























**BIG DATA TECHNOLOGIES** 

# **ICBDT 2020**

Qingdao, China | September 18-20, 2020

2020 3rd International Conference on Big Data Technologies (ICBDT 2020)



#### **Proceedings of**

### 2020 3rd International Conference on Big Data Technologies

# **ICBDT 2020**

# Workshop 2020 4th International Conference on Business Information Systems (ICBIS 2020)

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#### **Preface**

It is our great pleasure to welcome you to attend the 4th International Conference on 2020 3rd International Conference on Big Data Technologies (ICBDT 2020) and it's workshop 2020 4th International Conference on Business Information Systems (ICBIS 2020), held during September 18-20, 2020, which is supported by Shandong University of Science and Technology, China, University of Jinan, Shandong University, Guizhou University, Shandong Normal University, Qingdao University, and other universities. With the world fighting together against coronavirus this year, ICBDT 2020 has been converted into a virtual conference for the safety of our participants.

The aim of ICBDT 2020 and ICBIS 2020 are to provide a professional platform for discussing research issues, opportunities and challenges in the fields of Big Data Technologies and Business Information Systems. The conference has attracted papers from many international researchers and scholars in related fields with burgeoning applications touching upon various sectors from United States, China. Portugal, Thailand, United Kingdom, Sweden, Indonesia. etc.

Shandong University of Science and Technology (SDUST), founded in 1951, offers multidisciplinary education in engineering, sciences, management, literature, law, economics and education with unique engineering characteristics. It is a key construction university of Shandong Province for cultivating personnels with practical abilities. It is co-built by Shandong Provincial People's Government and the former State Administration of Work Safety.

All of the papers were subjected to peer-review by conference committee members and international reviewers. The proceedings will be published in the International Conference Proceedings Series by ACM, which will be archived in the ACM Digital Library, with ISBN numbers 978-1-4503-8785-9.

We have two Keynote speakers invited this year, they are: Prof. Limsoon Wong, ACM Fellow, National University of Singapore, Singapore; Prof. Wenyu Zhang, Zhejiang University of Finance and Economics, China. We thank the ICBDT 2020 organizing committee members, keynote speakers, session chairs, authors, teachers and students, and in general, to those who supported this conference.

Finally, we hope that you will find this conference interesting and rewarding and provide you with a valuable opportunity to share ideas with other researchers around the world.

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# The Impact of A Collection of Tasks And Activities On Accounting Information Quality: Survey in Indonesia

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#### **ABSTRACT**

An organization in general, of course, has a goal of being able to survive in the long term. To achieve this goal, an organization needs a good business process to support the running of the organization. Business Process can be considered as a collection of tasks and activities that exist in a structured and orderly manner to provide results in the form of goods or services for internal and external users. Organizational managers are responsible for managing business processes. Business processes are needed to see how the company runs its daily business, business processes also have an important role in structuring and implementing flexible information systems. Information systems are built and operated to provide information for managers. This research intends to understand effect of business processes quality (BPQ) to accounting information systems quality (AISQ) and its impact on accounting information quality (AIQ).

#### **CCS Concepts**

·Social and professional topics ~Professional topics ~Management of computing and information systems ~Information system economics

#### Keywords

business processes, a collection of task, accounting information quality.

#### 1. INTRODUCTION

Every company realizes prices by serving the goods & services that consumers expect. The goods & services mentioned are prepared to pass through the line of business processes. A business process is a chain of activities to achieve business goals. Manager do their planning by dividing the business process into smaller activities, assigning people to do each activity and motivating them

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to do a good job. Managers need information to make decisions. Information systems are built and operated to provide information for managers. Information systems provide information through 3 processes: recording data about business activities, storing & maintaining data and reporting useful information about business processes. The infrastructure that supports the production of accounting information is the Accounting Information System (AIS). The resources for running AIS are people & technology. AIS will capture, store data about business events which can be called activities in accounting transactions. Only events that change the composition of the organization's assets, liabilities and capital will be accounted for and processed by AIS. AIS will definitely appear in every company [1]. AIS is a group of data and procedures for processing data that generate information for its users [2]. Information is the adhesive of the organization, better the quality better the communication, and the integrity will be better [3]. Qualified information has characteristics such as relevant, accurate, well-timed, and comprehensive. information is not qualified, it will impact the wrong decisionmaking [4]. Qualified accounting information is a competitive advantage for organizations [5]. They have to qualified information on accounting systems to produce qualified information [6].

#### 2. LITERATURE REVIEW

#### 2.1. Business Process Quality (Bpq)

Romney and Steinbart [7] argue that a business process is a set of activities and tasks that are interrelated, coordinated and structured by a person or with a computer or machine to help achieve organizational goals. Weske [8] stated a business process can be thought of as a set of activities that use one or more inputs to produce valuable outputs for customers. The conclusion is about business processes quality can be said to be a process under the standards in providing products or services by the organization's objectives. The dimensions of the quality of business processes will use are time leads, the quality or internal processes, the flexibility of the process. Time leads refers to how long an activity will run from start to finish [9] [10] [11]. The quality of internal processes, is the ability to produce a qualified output [9] [10] [11]. The flexibility of the process is as the process's capability to produce the desired diversity output [9] [10] [11].

## 2.2. Accounting Information Systems Ouality (Aisq)

Information quality is the result of the quality of information systems, the results of which will be useful for decision making,

and must reflect several characteristics, namely relevant, easy to understand, complete [12]. Information systems quality according to DeLone and Mclean (2003) is a term for success [13]. the success of information systems is the ability of an accountant to understand the accounting information system and carry out the use of technology [14]. AIS refers to the activities of collecting, storing, and processing financial and accounting data required by decision makers in the company. AIS is basically an activity concept that uses computers to track accounting activities and is often used in conjunction with information technology resources [15]. The dimensions used for accounting information system quality are: Integration which means that system support business decisions to making information combinations easier [16] and information systems are integrated into all components in the accounting information system to convert financial data into financial information [1]. Flexibility refers to the system can adapt to users needs and environmental changes [16] [17]. Accessibility which means the system must be accessible anytime and anywhere and be able to generate information automatically without the need for manual calculations [16].

#### 2.3. Accounting Information Quality

Information can be defined as data that has been processed and arranged to give meaning to the user. Users need information for the decision-making process and improve the decision-making process. Qualified information will improving decision [18]. Qualified information as successfully information has component such as relevant, timely, accurate, complete, and summarization [19]. The dimensions the accounting information quality as follows:

- 1. Accurate means accounting information truly reflects the situation and the existing conditions and free from material error [18] [19]
- 2. Relevant means accounting information conduct under the requirements [19] [20]
- 3. Timely may imply that accounting information is available when the information is required [19] [20] [3]
- 4. Complete, can be interpreted as accounting information twill be generated data related to issues and events to make a decision [19] [18]

#### 3. THEORETICAL FRAMEWORK

#### 3.1. Effect Of Bpq On Aisq

To perform in business measurement professionally, we must have knowledge and expertise related to business processes and business context for an accounting information system [18]. Before we develop a useful accounting information system framework, we must understand the organization's business processes, entities involved, and transaction data [21]. The information system's value is the relationship between information systems with users and business processes [22]. While at the organizational level, the business process is fundamental; it has roleplay in the realization of flexible information systems [12].

#### 3.2. Effect Of Aisq To Aiq

Information quality refers to the degree of product issued by an information system. According to Hall [19], AISQ is based

directly on the system development life cycle activities that generate accounting information. This system presents accounting information to internal and external users. The overall objective of AIS is to convey information to users [23]

#### 4. HYPOTHESES DEVELOPMENT

1. BPQ affects AISQ

2. AISQ affects AIQ

#### 5. METHODOLOGY

Based on the research objectives, this study was included in survey research. The survey method is a primary data collection method that uses oral and written questions. The instrument used was a questionnaire with closed questions and provided an empty space if the respondent wanted to give a brief comment on each question item contained in the questionnaire. Each answer to the questionnaire have the scores obtained have a level measurement or ordinal-scale unit. Target population in this study was 119 commercial banks in Indonesia. The reason for determining the banking industry as a population is because the ability of the regions to spur economic growth will be largely determined by the ability of the regions to strengthen the bases of domestic growth and to explore the unique potential that exists in the regions. To develop regional economic bases, financial support from banking and financial institutions is required. Respondents in the study consisted of 67 banking industries in Indonesia, and the observation unit was the operational manager of 254 people and officers who did accounting. The reason for choosing operational managers as respondents is because users of information systems include managers, non-management workers and external users. The Structural Equation Model (SEM) with the parameter estimation model using the PLS (Partial Least Square) method was applied to test the research hypothesis. SEM statistical analysis techniques are used because of the causal relationship between variables, and each variable involved is considered a variable that cannot be observed directly.

#### 6. DISCUSION OF FINDINGS

In this section, we can see the results of data processing using partial least squares. Then a complete model path diagram is also presented that illustrates the effect of BPQ on ASIQ and its impact on AIQ in the following figure:

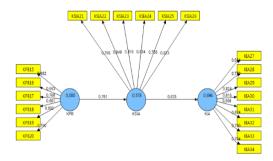


Figure 1. Path Diagram Full Model

The weighting factors in Figure 1 reflect the validity of each statement item is valid and the reliability of the construct latent variables being studied has also been reliable. The questionnaire statement is said to be valid if it has a weighting factor higher than 0,50. Then the criteria for composite reliability are considered adequate if the result is more than 0,70.

#### 7. HYPOTHESES TESTING

A summary of the research hypothesis testing is shown below:

**Table 1. Summary Hypothesis Test Results** 

Sub	Path	Coeff.	t <sub>statistic</sub> *	$R^2$
Structure				
First	KPB →	0,761	10,382	0,578
	KSIA			
Second	KSIA →	0,833	22,244	0,694
	KIA			

\*t-critical = 1,96

The coefficient of determination (R-square) in Table 1 shows that the quality of BPQ has an influence of 57.8% on AISQ. Furthermore, AISQ has an impact of 69.4% on AIQ.

Test results in Table 1 show the value of the t<sub>statistic</sub>'s of business process quality (10.382) is higher than t<sub>critical</sub> (1.96), which means the first hypothesis show that accounting information systems are influenced by quality of business process. This study provides empirical evidence that the better the quality of business processes, the better the quality of the accounting information system. This research is in line with the statement of Turban and Volonino [22] that there is a relationship between business processes and accounting information systems. The test results for the second hypothesis about the impact of AISQ on AIQ also show that the t statistic is higher than t critical. This is in line with the statement from Hall [19] that there is a positive relationship between AIS and accounting information.

#### 8. CONCLUSION

- 1. The BPQ which include time, internal process quality and process flexibility have been accommodated in the AISQ. From the research results, it is known that the time dimension still needs further attention because there are still many obstacles when faced with simultaneously withdrawing large data from several branch offices in banking organizations.
- 2. The AISQ has an impact on the AIQ. From the research results it is known that so far the accounting information system software used has shown a harmonious integration between computer devices, software, communication equipment, operating procedures, entered data, tasks to be done and producing accounting information as is according to user needs.

#### 9. RECOMMENDATION

There are things that need to be considered in the BPQ, which must increase the application capability of the AIS so that it has a user interface design that is easy to learn with a menu structure and icons in the form of simple images. This is related to efforts so that someone does not need a long waiting time to master the application and does not hinder the work of other individuals. An accountant must realize that everyone has different perceptions in receiving information, so that the information to be provided can be designed and communicated according to the behavior of decision makers. To fulfill the symbol of scientific investigation, other researchers are advised to add other variables to enrich the model. It is hoped that the results of further research can produce more perfect results or can remain the same as the results of this study. If the research results are the same, it means that the model used in this study has high consistency to be applied to banking organizations.

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