

Role Of Environment Uncertainty On Management Information System-Literature Approach

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Abstract: The purpose of this research is to find role of environmental uncertainty on the quality of management information system with the literature review. Environmental uncertainty is the inability of the individual to capture the environmental factors from outside the company who are not sure which affect the companies that will impact on the quality of management information system application, when it lowered the individual's inability to capture the environmental factors from outside uncertain it will improve the quality of management information system application.

Index Terms: environmental uncertainty, management information system

1 INTRODUCTION

The role of management information systems add value to an organization when interacting with corporate strategy (Romney & Steinbart: 2015, 29). The value of an organization can be increased if the company using SIA as a tool of decision making that affect corporate strategies that create value added and the usefulness of the information that satisfy a variety of users. This is consistent with the definition of the management information system is a system to collect, record, store and process data to produce information as a basis for decision making (Romney: 2015, 36). Management information systems are designed properly will provide added value for the company (Romney & Steinbart: 2015, 37). So the quality of management information systems that can provide added value to company. Heidmann (2008: 87-91) defined quality management information system has the characteristics of an integrated, flexible, ease of access (accessibility), procedural system (formalization) and used through various media. According to Stair and Reynolds (2010: 57), the quality of management information systems are generally flexible, efficient, and timely aksesibilitas. A phenomenon that occurs related to quality problems in the management information systems Organizing Body Association of Indonesian Private University (ABPPTSI) noted that there are currently 3,124 foundations organizing private universities (PTS) and 205 of their conflict and the minister ABPPTSI General Thomas Suyatno Center said, there are a number of things which makes the foundation 205 which is problematic because of financial conflicts, facilities, and related financial management authority delays in preparing the financial statements, the use of improper accounting system and manual reporting is not based on information technology, (News of: August 27 2015). It can be said SIA quality in a number of private colleges foundations that are still poor. Characteristics of information from environmental uncertainty affects the quality of management information systems that play a role in decision-making (Belkaoui: 2002, 147). The same thing expressed by Bowhill (2008, 551) states that when designing the management information system, it is important to be aware of which is the uncertainty and complexity of the external environment.

And Sharma (2009: 240), states that the management information system designed to consider the environment as the data non-financial uncertainty. Hammad et.al. (2012) demonstrated environmental uncertainties affect the quality of management accounting system as an important factor for designing management accounting system in order to efficiently and effectively. Similar research results shown by Gilbert and Singer (2011) ie environmental uncertainty affects strategy and management information systems are designed as a strategy. Environmental uncertainties affecting the computerized accounting systems and corporate performance (David Han-Min Wang and QuanLinh Huynh: 2013). Characteristics of environmental uncertainty consists of three that state of uncertainty, response of uncertainty and effect of uncertainty (Luhman & Cunliffe: 2012, 57). According Luhman & Cunliffe (2012: 57), the state of uncertainty is when there is a difference naturally information from the external environment that shape the perception of the company in case it can not predict specific events, the company does not understand how things change and relate to each other. Effect uncertainty, occurs if the difference in knowledge about the impact of the environment on the company can not predict the impact of external changes and differences in beliefs regarding uncertainty due Response of something occurs if the difference in knowledge about the value or usefulness of the action can not predict the consequences. Soliman (2013: 214), describes the same thing with Luhman and Cunliffe (2012: 57) there are three types of environmental uncertainties that state of uncertainty, uncertainty effect and response uncertainty. It is described equally well by Buller (2001: 18) there are three components of uncertainty that state of uncertainty relating to the environment that can not be predicted, the effect of uncertainty is inability to predict the

Literature review

Management information system

Management information system is a tool for companies to process data into useful information for decision-making by the management, it is in line with the definition described by some experts below:

According to Romney et.al. (2015: 36):

Management information system – a system that collects, records, stores, and processes data to produce information for decision makers. It includes people, procedures and instructions, data, software, information technology infrastructure, and security measures.

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According to Wilkinson et.al. (2000:7):

An management information system as financial information system is a unified structure within an entity, such as business firm, that employs physical resources and other components to transform economic data into accounting information, with the purpose of satisfying the information needs of a variety users. Menurut Bodnar & Hopwood (2014:1): Management information system (AIS) is a collection of resources such as people and equipment design to transform financial data into information. This information is communicated to wide variety of decision makers. Management information systems perform this transformation whether they are essentially manual systems or thoroughly computerized. So it can be said management information system is a system that is a structural unity as a collection of physical and non-physical resources are integrated in harmony to transform financial data into financial information for various used as a basis for conclusions.

Quality of Management information systems

Management information systems that generate information useful in decision making for the management if it has the quality characteristics of good management information system as expressed by some experts below:

A. According Heidmann (2008: 87-91):**System Quality of Management Accounting Systems****1. Integration**

Integration measures "the degree to which a system facilitates the combination of information from various sources to support business decisions Management accounting systems can facilitate the integration of information from different functional areas,

2. Flexibility

Flexibility measures "the degree to which a system can adapt to a variety of user needs and to changing conditions." Management accounting systems can limit the attention of managers to areas covered by the system.

3. Accessibility

Accessibility measures "the degree to which a system and the information it contains can be accessed with relatively low effort." Access to information can be seen as necessary condition to system quality.

4. Formalization

Formalization measures the degree to which a system contains rules or procedures. In order to coordinate activities, organizations establish procedures concerning how to react to stimuli from management accounting systems.

5. Media Richness

Media richness measures the degree to which a system uses channels that enable a high level of personal interaction. Strategic issues are hard to quantify and require different points of view in order to create a shared interpretation. Face-to-face meetings and other rich media are best suited to exchange interpretations of strategic issues in order to reduce equivocality associated with them. 550 A management accounting system

B. According Stair and Reynolds(2010:57)

A quality of information system is **usually flexible, efficient, accessible and timely.**

C. According Davis et.al(1989:320)

.... People tend to use or not use an application **to the extent they believe it will help them perform their job better.** This first variable is referred to as the **perceive usefulness** of IT Technology; even if potential users believe that a given application is useful, they may, at the same time believe that that the systems is too hard to use and that performance benefits of usage are not by the effort of using application. That is, in addition to usefulness, usage is theorized to be influenced by the **perceive ease of use.**

Davis et.al. (1989:320) further defined **Perceived usefulness** as 'the degree to which a person that using a particular system would enhance his or her job performance. **Perceive ease of use**, in contrast 'degree to which a person believes that using a particular system would be free of effort. That is the quality of management information system can be said to be qualified if a) can be perceived benefits as ' the extent to which people who use a particular system would enhance his job performance . And b) can be perceived ease of use , different degrees ' for people who believe that using a particular system would be free of effort . So from the above description quality information system can be said to have characteristics (dimensions) : integration , flexibility , efficient , accessible , formalization , media richness and timely , perceive perceive of usefulness and ease of use . (Romney & Steinbart : 205 ; Davis : 1989)

Environmental Uncertainty

Environmental Uncertainty In designing management information systems, companies consider factors beyond the external environment that have an impact for this perusahaan. Berikut outlined some of the definitions of environmental uncertainty in the opinion of experts as follows:

1. According to Luhman and Cunliffe

Milliken set out to improve the conceptualization of environmental uncertainty, defining uncertainty 'as an individuals perceived inability to Predict something accurately where the source of that uncertainty comes from the external environment. (Luhman & Cunliffe: 2012, .57).

2. According to Soliman

While describing environmental uncertainty as perceptual phenomenon that uncertainty derives from a person's state of mind uncertain on how they perceive the environment to be (Soliman: 2013, 214) That is uncertainty lingkungan digambarkan as the phenomenon of uncertainty comes from the perception that a person's state of mind about how surely they see the neighborhood become

3. According to Buller

Perceive environmental uncertainty is defined as the extent to the which managers perceive uncertainty about Reviews their environment and its effects on the firm. (Buller: 2001, 18) That is the uncertainty of the environment is defined as the extent to which managers feel uncertainty about their environment and their impact on the company.

So the uncertainty of the environment can be said to be defined as the inability of individuals to feel the uncertainty of the environment and its impact on the company.

Dimensions of environmental uncertainty

Characteristics of environmental uncertainty expressed by some experts is as follows:

1. According to Buller

She concluded environmental uncertainty is composed of three distinct components: state of uncertainty relates to the unpredictability of the environment, the effect of uncertainty is the inability to Predict the impact of environmental, response uncertainty reflecting the lack of knowledge about the response options or inability to Predict the Consequences of a uncertainty. (Buller: 2001.18)

According to Luhmann and Cunliffe

And with this basic definition, she proposed three types of perceived environmental uncertainty to be utilized in future activities. The three types are:

1. State uncertainty- where a lack of information on the nature of the external environment leads to the perception of unpredictability organization so that members do not understand how things are changing or how things interrelate.
2. Effect uncertainty- where a lack of knowledge about the effect of the environment on the Organizations means that members can not Predict the impact of external changes and lack confidence about causal statement.
3. Response uncertainty-when a lack of knowledge of the value or utility of each course of action leads to an inability to Predict Consequences

(Luhman & Cunliffe: 2012, .57) And with this basic definition, it proposes three types of perceived environmental uncertainty to be used in future activities. The three types are:

1. State uncertainty- where the lack of information about the nature of the external environment of uncertainty leads to the perception that the organization's members do not understand how things change or how things are interconnected.
2. Effect uncertainty- where a lack of knowledge about the environmental effects on the organization means that members can not predict the impact of external changes and a lack of confidence about the causal statement.
3. Response uncertainty- lack of knowledge about the value or usefulness of any action leads to the inability to predict the consequences

3. Menurut Soliman

Three different types of perceived environmental uncertainty: state of uncertainty, uncertainty and response effect of uncertainty (Soliman: 2013, 214). Three different types of perceived environmental uncertainty: uncertainty state, effect and response uncertainty uncertainty (Soliman: 2013, 214). So we can say there are three dimensions of environmental uncertainty is a state of uncertainty, uncertainty effect and response uncertainty.

Conclusion

So we can conclude environmental uncertainty affects the quality of management information system the data associated with other non-financial basis for the company to implement quality information systems to produce quality information useful in decision making. This is supported by empirical evidence from previous studies that Hammad et.al. (2012) shows the uncertainty of the environment is an important factor in designing accounting systems are effective and efficient, and the results of the study indicate environmental uncertainty affects aimlessly accounting system for management information. Powered Gilbert & Singer (2011) shows the uncertainty of the environment shows a significant impact on the strategy and information systems are designed as a strategy. And Gull e.al. (1993) showed Gull et.al. shows the condition of the perception of high environmental uncertainty increases the quality of information produced by the information system to produce decisions that improve the performance of the company. And also David Han-Min Hwah and QuangLinh Huynh (2013) shows the results of environmental uncertainty affects the accounting system and the company's performance as a moderating variable.

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