variable job performances, time management (KW), give the value of R-square of 0514. Thus, KW latent variables can be explained by other latent variables, such as variable BK, BKK, BO, FP, GI, IT, JP, KK, KL, KP, LF, LK, PH, PU, PW, RF, SP, TG, and TP by 51.4%, while the rest is influenced by other variables.

2) Endogenous variable job performance, quality and quantity of work (KWL), give the value of R-square of 0.540. Thus, KWL latent variables can be explained by

other latent variables, such as variable BK, BKK, BO, FP, GI, IT, JP, KK, KL, KP, LF, LK, PH, PU, PW, RF, SP, TG, and TP by 54%, while the rest is influenced by other variables.

3) Endogenous variables work performances, the level of attendance (TH), give the value of R-square of 0.313. Thus, TH latent variables can be explained by other latent variables, such as variable BK, BKK, BO, FP, GI, IT, JP, KK, KL, KP, LF, LK, PH, PU, PW, RF, SP, TG, and TP by 31.3%, while the rest is influenced by other variables.

TABLE IV: PATH COEFFICIENT

Relationship between Latent Variables	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Statistics (O/STERR)	Sig.
BK -> KW	-0.074	-0.085	0.103	0.721	
BK -> KWL	-0.158	-0.143	0.089	1.776	**
BK -> TH	-0.049	-0.064	0.116	0.426	
BKK -> KW	-0.222	-0.214	0.147	1.511	
BKK -> KWL	0.120	0.107	0.130	0.922	
BKK -> TH	0.349	0.359	0.173	2.019	*
BO -> KW	-0.158	-0.125	0.111	1.419	
BO -> KWL	0.058	0.060	0.090	0.645	
BO -> TH	0.083	0.086	0.104	0.800	
FP -> KW	-0.094	-0.085	0.100	0.935	
FP -> KWL	0.017	0.020	0.098	0.172	
FP -> TH	-0.272	-0.271	0.141	1.926	**
GI -> KW	-0.083	-0.100	0.119	0.695	
GI -> KWL	0.247	0.211	0.108	2.296	*
GI -> TH	-0.089	-0.064	0.137	0.646	
IT -> KW	0.099	0.126	0.133	0.747	
IT -> KWL	-0.146	-0.105	0.146	1.001	
IT -> TH	0.130	0.116	0.159	0.821	
JP -> KW	0.148	0.135	0.156	0.949	
JP -> KWL	0.322	0.276	0.114	2.818	*
JP -> TH	0.257	0.275	0.144	1.782	**
KK -> KW	-0.160	-0.160	0.148	1.081	
KK -> KWL	0.110	0.099	0.126	0.868	
KK -> TH	0.010	0.017	0.112	0.088	
KL -> KW	0.258	0.239	0.120	2.153	*
KL -> KWL	0.455	0.443	0.109	4.169	*
KL -> TH	0.149	0.155	0.129	1.157	
KP -> KW	0.212	0.243	0.144	1.474	
KP -> KWL	0.042	0.058	0.125	0.335	
KP -> TH	-0.152	-0.129	0.157	0.971	
LF -> KW	0.001	0.007	0.089	0.009	
LF -> KWL	0.049	0.072	0.093	0.531	
LF -> TH	0.014	0.018	0.102	0.135	
LK -> KW	0.241	0.259	0.152	1.589	
LK -> KWL	0.158	0.139	0.135	1.172	
LK -> TH	0.181	0.191	0.154	1.179	
PH -> KW	-0.049	-0.093	0.133	0.366	
PH -> KWL	0.022	0.022	0.129	0.168	
PH -> TH	-0.126	-0.160	0.141	0.897	
PU -> KW	-0.230	-0.224	0.130	1.765	**
PU -> KWL	-0.082	-0.079	0.122	0.676	
PU -> TH	-0.139	-0.142	0.151	0.916	
PW -> KW	0.170	0.215	0.178	0.958	
PW -> KWL	-0.022	-0.017	0.141	0.155	
PW -> TH	0.043	0.059	0.168	0.255	
RF -> KW	0.026	0.038	0.131	0.197	
RF -> KWL	0.045	0.068	0.095	0.469	
RF -> TH	-0.024	-0.033	0.125	0.193	
SP -> KW	0.021	0.025	0.083	0.252	
SP -> KWL	0.010	0.034	0.086	0.112	
SP -> TH	0.014	0.014	0.118	0.114	
TG -> KW	0.325	0.301	0.125	2.604	*
TG -> KWL	-0.131	-0.115	0.127	1.036	
TG -> TH	0.151	0.135	0.139	1.084	
TP -> KW	0.373	0.319	0.131	2.846	*
TP -> KWL	0.192	0.217	0.121	1.590	
TP -> TH	-0.023	-0.059	0.141	0.166	

**significance at 0.1
*significance at 0.05

The evaluation of path coefficient conducted by looking at the value of the parameter coefficients and t-test significance values. The value of the parameter coefficients shows the effect of the latent variables on other latent variables. Positive or negative sign on the coefficient indicates a positive or negative relationship which exists between the latent variables. *T*-test is done to see the significance of the relationship between latent variables. Relationships among latent variables were statistically significant if the value of t greater than the critical t-value. Data processing results can be seen in Table IV.

Results of evaluations path coefficient results are used as the basis for the hypothesis testing. Based on the evaluation results, obtained 11 relationships among latent variables that are significant:

1) Relationship between BK and KWL has a coefficient of -0158 which means there is a negative effect of workload (BK) on the variable quantity and quality of the work (KWL) with the value of t statistics is 1.776 (larger than the critical value $t_{0.1;102} = 1.659$). Thus, there is a significant negative effect between the latent variables BK on KWL.

2) Relationship between BKK and TH has a coefficient of 0.349 which means there is a positive effect of working group (BKK) on the variable level of attendance (TH), with the value of t statistic is 2.019 (larger than the critical value $t_{0.05;102} = 1.983$). Thus, there is a significant positive effect between the latent variables BKK on TH.

3) Relationship between FP and TH has a coefficient of -0.272 which means there is a negative effect of facilities (FP) on the variable level of attendance (TH), with the value of t statistics is 1.926 (larger than the critical value $t_{0.1;102} = 1.659$). Thus, there is a significant negative effect between latent variables FP on TH.

4) Relationship between GI and KWL has a coefficient of 0.247 which means there is a positive effect of salary (GI) on the variable quality and quantity of work (KWL), with the value of t statistics for 2.296 (larger than the critical value $t_{0.05;102} = 1.983$). Thus, there is a significant positive effect between latent variables GI on KWL.

5) Relationship between JP and KWL has a coefficient parameter of 0.322 which means there is positive effect of job security (JP) on the variable quality and quantity of work (KWL), with the value of *t* statistic of 2.818 (larger than the critical value $t_{0.05;102} = 1.983$). Thus, there is a significant positive effect between the latent variables of the KWL on JP.

6) Relationship between JP and TH has a coefficient of 0.257 which means there is positive effect of job security (JP) on the variable level of attendance (TH), with the value of t statistic of 1.782 (larger than the critical value $t_{0.1;102} = 1.659$). Thus, there is a significant positive effect between latent variables JP on TH.

7) Relationship between KL and KW has a coefficient of 0.258, which means there is positive effect of justice (KL) on the variable time management (KW), with the value of *t* statistics for 2.153 (larger than the critical value $t_{0.05;102} = 1.983$). Thus, there is a significant positive effect between latent variables KL on KW.

8) Relationship between KL and KWL has a coefficient of 0.455 which means there is a positive effect of justice

(KL) on the variable quantity and quality of the work (KWL), with the value of t statistics for 4.169 (larger than the critical value $t_{0.05;102} = 1.983$). Thus, there is a significant positive effect between the latent variables of the KWL on KL.

9) Relationship between PU and KW has a coefficient of -0.23 which means there is a negative effect of the perception of effort (PU) on the variables time management (KW), with a value of t statistics for 1.765 (larger than the critical $t_{0.1;102} = 1.659$). Thus, there is a significant negative effect between latent variables PU on KW.

10) Relationship between TG and KW has a coefficient of 0.325 which means there is a positive effect of goals (TG) on the variables time management (KW), with a value of t statistics for 2.604 (larger than the critical value $t_{0.05;102} = 1.983$). Thus, there is a significant positive effect between latent variables TG on KW.

11) Relationship between TP and KW has a coefficient of 0.373 which means there is a positive effect of achievements (TP) on the variables time management (KW), with a value of *t* statistics for 2.864 (larger than the critical value $t_{0.05;102} = 1.983$). Thus, there is a significant positive effect between latent variables TP on KW.

V. DISCUSSION

Based on the evaluation of path coefficient that is used as the basis for the hypothesis testing, there are several significant relationships between variables. For the hypothesis 1, the result shows that there is no significant effect between variables working ability (skill and ability, experience) and performance (quality and quantity of work, level of attendance, and time management).

For the hypothesis 2, the result shows that there are significant effects between variables incentives (salary, job security, working group, and achievement) and performance (quality and quantity of work, level of attendance, and time management). All the relationships indicate a significant positive relationship. This result provides feedback in which the management must ensure the incentive which was given will fulfill the need.

For the hypothesis 3, the result shows that there are significant effects between variables motivation (perception of effort, fairness and goal) and performance (quality and quantity of work and time management). Variable perception of effort (PU) has a negative significant effect on time management (KW). It is shown that if the employee does not have a good perception of effort then it means the employee does not have good time management as well. The perception of effort refers to belief that effort will lead to performance and performance will lead to salary and reward. Other relationship indicates a significant positive relationship. The management must give fairness on evaluation of employee's performance and ensure that a goal is fulfilled.

For the hypothesis 4, the result shows that there is a significant effect between variables working conditions (workload and facilities) and performance (quality and quantity of work and level of attendance). Variable workload (BK) has a negative significant effect on quality and quantity

of work (KWL). It shows if the employee has an overload then the quantity and quality of employee performance will reduce. The management must maintain the optimal workload for each job and adjust the employee ability with job specification. Variable facilities (FP) have a negative significant effect on level of attendance (TH). It shows that completeness of supporting facilities will encourage the employee to work willingly for the organization. If the facilities do not support then there is a possibility for the employee to choose another job.

In this study the amount of data collected is limited, not all questionnaires returned. For further research, aspect individual attributes such as individual character, demographics, social status, and ethnicity can be included as part of variable working ability. Leadership aspect also can be included on variable working conditions. In future studies, can also be tested the effect among variables each other, not only the effect on job performance.

VI. Conclusion

The purpose of this study is to measure whether incentives, motivation, working ability and working conditions has a significant effect on employee performance as a case study conducted in an Indonesian university. The findings reveal that variables incentives, motivation and working conditions have a significant effect on employee performance. This result confirms that incentives and motivation have a positive significant effect on employee performance. Incentives consist of salary, job security, working group, and achievement. Motivation including fairness and goal. Furthermore, the results also uncover the issue that motivation that motivation, such as perception of effort, and working conditions, including facilities and workload, have a negative effect on employee performance, in term of quality and quantity of work, level of attendance, and time management. The results of this study provide a feedback for management to consider the availability of the factors such as incentives, motivation and working conditions that influence the work performance of the employee.

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