

# Tomato Fulfillment Supply Strategy (Based on Company's Internal – External Analysis)

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**Abstract:** *Mitra Tani Parahyangan (MTP) is one of the agribusiness company that has limitations in producing tomatoes, so MTP using partnership to fulfill the demand side of the retail market. This research analyzed the internal - external variables that influence the company to fulfill their tomatoes' daily demand, also made the alternative strategies by compounding internal-external variables using SWOT Matrix. The result showed that the strength of the company is the accessibility of the company to have good quality inputs (seeds) and in sufficient quantities. But on the other hand, companies have difficulty in accessing capital, causing a narrow piece of land as well as limitations in using technology companies in tomato cultivation. On opportunity side, the biggest opportunities that has to be utilized by MTP has supporting institution, as well as the growing number of competitors who produce and sell tomato products. MTP's biggest threat is the volatility of the tomatoes' price. After compounding two components from internal and external factors, we found at least six alternative strategies: 1) give education to MTP's farmers and partners; 2) arrange land's allocation; 3) turn competitors into partners for fulfilling MTP's demand; 4) arrange time of planting; 5) make the written work contract between MTP and their partners; and 6) adopt cultivation technology.*

**Keywords:** agribusiness company, beef tomato commodity, External Factor Evaluation (EFE), Internal Factor Evaluation (IFE), Strength Weakness Opportunity Threat (SWOT) Matrix

## 1. Introduction

Agriculture is the primary supplier of human needs, the food needs. Indonesia is an agricultural country, where the climate, weather, and land is a good environment for producing agricultural products. There are so many people and company that take advantage of it, and Mitra Tani Parahyangan (MTP) become one of them. Tomatoes are the main commodity traded because it has a fairly high economic selling price, ranging between Rp 8,000 to Rp 10,000/kilogram.

MTP's tomato daily demand is quite high, around 1.5-2 tons/day, which is derived from the demand for retail companies in West Java and its surroundings. Although MTP is located in Garut, West Java, where the location is suitable for producing tomato, but MTP only have a small production field that has to be divided because MTP has to plant other commodities. This demand, that is not matched by the company's production capability, makes MTP must fulfill their need by supplying tomatoes from his farming partner.

This study aimed to determine the strengths, weaknesses, opportunity, and threats to meet the supply of tomatoes. Each of these factors will be analyzed and ranked based on importance level and its rating, so we able to identify which variable that become MTP's major strength, major weakness in producing tomatoes and meet their needs to fulfill tomato demand. After that, every single variables will be used to make company's alternative strategy.

## 2. Data

This research used the primary data that collected through interviews and observations methods. There are 6 respondents were interviewed to assess the company's

internal and external conditions, they were the internal source of the company. Researchers interviewed: 1) chairman and owner of the business; 2) vice chairman (also become marketing manager); 3) operations manager; 4) financial manager; 5) production manager; and 6) the field manager.

## 3. Methodology

Before making the alternative strategies, company's management need to analyze the company's condition compares to other business, or based on his own condition (Umar 2008). The analytical tools that used in this research are Internal and External Factor Evaluation (IFE/EFE), and there are the steps in using IFE and EFE tools (David, 2009):

- 1) Make a list of critical internal factors that become the strengths and weaknesses (internal side), and factors that become company's opportunities and threats (external side).
- 2) Give the weight for each factor based on its importance level. The value is between 1 to 5, 1 symbolizes that the factors is so not important, 2 symbolizes that the factors is not important 3 shows a neutral factor, 4 shows important factors, and 5 shows very important factors. The weight are summed, and the weight of each factor will be divided by the sum of weights. For each factors, weights will be worth between 0 to 1, the greater (the closer to 1) the weight of the factor, the factor is more important than the others (Katsioloudes, 2011).
- 3) Give a rating on each factors. It aims to look at the company's performance in dealing with each factors. For internal factors, the given value is between 1-4, where 4 symbolizes major strength, 3 symbolizes minor strength, 2 symbolizes minor weakness and 1 symbolizes major weakness (Katsioloudes, 2012). For external factors, 4 if response is superior, 3 if response above average, 2 if

response is below average, and 1 if response is poor (Lodato, 2014).

- 4) Multiply the weight with rating on each factor to obtain the weighted score.
- 5) Sum each variable's weighted score. Total weighted score would be worth between 1,00-4,00.

Internal-and external variables is used for making alternative strategies using SWOT Matrix. For making this matrix, researchers have to: 1) use strengts to maximize opportunities (SO strategies); 2) use strengths to minimize threats (ST strategies); 3) minimize weaknesses by taking advantages of company's opportunity (WO strategies) and 4) make strategies that can minimize weaknesses and avoid threats (WT strategies) (Ey, 2009).

#### 4. Empirical Result

Before explaining about the MTP's internal and external critical factor, we have to explain the company's business activities first. MPT is an agribusiness company that using tomatoes as the main commodity. MTP sells tomato products to retailers in several cities in Java. High commodity demand (1.5-2 tonnes each day) cannot be fulfilled because the lack of company's ability in producing tomatoes. It pushes MTP to cooperate with farmer partners. Based on interviews, the percentage of supply of tomato mostly fulfilled by partners (90%), and the rest is fulfilled from own production. This shows the inability of MTP in meeting the needs and dependence level of MTP to his partner is extremely high.

##### Internal Factor Analysis (IFE)

Internal factors were analyzed based on the main activities of MTP in obtaining supplies need, which are producing tomatoes cooperating with partner farmers. Based on Table 1, the major strength of MTP is the ability to get good quality and productivity seed in the appropriate quantity. This factor is the most important factors (weight is 0.400) and become a major strength (rating 4). This capability supports MTP's performance, especially when someday MTP will to expand its production land.

Other factors which have a high weighted score are MTP relationship with farmers and quality control in tomato products. MTP have strong relationship with its own farmers and farmers partner, due to the mutually beneficial cooperation by the two sides over the years. Like MTP farmers said, business owners make a personal bound so the farmers are willing to listen the direction of the owners and management. From partners side, cooperation between them build mutual trust and active communication for trade transactions. MTP set a purchase price of tomatoes based on the moving of market prices, so that farmers do not feel disadvantaged due to partners selling price is too low. As considered the purchase price is in prfitable level, farmers obey the MTP's rule which is about the standard quality that sets as retail needs. If the partners cannot meet the standard, MTP can buy the tomato products with the lower price, it considered as the punishment to the partners. With this rules, this cooperation is equally beneficial to both parties.

Lack of financial capital is the main weakness of companies that can cause other weaknesses such as lack in using

technology and small production field. MTP only rely on its owner capital, and this limitation causes inability of the company to increase production scale by expanding production field or adapting cultivation technology. From the land side, MTP is not only facing the narrow land problem, but also the degraded of lands quality (land fertility). This happens because the land is used continuously without any change of the plant or make efforts to restore lost nutrients.

**Table 1: Result of Internal Factor Evaluation**

Variables	Weight	Rating	Weighted Score
<b>Strengths</b>			
1. Farmers loyalty	0.080	4	0.320
2. Support facilities	0.093	3	0.280
3. Strong relationship between company and its farmers also partners	0.097	4	0.387
4. Accessibility of having good quality seeds	0.100	4	0.400
5. Company controls in farming	0.097	4	0.387
<b>Strengths Total Weighted Score</b>			<b>1.774</b>
<b>Weaknesses</b>			
1. Small also rent production field	0.087	1	0.087
2. The absence of a written contract	0.070	2	0.140
3. Lack of financial capital	0.097	2	0.193
4. Lack in using cultivation techology	0.090	2	0.180
5. Lack in managing company	0.093	2	0.187
6. Coordination with farmers and partners	0.097	2	0.193
<b>Weaknesses Total Weighted Score</b>			<b>0.980</b>
<b>IFE Total Weighted Score</b>			<b>2.754</b>

MTP's other weakness are lack in managing company and coordination with farmers and partners. Sequently, both factors have rate of importance 0.093 and 0.97 but the performance (rating) of the company is only worth 2. Lack in managing company is seen in the finance department, where data is written in the books, not on the electronic media. For cooperation variable, few of respondent argued that it became the strength of the company but most of them say it is the weakness of the company. Its contradicted with the argument before, says that MTP has good relationship so they will listen the directions from MTP. But what we critizm here is different from before. PT. MTP is having adversity to guide the farmers and partners about how to apply the cultivation techniques and technology because its difficult to communicate and gather them so they can listen their explanation and directions. Also, farmers who have a family background in farming is still sticking into conventional agricultural methods.

MTP has minor weakness which is the absence of written contract. It leads the company to the uncertainty quantity of supply, when at harvest time MTP will face oversupply and vice versa (in the lean time MTP will face a lack of supply). Actually, it is considered by researcher as a very crucial for the stock management, but the owner and management consider that factor is not too important. This happens because the MTP may fulfill the lack of supply from the market nearby, so sell the excess product.

##### External Factor Analysis (EFE)

In opportunity sides, supporting institution and increasing number of competitors plays an important role to help the MTP in running its business program (forfulfilling his daily product). This point of view is different form others, such as Rahmawati (2015) research, because usually competitors become one of company's threat. Knowledge level of instructors (read : penyuluh) as a supporting institution, sometimes higher than farmers, so it can be used to improve farmers knowledge about good cultivation techniques technology. Other supporting institution, such as farmer groups that exist in the surrounding area, is also a good supporting institution. Farmers group can be a friend to share knowledge, also help MTP in providing supply of tomatoes. As farmer groups, increasing the number of the farmers and company be regarded as bless for MTP. Increasing the number of actors who provide tomatoes into market can be used as the alternative of providing tomatoes when there is a lack in supply. They sell their crop to the market, so MTP may seek additional supply to the market.

Government's policy is an opportunity for MTP because because it can help MTP to enhance the company's ability to compete. Support can be given as a material support (such as money or agricultural equipment), or through regulation. Some of the benefits are already being felt MTP due to the government's policy are: 1) with its policy, government helps MTP to provide cheap but good quality seeds, and 2) in the goods form, such as land cover (read: mulsa) for covering the land from pests, rain water , and others.

Table 2 Result of External Factor Evaluation

Variables	Weight	Rating	Weighted Score
<b>Opportunities</b>			
1. Government's Policy and Assist	0.138	3	0.414
2. Supporting institution (farming instructors, and so on)	0.155	4	0.620
3. Increasing number of competitors	0.155	4	0.620
4. Increasing demand for tomatoes	0.116	4	0.464
5. Utilization of information technologies	0.127	3	0.381
<b>Opportunities Total Weighted Score</b>			<b>2.499</b>
<b>Threats</b>			
1. Volatility of tomato's price	0.155	3	0.465
2. Weather and illness in tomatoes cultivation	0.155	4	0.620
<b>Threats Total Weighted Score</b>			<b>1.085</b>
<b>EFE Total Weighted Score</b>			<b>3.584</b>

Utilization of information technologies is one of the significant opportunities that has to be exploited because it can improve the MTP ability to increase the production by learning lates cultivation technique and technologies, also improve the number of selling by expanding the market. Information technology is already used by MTP, but only for communication (via telephone). The rating for this factor is worth 3, this indicates that the MTP still can improve this. Among some of the information technology that can be used, Internet is the greates opportunity which can be used to sell and communicate with partners or customers in the cheaper and reach the wider area, also it can be used to find the

information about weather, market price, or more shopisticated techniques and technologies of cultivation.

Demand for tomatoes is a business opportunity that must be captured to increase MTP's revenue and profit. In fact, it showed from absorption of commodity in markets around Garut, West Java. When MTP is experiencing excess supply, MTP sells this excess into a local market and it absorbed quickly by the market. This indicates that tomato has a high economic value. Although it is a big opportunity, this is not the main opportunities that should be utilized by the company. This happens because the company is still struggled for fulfilling the demand from retail market. It showed by its small weight (value of importance).

From threat sides, volatility of tomato's price and weather and illness in tomatoes production become very strong threat. But there are differences in the response of companies in response to this threat, which company has a better response in weather and disease compared its respond to price volatility. It is showed from the ratings (3 to volatility of tomato's price and 4 for weather and illnes in tomatoes production). This happens because the production management continously adapt the better cultivation techniques. From the price, MTP set the purchase price of tomatoes from the farmers to follow market prices, so that when the tomatoes were scarce, companies have to buy tomatoes from farmers or market price is quite high. Normal price is around Rp 8,000 to Rp 10,000 each kilogram, and become Rp 13,000-Rp 14,500 each kilogram when there is a shortage in the market.

#### SWOT Matrix

There are six alternative strategies that can be used by MTP to increase company's ability so they can increase their tomato supply. This is an explanation about how to apply the alternatives:

1. Give the education to MTP's farmers and partners  
 MTP gives the coaching and training section to both farsmers and partners in the same time. To provide this, MTP has to make cooperation with supporting institution such as regional farming instructors (read: penyuluh) because they can provide knowledge and latest information. This strategy is expected to increase land productivity, quantity also quality, significantly.

2. Arrange land's allocation  
 Researcher suggest MTP can expand tomato's field by tighting others commodity's land. This strategy implemented by not cultivating the commodity that has less economic advantage than tomato itself. This strategy is expected to increase tomato production by utilizing own resource (land).

3. Turn competitors into partners  
 MTP can persuade competitors (in the both form, farmers and intermediary/sellers) so they can make an agreement that gives advantage to all players. Even, maybe in the next periode they can build a cooperation. If they do this, they can get their own advantage. For MTP, it can make stability for their supply. For intermediary/sellers, MTP provides "market

certainty” for them, furthermore MTP can provide good buy price (depends on contract).

**4. Arrange time of planting**

It is about planting schedule. It is not only effected to tomato’s time of planting, but also to another commodities. It implements by picking two or more commodities that has to be planted in one land (one of them must be tomate), and management has to decide how long, (in months) when it starts and when it stops that they plant one commodity. This schedulling is considered on the weather, climate, harvest season, lean season, or their own forecasting where MTP can acvhieve highest productivity, highest price or another consideration.

**5. Make the written work contract between MTP and their partners**

The written work contract contains (minimum): 1) minimum supply that partners has to give to MTP; 2) selling price (from partners’ side) based on the agreement; 3) punishment if MTP or partners does not obey the contract.

**6. Adopt cultivation technology**

Technology that can be adopted by MTP has to consider by their own weakness, which is lack of financial capital. Management can use technology that costs not much but simply effective. Based on previous research, one of technology that can be implemented is “rain shelter” to protect their plants from the rain. Rain can swipe away the pesticide from the leaves or branches, also fertilizer from the soil, so the plant loses the pesticides for protecting it from pest or the plant loses the nutrition that provided by fertilizer. Based on Arya *et al.* (2000), rain shelter can increase production ± 169 percents.

	<u>(S) Strengths:</u>	<u>(W) Weaknesses:</u>
	<ol style="list-style-type: none"> <li>1. Farmers loyalty</li> <li>2. Support facilities</li> <li>3. Relationship between company and its farmers also partners</li> <li>4. Accessibility of having good quality seeds</li> <li>5. Company controls in farming</li> </ol>	<ol style="list-style-type: none"> <li>1. Small also rent production field</li> <li>2. The absence of written contract</li> <li>3. Lack of financial capital</li> <li>4. Lack in using cultivation technology</li> <li>5. Lack of managing company</li> <li>6. Coordination with farmers and partners</li> </ol>
<u>(O) Opportunities:</u>	<u>SO Strategies</u>	<u>WO Strategy</u>
<ol style="list-style-type: none"> <li>1. Government’s policy and assist</li> <li>2. Supporting institution</li> <li>3. Increasing number of competitors</li> <li>4. Increasing demand for tomatoes</li> <li>5. Utilization of information technologies</li> </ol>	<ol style="list-style-type: none"> <li>1. Give education to MTP’s farmers and partners (S1-3-4-5, O1-2-4-5)</li> <li>2. Arrange land’s allocation (S1-2-3-4, O2-4)</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn competitors into partners for fulfilling MTP’s demand (W1-2-3-4-5-6, O3-4-5)</li> </ol>
<u>(T) Threats:</u>	<u>ST Strategy</u>	<u>WT Strategies</u>
<ol style="list-style-type: none"> <li>1. Volatility of tomato’s price</li> <li>2. Weather and illness in tomato cultivation</li> </ol>	<ol style="list-style-type: none"> <li>1. Arrange time of planting (S1-2-3-4, T1-2)</li> </ol>	<ol style="list-style-type: none"> <li>1. Make the written work contract between MTP and their partners (W1-2-4-5-6, T1-2)</li> <li>2. Adopt cultivation technology (W1-4-5,T1-2)</li> </ol>

Matrix 1. Strengths, Weaknesses, Threats, and Opportunity (SWOT) that contains alternative strategies.

**5. Conclusion**

MTP's major strength is accessibility of having good quality and productivity of seeds and MTP's major weakness is small production field (weighted score for each variables are 0.400 for major strength and 0.087 for major weakness). MTP can use supporting institution and increasing number of competitors for increasing its ability to produce more and meet their need. Besides, MTP main threat is the weather conditions and disease that can reduce productivity, also volatility of tomato’s price that can increase purchasing cost when the compant needs to buy tomatoes from partners and markets nearby. Internal and external variables become a basic consideration before creating alternative strategies. Although alternative strategies is implemented using internal (MTP) source, but if company can optimize external source or external institution, particularly farming instructors (read: penyuluh) and government, especially when it comes to implement this strategies: give education, arrange time of planting, and adopt cultivation technology. This two institution has good knowledge and information that support MTP to increase their production.

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