



## THE INFLUENCE OF INFORMATION TECHNOLOGY, HUMAN RESOURCES AND COMPUTER NETWORKS ON THE MARKETING INFORMATION SYSTEM (MSDM LITERATURE REVIEW)

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**Abstract:** Previous research is very important in a research or scientific article. Previous research serves to strengthen the theory and phenomena of the relationship or influence between variables. This article reviews the Effect of Information Technology, Human Resources and Computer Networks on Marketing Information Systems, a literature study on Marketing Information Systems. The purpose of writing this article is to build a hypothesis of the influence between variables to be used in further research. The results of this literature review article are: 1) Information Technology has an effect on the Marketing Information System; 2) Human Resources affect the Marketing Information System; and 3) Computer Networks affect the Marketing Information System.

**Keyword:** Marketing Information System, Information Technology, Human Resources and Computer Network.

### INTRODUCTION

#### Background of the problem

Every student, whether for Strata 1, Strata 2 and Strata 3, must conduct research in the form of theses, theses and dissertations. Likewise for lecturers, researchers and other functional staff who actively conduct research and make scientific articles for publication in scientific journals.

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

Based on empirical experience, many students and authors have difficulty finding supporting articles for their scientific works as previous research or as relevant research. Relevant articles are needed to strengthen the theory under study, to see the relationship or influence between variables and build hypotheses. This article discusses the influence of Information Technology, Human Resources, and Computer Networks on the Marketing Information System. The resulting article is in the form of a literature study or Executive Support System For Business (ESS).

### Formulation of the problem.

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

1. Does Information Technology affect the Marketing Information System?.
2. Does Human Resources affect the Marketing Information System?.
3. Does the Computer Network affect the Marketing Information System?.

## LITERATURE REVIEW

### Marketing Information System

Marketing Information System is a system that analyzes and measures marketing information that is collected continuously from various company sources. The marketing information system also provides information on sales, sales promotions, marketing activities, market research activities, and other matters related to marketing. According to Philip Kotler, a marketing information system is a structured set of procedures and regular ways to plan, collect, analyze, and present information to be used in making marketing decisions. Marketing Information Systems are parts that are interconnected and interrelated on a regular basis in forming an integrated unit that is closely related to organizations, companies, services, goods, ideas, people, targets, environmental factors, technology that influence each other's conditions. and market conditions. (Haryantini, Agra Sadya 2019). And the benefit of a marketing information system is to solve marketing problems that arise from a company and can take strategic policies in the scope of marketing.

Based on the explanation above, we can conclude that the marketing information system is a system designed to be able to process information to assist marketing activities and also sales activities in a company. The cycle contained in this marketing information system must also continue to be built so that later a pattern is formed that is able to facilitate the management in terms of controlling and evaluating the system in it. Marketing information system is a series that regulates the company, especially in completing the company's marketing field with a computerized system. In addition, the system provides information for sales, product promotion, marketing activities, market research activities, consumers and others related to marketing. Marketing information systems have several good functions for companies to carry out, including the following:

- 1) The company will be facilitated in terms of controlling the development of its business.
- 2) Help facilitate every information system owned by the company.
- 3) Help speed up information when there is an error or mistake in the data.
- 4) Facilitate time management in carrying out company activities, especially in terms of marketing.
- 5) Minimize the occurrence of human error.

The various functions of the system indicate that the company's management will be greatly assisted in marketing activities, either directly or indirectly. A professor and marketing expert named Phillip Kotler from Northwestern University in 1966 first used the term marketing nerve center to describe a new unit in marketing. The function of the unit is essentially to collect and process various information for marketing strategies. Kotler explained that there are three types of marketing information systems, namely:

- a) *Marketing Intelligence: is information obtained from the environment and continues to be absorbed into the company.*
- b) *Internal Marketing Information: is information collected from within the company*
- c) *Marketing Communication: is a system obtained from within the company to the company environment.*

Apart from that, the Marketing Information System also has several components, namely the Marketing Information System Input Component and the Marketing Information

System Output component. The Marketing Information System Input Components have 3 subsystems, namely:

- 1) Accounting Information Subsystem. The information subsystem is an activity carried out to collect data in which it describes marketing transactions in a company.
- 2) Marketing Research Subsystem. The marketing research subsystem is an activity to collect data related to various aspects of operations in marketing, especially various things that are closely related to customers. Generally, the data will be collected by a survey method.
- 3) Marketing Intelligence Subsystem. For this marketing intelligence subsystem, it will focus more on collecting data and also information related to competing companies, including the possibility of a benchmarking strategy. Because competitors will certainly be very tight at this time, for that the data collected must be complete and accurate.

And the Marketing Output Subsystem consists of:

- a) Product Subsystem. Research conducted in the company's information system must be able to conclude about the product to be marketed. The conclusions obtained, for example, whether the product is acceptable to the customer or not, what shape or color the product will be interested in, and so on. The product is the most important element that must be in the marketing mix and the company also has the authority to provide products to meet market needs. In this case, the task of the marketing manager is to develop a strategy and tactics in the marketing mix, then integrate it into a good marketing plan. Product life cycle or product life cycle is a product sale that can start from introduction, development and also decline. The product introduction stage in this case is a stage to introduce the product. While the development stage is a strategy related to how a sale can continue. On the other hand, the decline stage is a stage of eliminating products that are no longer consumed by consumers.
- b) Place Subsystem. The place subsystem is the entire software that describes how the product is distributed to consumers.
- c) Promotion Subsystem. The promotion subsystem is all software that is able to explain information directly or indirectly to managers related to sales.
- d) Price Subsystem. Pricing subsystem is software that will provide all product pricing information to managers. The pricing subsystem is almost the same as the promotion subsystem in terms of decision support. The determination of the price will be based on the costs to be incurred and then added with the required mark-up. Pricing is done based on a request for pricing in accordance with the value placed by consumers on a product.

The manager can later use these subsystems separately or combined. With the integrated mix subsystem, it is possible for managers to develop marketing strategies by utilizing various mixtures of elements in a combined way. For each system output, the management will decide that certain information is useful in solving a problem in marketing. Various software in this case will be developed to be able to provide information related to the elements of the marketing mix using various methods. Maka Sistem informasi pemasaran (Marketing Information Sistem) atau MKIS adalah suatu sistem berbasis digital atau komputerisasi yang berintraksi dengan sistem fungsional yang lain guna mendukung manajemen perusahaan dalam solusi masalah yang berkaitan dengan pemasaran barang perusahaan.

This Marketing Information System has been studied by many previous researchers, including: (Rahmawati, Noni, and Herry Mulyono, 2016), (Hidayatullah, Syarif, et al 2019), (Suwita, Jaka dan Beby Tiara, 2022), (Haryantini, H., and Agra Sadya, 2018), (Pane, Arya Duta Permana, et al,2022),( Mia, Sulaibatul Aslamiyah,2022), dan (Hidayatullah, S., Patalo, R. G., Firdianjah, A., & Waris, A, 2019).

### Information Technology

Information technology is a combination of computerized technology and interactions that will form a system of software (software) and hardware (hardware). The establishment of this software and hardware will be used as a means of processing, processing, generating, compiling, storing and manipulating activities and data in various methods. This method is used in order to produce high quality information and information that is accurate, precise, and relevant. This information is used as a company tool to reduce personal needs, uncertainty, government and business activities of a company. Information technology can produce very strategic information according to company needs, namely in the application of marketing information systems and aims to make decisions (Samuel, 2019).

Information technology can be regarded as a process for exchanging data and messages without space and time constraints that often limit a person's space for movement. Information technology is a tool that includes hardware, information theory, data networks, workstations, and robotics or intelligence generated from human thinking through robotic media. Components in information technology are used in order to carry out and complete practical and easy activities in marketing information systems (Aslizadeh, and Ahmad., 2014).

Information technology has a function as a tool that can improve the process of interaction and communication between humans. Information technology is presented to bridge communication between humans, so that all information obtained can be conveyed properly. Aspects of information technology are divided into methods and facilities which are included in the components of system analysis, methodological design, programming, computer software and hardware, the internet, which are incorporated into one system. Thus, information technology is projected as a tool that can detect all kinds of human problems in their lives (Adietya, et al., 2015).

Information technology includes computer technology (computing technology) and communication technology (communication technology) used to process and disseminate information, whether financial or non-financial (Bodnar and Hopwood, 1995). So it can be said that information technology is an analysis of factors that influence the use of information technology (Diana Rahmawati). All integrated methods or tools used to collect data, process and transmit or present electronically into information in various formats that are beneficial to the user. Investment in information technology is needed to produce information. quickly, accurately, carefully and completely, both internal information and external information and to gain competitive advantage, but these investments require large funds and have risks and threats of loss from the application of information technology itself. To make decisions that are more effective and informative, system developers need to have a better understanding of the factors that influence the use of information technology (Jackson et al, 1997). Complete understanding of a system is the key to the effective use of the system, so that the failure of a system is caused by a lack of understanding of the system by employees (Mortensen, 1988).

In order to better understand the relationship between information technology and individual performance, Sugeng and Nur Indriantoro (1998) argue that there is a need for a strong comprehensive theoretical model which includes variables that are significantly direct and indirect predictors of individual performance. In The Theory of Reasoned Action from Fishbein and Ajzen (1975) states that a person's behavior is an estimate of the intensity and action where someone will use information technology if it is useful and improves his performance and so should. Ficher (1996 in Silvia, 2001) states that the benefits of new information technology can be felt if the users of the information technology are "aware" of the benefits. In addition, the rapid development of information technology in the work environment causes the use of information technology to become an urgent problem.

Information technology has produced many literacy studies, including (Anggiyasari, Yunita Duwi 2022), (Zahwa, Feriska Achlikul, and Imam Syafi'i, 2022), (Zakiy, Faishal ., 2022), (Edwar., 2022), (Primawanti., 2017), (Prasetyaningrum et al., 2019), and (Kaunang, Fergie Joanda, et al., 2011).

### **Human Resources**

Human resources are the main driver of the running of an organization. These resources can be trained, developed, maintained for the future of the organization and can even determine the continuity of the organization. Without human resources all activities or plans that have been prepared by the organization will not be able to run. Let's say the plan that will be implemented is to provide online-based services, indeed in the realization of the service there are no employees who interact directly with customers, but behind the online services there are programmers or special officers who are responsible for smooth service.

In general, we recognize human resources as the driver of every organizational activity, but experts have various opinions about human resources. Quoted from Gaol (2014:14), Straub and Attner stated "People are the most important resource of an organization. They supply the talent, skills, knowledge, and experience to achieve the organization's objective, which means that humans are the most important resource of an organization. Humans provide talent, expertise, knowledge, and experience to achieve organizational goals. Then there is Schermerhorn (1996:4) who argues that "Human resources are the people, individuals, and groups that help organizations produce goods or services". goods or services. Of the many understandings put forward by experts, broadly speaking, human resources can be interpreted as individuals who work in an organization as assets that must be maintained, trained, and developed because they are the driving force of the organization.

Functions of Human Resources Various sources state that there are 5 main functions of human resources. The five functions can be described as follows:

- 1) HR as a workforce Manpower is a population of working age who is ready to do work, including those who are already working, those who are looking for work, those who are in school, and those who take care of the household. HR as a workforce is a function where humans can become producers of goods or services that are useful for themselves and other parties in need.
- 2) HR as an expert Every human being has different abilities and advantages. Along with the times, there are individuals who are able to develop the abilities or strengths they have to bring them to the point of being an expert in a particular field. These experts are certainly not ordinary people, the Circular Letter of the Director General of Taxes Number 39/PJ.23/1984 states that experts are individuals who have special expertise who in providing services based on their expertise are not bound by a work relationship (doing free work / providing professional services). services), for example accountants, doctors, lawyers, notaries, actuaries, tax consultants, architects, designers and so on.
- 3) HR as a leader Humans are monodualistic creatures, which means that apart from acting as individual beings, humans also act as social beings. Aristotle stated that humans are zoon politicon, which essentially states that humans are creatures that naturally will form groups or communities, so that it can be said that they cannot live without other humans. The ability of every human being is not the same, some of them are lacking in several ways, some have advantages over other humans. This is where the meeting point, in a group or human community will certainly need a figure who can lead or mediate the group or community. Humans who have advantages over other humans will generally be their leaders because they are considered capable of doing more things that not everyone can do.

- 4) HR as an entrepreneur As a human entrepreneur, you must be able to enter the world of production. In this world of production, humans can produce services or goods to meet their own needs or those of others. The role of man in this world of production shows that he tries to produce something with his efforts, whether it is the result itself or the result of a group, either with his own hands or with tools, whose output is clearly the result of his efforts.
- 5) HR in the development of science and technology (Science and Technology) is a source of information that can increase knowledge or insight.

Human Resources has produced many literacy studies, including: (Tamsah, Hasmin, and Jumiatiy Nurung, 2022), (Wibowo, Abiyyu Satri, 2022), (Suherman, Muhamad Faisal, S. E. Elvira Zeyn, and A. K. MSi, 2022), (KURNIAWATI, RISQI INDAH, 2022), (Tumundo, Bradley BR, Irvan Trang, and Merinda HC Pandowo, 2022) dan (Wiradyatmika, Anak Agung Gde Alit, 2022)

### **Computer Network**

Today the world of Networking is so popular among people all over the world. Indeed, the existence of the network has changed the way things work in almost all areas of life. almost every second we are busy surfing using the internet network whether it is to find information, communication or just for entertainment. Interconnection Networking or Network is a communication network that connects billions of computer devices of various types or types globally and openly. The type of communication used in the network uses telephone, satellite and other media. At first the Network was just a computer network created by the United States Department of Defense. Its purpose is as a medium of communication and data transfer within the institution. This project was built in 1969 under the name ARPANET. And as the network grows, the Network is able to provide benefits in almost all fields and can be used by all people around the world. The existence of a network is able to give birth to a new world with different characteristics from the real world. Various services offered by the Network provide convenience for its users. The existence of the network in life also has a function, especially in the world community. The following are general network functions:

- a. As communication media. Based on the understanding of the network above, the network also has a function as a communication tool or medium for all humans in the world. The use of Network as a medium of communication is very common these days. This is evidenced by the emergence of many sites and social media and even chat applications that make it easier for people to communicate.
- b. Media To Access Information. Not only to communicate, but the Network also makes it easier for people in the world to find various kinds of information. If ancient times humans had to read books first to get information, then now only by using e-books humans can read books online.
- c. Media for Exchanging Resources. Networks also make it easier for humans to exchange resources. Well, the resources referred to here are like papers, papers, journals, designs, photos, videos and many others.
- d. Media To Access News. By using the Internet, you can find various types of news updates every day. If the ancient times to read the news had to go through the newspaper, then with the Network it was more facilitation.

In addition to the Network function, there are also several benefits, namely:

- 1) Communication Becomes Faster. If ancient times to communicate must be through correspondence, then by using Network communication is faster. By using Network, you can not only read messages from someone, but also can see and hear voices live.

- 2) Communication Becomes Faster. There are several ways that can be used to communicate through the network such as email, chat, social media and many others.
- 3) Adding Insights And Knowledge. With the Internet, now people do not need to be confused anymore in accessing knowledge. Just type what you want to know and a full explanation will appear instantly.
- 4) Adding Insights and Knowledge. Network does provide a variety of useful knowledge to add insight and knowledge. This knowledge can be obtained through websites, or search for it through videos on YouTube.
- 5) Ease of Shopping. If the tone of shopping has to go to the market, you are now shopping enough to sit in the sweet room in the room and choose it via your favorite smartphone. Because with the internet, shopping is easier. You don't even have to get tired of the heat and take a motorbike taxi.
- 6) Ease of Shopping. In addition, shopping on the Network is also easier and of course cheaper. Well, some companies that develop online shopping can be called e-commerce.
- 7) Ease of Marketing a Business. There are several advantages that can be obtained from a marketing business through a network compared to using conventional methods. Some of these advantages include lower marketing costs, being able to reach more people, being able to aim at a specific target, being able to build a brand faster and many others.
- 8) As a Means of Entertainment. Network is also used as a means of entertainment. Some things can be used as a means of entertainment on the Network such as YouTube, Facebook, Instagram, and many others.

Although the Network has many benefits, in fact the Network also has a weakness which is the weakness of using the Network which is sometimes unethical. A lot of misinformation is shocking. Then pornographic sites are also rampant and it is not good for the development of minors.

In essence, there is no network technology that stands alone, but will always be connected to each other. As the meaning of Network which means communication network. Each technology has its advantages and disadvantages, for example from the aspect of installation and operational costs or from the ideological and cultural aspects. The selection of technology systems is important considering the information security factor. Indonesia as a sovereign country should have an independent communication network system. Control over ICT is absolute in order to meet the basic needs of communication and protect the entire nation and homeland of Indonesia

The Computer Network has produced many literacy studies, including:, (Prihantoro, Cahyo,..., 2021), (Ibrahim, Akip Maulana,...,2021), (Sya'i, Muhammad, et al, 2022), (Suhada, Deksa Imam, et al, 2022), (Wiguna, Muhammad Tri Pandu, 2022) dan (Handayani, Sri, 2022).

**Tabel 1: Penelitian terdahulu yang relevan**

| No | Author (year)  | Previous Research Results                                 | Similarities to this article                             | Difference with This article                                    |
|----|----------------|---|--|---|
| 1  | Samuel(2019)   | X1 has positive influence and significant in Y1           | X1 affects Y1  | X2 has influence against Y1                                     |
| 2  | Handoko(2000)  | X1, X2, and X3, positive effect and significant to Y1     | X1 affects Y1  | X2, and X3, have influence on Y1                                |
| 3  | Hasibuan(2011) | X1, and X2, have positive influence and significant to Y1 | X1, and X2 have positive influence and significant to Y2 | X1, dan X2 memiliki pengaruh positif dan signifikan terhadap Y1 |

|   |                        |  |  |  |
|---|------------------------|--|--|--|
| 4 | Prasetyaningrum (2019) | X1, and X2 have positive influence and significant to Y2 | X1 has a positive and significant effect on Y1           | X2, and X3 have positive influence and significant to Y1 |
| 5 | Destriana (2018)       | X1, and X2 have positive influence and significant to Y1 | X1, and X2 have positive influence and significant to Y1 | -  |
| 6 | Handoko(2000)          | X has influence positive and significant against Y       | X has a positive and significant effect on Y             | -  |

\*Get variable: Mk.IS = Information Technology; Human Resources; and Computer Network

## RESEARCH METHOD

In this study, the authors use qualitative research methods and literature review or library research. Qualitative research is research that discusses and raises the meaning of individuals and community groups that come from social problems (Creswell, 2016). Qualitative methods can be used to examine social problems, social phenomena and a person's behavior. Qualitative methods aim to reveal the hidden meaning behind phenomena that occur in society.

Literature study or literature review is one of the techniques in collecting data which is carried out by the process of procuring studies or review studies from books or other literacy relevant to the research topic. Literature review activities are carried out with the aim of obtaining data, understanding and sources related to the topic of the researcher's problems (Maelani, 2015). In this article, the author conducts a literature review related to the Executive Support System (ESS) For Business. In addition, the authors also use journal articles that have been accredited. The articles and journals used have been sourced from Mendeley and Google Scholar.

## FINDINGS AND DISCUSSION

The discussion in this article contains the Executive Support System (ESS) For Business variables, including Information Technology, Human Resources, and Networks. These three variables have an influence on the Marketing Information System (Mk.Is). A more complete discussion will be carried out below, among others:

### **The Effect of Information Technology on the Marketing Information System.**

Information technology is defined as a technological tool used by a company to produce, process, and disseminate information in any form. Therefore, information technology can provide support for company operations efficiently and effectively. Information technology is useful for reducing the use of costs in carrying out business activities. Information technology can produce very strategic information according to company needs, namely in the application of marketing information systems and aims to make decisions (Samuel, 2019). Components in information technology are used in order to carry out and complete practical and easy activities in marketing information systems (Aslizadeh, and Ahmad., 2014).

Information technology has a function as a tool that can improve the process of interaction and communication between humans. Information technology is presented to bridge communication between humans, so that all information obtained can be conveyed properly. Aspects of information technology are divided into methods and facilities which are included in the components of system analysis, methodological design, programming, computer software and hardware, the internet, which are incorporated into one system. Thus, information technology is projected as a tool that can detect all kinds of human problems in their lives (Adietya, et al., 2015).



Information technology is increasingly widespread and is urgently needed to support all kinds of company management, so resources are needed that can provide maximum employee performance so that they can go through all kinds of competition in an increasingly fierce world of work. Technology Resources does not cause any influence without cooperation with human and business resources. The ability of HR in using information technology is of added value in order to improve employee performance. With this, the company's targets and objectives can be achieved according to the specified time (Jaryono & Widuri, 2011).

Based on this discussion, an analysis can be produced which shows that Information Technology has a very positive impact on the company's work power. The application of information technology in marketing information systems cannot be doubted. Even in government institutions, it has a good impact, so that employee performance has improved. The improved implementation of e-government is expected to have a positive impact on government performance in providing services to the wider community (A. A. Hidayat & Achjari, 2017). Discussions on information technology have resulted in many literacy studies, including: (Maryanti et al., 2012), (Destriana, 2018), (Samsiah et al., 2018), (Jaryono & Widuri, 2011), (A. A. Hidayat & Achjari, 2017), (Prasetyaningrum et al., 2019), (Indrayani, 2012), dan (Sawitri, 2016).

### **The Influence of Human Resources on the Marketing Information System.**

According to (Sumarsono, 2003) explains that Human Resources (HR) is a source that contains the quality of the effort carried out by a person (human) in a certain period of time and for certain purposes, for example: to produce or produce goods and services. Human Resources (HR) is related to the quality of humans themselves, which can be seen from the human ability to work, or being able to carry out all useful and beneficial activities, for example: economic activities. (Lamuda & B, 2018) states that the interaction between human resources and the system is an important issue in the implementation of the system that will affect the quality of information, the variable of human resource competence is measured by the instrument made.

Human Resources in a company / organization will create potential profits in business, because HR is the key to the progress of an industry. Human Resources are diverse, which can be in the form of: workers (employees), company leaders (CEO, Director, etc.), experts and technicians, job candidates, etc. Human Resources is also one of the strategic components of a company or organization in order to carry out the management functions of a company such as planning, organizing, directing, and supervising. Human Resources also has several operational functions. With the existence of good and quality Human Resources in a company or organization will help the company or organization in achieving its goals more effectively and efficiently.

Human Resources (HR) has been widely discussed by several experts including: (Hasibuan, 2011), (Hasibuan, 2002), (Marihhot Tua Efendi, 2002), (Henry Sumimora, 2006:3, dalam Baiq Setiani, 2013), (Mangkunegara, 2003), (Handoko, 2011), (Mangkunegara A. P., 2001), (Mangkunegara, 2002), (Handoko, 2000), (Sumarsono, 2003)

From several expert opinions regarding Human Resources, it can be concluded that Human Resources (HR) in the form of humans employed in a company/organization as pioneers, thinkers and planners to achieve company/organization goals. Meanwhile, broadly speaking, human resources are individuals who work as activists in an organization or company, and are assets of a company/organization that must be trained and developed.

**Effect of Computer Network on Marketing Information System.**

With the rapid development of networks, communication via the internet has been adopted by the business sector as an important tool for providing information. These developments have influenced the traditional form of presentation of corporate information. Network is seen as one of the important reporting media, so that information about the company's performance can be reached by all investors globally, apart from traditional means, by various parties such as creditors, shareholders, and analysts (Ashbaugh et al., 1999). Network offers a unique form of disclosure that becomes a medium for companies to provide information to the wider community as soon as possible (Abdelsalametal., 2007).

Network is a term for a collection of computer networks that connect academic, government, commercial, organizational, and individual sites (Rohaya, 2008). The Internet provides access to telecommunications services and information resources for millions of users spread throughout the world. The internet services currently available include direct communication (email, chat), discussions (Usenet News, email, mailing lists), distributed information resources (World Wide Web, Gopher), remote login and file traffic (Telnet, FTP). , and various other services.

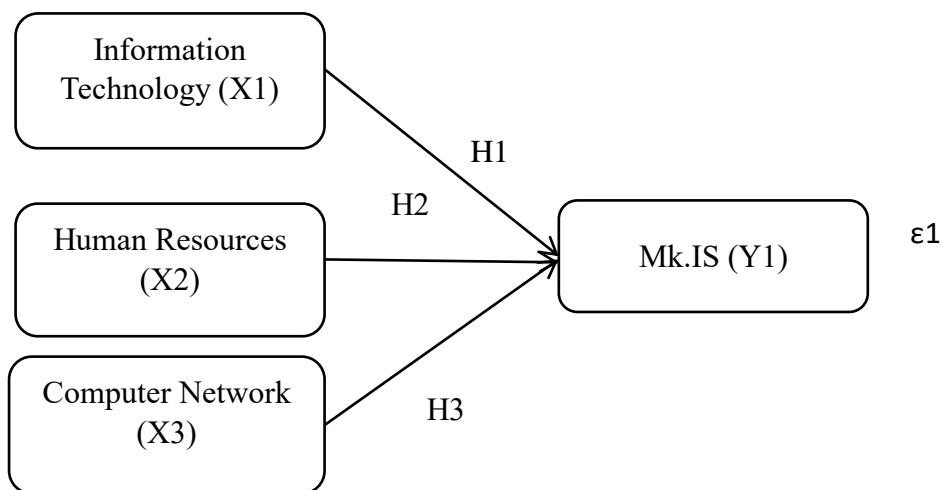
There are several indicators that can be used to measure the internet usage variable according to Rizki and Syarifa (2012), including:

- a. How often do you use the internet to support business activities.
- b. How satisfied are they using the internet in their business.
- c. How comfortable is it to use the internet in a brand business

Networks have been widely discussed by several experts including: (Nugroho,2020), (Primayanti, 2022),dan (Rizka, 2018)

**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 in this article is as follows:



**Figure 1: Conceptual Framework**

Based on the conceptual framework picture above, then: Information Technology, Human Resources, and Computer Networks have an effect on *Marketing Information System*.

Apart from these three variables that affect the Marketing Information System, there are many other variables that influence it, including:

- a) Communication Strategy: (Marsumi, 2022), dan (Sanjaya, 2022).
- b) Consumer Decision: (Nasrun, 2022), dan (Fadly, 2020).

- c) Promotional Website: (Hernandi, 2018), dan (Susilawati, 2019).
- d) Kreativitas / Creativity: (Desfiandi et al., 2017), (Yacob et al., 2020), (Richardo et al., 2020), (Christina Catur Widayati et al., 2020), (Prayetno & Ali, 2020), (C.C. Widayati et al., 2020)
- e) .Sistem / system: (Shobirin & Hapzi Ali, 2019), (Ashshidiqy & Ali, 2019), (Sari & Ali, 2019), (Djojo & Ali, 2012), (Darwisyah et al., 2021), (Somad, A., Imron Rosadi, K., & Ali, 2021), (Erlina Gusnita, Hapzi Ali, 2021)
- f) Software / Perangkat Lunak: (Indarsin & Ali, 2017), (Assagaf & Ali, 2017)
- g) Organisasi / Organization: (Sari & Ali, 2019), (Brata, Husani, Hapzi, 2017), (Limakrisna et al., 2016), (Desfiandi et al., 2017), (Harini et al., 2020), (Riyanto et al., 2017), (Sulaeman et al., 2019), (Ali, 1926), (Masydzulhak et al., 2016), (Widodo et al., 2017), (Silitonga et al., 2017), (Rivai et al., 2017), (Prayetno & Ali, 2017), (Saputra & Ali, 2021), (Saputra & Ali, 2022)

## CONCLUSIONS AND SUGGESTIONS

### Conclusion

Based on theory, relevant articles and discussions, hypotheses can be formulated for further research: Information Technology affects the Marketing Information System; Human Resources affect the Marketing Information System; Computer Network affects the Marketing Information System.

### Suggestion

Based on the conclusions above, the suggestion in this article is that there are many other factors that affect the Marketing Information System, apart from Information Technology, Human Resources, and Computer Networks at all types and levels of organizations or companies, therefore, studies are still needed. which is further to look for other factors that can influence the Marketing Information System other than the variables studied in this article. Other factors such as Communication Strategy, Consumer Decisions and Website Promotion.

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