Determinasi Decision Support System: Volume Sales, Marketing Distribution and Product Quality

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Abstract: The Determination Decision Support System Literature Article: Effects of Sales Volume, Marketing Distribution and Product Quality is a scientific article that aims to build research hypotheses on the influence of variables to be used in further research, within the scope of Management Information Systems. The method of writing this Literature Review article is the library research method, which is sourced from online media such as Google Scholar, Mendeley and other academic online media. The results of this article are that: 1) Sales Volume influences the Decision Support System; 2) Marketing Distribution influences the Decision Support System; and 3) Product Quality influences the Decision Support System. Apart from these 3 exogenous variables that affect the endogenous Decision Support System variables, there are many other factors including price, promotion and market conditions.


INTRODUCTION

Every student, whether Undergraduate 1, Undergraduate 2 or Undergraduate 3, must conduct research in the form of a thesis, thesis and dissertation. Likewise for lecturers, researchers and other functional staff who actively conduct research and create scientific articles for publication in scientific journals.

Scientific work is one of the requirements for students to complete their studies at most universities in Indonesia. This provision applies to all levels of education, namely undergraduate thesis (S1), undergraduate thesis (S2) and third-level dissertation (S3).

Based on empirical experience, many students and authors have difficulty finding supporting articles for their scientific work as previous research or as relevant research. Relevant articles are needed to strengthen the theory being researched, to see the relationship or influence between variables and build hypotheses. This article discusses the influence of...
Sales Volume, Marketing Distribution, and Product Quality on the Decision Support System, a literature review study in the field of Management Information Systems.

Based on the background, the problems that will be discussed can be formulated in order to build hypotheses for further research, namely:

1. Does Sales Volume affect the Decision Support System?.
2. Does Marketing Distribution affect the Decision Support System?.
3. Does Product Quality affect the Decision Support System?.

LITERATURE REVIEW

Decision support system

Decision Support System (DSS) is a concept contained in computer science where this concept can help decision makers overcome problems that are semi-structured or unstructured. (Yanto, 2021)

In another article it is said that the Decision Support System (DSS) is a system that is able to provide the ability to solve a problem and provide a solution to a problem. Decision Support System is able to solve problems by providing information or suggesting a decision, DSS can be defined as a system that supports the work of a manager in making decisions on a problem. Decision making is the main function of a manager or administration. (Junizar et al., 2022)

Decision Support System (DSS) is an integrated computer device to carry out orders for collecting, analyzing and reporting data using a decision model to support performance management in organizations. DSS gather information from an organization's business processes and markets to provide abstract information and knowledge based on timing and best choice decisions. The purpose of a decision support system is to provide information to decision makers so they can make more effective and targeted decisions. (Heryana, 2022)

The purpose of a DSS is to serve the management, operations, planning levels of the organization, increase effectiveness in decision making and help people make decisions about problems that may change quickly and are not easy to solve. The goal of a DSS is not to make the decision-making process as efficient as possible. Managers' time is valuable and should not be wasted, but the main benefit of using a DSS is that it makes better decisions. When making decisions, managers don't always try their best. Any number of mathematical models will do this for managers. However, in many cases it is the manager who must decide which alternative is best. Managers may spend extra time expanding the solution to the optimum, but the increased precision is well worth the time and effort that has been issued. Managers use judgment in determining when a decision will contribute to a solution to a problem.

This Decision Support System has been studied by many previous researchers including (59-117-1-SM (I), n.d.), (Munawir & Ardiansyah, 2017), (Hamdhani & Imbar, 2015).

Volume Sales

Sales volume is a measure that shows the amount or amount of goods or services sold. Sales volume is very influential on the size of the profit that will be obtained by the company. The amount of sales will affect the volume of product sales, and vice versa if sales do not reach the optimal target, sales volume will also decrease. This proves that sales volume affects profit. (Santi et al., 2019)

A large sales volume from a company can be obtained by enlarging the market both in terms of geography (region) and demography (social). The hope is that with a large market share, the goods and services that will be absorbed will also be greater, so that the main goal of the company getting the maximum profit can be achieved, apart from that to get the
maximum sales volume, the company must target the number of product sales within a certain period. (Indriani, 2018)

Sales Volume is an achievement expressed quantitatively in terms of physical or volume or unit of a product. Sales volume is something that indicates the ups and downs of sales and can be expressed in units, kilos, tons or liters. (Poluan et al., 2019)

This sales volume has been studied by many previous researchers including (Pradiani, 2018), (Zebua, 2018), (Batik et al., 2005).

Marketing Distribution

Marketing Distribution or marketing channel is the flow of goods from producers to consumers through marketing institutions. The role of marketing agencies is highly dependent on the prevailing market system and the characteristics of the goods being marketed. The function of the marketing channel is to see and compare price levels in each marketing agency. The marketing institution itself is a trader who participates in conveying the goods and services of producers to consumers through certain marketing channels, stating that distribution channels are intermediaries between buyers and sellers, through which movements of physical goods and transfer of property are passed from producers to consumers. Distribution is an integral part of the supply chain of a product. The role of distribution is very decisive for the delivery of a product to the hands of consumers. (Nurfadila et al., 2021)

Marketing distribution or marketing channel is a collection of interconnected entities that assist in the preparation of a product or service for use or consumption. Basu Swastha calls the marketing channel a distribution channel by highlighting that what is spread is a commodity. The distribution channel of an item, according to him, is a channel through which producers move goods from producers to consumers or industrial users. (Prayoga & Aslami, 2021)

Marketing Distribution or marketing channels are all things that cover all efforts to meet the needs of products/services from producers, suppliers, distributors to consumers by creating & offering value. From upstream to downstream, effective distribution channels are built with trust and commitment so that the company's targets can be achieved. In the service sector, members of the marketing channel do not know the channel flow so that the distribution is not only ineffective but the process of creating value cannot be built. (Koeswandi & Primaskara, 2020)

This marketing distribution has been studied by many previous researchers including (Situbondo, 2017), (Analysis of Surplus and Marketing Distribution of Farmers' Rice Production in Buay Madang District, East OKU Regency By: Henny Rosmawati *, 2009).

Product Quality

Product Quality is defined as the overall features and characteristics of a product or those that affect its ability to satisfy stated or implied results resulting in customer satisfaction which then encourages them to buy the product again. Companies that are able to produce goods or services in accordance with customer demands are companies that can win the competition. This makes every business person who wants to win the competition must pay full attention to product quality in order to produce products of good quality and in accordance with their functions. (Herlina & Mulyana, 2022)

Product Quality is the core of efforts to fulfill customer needs and desires which aim to balance customer expectations. Product quality has an interest for consumers in managing good relationships with product supply companies. The existence of a reciprocal relationship between companies and consumers will provide an opportunity to find out and fulfill the
needs and expectations of efforts to increase purchasing decisions. (Anggraeni & Soliha, 2020)

Product Quality is the ability of a product to carry out its functions, including reliability, durability, accuracy, ease of operation and product repair, as well as other valuable attributes. (Armayanti, 2019)

This product quality has been studied by many previous researchers including (Mowen and Minor,2002),(Kotler and Armstrong, 2008), (Tjiptono, 2012)

<table>
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<th>No</th>
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<td>Sales forecasting calculations that follow the database to help determine inventory priorities and sales strategy steps</td>
<td>Forecasting and sales volume affect the Decision Support System</td>
<td>At the implementation level Sales Volume has more influence on the Decision Support System</td>
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<td>Sutrisno, (2017)</td>
<td>The decision support system for determining the type of business based on 7P criteria using the electre method can assist prospective entrepreneurs in determining the type of business to be built by prospective entrepreneurs</td>
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<td>Sirait, (2017)</td>
<td>Determining the location to open a new branch outlet, CV. Boga Amanda uses several established criteria such as location, population density, transportation routes, and rental prices</td>
<td>Alternative stages such as normalizing the decision matrix determine the weight of the normalization matrix so that it influences the Decision Support System</td>
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<td>Yulianton, (2008)</td>
<td>The separation between strategic knowledge and domain knowledge through a multiblackboard architecture makes the system suitable for representing distributed decision-making processes. This has been applied to the problem area of strategic decision making in</td>
<td>Multi-agent systems provide an adequate structure for representing the multiple and complex interactions between cognitive agents, which are justified by the participation of multiple knowledge sources and</td>
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<td>Arifah, (2018)</td>
<td>The accuracy obtained in the Decision Support System that has been made is 93.8% with an error of 6.28% so that the success obtained in finding the closest distance to the fishing ground and the fish auction site with the highest price is included in the successful category.</td>
<td>Place Resources and Marketing Distribution affect the Decision Support System</td>
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<td>Mahya, (2008)</td>
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<td>Product quality from laying hens influences the Decision Support System</td>
<td>The results of this study indicate that the use of good data and style has an effect on increasing product quality in the form of good laying hens, this has an effect on the Decision Support System</td>
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**METHODS**

The method of writing this Literature Review article is the Qualitative Descriptive method and Library Research, sourced from the Google Scholar online application, Mendeley and other online academic applications.

In qualitative research, literature review must be used consistently with methodological assumptions. This means that it must be used inductively so that it does not direct the questions posed by the researcher. One of the main reasons for conducting qualitative research is that it is exploratory in nature, (Ali & Limakrisna, 2013).

Data collection used library observation techniques and descriptive analysis. Data collected through Google Scholar and others were analyzed using descriptive methods or by identifying each data and describing it with relevant and concrete explanations so that an understanding conclusion could be drawn.

**RESULT AND DISCUSSION**

Based on relevant theoretical studies and previous research, the discussion of this literature review article is:

**Effect of Sales Volume on the Decision Support System.**

Sales Volume affects the Decision Support System, where the dimensions or indicators of Volume Sales (market absorption, purchasing power and customer satisfaction) affect the dimensions or indicators of the Decision Support System, which include transaction database, model base and users, (Khodashahri & Sarabi, 2013).

To improve the Decision Support System by paying attention to Sales Volume, what management must do is do forecasting where it can find out which products the market likes more, (Jannah et al., 2022).

Sales volume affects the Decision Support System, if Sales Volume is well perceived by customers/consumers, this will increase the accuracy of managers in carrying out the Decision Support System, (Ristyawan, 2018).

Sales volume affects the Decision Support System, this is in line with research conducted by: (Pradiani, 2018), (Zebua, 2018), (Batik et al., 2005).
The Effect of Marketing Distribution on the Decision Support System.

Marketing Distribution affects the Decision Support System, where the dimensions or indicators of Marketing Distribution which include the choice of strategic location, area size and demographics affect the dimensions or indicators of the Decision Support System, (Sirait et al., 2017).

To improve the Decision Support System by paying attention to Marketing Distribution, what management must do is determine multi-agents, where distribution is in accordance with absorption of market behavior (Yulianton, 2008)

Marketing Distribution affects the Decision Support System, if the Marketing Distribution is well perceived by customers/consumers then this will improve the Decision Support System, (Sutrisno et al., 2017).

Marketing Distribution has an effect on the Decision Support System, this is in line with research conducted by: (Situbondo, 2017), (Analysis of Surplus and Marketing Distribution of Rice Production by Farmers in Buay Madang District, East OKU Regency By: Henny Rosmawati *, 2009).

Effect of Product Quality on the Decision Support System.

Product Quality influences the Decision Support System, where the dimensions or indicators of Product Quality (function, packaging appearance and price) affect the dimensions or indicators of the Decision Support System, (Anggraeni & Soliha, 2020).

To improve the Decision Support System by paying attention to Product Quality, what must be done by management is to strengthen brand image and effective customer loyalty, to be able to improve the quality of the desired product, (Armayanti, 2019)

Marketing Distribution influences the Decision Support System, if the Marketing Distribution is well perceived by customers/consumers then this will increase the influence of the Decision Support System, (Yanto, 2021)

Conceptual Framework

Based on the formulation of the problem, theoretical studies, relevant previous research and discussion of the influence between variables, the framework for thinking about this article is processed as follows.

![Conceptual Framework](image)

Based on the conceptual framework picture above, then: Sales Volume, Marketing Distribution, and Product Quality affect the Decision Support System.

Apart from these three exogenous variables that affect Information System Performance, there are many other variables that influence them, including:
1. Culture: (Harini et al., 2020), (Limakrisna et al., 2016), (Elmi et al., 2016), (Riyanto, B, et al., 2017), (Purba et al., 2017 ), (Widodo et al., 2020), (Widodo et al., 2020), (Maisah & Ali, 2020)

2. Creativity: (Desfiandi et al., 2017), (Yacob et al., 2020), (Richardo et al., 2020), (Widayati et al., 2020a), (Prayetno & Ali, 2020), (Widayati et al., 2020b)


7. Systematic Thinking: (Darwisyah et al., 2021), (Iryan et al., 2021),


CONCLUSION

Based on the theory, relevant articles and discussion, hypotheses can be formulated for further research:


REFERENCES


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