

Optimization of Human Sigma Event Management in Service Industry

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Abstract—Various types of organizations have implemented different quality management concepts, including Six Sigma. Although many important works related to Six Sigma have been documented, there are still some questions about the application of these concept in various organizations. At present, limited research has been carried out on the Human Sigma approach. Human Sigma was developed as a new management approach for measuring and managing human systems in companies. Human sigma is a contemporary management approach to measuring and managing human systems in business. This study aims to determine the level of employee and customer involvement in organizations related to service quality for business efficiency at the event organizer. The research design used is quantitative with an exploratory study approach and Human Sigma analysis. The results of this study indicate the importance of increasing business performance through increasing the value of customer and employee involvement in order to build loyalty to the organization and customer satisfaction. Based on the research results obtained by the design of strategies using IFE, EFE and SWOT to improve organizational performance.

Keywords: *human sigma, event organizer, quality of service*

I. INTRODUCTION

The development of service industry event organizers almost never stops in Indonesia. Despite having high growth potential, event organizers need government support to be competitive. Indonesian Back stagers' founder Krisnanto Sutrisman said the industry even had a growth of around 15% to 20% with an industry value of more than Rp500 trillion. There are currently around 4,000 employees with a formal workforce absorption of around 40,000 people. Despite the rise of Event Organizer (EO) in various cities today, but the current industrial event organizers are still not fully explored. There are still many events in the area that have the potential to be worked on.

Event Organizer (EO) is a service that aims to make it easier for people to organize an event that is organized well and smoothly, but not only that EO is also brand activation. Event Organizer (EO) that brings results for people who need event management. Can bring profit or at least create a good image.

Diamond Wedding Organizer and Alphabet Organizer are an Event Organizer (EO) service company established in Jakarta. Productivity is an important factor that influences the company's sustainability and development. The role of the Event Organizer covers the preparation, design, layout, outreach and promotion of the event to the implementation of off air to completion. The existence of an Event Organizer has become an inseparable part of the management strategy, moreover, competition between companies is getting tougher for the need for superior resources and a good system in carrying out these activities. The system will only excel if the people in it are good, in other words the superiority of a process or system will only depend on the people who manage or use the system. This is the idea behind Human Sigma, a new branch of science from Six Sigma that focuses on improving the quality of employee-customer encounters, especially in the sales and service functions of service organizations, both business and government. In this study the authors essentially want to know the level of employee and customer involvement in organizations related to service quality for business efficiency in event management.

II. LITERATURE REVIEW

A. Human Sigma

Human Sigma is a method for measuring customer satisfaction developed by John H. Fleming, Curt Coffman and James Harter. In the human sigma method, the relationship between employees and customers is very important because the emotional bond between the two can benefit the company [1]. By using the Human Sigma method, it can be seen the value of Human Sigma, the closeness of customer relations to employees and the closeness of customer relations, as a material for evaluating service performance and can be used as a basis for business strategy thinking.

Some basic principles of using the Human Sigma method such as in evaluating interactions between employees and customers are very different from evaluating manufactured products. Human Sigma talks about human emotions and behavior but its nature is not universal. Employee relations with customers need to be maintained in such a way because there is an effect on financial performance.

Fleming divides customers into 4 types based on the level of emotional attachment to the company [1], namely:

- Fully Engaged is a customer who has a strong emotional bond with the company and is very loyal to the company.
- Engaged is a customer that has not yet formed a bond with the company but has formed a foundation to form a stronger bond.
- Not Engaged This customer is emotionally and behavior tends to be neutral, does not have any emotional ties with any company.
- Actively Disengaged These customers are customers who have negative feelings towards the company. In addition, they can also have a bad influence on customer.

Human sigma measurement system with quantitative measurements using 4 levels of emotional bonding dimensions, namely:

- Confidence is the trust of customers in the company.
- Integrity, namely the level of customer consistency in using the company's service products.
- Pride is the level of customer pride for a company's product or service, or for the company itself.
- Passion is the level of customer dependence on products / services.

B. Employee Engagement

The individual level shows how companies interact with their customers personally.

- Dimensions of basic needs, is the main foundation of the formation of employee emotional ties with the company.
- Dimensions of individual contributions, shows the amount of employee contributions to the company.
- Dimensions of work environment factors or external factors, such as coworkers, superiors, friends, and the company's vision and mission.
- Dimensions of the role of the company against the progress of its employees.

Some of the previous studies related to human sigma are Carley's research on the implementation of Human Sigma in UK tourism SMEs [2], Noval about the implementation of Human Sigma in Apartments [3] and Suparno et al. research on the implementation of Human Sigma in Hospitals [4].

III. METHOD

A. Types of Research

This type of research is quantitative descriptive using questionnaires for data collection.

B. Population and Sample

The study population was employees and customers in 3 event management in Jakarta. The sample taken consisted of 45 employees and 55 customers. Measurement of customer relations and employee relations using tiered questions in the following order [1]:

1) Customer engagement

- Are you satisfied with this service?
- Will you always use this service?
- Do you recommend this product to others?
- This service is a service that can be trusted.
- This service is what is promised.
- This company always prioritizes customer satisfaction.
- This product has always been the solution to my needs.
- I feel proud to use this service.
- This company always pays attention to customer needs.
- This product is the perfect service for me.

2) Employee engagement

- I know what is expected of me about this job.
- I have everything to do this job correctly.
- At work, I have the opportunity to do my best every day.
- In the last seven days, I received praise for my work.
- My boss looks very concerned about me as a subordinate.
- My boss and friends always encourage me to always be more advanced.
- My opinion is always considered by my superiors and friends.
- The purpose of this company is clear and makes me feel needed in this job.
- My friends have a strong commitment to provide the best for the company.
- I have best friends at work.
- In the past six months someone has stated that I have positive progress at work.
- In the past year, I have had the opportunity to learn and develop.

C. Validity and Reliability Testing

1) Validity test: Validity test is done by calculating the correlation value (r) between the data on each with a total score using the product moment Pearson correlation technique formula. Validity is measured against each measuring instrument that is every statement that exists. Validity test is

done to respondents where when get r count > from r table ($\alpha = 5\%$) then the questions in the questionnaire are declared valid.

2) *Reliability test*: Calculate the reliability level of a data that is by using the Cronbach Alpha formula.

D. Data Analysis Method

1) *Calculating the value of customer engagement*

2) *Calculating the value of employee engagement*

3) *Calculating the value of human sigma*: Measuring the employee-company relationship or Employee Engagement (EE) and the customer-company relationship or Customer Engagement (CE), with the following formula:

- EE Percentile and CE Percentile are above the distribution median Human Sigma = $(EE \text{ Percentile} \times CE \text{ Percentile}) \times 0.5 \times (\text{Percentile max.} / \text{Percentile min.})^{0.5}$
- One of them is less than the data distribution median Human Sigma = $((EE \text{ Percentile} \times CE \text{ Percentile}) / 2)^{0.5}$

4) *Analysis of IFE, EFE and SWOT*

IV. RESULTS AND DISCUSSION

A. Calculation of Validity and Reliability

Based on the test of the validity and reliability of the questionnaire it was found that all statements submitted in the questionnaire had r arithmetic > r table so that the statement was declared valid. Then reliability testing is carried out. The reliability test results showed the Cronbach alpha value of 0.892, which means that the test instrument used in the form of a questionnaire with service attributes in the questionnaire given to customers and employees was reliable.

1) *Calculation of Customer Engagement (CE) value*

TABLE I. CUSTOMER AVERAGE VALUES

No	Avg	No	Avg	No	Avg	No	Avg
1	2,82	16	3,27	31	3,36	46	3,55
2	2,82	17	3,27	32	3,36	47	3,64
3	2,82	18	3,27	33	3,36	48	3,64
4	2,82	19	3,27	34	3,36	49	3,64
5	2,91	20	3,27	35	3,45	50	3,64
6	2,91	21	3,27	36	3,45	51	3,73
7	2,91	22	3,27	37	3,45	52	3,73
8	3,09	23	3,27	38	3,45	53	3,73
9	3,09	24	3,36	39	3,45	54	4,09
10	3,09	25	3,36	40	3,45	55	4,09
11	3,18	26	3,36	41	3,55		
12	3,18	27	3,36	42	3,55		
13	3,18	28	3,36	43	3,55		
14	3,27	29	3,36	44	3,55		
15	3,27	30	3,36	45	3,55		
Totally	184,6	Mean	3,35				

From the table 1 it can be seen that the average of the 55 data is 3.35, and the position of the mean values lies in the 23rd and 24th data.

- CE Percentile = $23.5 / 55 = 0.43$ or 43%
- Median = 3.36
- Mean = 3.35 (smaller than the median)
- CE Index = $(\text{mean} / 5) \times 6 = (3.35 / 5) \times 6 = 4.02$

2) *Calculation of Employee Engagement (EE) value*

TABLE II. EMPLOYEE AVERAGE VALUES

No	Avg	No	Avg	No	Avg
1	2,82	16	3,36	31	3,55
2	2,91	17	3,36	32	3,55
3	3,09	18	3,36	33	3,55
4	3,18	19	3,36	34	3,55
5	3,18	20	3,36	35	3,55
6	3,18	21	3,36	36	3,55
7	3,18	22	3,45	37	3,64
8	3,18	23	3,55	38	3,64
9	3,27	24	3,55	39	3,64
10	3,27	25	3,55	40	3,64
11	3,27	26	3,55	41	3,73
12	3,27	27	3,55	42	3,73
13	3,27	28	3,55	43	3,82
14	3,27	29	3,55	44	4,09
15	3,36	30	3,55	45	4,18
Totally	155	Mean	3,44		

From the table 2 it can be seen that the average of the 45 data is 3.44, and the position of the mean values lies in the 21st and 22nd data.

- EE Percentile = $21.5 / 45 = 0.48$ or 48%
- Median = 3.45
- Mean = 3.44 (smaller than the median)
- CE Index = $(\text{mean} / 5) \times 6 = (3.44 / 5) \times 6 = 4.13$

3) *Calculating the value of human sigma*: From the above calculation, the value obtained from the EE and CE calculation is smaller than the average value of 50%, then the HS value calculation is as follows:

$$\begin{aligned} \text{Human Sigma} &= ((EE \text{ Percentile} \times CE \text{ Percentile}) / 2)^{0.5} \\ &= ((0.43 \times 0.48) / 2)^{0.5} = 0.289 \text{ or } 28.9\% \end{aligned}$$

CE percentile value is 43% and EE percentile value is 48%, so the HS quadrant is in quadrant I. The condition is NON-OPTIMIZED in part because the EE and CE values are still below the average value of 50%. This means that the customer relationship with the company is less than optimal. The financial coefficient obtained is at an average level because its Human Sigma value is 28.9%.

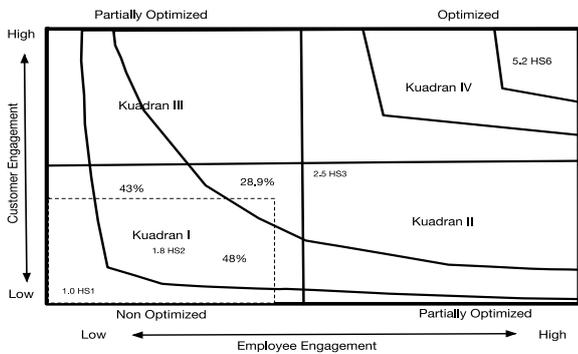


Fig. 1. Human sigma quadrant.

The figure 1 shows that the quality of the relationship between the company and customers is relatively poor with a value of 43%, so the company must focus more on service quality. But the opportunity to improve the relationship between the company and the customer is still very open, because the value of the close relationship between employees and the company is close to the average value, which is worth 48%. Based on the values obtained, the performance improvement in the company is needed to improve the relationship between customers and the company.

4) *EFE, IFE and SWOT analysis:* The EFE and IFE analysis process was carried out with interviews and Focus Group Discussions (FGD) of 9 people consisting of company leaders, employees and event organizer organizers. The results of the interview and FGD, the following results are obtained:

a) *Analysis EFE (External Factors Evaluation)*

TABLE III. EXTERNAL FACTORS EVALUATION MATRIX

No	Internal Factors	Rating	weight	Rating x weight
Opportunity				
1	Various types of programs provided by Event Organizer	4	0,13	0,52
2	Many people who need event organizer services	3	0,13	0,39
3	Having a good relationship with customers	4	0,11	0,44
4	Networking with event organizer associations	3	0,09	0,27
5	Rewards for loyal customers	4	0,11	0,44
Threat				
6	A better brand image event organizer competitor	2	0,09	0,18
7	Competitor event organizers have better facilities	2	0,09	0,18
8	The location of the competitor's event organizer is more strategic	1	0,08	0,08
9	Fair price competition	2	0,10	0,20
10	Event organizer competitors have strong financial capital	2	0,07	0,14
	Totally			2,84

Based on the EFE analysis, the opportunity factor gets a total score of 2.06 while the threat factor scores 0.78. With a total score of 2.84. This means that the opportunity score of the event organizer company is greater than the threat. Based on

the score assessment, the event organizer's total score of 2.84 is included in the "good enough" event organizer category which is above the average value of 2 from the predetermined rating of a maximum of 4. The company must have anticipation of all threats come by taking advantage of external opportunities in the company. From the weighted value above, the biggest opportunity that can be utilized by the company is the variety of types of programs provided by Event Organizer which have the greatest value of 0.52 so the company must focus more on this opportunity because this is also the company's strategy to be more innovative. In terms of threats, the company is quite responsive to the threat factor that has the greatest weight, namely 0.20, namely price competition. The thing that needs to be done by companies in increasingly fierce competition with the presence of competitors in the event organizer industry is to create a good promotional strategy to increase sales.

b) *Analysis of IFE (Internal Factor Evaluation)*

TABLE IV. INTERNAL FACTOR EVALUATION MATRIX

No	Internal Factors	Rating	weight	Rating x weight
Strength				
1	The company has long been established	3	0,09	0,27
2	There is an innovative service program	4	0,12	0,48
3	Friendly corporate culture	4	0,11	0,44
4	There are experts for each work unit	4	0,11	0,44
5	There is support from local residents	3	0,07	0,21
Weakness				
6	Company facilities are incomplete	1	0,08	0,08
7	There is no talent management system	2	0,10	0,20
8	Not all workers have sufficient expertise in the field of work	1	0,10	0,10
9	Lack of information on raw materials	2	0,12	0,24
10	The services provided are sometimes not timely	2	0,10	0,20
	Totally			2,66

The total score for the IFE is 2.66. This means that the existing strength scores at the Even Organizer company are better than the weaknesses. Based on the score assessment that has been compiled, the total Even Organizer company of 2.66 is included in the Event Organizer category which is "quite good", ie above the average value of 2 of the predetermined rating of a maximum of 4. The weaknesses of Even Organizer companies must be more addressed by the management so that later the weakness score can be minimized. Weakness score that gets the highest value is the lack of raw material information of 0.24. From these results, the Event Organizer company can still carry out its activities, but it must be able to utilize its strengths to overcome the weaknesses of the Even Organizer company. For the strength factor that is considered the most important by the company is the existence of an innovative service program that has a score of 0.48. This internal strength must be utilized properly by the company.

c) *SWOT analysis*: Based on the results of data processing through Human Sigma and analysis through the SWOT matrix, we need a suitable main strategy to be applied.

- Improving Service

From the calculation of the Human Sigma method, the most important thing is that the Event Management service problem is not yet stable. This is evidenced by the relatively low CE value, which is 43%, proving that Event Management customers have not felt fully satisfied with the services provided by Event Management as the dimension described in the Human Sigma method is Engaged. Where customers who do not yet have an emotional bond with the company but have a basis for forming a stronger bond. So, the company must improve good relations with customers. Likewise, with the results of the EE value, which is also still below the average value of 48%, which indicates that employees do not fully have an emotional bond with the most basic company.

- SWOT Analysis Strategy

S-O Strategy: The strategy that can be made by companies related to S-O is to create innovative products, improve services by using application-based services and expand supplier networks.

S-T Strategy: Strategies that can be made by companies related to S-T are conducting capacity building for employees, making talent management and conducting certification.

W-O Strategy: The strategy that can be made by companies related to W-O is to improve and enhance facilities to be more innovative and enhance networking with similar companies.

W-T Strategy: The strategy that can be made by companies related to W-T is to make procedures or standard systems to

facilitate the management of event reports and maintain and improve the integrity and competence of all employees.

V. CONCLUSION

Based on the results of calculations and analyzes that have been done, it is known that the Human Sigma Even Organizer quadrant is in quadrants 1 and HS 3. The conditions are not optimized or partially optimal. With a CE value of 43%, and an EE value of 48%, in addition, a Human Sigma Even Organizer value of 28.9% was also obtained. This value will affect the company's finances, the HS value in the HS3 area of 2.5 has a coefficient that indicates the level of corporate finance. The higher the coefficient of the company, the better the company's financial condition. After analyzing IFE and EFE, we get a strategy that can be applied in Even Organizer, namely; create innovative products, improve services by using application-based services, renew supplier connections, create good relationships with customers, build capacity for employees, create talent management and certify companies can improve service performance.

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