

THE ROLE OF BIG DATA IN DECISION MAKING FOR ENTREPRENEURS HIP THROUGH THE USE OF INFORMATION SYSTEMS IN E-COMERCE

Achmad Fauzi¹, Ahmad Muchlisin Natas Pasaribu², Tantri Aprilia³, Arif Musyaffa⁴, Herlin Rahmasari⁵, Iqbal Al Baihaqi⁶, Muhammad Yusuf Nugroho⁷, Nabila Alifiyah⁸

Universitas Bhayangkara Jakarta Raya

Corresponding Author: Tantri Aprilia tanaprl3@gmail.com

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ABSTRACT

The use of information systems contained in E-commerce which of course will be very important to help someone who is about to enter the world of entrepreneurship, the role of the information system is also inseparable from the development of the digital world which is also inseparable from the role of big data itself. This journal will discuss the role of big data which stores a lot of data needed, then this data will be processed in the information system that exists in the E-commerce system so that it will produce very important information to help someone in making decisions for entrepreneurship and will also discuss components in each discussion. The purpose of this research is expected to be additional information to help someone in making decisions in entrepreneurship and also become an additional reference if there is further research. The methods to be used are qualitative methods and literature studies obtained from previous scientific journals and articles.

INTRODUCTION

Big data is a term used to describe vast amounts of structured and unstructured data. Big Data can be expected as an information medium that offers unlimited space, as well as the ability to require and handle various types of information quickly. Big Data can function as a tool for data analysis as well as a storage medium. Big data will generate useful information for businesses, which can then be used as a guide for making decisions. One of the keys is to provide businesses with the right information so they can make the right decisions on the quality of their data sources. Big Data can provide information data that is in accordance with its search history and is useful for helping an entrepreneur in making decisions in the field of E-commerce.

Electronic trade, as defined by E. Turban et al. E-commerce, also known as electronic commerce, is the practice of buying and selling goods or services, exchanging products, and moving payments, services, and information over computer networks or the internet, according to Rizki et al. (2019). E-commerce is also known as the idea of conducting business electronically, with a strategy of purchasing and selling goods or services through an electronic network that transmits data, an inventory management system that is automatically created, and a data collection system that is put into place.

The existence of E-commerce at this time is inseparable from the Information System which is developing very rapidly. Information System is an organized combination of work procedures, information, people, and information technology.

Meanwhile, according to O'brien (2011), information systems are any organized combination of people, devices, software, and databases that collect, modify, and disseminate information in an organizational form.

Based on the description above, to examine a formulation of the problem is taken as a discussion as follows:

1. How can Big data play a role in existing information systems in E-commerce?
2. How can the information systems in E-commerce affect someone's decision making in entrepreneurship?
3. How effective is the influence of the information systems contained in E-commerce in carrying out their roles?

THEORETICAL REVIEW

Big Data

Big data refers to big data sets having various, intricate structures that are challenging to store, process, and display for use in subsequent processing or outcomes. Big data analysis is the act of poring over vast amounts of data to look for obscure patterns and correlations. With the aid of richer, deeper insights and a competitive advantage, businesses or organizations can benefit from this information. Big data implementation must be planned and carried out as precisely as possible for this reason. This paper examines privacy concerns in big data and provides an overview of its content, scope, samples, methodologies, benefits, and obstacles. (2013) Seref Sagiroglu and Duygu Sinanc.

Big Data can include all relevant data and then serve as a guide for decision making, its role in this process is very important. One of the keys is to provide the right information system so that entrepreneurs can make the right decisions and can choose the quality of their data sources so that the resulting decisions are the best decisions.

There are three aspects or characteristics that must be present in big data itself, which are usually referred to as the three Vs or three Vs, namely volume, velocity, and variety. In addition there are several additional characteristics, namely value, veracity, validity, variability, venue, vocabulary, vagueness. If one of the three V characteristics does not exist, then the data set cannot be considered as big data.

The important characteristics that must exist in Big Data are called three V (three V) consisting of:

1. Volumes

Volume is one of the characteristics possessed by big data. Big data itself means data that is large in size, therefore volume is very important in processing big data.

2. Velocity

Velocity refers to the speed possessed by the data, how fast the data can be processed and analyzed for a need. If the speed of big data is good, the data can be received and used directly.

3. Variety

Variety can be interpreted as the various types of data that exist in big data, for example; data in the form of audio, images, video and others.

The steps that must be taken to process Big Data as well as tools to assist each stage:

1. Acquired
Acquired is a stage related to the source and method of obtaining data.
2. Accessed
Accessed is a stage related to data access, so that it can be managed for the next stage. The data that has been collected requires governance, integration, storage, and computing.
3. Analytics
Analytic is a stage related to the information that has been obtained through the results of data processing that has been processed.
4. Application
Application is the last stage which is related to the application or application related to the visualization and reporting of the results of analytics.

Information Systems

Information systems are actually subsystems that are part of a larger system. Information Systems cannot be used or designed separately from other subsystems. The information system is only one of several subsystems owned by the organization. The operation of other subsystems completely depends on the organizational roles determined by their respective functions and departments. The task of the information system is to manage and regulate the operation of the organization's subsystems so as to help the organization achieve its goals.

Information Systems are absolutely necessary to make logical decisions that require an understanding of the problem and knowledge of alternative solutions. More accurate information leads to better decisions. The quality of information depends on three things, namely information must be accurate, timely, and relevant.

E-commerce

E-commerce is a dynamic technical instrument that consists of business processes and apps that link businesses or business actors with customers and a community through electronic exchange of commodities.

E-commerce is a system that can be used when an internet network is available and can be used for buying and selling, marketing and transfer processes when a computer network is available. E-commerce has opened up opportunities for almost everyone to do business because it can create a business in cyberspace that connects

many people without geographical location limitations. Consumers can order goods and services from almost anywhere, 24 hours a day, 7 days a week, without being limited by operating hours or distance from the store. (Kartavianus, 20012)

The obstacle that often occurs in prospective entrepreneurs starting a business is limited capital. E-commerce provides a solution where businesses can be implemented with relatively small capital. Web technology is used in the concept of electronic commerce, enabling the media to provide information that is available and usable from anywhere and in any country as long as the Internet is available. Simply put, an internet connection either through a Wireless Local Area Network (WLAN) or a device that is convenient for entrepreneurs to offer and convey information about products or services requested by consumers. So for small and medium-sized businesses, websites play a dual role as a virtual business and as a cheap and suitable means of advertising.

Decision Marking

Decision making is a result of solving a problem, answering a question as a law of the situation, and that is an alternative choice that exists, as well as ending a thought about the problem. Decision making must be done carefully and must also think about the consequences that will be obtained if we make these decisions, therefore, before making a decision it is expected to find information data about the problem, data quality is also very important because data quality determines the outcome of such decision.

The results of this decision-making have two functions, namely as the beginning of all conscious and directed human activities both institutionally and organizationally, and something that is futuristic or related to the future (effect or influence that lasts a long time).

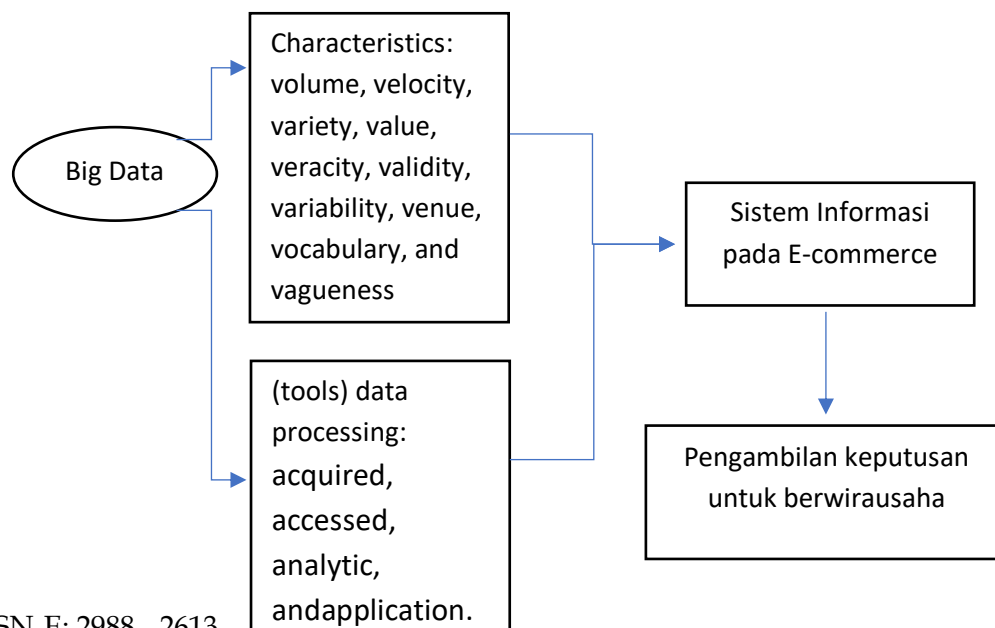


Figure 1. Conceptual Framework

METHODOLOGY

The research method in this journal is using qualitative methods and literature review with literature review journals. obtained from journals and scientific articles from previous research results, this aims to add to and develop the theories that have been explained by previous researchers. This research journal takes references from Google Scholar, online books, and other online media.

RESULTS

Table 1. Previous Research

No.	Author, year	Results of research	Similar studies to this one	The difference with this research
1	Dewa Ayu Anggi Pramiswari, Ida Bagus Dharmadiaksa (2017)	E-commerce has a positive impact on business decision making. The higher the level of knowledge about e-commerce, the greater the interest of students in making business decisions.	E-commerce really helps an entrepreneur to make decisions with data and information obtained from information systems.	The difference with this research is that this research has a more specific object.
2	Anastasia Lipursari (2013)	Decision making is the result of solving a problem, answering a question as the law of a situation, and choosing an option from various alternatives and stopping the process of thinking	Decision making is very important in determining the future. Decision making can be taken by considering and sorting the data and information obtained from the information system.	The difference in this journal is that this journal focuses on decision making in everyday economic problems.

		about the problem or question at hand.		
3	Nurabiah, Herlina Puspardini, Yusli Mariadi (2021)	E-commerce has no significant positive effect on accounting students' business decision making.	E-commerce has a positive impact on business decision making.	The difference in this journal is that this journal gives positive but not significant results.
4	Muchlis, Dian Agustia, I made Narsa (2017)	Big Data technology as an internal company resource that can improve the company's financial performance.	Big Data is a term in a technology that describes large amounts of data. There are three important criteria called three v.	The difference in this journal is that this journal uses TOBINSQ and Market to Book Value Ratio (MBVR) measurements.
5	Sutri Handayani (2018)	E-commerce can make it easier for consumers to order online because consumers do not have to come directly to the store.	E-commerce is a dynamic technology suite that includes applications and business processes that connect businesses, consumers and communities through transactions.	The difference in this journal is that this journal focuses more on networks and the web.
6	Michael Jonatan Sihombing, Hari Sulisty (2021)	At the same time, E-commerce and information systems have a major impact on business decision making.	E-commerce has a large and significant impact on the decision making for entrepreneurship.	The difference in this journal is that this journal discusses the influence of E-commerce and information systems from the point of view of accounting information systems.

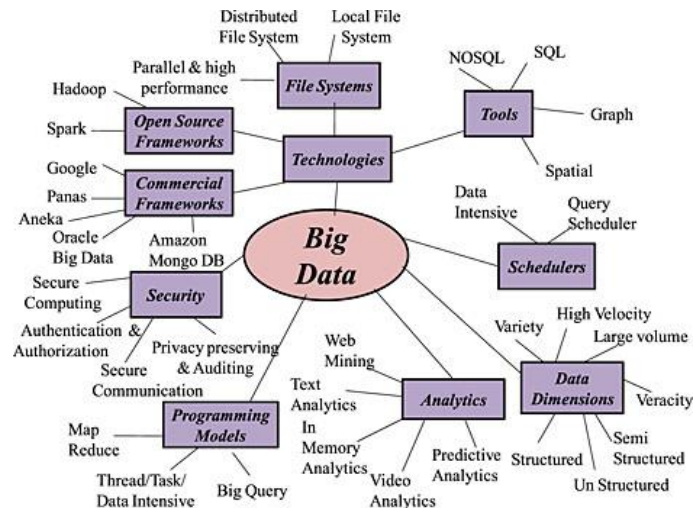
7	Heri Purwanto (2021)	An information system is an online work unit that collects and stores information data and is able to process it into usable and appropriate information.	Information systems are processing, storing, and generating collected and processed information.	The difference in this journal is that it focuses on the amount of information provided to many users with similar needs to support decision making.
8	Heny Pratiwi (2016)	Decisions are the result of reflection and selection of one of several options that can be used to solve the problem.	The decision-making process is something that people always deal with. Decisions are usually made based on certain considerations or logic, the best choice must be chosen from several options and the goal must be achieved.	The difference in this journal is that this journal discusses the selection of an alternative based on certain criteria.
9	Ahmad Sujawardi (2015)	An information system is a series within an organization consisting of a number of computerized or manual fine components that collect and process data containing information related to the creation and processing of data into information.	An information system is a series of organizations whose function is to collect and manage data that contains information about users with similar needs to support decision making.	The difference in this journal is that it focuses on computerized components that provide information to multiple users about similar needs.
10	Risnanda Juliana Putri (2019)	Decision making is done by solving problems systematically,	Making decisions involves deciding between potential actions to	This research only focuses on a systematic approach

		collecting information for information and adding factors that need to be considered in the decision-making process.	accomplish specific objectives.	to problems that occur in companies.
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DISCUSSION

The Role of Big Data in Information Systems in E-commerce

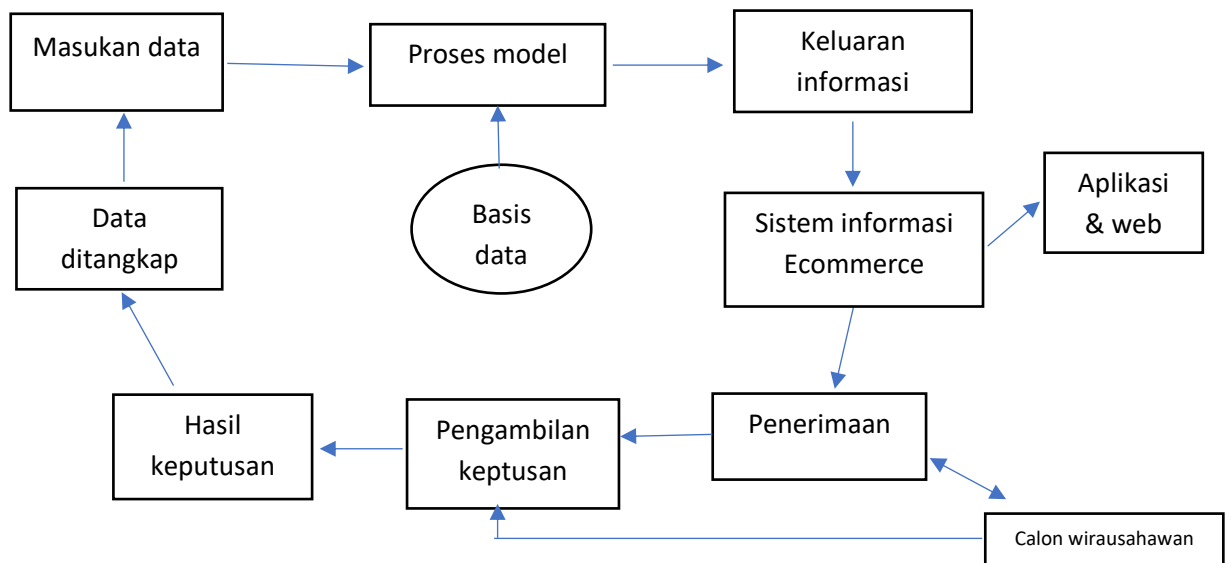
Big Data is one of the most important new technologies for today's business. To collect the data we want, we can view or search for data by utilizing existing information. Big data has characteristics that must be present in big data itself, which are usually referred to as the three V's or three V's, namely volume, velocity, and variety. In addition there are several additional characteristics, namely value, veracity, validity, variability, venue, vocabulary, vagueness. Apart from having characteristics, Big data also has (tools) to assist the processing process, there are four stages in it, namely acquired, accessed, analytic, and application. Big data acts as a supplier of data or provides data that is very important to make the existing Information System in E-commerce work as it functions, and makes this role an absolute unit.



The Influence of Information Systems on E-commerce in Entrepreneurial Decision Making

Information systems are essential for making logical decisions that require understanding of problems and knowledge of alternative solutions. More accurate information leads to better decisions. The quality of information depends on three things, namely information must be correct, current and relevant.

The role of this information system is very important because it determines the results of the data that has become information which will later be considered by an entrepreneur in making decisions for entrepreneurship. The result of the information must be the best choice because the decision will determine the outcome in the future. While E-commerce provides a solution where businesses can be implemented with relatively small capital. Web technology and applications are used in the concept of electronic commerce, enabling the media to provide information that is available and can be used from anywhere and in any country as long as the internet is available so that it will make it easier for an entrepreneur to colonize his business and make prospective entrepreneurs not hesitate to open a business and become an entrepreneur.



The chart above shows the information cycle which describes the processing of data into information and the use of information for decision making, until finally the results of the decision-making actions result in the return of data.

In a report on *Kominfo.go.id* (2021), Suharso said e-commerce sales have grown at an annual rate of 15.4%, and these results are very important for the sales growth of Indonesia's e-commerce business sector. Said that it meant E-commerce and Information Systems play a very positive and significant role in helping someone to become an entrepreneur because it is very promising for businesses to be pioneered to progress, so prospective entrepreneurs don't hesitate and fear if their choice to become an entrepreneur is the right decision.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

From the theory and explanations previously described, it can be concluded that Big Data, E-commerce, and Information Systems are very influential and play a positive and significant role in decision making. However, it should also be noted that in order to obtain the results of the decision, several processes and characteristics must be met. All of these processes must be carried out in order to get the best choice which will later be used as several alternatives for decision making.

Big data is very important because the data needed for decision making is in big data, and the data that has been collected will later be processed and produce information that will be input into the existing Information System on the E-commerce application or web and will eventually produce some information with fast, precise and efficient which will be several options for prospective entrepreneurs to choose between these options.

RECOMMENDATIONS

Because the scope of data that exists in Big Data is very large, it is expected to be careful in finding data, and analyze the data you want to use first so that the information that will be obtained later will be in accordance with what you are looking for and to minimize the occurrence of misinformation because decision making is very difficult. important for determining the next step.

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