Factors affecting the effectiveness of financial management information system

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Abstract

This study aims to analyze the factors that influence the effectiveness of management information system in the financial institution. Data were distributed to the managers in financial areas ranging from middle to top management level in Cimahi. The respondents in this study are 49 people. This study uses a quantitative and descriptive approach. The method used is an associative method. Data analysis uses regression analysis model. The unit of analysis in this study is the financial manager in the village and sub-district of Cimahi. Financial managers at the top level and middle level interact directly in the utilization of information technology. The data testing is done through validity test with Spearman Rank correlation coefficient and reliability tests with Cronbach Alpha coefficient. As for descriptive data analysis, multiple regression analysis was used. The results showed that the sophistication of the technology, manager’s knowledge, and participation affect the effectiveness of implementation of financial management information system. The problem that needs to be corrected is the technology that is still inadequate to produce accurate and relevant information.

Keywords: Technological Sophistication; Manager’s Participation; Manager’s Knowledge; Effectiveness of Information System.

1. Introduction

The era of globalization and advance in information technology encourage competition, forcing the companies to get accurate information with respect to their business [1]. Various agreements were made by almost all governments in the world to welcome the era. It will also have an impact on regional financial management. Indonesian Government Regulation number 56 of 2005 on Regional Financial Information System states that the government requires local governments to submit financial information to the principle accurately, relevantly and reliably. This is also supported by the release of government article number 113/2014 on the village financial management. One of the things that can support this condition is the use of information technology in the village area. In fact, the quality of financial reporting generated currently is still low. There are still many local governments who received a qualified opinion from the Supreme Audit Agency (BPK).

Technological advances in the field of transport and telecommunication increasingly encourage the acceleration of global trade as characterized by the rapid changes in the money market, capital flows, and increased competition for capital, skilled labor, raw materials and markets globally. Manufacturers/entrepreneurs who are able to master the technology will be able to control the information that underlies the global trade. Thus, they are able to improve their competitiveness. The more sophisticated the information technology becomes, the more rapid and the more complete the information that should be received. However, if the advance of information technologies is not accompanied by the participation of management and the ability of managers, it will not optimally improve the competitiveness of the business.

The sophistication of information technology, management participation, and knowledge of accounting managers provide a positive and significant impact on the effectiveness of the accounting information system [2]. Employee knowledge and the use of information technology have an impact on the effectiveness of information system [3]. On the other hand, the support of top management will also affect the effectiveness of enterprise information system [4]. In performing the duties, the employees will take advantage of using the technology as it makes their job easier. If the company is able to apply the information and use information technology effectively, it will be able to generate information that can be received in a timely, accurate, and reliable way which in turn can increase the efficiency of employee performance. The increased employee performance can improve overall organizational performance and this will encourage the companies to increase their competitiveness. Companies that have the sophistication of information technology, management participation, and manager's knowledge will increase the effectiveness of the company's information system [2].

2. Literature review

The effectiveness of management of an organization is seen as a success in terms of quality according to the desired expectation. To achieve such success, there are many people use information technology tools to produce information. Information and Communication Technology are seen as the things that can lift the image of a nation. So, the countries in the world are vying to advance the technology, information, and communication. Information Technology is a technology used for data processing, including processing, obtaining, compiling, storing, manipulating data in various ways to produce quality information, i.e. information that is relevant, accurate and timely, used for personal, business, and government and is a strategic information for decision-making [5, 6, 7, 8]. The effectiveness of information system can be seen from the nature of the information generated. The information must be presented at the right time, easily understood, in the proper format, consistent and in accordance with requirements [9]. This notion is also supported by the research results stating that the use of information technology (IT) will be able to support the effectiveness of business [10].

In fact, IT is a phenomenon created by implementing computer systems in organizations and society and its transformation is a result of the application [11]. On the other hand, the study of literature and expert opinion indicate that there is a need to use the knowledge management and it cannot be denied in the organization. Factors such as globalization, government, and civic orientation need to be taking into consideration. The successful implementation of information systems in the business environment is dependent on the company's ability to control the information that underlies the global trade. Thus, they are able to improve their competitiveness.
strategy. The main characteristic of the current problem is a large amount of data and information to be collected, stored, processed, retrieved and analyzed. This property, which is regarded as the creator of the complexity of the organization, causes the organization to move toward the modern technology called Information Technology (IT). This helps to facilitate the work with data and information [13]. This technology was first used by academic and industrial fields two decades ago and is now one of the global modern technologies combining computer science, mathematics, telecommunication and knowledge management [14]. The IT life cycle is short and grows fast, thus there are different definitions and perceptions about it among researchers. We also found some inconsistencies between them [15], [16]. This condition includes a wide range of concept that is sometimes quite limited in the computer processing operation and sometimes widely remembered as a technology that develops in and depends on the organization. Information technology tasks to collect, store, organize, process and disseminate information, including audio, images, text or numbers are performed by computers and telecommunication apparatus [17], [18]. However, the IT today is more than a direct relationship between people. This is done through applications such as email, chat rooms, video conferencing and others. IT as a data base for knowledge sharing and storage can be regarded as the best method for preserving an organization’s intellectual investment. Therefore, the organization like sports federations which are in competition with their foreign rivals, continuously need special attention for IT to maintain their competitive edge. Thus, organizations make employment use of familiar and expert workers, and provide the opportunity for the advancement and competition. Descriptive findings of knowledge management indicate that the creation of knowledge has an averagely higher effect than the transfer of knowledge. Administration covers all electronic automation both formal and informal, a relationship between entities inside and outside the organization. Link or communication is a term that distinguishes the administration automation of data processing, management information system, and decision support system. Automation of administrative communication is both orally and written. The spread of ICT in the United States during 1973-1995 revealed an increase of 1.4% [19]. The findings showed that there is no significant relationship between ICT infrastructure and the creation of knowledge, but there is a significant relationship between the infrastructure and knowledge transfer [11]. The study comparing the dimensions of knowledge management between public and private organizations concluded that there is no significant difference in the organization in terms of information technology and knowledge management within the organization [14]. The best way to use information technology in the field of knowledge management is a combination of two factors, namely, realize the limitations of information technology and the other is that every information technology will be ignored regardless of the global cultural change in relation to the value of knowledge.

The implementation of an information system is because of several factors. Effectiveness is always associated with the relationship between the expected results and the results achieved. Successful implementation of information system can be measured by the usefulness of the system [19], [20], [21]. User satisfaction will ultimately also depend on the quality of information system designed [22]. Effectiveness can be viewed from other different angles (view points) and can be assessed in different ways and can be associated with the management efficiency in the organization. Characteristics of an effective information system can be seen from the data security, time (speed and accuracy), variations of reports/output and relevance to the needs of users [17]. Implementation of information system will be highly dependent on the satisfaction of users [20].

The complexity of the process of accounting information system requires the experience of a financial manager with the AIS (experience with AIS) and the AIS training (training in AIS), both of which the constructors (user related constructs) which determine the success of the implementation of accounting information system [23]. Training and educational developers, managers, and users of accounting information system (training and education) are an important success factors for an increased effectiveness of the implementation of accounting information system in the enterprise. The complexity of accounting information system and various financial transactions that occur throughout the company require a careful and continuous management in order to produce the valid financial statements [9]. The keys to the successful implementation of an information system are the use of the system (using the system) and the use of accounting information system to assist the completion of daily work [21], [24], [19]. Results of other studies also revealed that the indicators of successful application of accounting information system are the user satisfaction and level of usability of the accounting information system [25, 26]. The knowledge of accounting manager and manager participation in the implementation and development of accounting information system have a strong relationship with the effectiveness of the accounting information system [6], [7]. Knowledge of accounting managers influences the accounting information system and provides a significant impact on the quality of information [23], [8]. Companies that use accounting information system can get the benefit because they have the opportunity to do something faster, effectively and efficiently than their competitors [5]. A good organizational management may not be successful if the managers do not contribute to the implementation of the organization’s operations. The management must provide high support for any work they do. The role of management in the cooperation and support and grows during the implementation of management functions i.e. planning, organizing, actuating and control [27]. Every manager must have the basic skills in business management to effectively manage and motivate his team. The main role of a manager in any organization is to lead, motivate and encourage employees to work together and achieve organizational goals. To achieve the goals, managers must plan, organize and control the available resources, including human resources. Every manager needs to have certain skills and qualities, so he is able to do his job at his best. Knowledge is the result of knowing something and occurs after sensing specific objects [28]. Sensing occurs through human senses: the senses of sight, hearing, smell, taste, and touch. Most human knowledge is obtained through the eyes and ears. In accounting information system, the knowledgeable manager is a manager with expertise in accounting information system acquired through education, training, and experience. The experience in the field of accounting information system and training in the field of accounting information system are the building-blocks of knowledge in the field of AIS [23]. User training in AIS is a factor shaping a person’s knowledge in the field of accounting information system [24]. Knowledgeable managers in the field of accounting information system are synonymous with the competence in the field of accounting information system [22]. Knowledge management refers to the ability to manage “knowledge”. This is a holistic view of the mechanisms and processes based on the creation, collection, storage, retrieval, dissemination and utilization of knowledge which is the organization of interdisciplinary amendment in the academic world, especially in labor practice. A manager must have the ability to handle and work with people of different temperaments, backgrounds, and educational qualifications. He should be well aware of what might motivate the members of his team to be the best he can. A manager must be good at building a relationship with subordinates and fair to them, so there is no ill feeling among the team members. A manager must have the ability to build a good team as well. It’s important that a manager has good communication skills. A manager who is a good communicator can accurately describe the vision and strategy to his team. A good communication skill is essential to the effective functioning of the team and assists in decision making. Along with being a communicator, a manager must be a good listener as well. He must respect the perspectives and views of his subordinates. A strong communication skill can help in establishing a long-term relationship with team members so they do not escape from the organization. They will be appreciated and trust the organization. A manager needs to take decisions every day. There is no doubt that he must have sufficient skills of decision making, critical thinking to solve problems and make decisions [22]. In a critical situation, a manager must know how to stay calm so he is able to take the most appropriate decision. Leadership skill is a must-have skill for all managers. A leader is a person who can motivate, guide and lead team members, providing them with the right resources so that the objectives can be achieved. A leader recognizes the strengths and weaknesses of the team and allocates tasks that correspond with them. A good leader is the one who empowers team members to act independently if the situation demands to do so. A manager must have all the leadership skills to be successful.

3. Methods

This study will analyze the pattern of causal relationship between variables of the study. Research methods and analytical tools used are the Research Instrument Test (Validity and Reliability Test) and Descriptive Analyis, providing a descriptive overview of the primary data obtained from respondents). Verification analysis uses the statistical analysis tools consisting of classical assumption test, hypothesis testing by using multiple linear regression, and simultaneous hypothesis testing by using F test statistics. The verification analysis uses statistical tools and is assisted by SPSS software. Research population (n = 49) includes the middle and top management level in the South Cimahi district. They were selected to participate in the study through the census. There were 45 questionnaires distributed to all managers. The research model can be described as follows. 

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4. Results and discussion

The government of the Republic of Indonesia designs financial management information systems in order to increase accountability, transparency, and accuracy of financial information starting from the village to the country level [32]. Financial Management Information System (SIPKD) is implemented simultaneously throughout Indonesia. The SIPKD is an integrated system used as a tool for local government to increase the effectiveness of the implementation of various regulations in financial management areas based on the principles of efficiency, economical aspect, effectiveness, transparency, accountability, and auditability. This application is also a manifestation of the Ministry of Home Affairs to the local government in the areas of financial management. The SIPKD is expected to strengthen the perception system and procedure in the areas of financial management and the interpretation of the implementation of the various laws and regulations. In realizing transparency in the area of financial management, the Government issued regulation No. 56 of 2006 on Regional Financial Information System. This rule essentially states that regional governments must present financial information openly to the public, and as a consequence, each local government should build a good financial information system.

SIPKD application is developed with a web-based approach using the technology of Microsoft.NET framework which is an integral component of Microsoft windows system. This supports the development of application and XML web service. SIPKD built with NET framework technology is destined to be stored and executed on another computer and internet so it can minimize software deployment/software installation, either on the server or on the client. Besides, it is expected to minimize the difference in the released-version (versioning conflict). Thus, the performance of this running application will also be influenced by the number of clients accessing various financial management functions. Database performance will decrease along with the increasing volume of data, user/session, transaction throughput, and the type of operation in the database. To increase the performance, a larger RAM and faster processor are needed so there are more data cached in the memory. Besides, it will result in a faster data processing.

To run SIPKD, average computers in the government has already been qualified in terms of hardware. But the problem arises when downloading and uploading data through the internet which is considered very slow, thus inhibiting data management. This is often anticipated by the off-line approach.

The factors to be assessed in the participation of managers are planning, organizing, and monitoring [27], [26]. The rate of management participation with the subordinates tends to be low. It seems in tune with the age of the financial managers in the areas who are over 40 years in average. They have too long in the new environment and there is no renewal of management, so the financial management is left without direction and running as usual. Thus, the subordinates assume that there is a little participation of management in the financial management. As for financial managers who are still young (30 years), the participation occurs.

In terms of manager’s knowledge, the factors assessed are experience, training, and education in the field of accounting information system linked to mastery of financial management. Education level does not reflect the managers qualified, even if they have a master degree (S2). In fact, it is seen from knowledge acquisition in finance areas even though the level of education is very diverse. Manager’s knowledge on financial management is not from formal education, but from their involvement in training in the field of financial management.

The effectiveness of Regional Financial Information System is seen from the report, data security, time, accuracy, and relevance. Some questions have a low score which is primarily related to the speed and accuracy of information. Free financial information for the management of cash receipts and disbursements of funds depends on the speed of information networks, which are often the biggest complaint when downloading and uploading financial data. So, financial managers often choose to do the financial management manually or offline because the network is slow. If seen from the graph above, the average utilization of the best condition in SIPKD as a financial management tool has been optimized. It seems that the behavior or organization culture in each of the subdistrict is transmitted to the organizational culture within the village. The participation and manager’s knowledge in financial management are very low. SIPKD only limits funding for the management of fund which is cash in and out. While in terms of accounting policies and the management of currency exchange than cash is not optimized. In fact, if considered, the assets owned by the government are not only cash, but also fixed assets such as vehicles, buildings, and more.

The result showed that the value of R² is 0.949 which indicates that the role of information technology is strongly linked to the effectiveness of financial information system. It can be described as a complete IT condition, adequate hardware, and software, but less supported by the communication network. An effective information system is supported by a complete report, relevant and accurate information, data security, but less supported by the speed of data presentation, both the download and upload of financial data. Unlike the strong correlation between the sophistication of the IT effectiveness with the SI, the relationship between the effectiveness of the Management Participation with SI only has R² is 0.502. This value indicates that the relationship is moderate. This means that the management does not play any role in determining the effectiveness of the information system because IS has been running its course without interfering. Likewise, manager’s knowledge in financial information system has a value of R² is 0.487.

While the influence of technological sophistication, the participation of the manager and the manager's knowledge on the effectiveness of information system produce the effect of 0.894.

The table above is the result of correlation (R) and the coefficient of determination (R²). When viewed from the R value of 0.949, it is shown that there is a strong correlation among the sophistication of IT, Management Participation, Manager’s Knowledge and Effectiveness of Information System. Likewise, R² amounted to 0.900 shows that the Effectiveness of Information System can be explained simultaneously by IT Sophistication, Participation Management, and Manager’s Knowledge.

Descriptive finding related to knowledge management indicates that the creation of knowledge within the organization is in average higher than the transfer of knowledge. However, information technology is now more than creating a direct relationship between people via an application such as electronic mail, chat rooms, video conferencing equipment and other groups. IT as a database for storing and sharing knowledge can be a best practice for maintaining intellectual investment and increasing productivity within the organization.

The result showed that there is a significant and positive relationship between the creation of knowledge and transfer of knowledge. In the traditional model, organizations and individuals often do not want to transfer and exchange their knowledge. Instead of looking knowledge as organizational resources, they think of knowledge as a resource and a guarantee for the continuity of their work and are not willing to share with others because they fear of losing control of their organizational knowledge. In fact, knowledge not circulating in the organization will not be developed and will eventually become obsolete and will be turned into an obstacle. In short, knowledge circulation through sharing, business and trade will lead to the production of new knowledge that would have seemed impossible without the use of information technology. An organization that supports information sharing and the creation of knowledge among employees can determine which process is efficient and effective and can improve the performance and productivity of the organization. Therefore, sports and youth department should have a holistic approach to both of these components and provide an opportunity to transfer and share organizational knowledge among employees. Given that there is a significant relationship between knowledge management and employee productivity, it is recommended that the manager of sports and youth department review and measure productivity, i.e. the productivity of human resources and components of knowledge management in the organization.
5. Conclusion

Based on the analysis and discussion as well as data testing, it can be concluded that the information technology, the participation of financial managers, and manager's knowledge have an effect on the effectiveness of regional financial information system. Some of the things that must be considered by the government are the quality of network connectivity and manager's knowledge. These two aspects need to be improved so that the effectiveness of existing information system can be used to improve public services.

References


