Analysis of Performance Measurement in the Department Quality of PT. ABC with the Balance Score Card and Path Analysis Methods

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Abstract: To achieve the company's vision and mission and strategy, a strategic map from each department is needed so that performance indicators can be measured from each department. In this study the determination of performance measurement was carried out at the quality department at PT. ABC by using 4 perspective balance score cards. Balance Score Card is one of the management tools used to carry out strategy implementation and measure performance with 4 factor perspectives. The results of achieving key performance indicators (KPI) will be included in the employee's annual performance appraisal and the results of KPI achievement are carried out by controls and reviews with a certain frequency of time. The results of the analysis of the effect of measuring performance and employee motivation on improving employee performance indicate that performance measurement has a direct influence with increasing employee performance with a significance of 0,000 <0,05, while employee motivation at work also has a direct effect on increasing employee work with a significance of 0,030 < 0.05.

Keywords: Balance Score Card, Key Performance Indicator, Path Analysis, Quality, Performance Management, Shoe Manufacturing

1. Introduction

A. Background

Quality department organization structure at PT. ABC consists of two divisions namely the Quality Integration Program (QIP) and Quality Assurance (QA) division where two divisions are led by a Department Head. For the QIP division consists of CSAS quality control parts (Cutting, Sewing, Assembling, Stockfitting) and Mixing Room, while the QA division consists of Laboratory, Final Inspection, Incoming, and QA Subcont Tier 3 (T3) parts. In supporting the company's strategy, the Quality Department has a vision "To assure the best quality product trough consistent application of total quality systems and enhancing the quality mindset" which means guaranteeing the best quality products through the implementation of a quality system and improving the quality mindset and consistent. Integrated quality or commonly called Total Quality Management (TQM) can be defined from the three words it has, namely: Total (overall), Quality (quality of goods or services), and Management (how to control). From these three definitions, it can be defined that the management system is oriented to customer satisfaction with activities that

are attempted to be right (right first time) through continuous improvement and motivating employees (Kid Sad grove, 1995). The QA and QIP divisions have their own activities and roles to support the strategy. The main activity of QA is to carry out projects related to product quality control from the stages of development and at the final inspection stage such as planning procedures for guaranteeing the quality of a product when mass production and conduct investigations regarding customer complaints and non-conformity issues. The role of QA in these activities is to ensure that the finished products that mass production will carry out and which will be sent to end customers have gone through visual and physical inspection at the stages of development and final inspection so that they are in accordance with quality standards determined and needed by the customer. Whereas the main activity of QIP is to carry out projects related to quality control at the production stage such as ensuring that the work processes carried out in production are in accordance with the SOP (Standard Operating Procedure) and conducting visual inspection of finished products after the assembling or finishing process is in accordance with inspection standards desired by customers such as may not be over cement, open bond, dirty, wrinkle, and others.
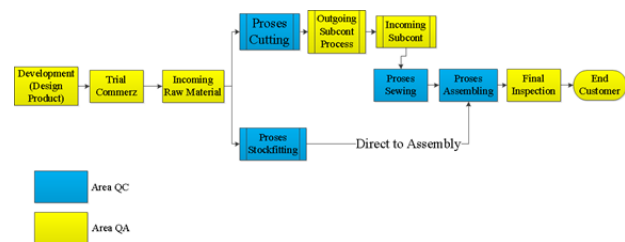

Fig. 1. Flow Manufacturing Product PT. ABC

For projects carried out by QA and QC the project team is because the implementation of the project cannot be carried out individually and must involve all members in the team so that all team members have responsibility for the work process and the results of the project achievements. An example in the QC section, the QC Manager has a project and target to improve the performance of the Final Inspection Rejection Rate (FRI). To improve the performance, the QC manager needs to involve all members of the team starting from the operator level, staff, to

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the section head for the division of control functions and in terms of strategic planning. The involvement of all QC team members in the project can be seen in the control function at each level such as (1) the operator level in QC roving which has the function and role to ensure that the production processes are carried out in the area of cutting, sewing, stock fitting and assembling (CSAS) already meet existing SOP standards such as product sample readiness in the production line, readiness and suitability of tooling to be used in the production process, engine temperature according to standards, and others. While the tool gate QC operator level has a function and role to conduct visual inspection of finished products that have gone through an assembly or finishing process to ensure that the finished product is in accordance with the product sample and the product standard desired by the customer. If a product is found that does not match the standard (defect) during a visual inspection, then the defect will be calculated into Right First Time (RFT). (2) The level of staff has functions and roles in monitoring the daily achievements of RFT and FRI where the monitoring will be made in the form of a daily report so that it can be reviewed by the relevant section for repairs. (3) For the level of the head of the division has a function and role in controlling and evaluating the net performance achievement of the team involved in the direct production process such as QC roving and QC tool gate. This review can be done from the achievement of RFT and FRI in each QC and the results of the review will be made continuous improvement. From the functions and roles of each QC level, it can be concluded that the three levels have functions and roles that correlate with each other to help QC managers achieve the projects and targets that are being worked out in terms of improving low FRI performance.

To measure the achievement of each performance in the quality department, a structured method is needed between indicators and targets that are determined by measuring performance management. In addition, analysis is also needed regarding the effect of measuring performance and employee motivation in working on employee performance to find out whether the performance measurement has a positive impact on improving employee performance achievement which will directly have a positive impact on achieving corporate strategy. Quality can be defined in various ways in which conceptual quality is related to one or several characteristics that a product or service is expected to have. In addition, quality is the consistency of improvement or improvement and a decrease in the characteristics of a product (goods and services) that are produced in order to meet the needs specified to improve internal and external customer satisfaction. Quality in the context of standard process control is how good an output is in meeting specifications and tolerances set by the design part of a company. The specifications and tolerances set by the product design section are referred to as design quality (quality of design) which must be oriented to the needs or desires of consumers (market orientation). This is intended to conform to the concept of deming wheels in modern industrial processes,

namely (1) market research, (2) product and process design, (3) production processes, and (4) marketing processes. In addition there are several quality dimensions in the manufacturing and service industries (Montgomery, 2009). This dimension is used to see which side of the quality will be assessed. The dimensions of product quality in the manufacturing industry include:

- Performance that is related to the basic operating characteristics of a product.
- Durability, which is related to how long or the age of a product concerned can last before finally the product must be replaced.
- Conformance to Specifications, which is the extent to which the basic operating characteristics of a product can meet certain specifications of the consumer or in other words no defects in the product.
- Features (characteristics) that are characteristics of a product designed to enhance product functions and add characteristics to the product.
- Reliability (probability), namely the probability that the product concerned will work well and satisfactorily or not in a certain period of time.
- Aesthetics (aesthetics) that is related to how the product is concerned.
- Perceived Quality, which is the result of using measurements made indirectly because of the possibility that consumers do not understand or lack information about the product concerned.
- Serviceability, namely ease and speed to be repaired, as well as competence and hospitality of service staff (Tjiptono, 2008).

Perfomance Management is a company system where managers integrate goal setting, supervision and evaluation activities, provide feedback and training as well as continuous employee appreciation. Systematic approach to improve individual or team performance in achieving an organizational goal. In the performance performance measurement approach can be done with 5 types of approaches, namely (1) comparative approach, (2) attribute approach, (3) behavior approach, (4) outcome approach, (5) and quality approach. Balance Scorecard is one of the systems used in measuring performance performance using the results approach (Kreitner and Angelo Kinicki, 2014). Balance Scorecard is a performance measurement system that focuses on financial and non-financial aspects by looking at 4 balance scorecard perspectives, namely financial, customer, learning and growth perspectives, and internal business processes (Sukardi, 2003). Balance Scorecard is a performance management tool that can help organizations to translate vision and strategy into action by utilizing a set of financial and non-financial indicators which are all intertwined in a causal relationship. The ultimate goal of performance management is to get the best performance from employees and organizations to achieve profit and growth while developing employee competencies in facing challenging tasks (Luis,

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2003). Path Analysis is a development technique of multiple linear regression that is used to test the amount of contribution (contribution) indicated by the path coefficient on each path diagram of the causal relationship between variables X1, X2, and X3 to Y and its impact on Z. Path analysis as an extended regression model used to test the alignment of the correlation matrix with two or more models of causal relationships compared to researchers. In path analysis there are 2 variables, namely exogenous variables reflecting the causal variables and endogenous variables as the effect variable (Garson. D, 2008). The main objective in this research is to make a performance measurement using the balance scorecard method so that each project that is carried out by each team involved in department quality has a positive role and results towards the achievement of company strategy and performance measurement in accordance with the vision and mission between the department and the company . In addition, the second objective in this study was to analyze the effect of measuring employee performance and employee motivation on increasing employee performance using the Path Analysis statistical analysis.

2. Method

A. Research methodology

This research was conducted at the quality department at PT. ABC which has an important role in controlling from raw material, subcont, production process to finished product. In this research methodology, the following steps are carried out:

- Determine the strategy map that will be adjusted to the company's vision and mission so that the measurement of performance is clear and well measured.
- Determine the key performance indicators that will be

adjusted to the company's strategy using 4 perspectives on the balance scorecard.
- Determine targets for each KPI based on achievements in the previous period with the SMART method (Specific, Measurable, Achievable, Reasonable, Time Bound)
- Describe the definition and formulation of performance measurements for each KPI.
- Control and review the achievement of each KPI
- Evaluate and improve if there is a KPI that does not reach the target.
- Conduct a quantitative approach by analyzing the effect of performance measurement (X1) and employee motivation (X2) on achieving corporate strategy (X3).

3. Results and discussion

A. Determining strategy map based on company vision and mission

PT. ABC which is a shoe manufacturing company that has a vision and mission to be the best company for the leading sports brands in the world and has a core value of the company namely (1) customer focus, (2) sportsmanship, (3) proactive, (4) enthusiasm, (5) and social responsibility. To achieve this vision and mission, the strategy carried out by the quality department is in line with the department's mission which previously explained where the strategy is to ensure that the products to be sent to end customers have gone through a good and consistent quality control process in raw material, subcont, process production to finished products so that the achievement of performance can be measured, one of which is by increasing

Table 1
BSC Department Quality

Perspective	Bobot	Strategy Map	No.	KPI	KPI type
Financial	10%	Reduce OH Cost of QA	1	OH	Lower is Better
			Total Score Financial		
Customer	40%	Excellent SCP Quality	1	Cost of quality claims	Lower is Better
Perspective	Bobot	Strategy Map	No.	KPI	KPI type
		Excellent Final Random Inspection	1	On time Inspection Booking Compliance	Higher is better
			Total Score Customer		
IBP	40%	Excellent Readiness Inspection	1	% Ontime FGT	Higher is better
		Excellent Quality Inspection	1	% In Accuracy Released to Production	Lower is Better
			2	% On Time Material Inspection	Higher is better
		Improve Quality System Supply Chain	1	Subcont Quality Performance (T3)	Higher is better
			2	% Ontime Cost of quality claim due to supplier execution	Higher is better
		Excellent Product Quality	1	Un repairable Defective	Lower is Better
			2	Final Inspection Rejection Rate	Lower is Better
			Total Score Internal Business Process		
Learning & Growth	10%	Increase Competent QC	1	% Competent QC	Higher is better
		Excellent Kaizen Implementation	1	% Kaizen Saving	Higher is better
		Develop Integrated HR & Talent Management System	2	% completion of Integrated HR Management Project	Higher is better
			Total Score Learning & Growth		

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Table 2
Set Up Target KPI Department Quality

No.	Sasaran Strategis (SS)	No.	KPI	Bobot IPC	Polarisasi	UoM	Freq. Update	Baseline		Target 2018	Pilot
								Target 2017	Ytd Des'17		
F1	Reduce OH Cost of QA	F1.1	OH Cost (Absolute Value)	10%	↓	Mill	Monthly	7,153.92	5,529.70	6,673.51	QA
						Rp					
C1	Excellent SCP Quality	C1.1	Cost of Quality Claim	10%	↓	%	Monthly	0.025%	0.026%	0.025%	QA
		C1.2	Pass Rate (UA)	10%	↑	%	Monthly	96%	100.00%	96%	Final Random Inspection
		C1.3	Grade of OEM (Original Equipment Manufacturing)	10%	↑	Rank	Half year	A	A	A	QA

No.	Sasaran Strategis (SS)	No.	KPI	Bobot IPC	Polarisasi	UoM	Freq. Update	Baseline		Target 2018	Pilot
								Target 2017	Ytd Des'17		
C2	Excellent Final Random Inspection	C2.1	Ontime Inspection Booking Compliance	10%	↑	%	Monthly	n/a	n/a	100.00%	Final Random Inspection
I1	Excellent Readiness Inspection	I1.1	% Ontime FGT	5%	↑	%	Monthly	n/a	n/a	100.00%	Final Random Inspection
I2	Excellent Quality Inspection	I2.1	% In Accuracy Released to Production	5%	↓	%	Monthly	1.00%	11.59%	0.50%	Incoming & Subcont
		I2.2	% On Time Material Inspection	5%	↑	%	Monthly	100.00%	98.72%	100.00%	Incoming
I3	Improve Quality System Supply Chain	I3.1	Subcont Quality Performance (T3)	7%	↑	%	Monthly	95.00%	74.5%	85.00%	Subcont
		I3.2	% Ontime Cost of quality claim due to supplier execution	5%	↑	%	Monthly	n/a	n/a	100.00%	Incoming & Subcont
I4	Excellent Product Quality	I4.1	Un repairable Defective	6%	↓	%	Monthly	0.10%	0.05%	0.03%	QA & Production
		I4.2	Final Inspection Rejection Rate	7%	↓	%	Monthly	2.00%	1.30%	1%	QA
L1	Increase Competent QC	L1.1	% Competent QC	3%	↑	%	Half year	n/a	n/a	90.00%	QA
L2	Excellent Kaizen Implementation	L2.1	% Kaizen Saving	2%	↑	%	Monthly	n/a	n/a	100.00%	QA
L3	Develop Integrated HR & Talent Management System	L3.1	% completion of Integrated HR Management Project	5%	↑	%	Quarterly	n/a	n/a	100.00%	QA

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Right First Time (RFT) and FRI (Final Rate Inspection) Rejection. The description of this strategy map is done using the balanced scorecard results approach that is adjusted to 4 perspectives. The strategy map in the quality department can be seen in the Fig. 2.
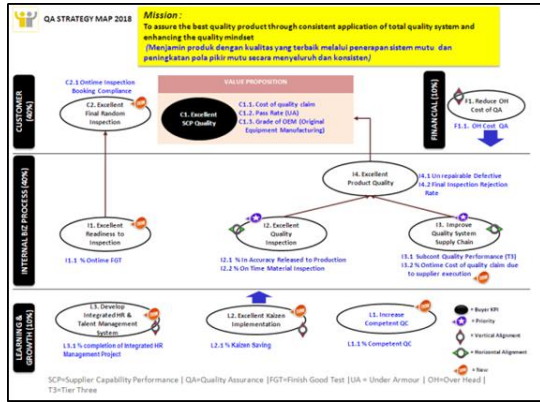

Fig. 2. Strategy Map Department Quality
(Source: Management PT. ABC, 2018)

B. Determining KPI using 4 perspective balance score cards

In determining the KPI for the quality department is divided into 4 balance scorecard perspectives that correlate with each other. The determination of KPI is expected to have a positive influence and role on achieving the company's vision and mission and strategy. The quality department balance score card table can be seen in Table 1.

C. Determining the target key performance indicator

To determine the target key performance indicator in the quality department, it is done by looking at the results of achievements in the previous period and still using the SMART method (specific, measurable, achievable, reasonable, time bound) and the target set must be communicated and socialized with PIC (Person In Charge) involved in each KPI project so that the strategy map on the KPI can be understood and executed properly. Each performance indicator has its own polarization. The polarization shows the type of KPI where there are KPIs that have targets with minimum and maximum scales. For KPIs that show the minimum scale have KPI Higher is better types, while for KPIs which show the maximum scale having KPI type Low is better. For the results of the targeting of each quality department KPI can be seen in the Table 2.

D. Definitions and formulations for measuring performance of each KPI

To make it easy for the PIC Project to understand each KPI that is done and prevent any misunderstanding, then each PIC Project will be given information about the definition and formulation of performance measurements from each KPI. The definitions and formulations can be seen in Table 3.

E. Conducting controls and review of the results of achieving each KPI

The process of control and review of the results of the achievement of each KPI is carried out by the PIC project with the support system in accordance with the frequency. Specified time (in table 2). But for some KPIs that are critical, such as RFT or FRI performance, control and review of achievement will be carried out every day. An example of a KPI for RFT performance per day can be seen in Fig. 3.
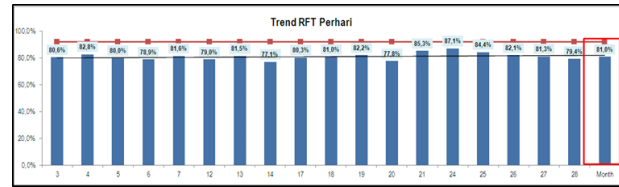

Fig. 3. RFT Performance / September Day

In the RFT performance trend above, it can be seen that the RFT performance during September has not yet reached the set minimum standard of 92%, so that continuous and consistent improvements are needed to achieve these targets. The process of control and review needs to be done so that the cause of the KPI target is not known. With this process, it is expected that feedback from each team member involved in the project can be identified in any future improvement plans. The results of the control and review of KPI achievement will also be used in the evaluation of the annual performance of each PIC project using 3 dimensions, namely (1) dimensions of performance (2), dimensions of competence, (3) dimensions of discipline. To achieve the KPI itself, it is included in the performance dimension. For example, the results of KPI achievement for the position of Manager Quality can be seen in the Table 4.

The value of the KPI achievement results will then be included in the employee's annual performance appraisal form for group B. On the annual performance appraisal form, each entered value will be multiplied by the weight of the scores on each KPI. The annual performance appraisal of employees will influence salary increases and bonuses earned by each PIC and project team. For scaling / grading employee annual performance assessments can be seen in the guiding norm. On the rating scale shows the performance of employees whether they meet expectations and work requirements or not. The example for employee annual performance assessment can be seen in the table 5

F. Evaluation and improvement of KPI

To evaluate the achievement of KPIs that have not met the target based on the root cause, the achievement of the KPI is not achieved. In table 4, the KPI Manager Quality regarding Final Inspection Rejection Rate (FRI) does not reach the maximum target of 7% where the KPI results are 13.57%. To analyze root cause, the achievement of the KPI target was not achieved by looking at the performance of QC Tool gate operators in the final inspection area. The QC tool gate performance can be seen in Table 6.

In the final inspection report, it can be seen that the type of defect that is not properly controlled by the QC tool gate is

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found because of the bond gap, dirty, and different colors. To improve the QC performance so that it does not become a recurring problem, it is necessary to do retraining like:

- Training on bonding inspection standards up to the handling or repair process if bond shoes are found.
- Training on the method of cleaning processes using chemicals for dirty shoes.
- QC color blind evaluation through examination using Munsell.

If after the training QC performance is still not good, the QC is categorized as not feasible to carry out the visual inspection of finished shoes in production. For the results of evaluation of color blind examination with the Munsell Test, if it is found that there is a QC that has a substandard performance, then the QC may not be involved in the visual inspection of finished shoes in production. The standard performance test for QC is Average. Examples of the results of color blind evaluation using the munsell test can be seen in Fig. 4.

Table 4
Achievement of Key Performance Indicator

Perspective	Bobot	Strategy Map	No.	KPI	KPI type	Bobot	Target	Actual	% Achievement	KPI Score
Financial	10%	Reduce OH Cost of QA	1	OH	Lower is Better	10%	4620.88	5000.5164	92%	9.18
				Total Score Financial		10%				9.18
Customer	40%	Excellent SCP Quality	1	Cost of quality claims	Lower is Better	10%	0.025%	0.012%	100%	10.00
			2	Pass rate	Higher is better	10%	96.00%	100.00%	100%	10.00
			3	Grade of OEM (Original Equipment Manufacturing)	Higher is better	10%	100	100	100%	10.00
		Excellent Final Random Inspection	1	Ontime Inspection Booking Compliance	Higher is better	10%	100.00%	77.47%	77%	7.75
				Total Score Customer		40%				37.75
IBP	40%	Excellent Readiness Inspection	1	% Ontime FGT	Higher is better	5%	100.00%	72.73%	73%	3.64
		Excellent Quality Inspection	1	% In Accuracy Released to Production	Lower is Better	5%	0.50%	21.43%	0%	0.00
			2	% On Time Material Inspection	Higher is better	5%	100.00%	99.79%	100%	4.99
		Improve Quality System Supply Chain	1	Subcont Quality Performance (T3)	Higher is better	7%	85.00%	59.11%	70%	4.87
			2	% Ontime Cost of quality claim due to supplier execution	Higher is better	5%	100.00%	11.29%	11%	0.56
		Excellent Product Quality	1	Un repairable Defective	Lower is Better	6%	0.10%	0.33%	0%	0.00
			2	Final Inspection Rejection Rate	Lower is Better	7%	1.00%	13.57%	0%	0.00
				Total Score Internal Business Process		40%				14.06
Learning & Growth	10%	Increase Competent QC	1	% Competent QC	Higher is better	3%	85%	78%	92%	2.75
		Excellent Kaizen Implementation	1	% Kaizen Saving	Higher is better	2%	100%	100%	100%	2.00
		Develop Integrated HR & Talent Management System	2	% completion of Integrated HR Management Project	Higher is better	5%	100%	92%	92%	4.60
				Total Score Learning & Growth		10%				9.35
				TOTAL SCORE						70.34
				TOTAL SCORE (excl N/A)						76.45

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Table 5
Employee Performance Assessment Form

| Data Karyawan						
Divisi / Departement:			Position:			
NIK:			Assessment Period:			
Name:			Date of Assessment:			
* COMPLETED WITH THE VALUE THAT IS IN THE NORMA ASSESSMENT GUIDE (TABLE UNDER)						
A.1. PERFORMANCE (PERFORMANCE) DIMENSION						
NO.	ASPECT	DEFINITION	GRADE	WEIGHT		TOTAL (value of x weight)
				STAFF	LEADER	
KPI (Key Performance Indicator)						
1	PERFORMANCE DIMENSIONS	Total KPI achievement		0%		
NON KPI (Apabila dibutuhkan)						
2	Kualitas / Keakuratan (Quality / Accuracy)	Work results meet the accuracy or expected quality standards		25%		0
3	Kecepatan / Ketepatan (Speed / Delivery)	Work quickly, on time without reducing the quality of work		35%		0
4	Kesadaran Biaya (Efficiency / Cost awareness)	Care for process efficiency and costs to be incurred		30%		0
5	Penanganan Masalah (Problem Solving)	How to deal with, solve problems and follow up on solving these problems		10%		0
		TOTAL PERFORMANCE DIMENSIONS		100%	0%	0
A.2 REWARD & PENALTY						
	REWARD (nilai 1 - 5)					
	PENALTY (nilai 1 - 15)					
		TOTAL REWARD & PENALTY				
B. DIMENSI KOMPETENSI						
NO.	ASPECT	DEFINITION	GRADE	WEIGHT		TOTAL (value of x weight)
				STAFF	LEADER	
CUSTOMER FOCUS						
1	Customer orientation	Understand customer views and requests (internal & external), including doing what should be done to serve customers to meet expectations and anticipate future needs.		15%	15%	0
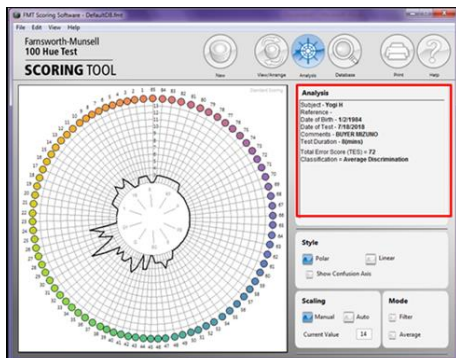
Fig. 4. Results of Color Blind Examination with the Munsell Test

G. Performance measurement analysis and work motivation on employee performance

In this quantitative study, a sample of 15 respondents consisted of 2 manager positions, 3 section heads, 5 supervisor positions, and 5 staff positions where data collection was done using a questionnaire and analysis using path analysis was conducted. In this case you will use 3 variables, namely performance measurement (X1), work motivation (X2), and employee performance (X3). The path diagram in this case can be seen in Fig. 5.

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Table 5 (Cont.)
Employee Performance Assessment Form

NO.	ASPECT	DEFINITION	GRADE	WEIGHT		TOTAL (value of x weight)
				STAFF	LEADER	
	SPORTSMANSHIP					
2	Develop and maintain relationships	The ability to establish good relationships with customers (internal & external), understand the views of others and can resolve conflicts.		10%	10%	0
3	Group collaboration	Ability to work in teams and willingness to accept assignments to achieve team goals.		15%	10%	0
	PROACTIVE					
4	Individual motivation	A strong willingness to achieve goals, be responsible for completing tasks, show initiative and ensure that the goal is achieved.		15%	15%	0
5	Kemandirian	The ability to be able to stand alone, overcome interests without relying on others, acts with integrity.		15%	15%	0
	ENTHUSIASM					
6	Flexibility	Willingness to change and learn, develop new ideas or ideas.		15%	15%	0
	SOCIAL RESPONSIBILITY					
7	Health Safety & Environment	Care for health, safety and safety in the work area.		15%	10%	0
	* ADDITIONAL (SPECIAL LEADERS)					
8	Leadership	The ability to organize, delegate tasks, motivate, supervise and direct subordinates to achieve goals and act as positive role models.		0%	10%	0%
		TOTAL DIMENSIONS OF COMPETENCE		100%	100%	0
	C. DIMENSION OF DISCIPLINE					
	PRESENCE Permit: 0 X 0.3 Alpha: 0 X 2.0 Too late: 0 X 0.5					
	SANCTION SP 1: … X 5, SP 2 : …X 10, SP 3 : … X 15, Skorsing : … X20					

PANDUAN NORMA PENILAIAN			
GRADE	INFORMATION	All Dimensions Assessment	
>90 - 100	Performance **always exceeds** expectations and work requirements	Total Performance Dimensions	60%
>80 - 100	Performance meets **expectations** and work requirements	Total Competency Dimensions	40%
>65 - 80	Performance **mostly** meets expectations and work requirements	Total Rewards & Penalty	
>50 – 65	**Most performance** does not meet expectations and work requirements	Total Discipline Dimensions	
≤ 50	Performance **does not meet expectations** and work requirements	Total Assessment Results	

Table 6
Final Inspection Report

No	SO LINE	ORDER NO	Inspection Date	Model Name	TOTAL QTY ORDER	Total Qty Pass (Pairs)	Total Qty Fail (Pairs)	Sample lot Inspect	Qty Defect IC	B'Grade	DEFECT CODE
1	3338-5	IPC1807NA	1-Aug	SONIC RUSH	680	680		160	2	1	Beda Warna
2	3338-14	IPC1807T	1-Aug	MONARCIDA 2 FS JR MD	90	90		18	1	0	Bond Gap/1
3	3338-18	IPC1807T	1-Aug	MONARCIDA 2 FS JR IN	410	410		40	1	0	Bond Gap/1
4	3392-1	IPCPO2018005-0576SWS	1-Aug	THUNDER BLADE	200	200		26	1	0	Bond Gap/1
5	3390-3	IPCPO2018005-0570SMS	1-Aug	THUNDER BLADE MID	200	200		26	1	0	Line up diff/1
6	3339-1	AB1804003	1-Aug	SONIC RUSH	310		310	40	6	0	Beda Warna
7	3337-1	IPC1807A	1-Aug	SONIC RUSH	160		160	32	4	0	Dirty

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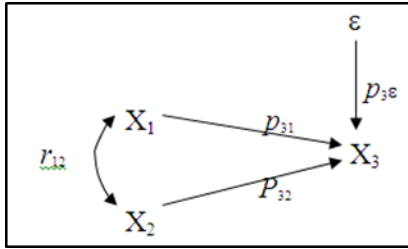**www.ijresm.com | ISSN (Online): 2581-5792**

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Fig. 5. Path Chart

On the path diagram above it can be seen that performance measurement (X1) and work motivation (X2) have correlative links and together will affect employee performance (X3). To measure performance and work motivation is an exogenous variable, while for employee performance is an endogenous variable. To find out the direct effect of X1 on X3 and the direct effect of X2 on X3, the data interpretation will be carried out as follows:

Table 7
Model R Square

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,949^a	,900	,883	12,44732

a. Predictors: (Constant), Motivasi Karyawan, Pengukuran Kinerja

Then P3³:
$P3^3: \sqrt{1-R^2} = \sqrt{1-0,900} = 0,316$

Table 8
Correlations dan Coefficients

Correlations		Kinerja Karyawan	Pengukuran Kinerja	Motivasi Karyawan
Kinerja Karyawan	Pearson Correlation	1	,921**	,832**
	Sig. (2-tailed)		,000	,000
	N	15	15	15
Pengukuran Kinerja	Pearson Correlation	,921**	1	,738**
	Sig. (2-tailed)	,000		,002
	N	15	15	15
Motivasi Karyawan	Pearson Correlation	,832**	,738**	1
	Sig. (2-tailed)	,000	,002	
	N	15	15	15

**. Correlation is significant at the 0.01 level (2-tailed).

Table 8
Coefficients

Coefficients^a		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	96,264	16,643		5,784	,000
	Pengukuran Kinerja	2,538	,510	,675	4,979	,000
	Motivasi Karyawan	,317	,129	,334	2,460	,030

a. Dependent Variable: Kinerja Karyawan

From the correlations table and the coefficients above, then a:
The direct effect of X1 on X3 is (0.675) x (0.921) = 0.621
The direct effect of X2 on X3 is (0.334) x (0.832) = 0.277
Then the conclusions from the research above are:
- Analysis of the effect of X1 on X3, From the analysis obtained that the significance of X1 is 0,000 <0,05, so it can be concluded that directly there is a significant

effect of X1 on X3.
- Analysis of the effect of X2 on X3, From the analysis it was found that the significance of X2 was 0.030 <0.05, so it can be concluded that there is a direct significant effect of X2 on X3.

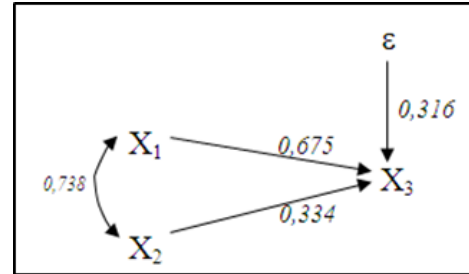The path diagram for the results of the above research can be seen in Fig. 6.

Fig. 6. Research Results Path Diagram

4. Conclusion

Based on the results of a case study of performance management and analysis of the effect of performance measurement with path analysis, the conclusions that can be given are as follows:
- By using the balance scorecard method, the target of each performance indicator can be determined based on the achievements in the previous period.
- Based on the balance scorecard method, it is known that there is one performance indicator on the KPI QC Manager who does not reach the target, namely regarding Final Rate Inspection (FRI) Rejection with an achievement of 13.57% where the target set by the company is a maximum of 7%.
- Evaluation of the results of achievements that did not reach these targets can be improved by a retraining process to QC who are directly involved in the process of checking the process and finished products.
- By using path analysis, it can be seen that performance measurement has a direct effect on improving employee performance with a significance of 0,000 <0, 05, while employee motivation in work also has a direct influence with increasing employee work with a significance of 0,030 <0, 05.

A. Suggestions

- Based on the results of a performance management case study and an analysis of the effect of performance measurement with this path analysis, the suggestions that can be given are as follows:
- Adjust the measurement of performance indicators if there is a change in the quality department's strategy map.
- Carry out continuous improvement control on the results of the KPI which has a GAP between the results and the target.

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