

Research Article

**The Contingency Approaches to the Design of Accounting Systems**

Frans Alfian<sup>1</sup>, Vahrunnisa Purba<sup>2</sup>, Iskandar Muda<sup>3</sup>

**Abstract**

Based on the description above, the authors are interested in identifying how the influence of contingency theory on the design of accounting systems in companies and previous studies. This research is to understand the effect of contingency theory on the design of accounting systems in companies and previous studies. The author uses a type of qualitative descriptive research. Qualitative research or qualitative paradigm is a research paradigm that emphasizes understanding of problems in social life based on conditions of reality or natural settings that are holistic, complex, and detailed. Contingency theory in management accounting shows an attempt to identify an appropriate control system for a particular situation. From previous studies it can be concluded that there are contingent factors that affect the design of accounting information: Environment, Technology, Structure, Strategy and Size.

**Keywords:** contingency theory, design of accounting systems, Environment, Technology

**1. INTRODUCTION**

Selection of Accounting System Design basically depends on situational factors that occur in an organization. In research on the choice of accounting system design, a contingency approach is needed to evaluate the condition factors that are expected to produce a more effective accounting system. Contingency theory argues that the design of an accounting system is dependent on the organizational context in which the control is implemented (Fisher, 1998). Meanwhile, Otley (1991) argues that accounting theory in management accounting is an attempt to identify the most appropriate accounting-based control system for a given condition. Therefore, efforts to identify the most important contingent variables and predict their effect on the design of the accounting system are necessary. A better relationship between accounting system design and contingency variables is expected to increase organizational performance

In principle, the design of the accounting system will always try to adopt the system to be more useful in certain conditions. Therefore, efforts to identify the most important contingency variables and predict their effects on the design of the accounting system are needed (Lathifah, 2014).

In addition, the rapid development of technology affects many aspects, one of which is the economic and business aspects. Competition between businesses is becoming increasingly fierce. The development of a business, in order to compete in the market, a business is required to improve

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<sup>1,2,3</sup> Universitas Sumatera Utara, Medan, Indonesia

the quality of work, service quality and data accuracy. In addition, a business must have accurate, relevant, and timely information. To obtain such information, a good and appropriate information system is needed. Because a good information system is not enough, the system must be in accordance with the needs and business activities carried out by the company.

As we know, with a good system, errors that arise due to inefficiency of operations, lack of adequate information, and errors that occur caused by humans can be minimized. Accurate and timely information will greatly assist the company in making decisions and determining the steps that must be taken to support operations and also in terms of developing the company.

Romney and Steinbart (2006: 3) in Nugroho (2018) state that an accounting information system is a system that collects, records and processes data to produce information for decision making. Then the accounting information system according to Krismiaji (2010: 4) in Nugroho (2018) is a system that processes data and transactions to produce useful information for planning, controlling and operating a business.

Based on the explanation above, it can be concluded that to produce output A good accounting information system must contain periodic calculations between costs and results from activities, and company financial information to management in a precise and accurate manner, where these activities must be carried out properly and efficiently so as to reduce the risk of errors in producing fast and accurate information that is used as a source of information. decision making for the future. To understand the effect of contingency theory on the design of accounting systems in companies and previous studies.

## **2. LITERATURE REVIEW**

### **2.1. Contingency Theory Approach**

EkoSugiyanto and Rachmad Saleh (2003) said that the management control system used in a company always has a tendency to change and adapt to changes in environmental conditions as a result of contingencies. Performance measurement, performance standards and the relationship of rewards with performance greatly affect the management control system in the contingency theory approach to its design and use. The influences include the following.

#### **1) Effect of Contingency Theory in Organizational Design**

Uncertainty greatly affects the design of an organization where the structure of the organization has various activity functions that have different authority, duties and responsibilities at each level of management. In addition, within the organizational structure there is a strong mechanism that can ensure that tasks have been carried out consistently and provide coordination limits for each existing organization. The approach taken in designing the formal organizational structure uses the contingency theory approach.

#### **2) Effect of Contingency Theory on Management Control System**

Contingency theory in management accounting shows an attempt to identify the appropriate control system for a particular situation. In principle, the process of identifying uncertainty becomes very important and can assess the effect of uncertainty on the design of the management control system. In Marini et al (2018) mentions that accounting information plays an effective role in supporting management processes and accounting information and management control systems. The variables that need to be considered in the management control system in

contingency theory include: environment, technology, company size, corporate strategy and culture.

### 2.2. Contingent Variables

Several contingent variables that can occur in a company's management control system can be divided into 5 categories (Fisher, 1998):

#### 1) Variables related to the element of uncertainty (Uncertainty)

The main sources of task and environmental uncertainty are external factors. According to Zainuddin (2003) in Purwati and Zulaikha (2006) describes the taxonomy of external environmental variables in:

- a. Turbulence (risky, unpredictable, fluctuating)
- b. Hostility (stressful, dominating, restrictive)
- c. Diversity (Variety of product, input, customer)
- d. Complexity (rapidly developing technologies)

#### 2) Variables related to technology and company interdependence

According to Zainuddin (2003) in Purwati and Zulaikha (2006) it concerns how the organization's operating processes (change input Becomes output) and includes hardware, machines, tools, software and knowledge.

#### 3) Variables related to industry, company, business unit

Diversification, structure and size of the company is one example of this variable. According to Zainuddin (2003) in Purwati and Zulaikha (2006) diversification is related to product complexity and company structure. Structure is a formal specification of the different roles for organizational members or tasks for groups in order to ensure that organizational activities are carried out. The arrangement of the structure affects work efficiency, individual motivation, information flow and control systems and helps direct the future of the organization.

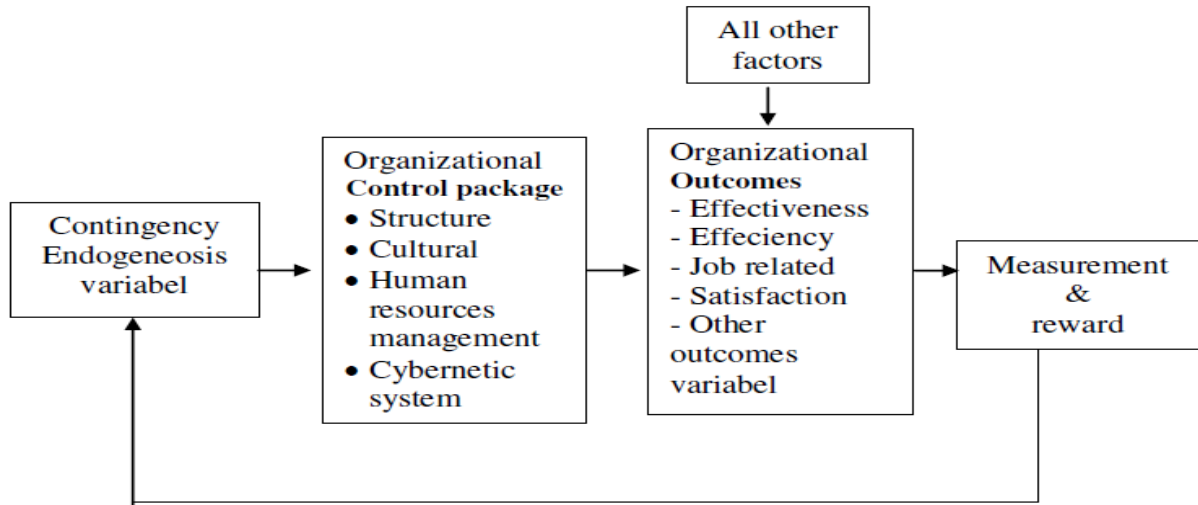
#### 4) Mission and competitive strategy variables

According to Simon (1987) in Purwati and Zulaikha (2006) linking the product life cycle consists of: build, hold, harvest and divers strategy.

Variables related to observable factors (Observability) According to Thompson (1967) and Ouchi (1977) in Purwati and Zulaikha (2006) these factors include measurement, evaluation and feedback on personal activities and results (outcome) in the management control system. This measurement, evaluation and feedback is carried out in order to assess the effectiveness of the management control system.

### 2.3. Controlling Contingency Framework

Fisher (1998) in Purwati and Zulaikha (2006) makes a framework (framework) for contingency control as shown in Figure 1. The process in contingency control is aimed at a cycle that occurs repeatedly. The issue that arises in the development of this model is how to determine the contingency factors. Certain factors can be determined through management satisfaction while other factors are determined exogenously. After the company determines the goals and contingency factors, the company will try to achieve these goals.

Gambar 1. *Contingent Control Framework*

#### 2.4. Accounting Information System

Based on the statements of Stephen A. Moscovice and Mark G. Simkin in the book Jogiyanto (1993) Accounting Information System is defined as an organizational component that collects, classifies, processes, analyzes, communicates decision-making information with a financial orientation that is relevant to the parties within the company. While the Accounting Information System according to Romney and Steinbart is a system that collects, records, stores and processes accounting data and other data to produce information for decision makers.

Criticism of contingency research is more directed at design contingency framework, especially in the aspect of test methods. Drazin and Van de Ven (1985) proposed three important approaches in contingency research, including: selection, interaction and systems. The fact that in the selection and interaction approach raises a number of weaknesses both in the consequences of the results, the direction of the approach method is then focused on the systems approach. According to Ningtya et al (2019), an information system is a collection of sources such as people and equipment designed to transform financial data and other data to decision makers.

There are three approaches to the concept fit as stated by Drazin and Van de Ven (1985), which includes selection, interaction and system. The selection approach links contextual variables with organizational variables, but does not clearly correlate the relationship between these two variables with organizational performance. The multiple interaction approach views that the influence fit between contextual variables and organizational variables in the regression model. The significance coefficient of the highest order of interaction in the regression equation shows that there is support for the developed hypothesis.

Denies Priantinah (2005) states that the purpose of the information system is to: Accounting is to present accounting information to various parties who need the information, both internal and external parties of the company. In terms of internal and external users of accounting information systems, there are three main objectives, namely:

1. To support the company's day-to-day operations, namely processing accounting transactions into information.
2. To support the company's internal parties in making decisions.
3. To fulfill obligations related to management accountability (agent) to the owner (principal).

## 2.5. Use of Accounting Information in Considering Valuation

In EkoSugiyanto and Rachmad Saleh (2003) mentions that the influence of accounting information on managerial behavior occurs directly when accounting is used to evaluate performance. If the use of inappropriate accounting information in performance appraisals, it often results in unexpected behavior and will bring individual concerns in measuring their behavior. If the budget is used as a standard to compare the performance to be assessed, then the assessment has a direct influence on budget performance. One of the most important parts in designing and operating an effective budget control system is shown in the preparation of a set of performance measurements that will be used, which can produce all the desired performance of the organization. Performance measurement that is often used involves the measurement of accounting information and using the budget as a benchmark against which performance is assessed, where budget considerations themselves are under pressure and actual performance measurements may be manipulated to give the impression of satisfactory performance.

## 3. RESEARCH METHOD

The author uses a type of qualitative descriptive research. Qualitative research or qualitative paradigm is a research paradigm that emphasizes understanding of problems in social life based on conditions of reality or natural settings that are holistic, complex, and detailed (Indriantoro and Supomo, 2015). The analytical method used in this research is a research method in the form of literature review or literature study which contains theories relevant to research problems. Literature study is a study that is used to collect information and data with the help of various materials in the library such as documents, books, magazines, historical stories, and so on (Mardalis, 1999). Meanwhile, according to other experts, literature study is a theoretical study, references and other scientific literature related to culture, values and norms that developed in the social situation under study (Sugiyono, 2012). The data sources used for this research are books, journals and internet sites related to the chosen topic. The data sources of this research consist of books and journals on contingency theory and accounting information systems.

## 4. RESULT AND DISCUSSION

### 4.1 Results

As explained in the previous chapter that contingency theory in accounting system design is needed to identify uncertainty in an organization and control it as an effort to improve company performance. The design of the accounting system will be effectively used if the information produced is in accordance with the company's needs in evaluating performance.

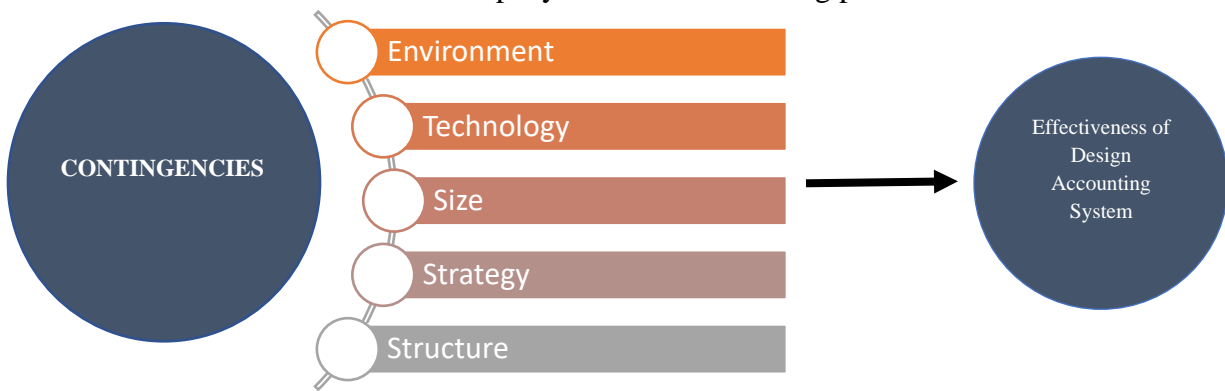


Figure 2: Contingency Factors Affecting Design Effectiveness Accounting System

The picture above explains that there are factors of contingency, namely: environment, technology, organizational size, strategy and organizational structure. Several studies have been carried out on these factors by researchers to determine whether these factors, when controlled by the company through the information system established by the company, will produce effective outputs for the management. Effectiveness will be formed when the design of the accounting system made is able to follow the development of factors and provide consistent information for the company.

Chapman (1997) in Narsa, et al (2008) suggests that environmental uncertainty is a fundamental variable in contingency research. This is supported in the research of Khandwalla (1977) in Narsa, et al (2008) and Zainuddin (2003) in Purwati and Zulaikha (2006) provide a taxonomy of environmental variables, namely:

1. Turbulence (risky, unpredictable, fluctuating, ambiguous). Chong and Chong (1997) in Al-Eqab and Ismail (2011) emphasize the importance of external data, non-financial data and future-oriented data in a turbulent and uncertain environment.
2. Diversity (variety in products, inputs, customers). According to the researcher, if diversity has increased, then the existing system design follows these changes so that the information presented can meet the needs. For example: The company only has a beverage product, so the existing accounting design will only show how the transaction is for that product. However, if the company has added food products, the company must develop its accounting system design to contain information related to food product sales transactions.
3. Complexity (rapid technological development). Dynamically evolving technology requires companies to follow and adapt. This development is in line with the information according to the company's needs. According to the researcher, this complexity supports the environmental variables of turbulence and diversity which means that when companies are able to follow the complexity of technology in accounting information system design, turbulence and diversity will be overcome.

## **4.2. Discussion**

Research on environmental factors is supported by the arguments put forward by Gordon and Miller (1980) in Narsa, et al (2008) that an effective management accounting system should be designed to fit the requirements of the external environment and must be consistent with executive decision-making styles and organizational culture and Al-Eqab and Ismail (2011) in their research resulted in a positive influence between the environment and the design of accounting information systems on companies registered in Jordan. Waterhouse and Tiessen (1978) in Narsa, et al (2008) state that to be effective, the ability to predict the environment, technological routines and departmental functions must be included in the development of a management accounting system.

Regarding technological factors, Doms et al (2004) in Al-Eqab and Ismail (2011) argue that when companies have various types of technology such as Enterprise Resources Planning (ERP), Supply Chain Management (SCM) and Customer Relationship Management (CRM), an accounting information system will be designed with this technology in mind to achieve relevant information for end users. Sugiyanto and Saleh (2003) suggest that in designing the system it is necessary to consider two factors, namely: knowledge workers to optimally utilize information technology capabilities and information capabilities to provide information sharing facilities. Merchant research findings (1984) in Narsa, et al (2008) market factors, production technology and organizational characteristics affect contingencies, which is supported by research from Al-

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Eqab and Ismail (2011) that there is a positive influence between technological sophistication and system design sophistication. accounting information on companies registered in Jordan.

Sugiyanto and Saleh (2003) state that the thing that must be considered in the size of the company in contingency is how the design of the accounting information system is able to quickly respond to environmental demands, has a level of flexibility that can adapt to changes and encourage innovation. Khandwalla (1977) in Narsa, et al (2008) found that large companies with more diversified products and use more sophisticated controls and obtain environmental information such as forecasting and market research. Merchant (1981) has also considered size as a multi-variable approach to contingency.

According to the researcher, strategy is a factor in contingencies because to dominate the market and keep up with environmental changes, companies must have certain strategies in designing their accounting information systems. Otley (1980) in Al-Eqab and Ismail (2011) states that business strategy is an important factor that can improve the main characteristics of accounting information system design. Fisher et al (2005) in Al-Eqab and Ismail (2011) stated that theoretically companies use certain strategies to improve their business performance.

Several researches have been conducted related to organizational structure, namely Chia (1995) in Narsa, et al (2008), Chenhall (2003) in Narsa, et al (2008) who participated in researching other variables such as environment and technology.

### 5.CONCLUSION

1. Contingency theory in management accounting shows an attempt to identify an appropriate control system for a particular situation.
2. From previous studies it can be concluded that there are contingent factors that affect the design of accounting information:
  - 1) Environment
  - 2) Technology
  - 3) Structure
  - 4) Strategy
  - 5) Size
3. Chapman (1997) in Narsa, et al (2008) suggests that environmental uncertainty is a fundamental variable in contingency research where the taxonomy of variables is: turbulence, diversity and complexity.
4. Sugiyanto and Saleh (2003) suggest that in designing the system it is necessary to consider two factors, namely: knowledge workers to optimally utilize information technology capabilities and information capabilities to provide information sharing facilities.
5. Sugiyanto and Saleh (2003) state that the thing that must be considered is the company size factor in contingencies is how the design of accounting information systems is able to quickly respond to environmental demands, has a level of flexibility that can adapt to changes and encourage innovation.
6. Otley (1980) in Al-Eqab and Ismail (2011) states that business strategy is an important factor that can improve the main characteristics of accounting information system design.

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