

## The Employees Perception Analysis toward the Operational Expectation and Reality based on Ishikawa and Spider Plot Methods

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### ABSTRACT

*The purpose of this study is to examine and analyze the employees' perception toward the operational expectation and reality in the production factors based on Ishikawa and Spider Plot at PT. Tata Makmur Bersama – Sidoarjo. The population of this study is all 198 employees of PT. Tata Makmur Bersama - Sidoarjo, and the sample technique is saturated sampling, where the sample is the whole population. This study finds that the employees' perception and expectation toward the operational reality can be identified as good category, through the average of Customer Satisfaction Index (CSI) in all aspects analysis. Nevertheless, only few production aspects that the firm is doing well; consequently the employees feel receiving inadequate treatments. This study enlightens the distinction of the Improvement Ratio (IR) as scale through Cartesian and Spider Plot diagrams due to the ability to reveal the broaden deviation between the operational expectation and reality that cause employees' tremendous dissatisfaction. In addition, this study presents the short-term priority scale to enhance the primary priority quadrant in order to explain the short-term and long-term management's strategy map that shows in Cartesian diagram. Furthermore, this study recommends the firm's management could utilize the data at Achievement Maintenance Quadrant and Low Priority to improve the long-term management's strategy map.*

**Keywords:** *Employees' Perception; Expectation and Actuality; Ishikawa Method; Spider Plot; Priority Scale.*

### INTRODUCTION

The Human Resource (HR) strategy should be determined with the consideration of some external factors, such as future trends and needs, demand and supply, government regulations compliance, the employees' needs, potential competitors, the adjustments of social, demographic, technology, cultural and values changes. John and Hoon (2002) highlighting that HR strategy have to able to reflect clearly the firm's strategy concerning of the people, profit, and overall effectiveness. Each firm is required to have the veracious strategy in determining its strategic and operational activities to enrich its competitiveness by optimizing the production factors in producing products or services as the production's outputs.

### How to Cite:

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Draft (2012) mentions that the management ultimate responsibility is to accomplish elevated performance, which is the fulfillment of the firm's goal through manage the resources in efficient and effective manners. On the other hand, Aaron (2009) finds that management are struggling to balance the efficiency and effeteness manners. The firm has an obligation to ensure the involvement and interrelationship between the production's factors, which are man, money, materials, methods, market, and machine (Gorda, 2006); with the intention of maintaining the firm's sustainability. One of the production factors is man that represents HR factor, and plays crucial roles to manage and control the other production factors.

Formerly, Mark (2005) emphasizes that all the reasonable goals of the firm ought to be achieved with the aim of the firm's sustainability, wealth and profitability. Moreover, Ivancevich and Mattesion (2009) identify that 4 (four) specific steps of diagnostic approach need to be taken by HR management, which are diagnosis, prescription, implementation and evaluation.

PT. Tata Makmur Bersama – Sidoarjo is a plywood processing firm that had been established since 2012, and the firm has experiencing serious production challenges due to lack competency of its HR to operating and managing the other production factors. Therefore, the problem statements of this study are:

- a. What is the employees' perception or response toward its operational expectation and reality based on Ishikawa diagram or method
- b. What is the firm's distinction map and improvement ratio using Cartesian and Spider Plot Methods
- c. What is the firm's improvement strategies for short-term, medium-term, and long-term.
- d. Based on the problem statements above, the purpose of this study are:
- e. To analyze the employees' perception or response toward its operational expectation and reality based on Ishikawa diagram or method
- f. To analyze the firm's distinction map and improvement ratio analysis using Cartesian and Spider Plot Methods
- g. To analyze the firm's improvement the strategies for short-term, medium-term, and long-term.

## **METHODOLOGY**

### **Population and Sample**

Sugiyono (2010) explain about the different meaning between the population and the sample. Population is a generalization region consisting of objects or subjects that have certain qualities and characteristics established by researchers to be studied and then drawn conclusions. Thus, this study population is all 198 employees of PT. Tata Makmur Bersama – Sidoarjo. Meanwhile, sample is part of the number and characteristics possessed by the population. This study taken all 198 employees of PT. Tata Makmur Bersama – Sidoarjo as the sample, therefore, this study employs a saturated sampling. Saturation sampling technique is a sample determination technique when all members of the population are used as a sample (Sugiyono, 2010).

## **RESULT AND DISCUSSION**

Due to numerous factors that need to be measured and analyzed, this study emphasis on deeper analyzing through an 'Importance-Satisfaction Analysis' by using Cartesian Diagram of Most Important Score (MIS) mapping as abscissa on y axis and Most Satisfaction Score (MSS) as abscissa on x axis to several aspects.

No	Aspect	Expected/ Interest		Reality/ Satisfaction		MS (X)	MSS (X)	GAP (i)=(h) -(g) :(h)	IR (j)=(g) :(h)	CSI (l)=(h) :(g)	Notes
		Total Score (c)	Total Filled (d)	Total Score (e)	Total Filled (f)						
1	C28	99	30	96	30	3,30	3,20	(0,10)	1,03	97%	Excellent
2	C29	97	30	98	30	3,23	3,27	0,03	0,99	101%	Excellent
3	C30	96	30	106	30	3,20	3,53	0,33	0,91	110%	Excellent
4	C31	111	30	91	30	3,70	3,03	(0,67)	1,22	82%	Good
5	C32	95	30	95	30	3,17	3,17	-	1,00	100%	Excellent
6	C33	100	30	96	30	3,33	3,20	(0,13)	1,04	96%	Excellent
7	C34	99	30	95	30	3,30	3,17	(0,13)	1,04	96%	Excellent
8	C35	107	30	108	30	3,57	3,60	0,03	0,99	101%	Excellent
9	C36	96	30	100	30	3,20	3,33	0,13	0,96	104%	Excellent
10	C37	99	30	93	30	3,30	3,10	(0,20)	1,06	94%	Excellent
11	C38	100	30	92	30	3,33	3,07	(0,27)	1,09	92%	Excellent
12	C39	109	30	91	30	3,63	3,03	(0,60)	1,20	83%	Good
13	C40	109	30	95	30	3,63	3,17	(0,47)	1,15	87%	Excellent
14	C41	109	30	95	30	3,63	3,17	(0,47)	1,15	87%	Excellent
15	C42	99	30	91	30	3,30	3,03	(0,27)	1,09	92%	Excellent
16	C43	100	30	98	30	3,33	3,27	(0,07)	1,02	98%	Excellent
17	C44	99	30	110	30	3,30	3,67	0,37	0,90	111%	Excellent
18	C45	113	30	103	30	3,77	3,43	(0,33)	1,10	91%	Excellent

Source: Data Processing, 2017

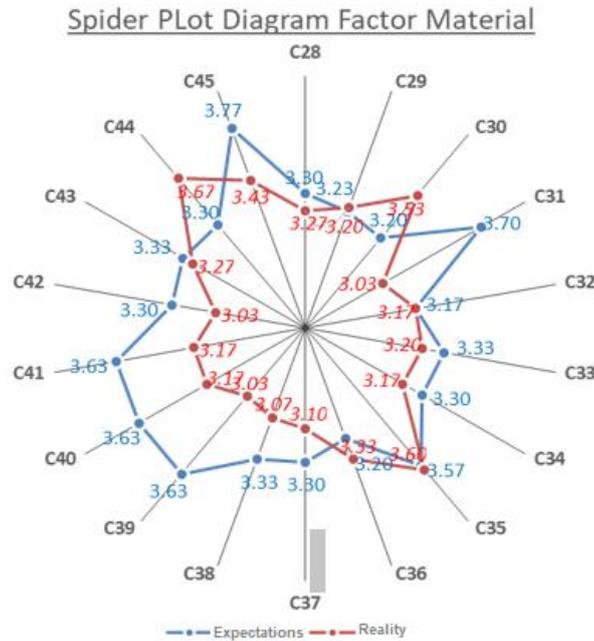
**Figure 1**  
**The Results of the Manpower Questioner Tabulation**

**Manpower (Aspect C)**

The Description of the Aspects:

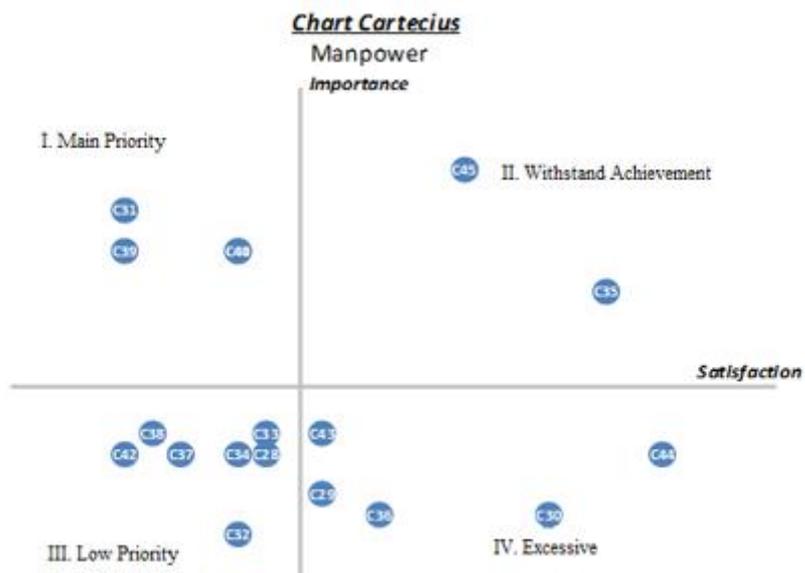
- C28 Employees arrive on time
- C29 The firm's Code of Conduct must be complied by all employees
- C30 A strict sanctions for those who failure to comply with the firm's regulations
- C31 Employees accomplished the work on time
- C32 The establishment of good relationship between the employees during and after office hours
- C33 Each employee must be an expert in their field
- C34 Basic capability in patching of damaged materials
- C35 The high turn-over affect employee performance
- C36 There is a suitable fit between employee's age and the duties
- C37 There is a suitable fit between employee's education background and the position
- C38 There is a suitable fit between employee's health conditions with the working environment
- C39 The given wage is appropriate also there is a periodic increase
- C40 There are health facilities provided as medical allowances and insurance
- C41 Employees receive the BPJS – the Indonesian medical insurance and manpower insurance
- C42 Completion of work on time
- C43 The number of workers in the company in accordance with the needs of the company
- C44 The implementation of mutation and rotation is for the benefits of employee's competency and to increase their working spirit
- C45 Suggestions and criticism from colleagues make the employee works better

This study shows that manpower CSI factor is very good (96%) based on the result of mapping of MIS as abscissa on y axis and MSS as abscissa on x axis to 18 aspect for manpower factor in Figure 1.



Source: Data Processing, 2017

**Figure 2**  
**Spider Plot Diagram – Manpower Analysis**



Source: Data Processing, 2017

**Figure 3**  
**Cartesian Chart – Manpower Analysis**

**Table 1**  
**The Aspect C Analysis Result**

Priority Scale	Aspects
Improvement	C31 Employees accomplished the work on time
	C39 The given wage is appropriate also there is a periodic increase
	C40 There are health facilities provided as medical allowances and insurance
	C41 Employees receive the BPJS – the Indonesian medical insurance and manpower insurance
Maintaining	C45 Suggestions and criticism from colleagues make the employee works better
	C35 The high turn-over affect employee performance
Low	C33 Each employee must be an expert in their field
	C28 Employees arrive on time
	C34 Basic capability in patching of damaged materials
	C37 There is a suitable fit between employee's education background and the position
	C38 There is a suitable fit between employee's health conditions with the working environment
	C32 The establishment of good relationship between the employees during and after office hours
	C42 Completion of work on time
Efficiency	C44 The implementation of mutation and rotation is for the benefits of employee's competency and to increase their working spirit
	C30 A strict sanctions for those who failure to comply with the firm's regulations
	C36 There is a suitable fit between employee's age and the duties
	C29 The firm's Code of Conduct must be complied by all employees
	C43 The number of workers in the company in accordance with the needs of the company

Source: Data Processing, 2017

The analysis result of Aspect C based on Spider Plot diagram and Cartesian Chart is presented as Table 1.

#### **Management (Aspect D)**

The Description of the Aspects:

- D46 The leaders should be able to provide good examples to employees
- D47 The leaders' working experience espousal with the outcomes
- D48 The firm's short-term strategy has been stated on the each position's duties and functions
- D49 The firm's medium-term strategy is described in its standardized policies and rules
- D50 Socialize the vision, mission and corporate values to all employees
- D51 Employee personal data information is stored in the firm's data base
- D52 The firm concerns about the employees' careers path
- D53 The firm develops a career development of the employees
- D54 The employees' career path are fitted to their talents
- D55 The employee recruitment system is fit with the job specifications

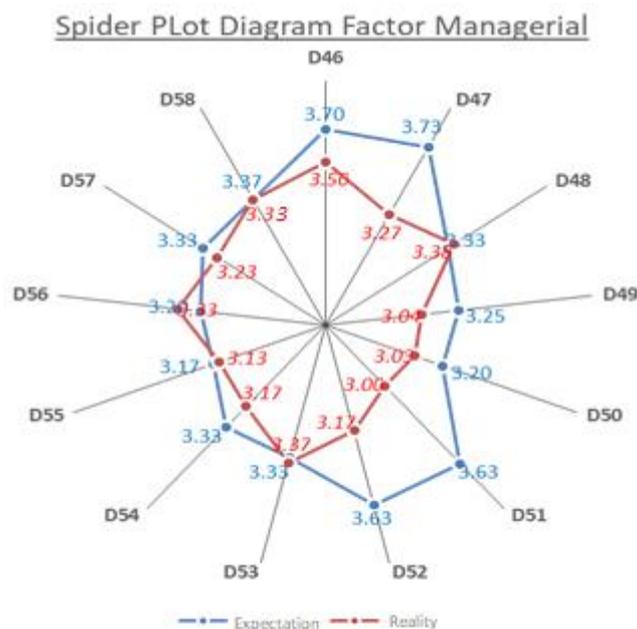
- D56 The employee training program is based on the needs of the job
- D57 Each leader understands the job description and its development
- D58 The firms develop a full-time duty program for its employees

The management CSI factor of this study is relatively low (65%), based on the results of mapping MIS as abscissa on y axis and MSS as abscissa on x axis to 13 aspects for managerial factor in figure 4. Hence generated diagram of spider plot and Cartesian as follows (Figure 5).

No	Aspect	Expected / Interest		Reality / Satisfaction		MIS	MSS	GAP	IR	CSI	Notes
		Total Score	Total Filled	Total Score	Total Filled	(Y)	(X)				
(a)	(b)	(c)	(d)	(e)	(f)	$(g) = (c) : (d)$	$(h) = (e) : (f)$	$(i) = (h) - (g)$	$(j) = (g) : (h)$	$(l) = (h) : (g)$	
1	D46	111	30	105	30	3.70	3.50	(0.20)	1.06	95%	Excellent
2	D47	112	30	98	30	3.73	3.27	(0.47)	1.14	88%	Excellent
3	D48	80	30	81	30	2.67	2.70	0.03	0.99	101%	Excellent
4	D49	78	30	73	30	2.60	2.43	(0.17)	1.07	94%	Excellent
5	D50	96	30	91	30	3.20	3.03	(0.17)	1.05	95%	Excellent
6	D51	109	30	90	30	3.63	3.00	(0.63)	1.21	83%	Good
7	D52	109	30	95	30	3.63	3.17	(0.47)	1.15	87%	Excellent
8	D53	100	30	101	30	3.33	3.37	0.03	0.99	101%	Excellent
9	D54	100	30	95	30	3.33	3.17	(0.17)	1.05	95%	Excellent
10	D55	95	30	94	30	3.17	3.13	(0.03)	1.01	99%	Excellent
11	D56	96	30	100	30	3.20	3.33	0.13	0.96	104%	Excellent
12	D57	100	30	97	30	3.33	3.23	(0.10)	1.03	97%	Excellent
13	D58	101	30	100	30	3.37	3.33	(0.03)	1.01	99%	Excellent

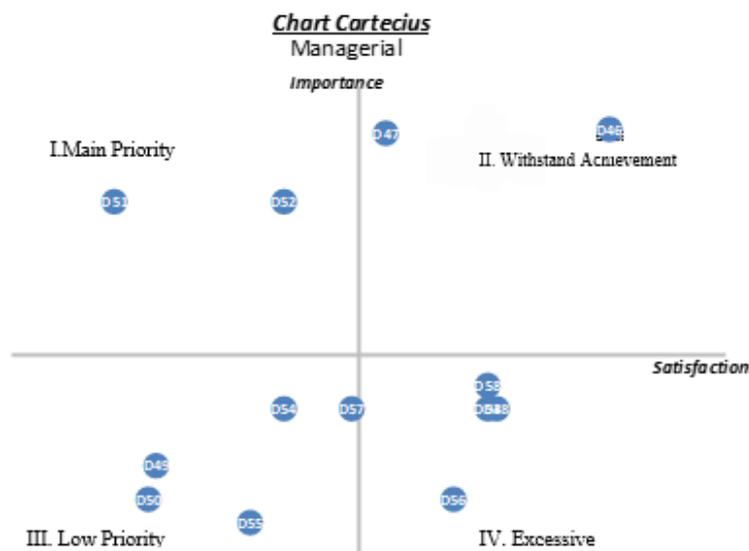
Source: Data Processing, 2017

**Figure 4**  
**The Results of the Management Questioner Tabulation**



Source: Data Processing, 2017

**Figure 5**  
**Spider Plot Diagram – Management Analysis**



Source: Data Processing, 2017

**Figure 6**  
**Cartesian Chart – Management Analysis**

**Table 2**  
**The Aspect D Analysis Result**

Priority Scale	Aspects
Improvement	D51 Employee personal data information is stored in the firm's data base
	D52 The firm concerns about the employees' careers path
Maintaining	D46 The leaders should be able to provide good examples to employees
	D47 The leaders' working experience espousal with the outcomes
Low	D57 Each leader understands the job description and its development
	D54 The employees' career path are fitted to their talents
	D55 The employee recruitment system is fit with the job specifications
	D49 The firm's medium-term strategy is described in its standardized policies and rules
	D50 Socialize the vision, mission and corporate values to all employees
	D56 The employee training program is based on the needs of the job
Efficiency	D48 The firm's short-term strategy has been stated on the each position's duties and functions
	D53 The firm develops a career development of the employees
	D58 The firms develop a full-time duty program for its employees
	D53 The firm develops a career development of the employees

Source: Data Processing, 2017

The analysis result of Aspect D based on Spider Plot diagram and Cartesian Chart is presented as Table 2.

## CONCLUSION

This study concludes the analysis result of employee's perception toward the operational expectation and reality based on Ishikawa and Spider Plot Methods at PT. Tata Makmur Bersama-Sidoarjo as follows a. Employee's perception or response to expectation and reality is found that the reality felt by employees is still less than the expectation, even though all aspects show the average level of CSI as a good category. Therefore, it needs to be improved until the expectation of employees can be fulfilled and focuses on working productivity enhancement. B. Based on Cartesian Chart and Spider Plot analysis, this study finds that there is a gap between employees' expectation and reality, especially related with methodology factors and material. c. The short-term and long-term improvement strategies are reflected in Cartesian Chart, for priority scale (Short run) is on the 'Main Priority' quadrant side, and for the long-term improvement there is in quadrant 'Maintaining the Achievement'.

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