

STRATEGIC PLANNING PERUSAHAAN DAERAH AIR MINUM (PDAM) SURYA SEMBADA KOTA SURABAYA WITH QSPM

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ABSTRACT

The development in external environment has led to a strict competition between private and state-owned water supply companies in Surabaya. As a water supply company in Surabaya, PDAM Surya Sembada needs to plan their work programs and activities strategically in order to maintain the sustainability of the company and fulfill the responsibilities expected from a water supply company.

This research observes and analyzes the internal and external factors that affect the company's performance in order to make a strategic planning for the company. The methods used to formulate the company's strategic planning include SWOT (Strength, Weakness, Opportunity and Threat), SPACE (Strategic Position and Action Evaluation), and QPSM (Quantitative Strategic Planning Matrix). The SWOT matrix can be classified into four categories; SO (Strength-Opportunity) Strategy, ST (Strength-Threat) Strategy, WO (Weakness-Opportunity) Strategy, and WT (Weakness-Threat) Strategy. The SWOT analysis can be used to run the IE (Internal-External) Matrix which classifies the company into three categories; Grow and Build, Hold and Maintain, and Harvest or Exit. The SWOT analysis can also be used to conduct SPACE Matrix which classifies the company into four categories; Aggressive, Conservative, Defensive, and Competitive. The QPSM will then determine the most effective strategy for the company based on the relative appeal of each strategy alternative.

SPACE Matrix result suggests that the company should consider the Conservative profile which has stable market opportunities and low growth. The company must focus on improving the production and distribution channels, reducing cost (efficiency), protecting competitive products, developing new products, and maximizing the benefits of an excellent market. The IE Matrix result indicates that the company is in the second territory, which is the Grow and Build stage. The most suitable strategy for this position is intensive strategies, such as market penetration, market development, and product development. The QPSM result of all respondents (including management and stakeholders) suggests that the management effectiveness and efficiency improvement strategy has the highest overall score of 6.6013. Other alternatives include service improvement strategy with 6.5896 and business development with 6.5329.

Keywords: Strategy Management, External Factors, Internal Factors, SWOT, QSPM

INTRODUCTION

Nowadays, by December 2013, the amount of PDAM Surya Sembada Kota Surabaya's installed production capacity are 10.830 liter/second with 507.557 home customers. The service coverage is about 90% with 29% of Non Revenue Water. The economic growing of Surabaya, globally can be classified good relatively, positive average growing is above 7% at 2010. In five years lately, Surabaya's economic structure developing can be seen mostly on tertier sector such as trading, hotel and restaurant, and processing industry. This is a big potential market for PDAM Surya Sembada specially on comersial sector (industry, trading and service).

PDAM's external environment condition is threatening by private party which is base on PP No.16 Year 2005 about water supply system developing, paragraph 1 number 9, is mentioned that the holding of water supply system developing are BUMN/BUMD, cooperative, and private business. Economically, piping water is considered as semi public goods. Private party or BUMN had already starting this piping water bussines, such as at Kabupaten Lamongan, Perum Jasa Tirta (PJT) I had already built IPA, made water channel and supply water for people. At Surabaya, the piping of water supply system (SPAM) made by several developer and private party. In a quantity, water production (total 405l/second) is far away if compare with water production capacity of PDAM Surya Sembada Surabaya wich reach out 10.830 l/second. What need to be noticed is that by small capacity, the coverage customer is the highest fare category specially PT. Pelindo III (commercial market segment)

Table 1. General Condition of PDAM Surya Sembada Surabaya

Description (Information)	Total (Quantity)	Unit
Area	326.36	2 Km
Population (2010 Census)	2765908	Soul
Production Capacity Installed	10.830	3 m / sec
Total Connections	507.557	per December 31, 2013
Production Capacity (2013)	287	3 million m / year
Total use of water (2013)	204	3 million m / year
Non Charging Water (2013)	29	%
Scope of Services	90	%
Length of distribution pipelines	5458	Km

Source: PDAM's Annual Management Report (2013)

Based on Table 1. above there are some points that could be notice which is market potential and community needs for clean water is still very high. The new service coverage of 90% means that at least there are 10% of people in Surabaya had not been served or the equivalent of 300 people. The big competitive threat condition and the internal conditions of the company has several strategic issues that is idle capacity and high levels of water loss. Customer satisfaction rate reached 82.3% is a great achievement. But what need to be notice is the result of customer

satisfaction survey also found that 57% of PDAM customers are still using gallon and well water.

In this study, SWOT identification process will be conducted and the effectiveness will be evaluated with QSPM. SWOT is a systematic identification of various factors to formulate the corporate strategy. This analysis is based on the logic that can maximizes strengths and opportunities, but simultaneously can minimize weaknesses and threats.

The general objective of this study is to determine and analyze how the long-term strategic planning of PDAM Surabaya Surya Sembada in order to encounter problems and potential. Specifically objectives are as follows:

1. Knowing and identifying the external and internal factors based on SWOT analysis to overcome the problems of high idle capacity, water leak and low quality, quantity and continuity of water flow, in order to deal with the increasing of open-regulation competition and the great market opportunities.
2. Provide alternatives and choose the most effective corporate strategies to be used based on QSPM.

LITERATURE REVIEW

Strategy Management

The strategy is a way to achieve long-term goals. Business strategy can include geographic expansion, diversification, acquisition, product development, market penetration, reduction, divestment, liquidation and joint ventures (David, 2009). To achieve the company's goal that has been set, the company management needs to pay attention in two main factors, namely external factors that can not be controlled and internal factors wholly within the control of company management (Muhammad, 2013).

Strategy Formulation

The very important strategy formulation techniques can be integrated into three levels of decision-making framework, as shown in Figure 1 below;

STAGE 1 : THE INPUT STAGE		
Ekternal Factor Evaluation (EFE) Matrix	Competitive Profile Matrix (CPM)	Internal Factor Evaluation (IFE) Matrix
STAGE 2 : THE MACHING STAGE		
Strenghts-Weakness Opportunities-Threats (SWOT) Matrix	Strategic Position and Action Evaluation (SPACE) Matrix	Boston Consulting Group (BCG) Matrix
Internal-External Matrix	Grand Strategy Matrix	
STAGE 3 : THE DECISION STAGE		
Quantitative Strategic Planning Matrix (QSPM)		

Figure 1. Framework of Strategy Formulation Analysis

Source: David, *et al.* 2009

Analysis and strategy election is a step in the strategic planning process carried out by the manager of the company to consider strategy alternatives and to choose which one to be use by the company. This step is usually a selection of business (business) which will be held by the company at the corporate level and then the selection of competitive strategy that will be used by each business (Pearce and Robinson, 2007).

Internal and External environmental analysis (IE)

Analysis by using Internal Factor Evaluation (IFE) Matrix and External Factor Evaluation (EFE) Matrix is to determine how big the influence of internal and external factors that are analyzed in developing the company (David, 2009).

SWOT Analysis

SWOT Analysis stands for strengths and weaknesses of the company's internal and opportunities and threats in external environment facing by the company. SWOT analysis is based on an assumption that an effective strategy will maximize and minimize weaknesses and threats. (Pearce and Robinson, 2007).

Internal-External Matrix

IFE and EFE matrixs are techniques that used at the input stage of the framework strategy formulation. This phase summarizes the basic information that needed to formulate a strategy. IFE and EFE matrix along with the clearly vision and mission statement provide basic information that needed to formulate a successful strategy, by terms that this assessment accompanied with good intuitive judgment in determining the appropriate weighting and assessment (David, 2009).

SPACE (Strategic Position and Action Evaluation)

Strategic Position and Action Evaluation (SPACE) Matrix is one of the company's strategy planning tool which is very important where that Matrix have noticed some very important factor in a company's organization both from internal and external aspects of the company (David, 2009).

QSPM (Quantitative Strategic Planning Matrix)

QSPM matrix is an analysis technique that designed to establish the relative attractiveness of feasible alternative action or objectively indicate which alternative strategy is the best one (David, 2009). QSPM enables company to evaluate alternative strategies objectively, based on company's internal and external success factor that have been previously identified.

RESEARCH METHODS

Descriptive quantitative methods which is explain how the strategic planning of PDAM Surabaya Surya Sembada by QSPM method (Quantitative Strategic Planning Matrix).

Subject and Object Research

Subject of the study is the overall upper middle level human resource in PDAM Surya Sembada Surabaya. The object is formulation of company's strategic planning.

Location and Time Research

This research was conducted in PDAM Surya Sembada Surabaya. The time of data collection during the month of May to November 2014.

Data Source

Data research can be classified into two types: primary data and secondary data.

- a) Primary data is data obtained directly from the source data, by observation, interviews and focused discussion (focus group discussion - "FGD).
- b) Secondary data were obtained or gathered from various existing sources (researcher as second hand).

Respondents Research

The study population was all management PDAM Surabaya Surya Sembada middle level-up (Middle and upper). Respondents in select from the management company and the stakeholders (stakeholhe) were 17 experts (expert) comprises;

- a) Division of Economic and Regional Business minimal (one person).
- b) Experts of Surabaya's Mayor minimum (one person).
- c) Commissioner (Supervisory Council) of PDAM Surya Sembada Surabaya consisting of the secretary and two members (two people).

- d) Managing Director and Director Division (Director of Finance, Director of Services and Director of Operations) (3 People).
- e) Senior manager of 11 people, include;

Data Analysis

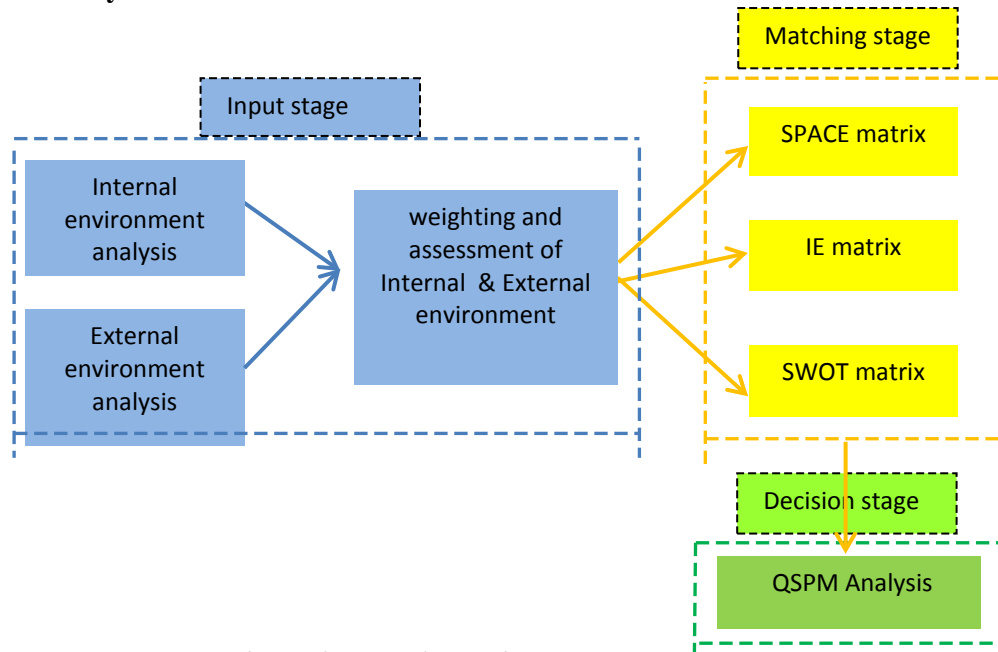


Figure 2. Data Analysis Methods

Input Stages

1. Analysis of internal and external environment

In order to determine the internal and external factors analysis of the performance improvement strategy of Regional Water Company (PDAM) Surya Sembada Surabaya, Focus Group Discussion (FGD) was conducted towards the management and stakeholders by basic material from Business Plan of PDAM Surya Sembada Surabaya for years 2011-2015.

2. IFE and EFE Matrix

Internal and external factors that strategic influence grouped in several areas/aspects that exist in the company. The weighting of each internal strategic factor is derived from the weighting of each field/aspect of the company. The result of the respondents assessment of the internal factors are in Table 2. and the external factors are in Table 3.

Table 2. The 2014 IFE Matrix of PDAM Surya Sembada Surabaya

Field	Factor	Evaluation result	Weights (field)	Weights (factor)	Value	Strength Score	Score weakness
Production	Untapped capacity (Idle Capacity)	15.90%	16%	30%	-2		-0.0960
	Installed capacity	10.830lt / sec		25%	2	0.0800	
	Water quality production	According <i>pemenkes</i>		25%	2	0.0800	

	Availability SOP	Available & guided portion		10%	1	0.0160	
	The operational costs of production	Rp. 836 / m3		10%	2	0.0320	
Distribution	The rate of water loss	28%	16%	40%	-2		-0.1280
	Water quality distribution	Yet according <i>Permenkes</i>		25%	-2		-0.0800
	Continuity of water flow	Not all customers receive 24 hours		25%	-3		-0.1200
	The operational costs of distribution	Rp.451 / m3		10%	2	0.0320	
Customer service	Customer satisfaction index	78%	16%	30%	1	0.048	
	Scope of services	90%		30%	-1		-0.048
	The new plug speed	3 days		10%	1		-0.012
	The ability of the handling of complaints	95%		15%	3	0.0720	
	The ability of the customer meter replacement	4.5%		15%	-3		-0.0720
Human Resources	Organizational structure	Has not been effective to support the company strategy	13%	30%	-1		-0.0390
	Clarity of career	Not available		20%	-3		-0.0780
	Performance assessment	Already exist but need evaluation		20%	-1		-0.0260
	Qualifications and competences	There is already a standard soft competence but no mapping employee competence		20%	-2		-0.0520
	Planning training needs of employees	Yet structured		10%	-2		-0.0260

Information Systems	Strategy planning and master plan	used as a reference since 2008	7%	70%	3	0.1470	
	Network connection	Already connected on line		30%	2	0.0420	
Supply chain management	Planning needs	Yet structured	8%	60%	-3		-0.1440
	Inventory system	Not optimal and inventory value of Rp. 40 M		40%	-3		-0.0960
Asset Management	Road map management system asset management	Already there since 2010	8%	20%	2	0.0320	
	Implementation of the management of asset management	Not optimal asset management		80%	-2		-0.1280
Finance	The ratio of profit to assets	19%	16%	12%	4	0.0768	
	The ratio of profit to sales	38%		13%	4	0.0832	
	The ratio of current assets to current liabilities	6.78		10%	1	0.0160	
	The ratio of long-term debt to equity	0.094		10%	4	0.0640	
	Ratio of total assets to total debt	5.85		10%	4	0.0640	
	The ratio of operating expenses to operating income	0.663		15%	2	0.0480	
	term receivables collection	9.6 days		15%	4	0.0960	
	Effectiveness billing	97.8%		15%	4	0.0960	
Total			100%			1.1250	-1.1450
Total score of internal company						2.2700	
Dominant weaknesses of the company (the difference score)						-0.0200	

Table 3. EFE Matrix PDAM Surya Sembada Surabaya 2014

Field	Factor	Evaluation result	Weights (field)	Weights (factor)	Value	Score Opportunity	Score Threats
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Water resources	Quantity raw water	Very likely increase the quantity of raw water supply dams and water <i>umbulan</i>	23%	40%	2	0.1840	
	The quality of the raw water	Raw water quality does not meet the standard		40%	-4		-0.3680
	The quality of ground water in Surabaya	Ground water quality is not good so dependent on water taps		20%	4	0.1840	
Technology	Water treatment technology	Water treatment technologies are available the better the quality	15%	60%	3	0.2700	
	Wastewater treatment technologies	There are water treatment technologies to recycle for use customers		40%	-3		-0.1800
Economic conditions	GDP	Surabaya GDP projections increased	15%	30%	3	0.1350	
	Inflation	Inflation in Surabaya relatively stable range of 6-8% per year		10%	1	0.0150	
	The increase in MSE (city minimum wage)	UMK high Surabaya (Rp.2.400.00) will increase the purchasing power of people		30%	1	0.0450	
	TDL and BBM	Increase HPP		30%	-3		-0.1350
Politics and society	Public perception of the taps	The public has a negative perception of the taps	10%	25%	-2		-0.0500
	Surabaya City Government Support	Great support from the municipality for the development of taps		50%	3	0.1500	

	Parliament support against rising (selling price)	Parliament generally do not support		25%	-2		-0.0500
Market	Water requirements	Community water needs continue to increase	22%	40%	4	0.3520	
	Population growth	Surabaya projected population growth of about 0.63% per year		20%	4	0.1760	
	Growth potential customers (business)	The growth of industry and services sector greater		40%	4	0.3520	
Legislation	Regulation no.23 of 2006	PDAM supported to arrange the sale price rates in accordance with fairness (full cost recovery) with consideration of the community's ability	15%	25%	3	0.1125	
	<i>Permendagri</i> no.2 th, 2007 and the regulations no.2 th 2009	Duties and responsibilities of the Board of Directors in support for the development of the company		25%	3	0.1125	
	Law No.7 th 2004 psl.9	Water rights can be granted to individuals and business entities with local government		25%	-2		-0.0750

	PP no.16 th 2006 psl.1 number 9	Organizing the development of water supply systems are state / local enterprises, cooperatives and private enterprises		25%	-2		-0.0750
Total			100%			2.0880	-0.9330
Total score of external companies						3.0210	
Dominant corporate opportunities (difference score)						1.1550	

Matching Stage

1. SPACE Matrix

From the above result have been obtained total value for each factor either internal (IFE of Industrial Strength Score and Score Competitive Advantage) and external (EFE of Financial Strength Score and Score Environment Advantage). Company quadrant position by searching resultant X-axis (IFE) and the resultant Y axis (EFE) as following;

Resultant sumbu X = Score Industrial Strength + Score Competitive Advantage
 $= 1,1250 + (-1,1450) = -0,0200$

Resultant sumbu Y = Score Financial Strength + Score Environment Advantage
 $= 2,0880 + (-0,9330) = 1,1550$

Plot sumbu X – Y = (-0,0200 ; 1,15510)

Resultant axis X = Score Industrial Strength + Competitive Advantage
 $= 1, 1250 + (-1, 1450) = -0, 0200$

Resultant axis Y = Score Financial Strength + Score Environment Advantage
 $= 2, 0880 + (-0, 9330) = 1,155 0$

X-Y axis plot = (-0, 0200; 1,155 10)

The Company has conservative profile (as in Figure 3.) where the market chances is stable with low growth. Here the company must focus on improving the production and distribution lines, reducing costs (efficiency), protect competitive products, develop new products and to take advantage of good market as soon as possible

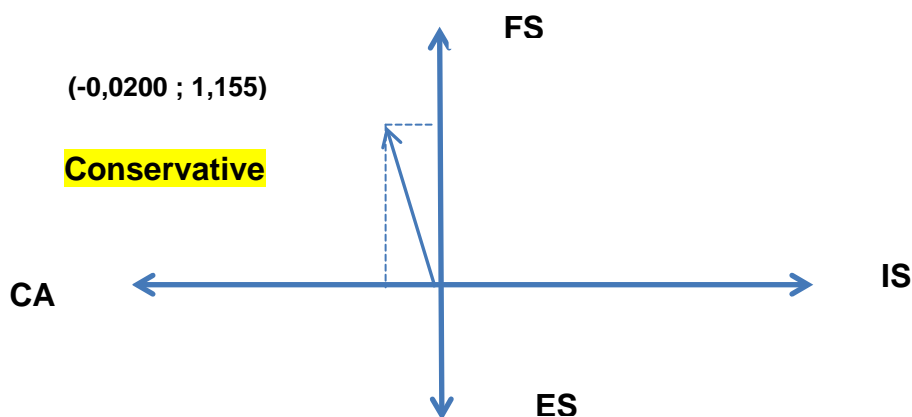


Figure 3. Company Position (SPACE Matrix) of PDAM Surya Sembada

2. IE Matrix (Internal and External)

IE matrix is based on two key dimensions; the total value of a weight given IFE function on the X axis and the total value of a weight given EFE function on the Y axis. IFE total value's result (X axis) is 2.2700 and EFE total value (Y axis) is 3, 0210, so the IE matrix as shown in Figure 4.

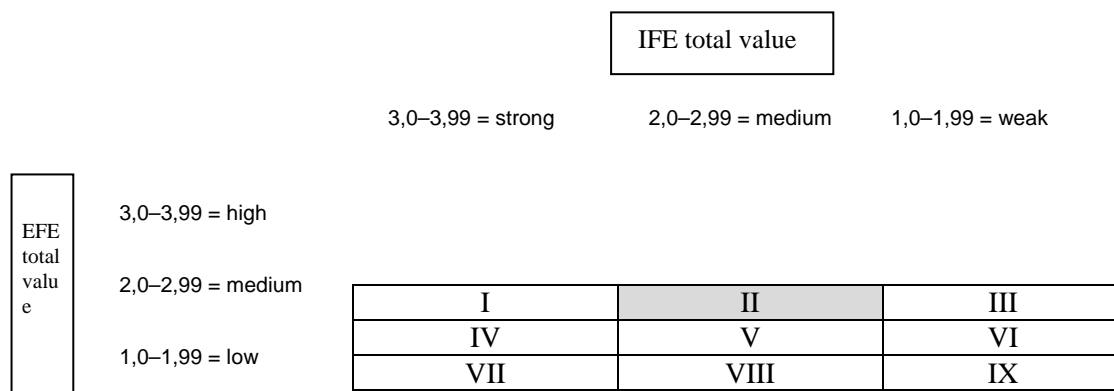


Figure 4. Internal External Matrix (IE) of PDAM Surya Sembada

3. SWOT matrix

SWOT Matrix (Strengths Weaknesses Opportunities Threats Matrix) is an analytical tool of company development based on the situation of the internal and external environment. SWOT matrix has four types of strategies, namely SO (Strengths-Opportunities), WO (Weakness-Opportunities), ST (Strengths-Threats), and WT (Weakness- Threats). Based on the analysis of the identifying data of strengths, weaknesses, opportunities and threats factors that exist, it is obtained four possible alternative strategies such as the following Table 4. SWOT matrix;

Based on the SWOT matrix has been done, there are some good alternative strategies that based on the SO strategy (Strengths-Opportunities), WO (Weakness-Opportunities), ST (Strengths-Threats), and WT (Weakness- Threats). From several analysis of the exist alternative strategies, three alternatives were obtained, namely;

1. Efficiency-effectiveness increasing and company operations management. This strategy is a combination of several strategies based on SO, ST, WO, and WT strategies. The Strategies are; a). production capacity Increasing; b). efficiency increasing; c.) internal management increasing; d). The effectiveness of production and distribution; e). Improve the internal conditions;
2. Company Business development. This strategy is a combination of several strategies based on SO and ST strategies. The strategies are; a). business development; b). public relations increasing;
3. Service improvement. This strategy is a combination of several strategies based on SO and ST strategies. The strategies are: a). Service Improvement; b). efficiency Increasing;

Decision Stage

Alternative strategies are grouped and classified into three groups which is: effectiveness and efficiency increasing and company operations management (EEM), company business development (PBP) and service improvement (PP). QSPM analysis towards the whole respondents (management and *stakeholders*), shown the highest average value is the strategy effectiveness and efficiency increasing and company management (average value 6.6013), then

alternative strategy to increase services (average value 6.5896) and the last is company business development with an average value of 6.5329.

CONCLUSION

Internal and external factors identification of PDAM Surya Sembada Surabaya based on *internal factor evaluation* (IFE) and *external factor evaluation* (EFE) is;

- a. Based on the identification of internal factors, PDAM Surya Sembada Surabaya has strengths in production aspects / field. The installed capacity is very large; the production quality is with a complete SOP and a good ratio of production costs. The main concern in this production is *idle capacity*. Financial aspects able to make a profit with high sales, the ratio of debt to assets is low and the water billing system account is a major factor in addition to the internal strength beside production aspects. The main factor of the company's weakness is distribution system and human resources aspects. Organizational structure, career path, performance assessment and planning of training needs of employees are not optimal yet.
- b. Based on the external factors identification, PDAM Surya Sembada Surabaya have opportunities in the following areas/fields of macro-economic and market in Surabaya. Higher financial consumption, the vast of population growth and growing commercial area gives the company opportunities to sell water at commercial rates. Local Regulation (PERDA) no.13 of 2014 provides opportunities for companies to conduct business development. The greatest threat is the availability of raw water.

Effective strategic PDAM Surya Sembada Surabaya;

- a. Based on SPACE matrix, PDAM Surya Sembada Surabaya has *conservative profile* where stable market opportunities with low growth. In this condition the company must focus on improving the production and distribution lines with water loss, reduction level, efficiency, charge with reduction, *idle capacity*, protect *competitive* products, develop new products and take advantage of excellent market
- b. Based on IE matrix, PDAM Surya Sembada Surabaya entered the region II, which means it's time to grow and develop (*grow and build strategies*). Appropriate strategy used to this position is an intensive strategy such as market penetration, market development and product development.
- c. Based on the SWOT matrix, there are 3 (three) alternative strategy that is;
 1. effectiveness and efficiency increasing and company operations management.
 2. Company business development.
 3. Service improvement.

Results of analisis QSPM against all respondents (management and *stakeholder*) PDAM Surya Sembada Surabaya, shows that the total average is the highest value on the strategy to effectiveness and efficiency increasing and company operations management (average value 6.6013), then alternative service improvement strategy average value 6.5896) and the last is Company business development with the average value of 6.5329

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