

The Pattern of The Marketing Ground Coffee Beans Using Decision Support System

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Abstract. All art the determination of the decision that accurate main factor of the success of a company. Out because of the multitude of factors affect the quality of by decision makers such as the location of certain market. The marketing group calls for a device that could analyze a variety of factors that determine a candidate the location of marketing. Moreover, a model that is written is provided by way of field research and literature studies. The support system decision designed includes storage all the information is a factor in the determination of allocations marketing. The system made analyzed the information obtained based on mode. Finally, this system be able to display recommendations about such things as decisions on the basis of the certain analysis results.

Key Words: Model, Decision Support System, Marketing.

1. Introduction

Human life always faced with a choice we realize or not. The option appeared from human life itself. In which every single the greater number of people tries to look for the best thing. They are seeking to lessen the gap between present condition and their expectation. Therefore, Different types and the importance and complexity are faced by people. As the result, people need certain alternative solution to reach their expectation in their future life. The similar thing happens in an organization, making decision is one of crucial thing do. Between 1960 until 1970, believed to be in the structure of decision is the only manager. But with technology development and globalization, the decision makers is the right and responsibilities of members of an organization.

We need to consider that in every single step of decision, the portion of each member is not the similar. It depends on the certain situation and condition. There is someone who directly makes a decision right after quick consideration. In other hand, there is someone who always difficult to make a certain decision since there is many aspects to consider. Farmer Matlin said the situation when someone took a decision will have an influence to the success of decision [1]. This is because people will consider, analyse, predict, before the alternatives to make the choice. Therefore, alternative were alternative the



best, in this matter is alternative it is believed to exert benefit the most and risk the smallest. Sometimes, it is needed a combination of an alternative to get the best result.

From the explanation above, it can be concluded that it is not easy to decide something to get maximum results minimal the risk. Since, there are many factors to be considered before. On the basis of the they came from the supporting a theory of Decision Support System (DSS). It has been broadcasted into several media or device such as book as the most. There are several experts that discussed about SPK such as ; Keen and Morton, Alter, Sprague and Carlson, Turban, power, etc [2]. From various definition of SPK, the main point is as a computer based system that support in order to make a certain decision. Decision management is an arranged in such a way the alternative to reach the goal. In general, the decision can be divided into 3 groups: (1) structured decision, (2) semi-structured decision, and (3) nonstructured decision. To decide the decision of three groups is not always simple, it takes a system to process all the needs and the alternatives model.

Nowadays, information Systems has important role in providing various information for business owner. In order to support all the process and activities, such as has capability what is important in providing a planning; assessment and control even allocate resources. Furthermore, information system is also helping on information distribution. The function of information systems that broad and complex is no longer possible for a manual in professional information systems. Finally, to reach the goal and expectation we have. Information technology is needed to manage the information system. Information technology based information is believed capable of making decision and enhance the role of managerial.

2. Literature Studies

In general, decision making always be transferred to a manager. While the decision making is not always be done by a manager. The support system for this decision is a process to choose among some alternative action. In order to, a company reaches certain target and goal. Keen and Morton states that the support system is an integrated decision intellectual resources of the decision. Model and utility holding computer data with the ability to overcome the problems of semi-structured [3].

From several article it can be concluded that decision can be influenced by 5 factors, such as: (1) problem they have; (2) education background; (3) personality; (4) adaptation process; and (4) culture, the decision can be used as infrastructure to understand the process involved in decision [4].

The decision process have the time not fixed, sometimes it is short can even instantly. In certain condition, the process may happen long enough, be able to come up a few weeks or even month. Decision making processes all depends on the proper information and the right people and the right time. One of the tasks of the challenge to the company is making their internal information are effective [5]. Naturally, to take a decision, someone will do several phases. Until the point where the decision had been taken built up and maintained. As for steps decisions making can sorted as follows:

- (1) Problem definition. This step is the beginning when someone want to make a decision. The problem must be explained accurately, because a problem is really related to several next phase that will be taken.
- (2) Identify the barrier factors. All business want of decision the best decision. to do so businesses need to have resources ideal as, information , time , personnel , equipment and identify restricting factors.
- (3) Choose the best alternative. The most difficult and risky phase. After we do alternative analysis, the next step is to be estimated that have advantage the largest and have risk smallest are selected.
- (4) Carry out a decision. Finally, a decision must be taken with the risk of anything. For the sake of a professional paid to make a decision. After the decision was made, and everyone who is engaged to be is expected to follow the decision well and correctly.

This method Divided into three groups, these measures namely, intelligence design and choice [6] Clearer explanation can be seen from Figure 1. In every step is divided into different activity. For Figure 1, it can be seen that Simon expects through do all the steps, the quality of decision can be improved.

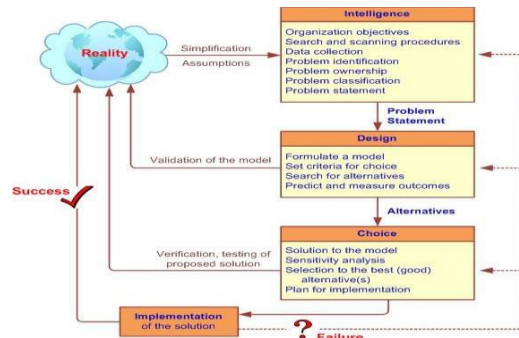


Figure 1. Taking process [7]

A decision system has 14 characteristics[7]. It can be explain below (Figure 2) below.

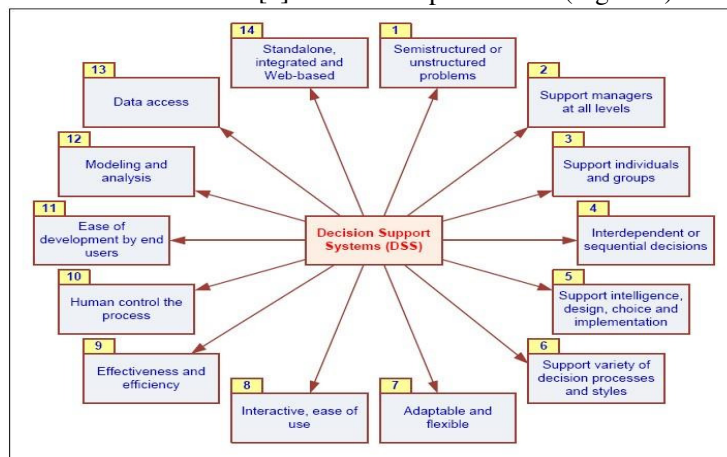


Figure 2. Decision system has 14 characteristics [7]

From those 14 characteristic, it can be seen that a support system will not be a clear decision can go well if not supported by the use of information technology [7].

This paper will take advantage of a support system decisions to be applied in marketing. The support system decision marketing is an integrated data system. Statistical analysis, model and format simulation by means of technology computer software and hardware in providing information for the decision process [8].

3. Decision Support System Model

In the model of decision, there are several steps that have explained above. The steps are :

- (1) Identify problems and identify the barrier factors. Each company is trying to find new markets capable of absorbing the results of their production. Neither company that moves in marketing ground coffee. The main purpose of marketing this is introducing products coffee from the company that better known and feels close to the

community. Based on that explanation, above assumed that the company, coffee grounds take two alternatives following in the market ground coffee.

(1.1) First Alternative.

- marketing manager received the information from the distributor that want to come on the market
- Marketing manager of assigned their surveyor staff to do survey to the candidates the distributor.
- The survey gives information about temperatures population density and other handed over to marketing manager.
- Marketing manager and the team will an analysis of survey results are based on their knowledge.
- If the result of the away from the team on marketing, the location of were suitable to set as the target locations new marketing push.

(1.2) Second Alternative.

- Marketing manager and team are using their background knowledge (get from marketing staff) try to do manual analysis in order to decide the new marketing allocation.
- Information have gotten from sales marketing. It used to compare the previous information, the distributor starts to sell their ground coffee to that location.

(2) Develop Potential Alternative.

In order to develop the model, there are several factors that must be considered. These factor that is believed become the goal success parameter such as (1) seasons; (2) Gross Domestic Regional (GDR) (3) The percentage of (estimates) ground coffee consumption; (4) The purchasing power; (5) population. The parameter, it is expected that comes several alternative decision that have the potential.

(3) Analyze Alternative and select the best alternative.

Below are models that can be applied to design decision support system.

(3.1) Total Dry Season = □ Dry Season per month

(3.2) Total Rain Season = □ Rain Season per month

Note: GDR data for Dry and Rain Season get from BPS-Statistics Indonesia

(3.3) The Use of Coffee Powder Percentage : _____
x100%

Note: GDR data for coffee powder get from BPS-Statistics Indonesia

(3.4) Index Buying Power (IBP)

IBP =

Information:

IBP = Index Buying Power for a province.

I = GDR Individual Percentage for food distribution.
 R = Percentage of coffee powder that using in a province P
 = Percentage of population in a province.

(4) Selling Potential

Potency of after sales coffee drink = Total Population x GDR x average income for food distribution percentage x average expend that use for coffee powder distribution percentage.

$$\text{Total Population Percentage} = \frac{\text{Total Population} \times \text{GDR} \times \text{average income for food distribution percentage} \times \text{average expend that use for coffee powder distribution percentage}}{\text{Total Population}} - 100\%$$

Note: Total population in each province get from BPS-Statistics Indonesia.

(5) Mean

$$\bar{X} = \frac{1}{n} \sum_{i=1}^n X_i$$

Information:

X_i = Observation Value - I

\bar{X} = Average

n = Data Amount

(6) Class Length Interval

$$R = \frac{X_{max} - X_{min}}{n-1}$$

C

Information:

c = Class Amount X_1

= Lowest Data Value

X_n = Highest Data Value $X_{n+1} = X_n + (0,1)^k$ k = Amount of number behind coma that have a lot of amount from data.

$$B_{ai} = B_{bi} + r - (0,1)^k$$

(7) Class Limit

Information :

Bai = Upper Class Limit to -i

Bbi = Lower Class Limit to -i

First Lower Class Limit (Lower) = Lowest value from data

$$B_{bi} = B_{ai-1} + (0,1)_k$$

- (8) Total Population = \square Population
- (9) Total GDR Coffee Powder = \square GDR Coffee Powder
- (10) Total GDR Food Distribution = \square GDR Coffee Powder
- (11) Total Weight = \square Weight

4. Conclusion

The marketing location is become more qualified. Since the model is consisted of different aspect. Furthermore, *what-if* analysis can be proceed, observed and modified accordance with their needs, desire and the styles of managers in decision process. The final result of this system is a decision based on calculations and mathematical models and directly can be seen excellence and weakness of the provinces that are analyzed. The result of this research, show a mathematic model for decision support system application.

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