Empirical Testing of Business

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Empirical Testing of Business Process on Implementation of Accounting Information System

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Information Article

A B S T R A C T

Accounting is currently used in a variety of commercial processes. The commercial process relates to the information system used by the organization, where the implementation of the accounting information system when preparing the organization's financial reports is still experiencing some problems. The purpose of this study is to conduct empirical testing that business processes can have a significant effect on the use of accounting information systems for competitive advantage. The findings of this study are expected to be useful for banks in terms of business processes related to the implementation of accounting information systems that produce high-quality accounting data. Primary data was collected for this study by distributing questionnaires to 50 accounting and finance departments at the bank. The SEM-PLS test tool was used for veryfication analysis. Implementation of accounting information systems has not been qualified in accordance with the expectations of the banking world. This is because the dimensions of business processes namely time, quality of internal processes, and process flexibility have not been fully considered in accounting information system implementation.

Key word: business process, accounting information systems, internal process

Acknowledgment

INTRODUCTION

The banking industry has challenges in meeting consumer expectations, particularly those pertaining to service requirements brought on by technological improvements. Conventional banks will have trouble if they can't quickly adapt to the expanding use of information system software in the banking business. The banking industry must adjust to advances in

technology as well as in business policies, culture, and other areas. Business processes are critical for understanding how businesses operate; they also play an important role in the design and implementation of flexible information systems. Reviewing and evaluating existing workflows or business processes is one of the most important activities involved in implementing a new system.

Each bank has an own information system and procedure, even though the data or information processed is the same across all banks. Software that is adaptable must be able to meet the expanding and changing needs of banking operations, which are also expanding. One of the most important parts of an organization's information system is the accounting information system. According to Savage et al. (2022), accounting information systems are interconnected with other information systems like marketing, personnel, development and research, warehousing, purchasing, and production in order to produce information that expresses financial problems in order to achieve organizational goals.

An accounting information system must gather the data generated by a business operation (Turner et al, 2020). As a result, we describe an accounting information system as a set of data and processing techniques that provide information that is required by its consumers. (Simkin et al., 2018). Singh et al. (2021) stated that a collection of resources (including both people and tools) known as the Accounting Information System (AIS) was developed with the aim of turning financial and other data into information. This information is delivered to several decision-makers. Simkin et al. stated the same thing (2018) that Accounting information systems in enterprises relate to the hardware, software, and other system components that organizations use to create computerized information systems. Information about financial accounting is available to external users, or people outside of the company (Whitecotton, 2016).

Financial managers are in charge of managing the organization's financial resources and require accounting information to make decisions linked to the finance function (Sivabalan et al., 2018). When used appropriately, accounting information is a potent tool for making wise company decisions (Cunningham et al., 2018). According to Indrawati (2020), the pressure of the corona virus or covid-19 pandemic could have a negative impact on the growth of the Islamic banking sector this year. Additionally, asset value and liquidity may decline. These micro problems must be managed properly so that financial system stability

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can be maintained in difficult conditions. This demonstrates the necessity of examining the accounting data generated by the bank's accounting information system in greater detail. Another problem occurred to Bank Mandiri when there was a malfunction in the system that did not work properly. This was stated by the Director of Business and Networks of Bank Mandiri, Gunardi (2019) because there were problems with the IT system and caused about 10 percent of the company's customers to experience changes in the amount of balance in their accounts.

Ezumah (2020) It was said that an information system implementation is deemed unsuccessful if it is unable to satisfy the demands of consumers of the information from one or more of the employed dimensions. Reviewing and assessing current workflows or business processes is one of the key actions required for building an information system (Wager et al., 2017). Weske (2019) said the same thing, that business processes play a crucial role in the design and implementation of flexible information systems, and that business processes are crucial at the organizational level for understanding how businesses run.

The case of wrong bank transfers for priority customers of PT Bank Rakyat Indonesia (Persero) has become a business process phenomenon because it caused mysterious money of GBP 1,714,842 or around Rp. 32.5 billion to enter the customer's foreign currency savings account at the end of 2019. The bank has only questioned the 11-month transfer error then (Kusuma, 2021). In connection with this, there is another phenomenon conveyed by Mukti (2020) responding to reports of bank account burglary through the exchange of Subscriber Identity Module (SIM) cards. The Indonesian Telecommunications Regulatory Body (BRTI) will evaluate the procedures of all telecommunications operators. This is also a phenomenon of business processes that are happening in Indonesia.

The description provided in the background information above has inspired to conduct research under the title: "Empirical Testing of Business Process on Implementation of Accounting Information System.

The authors propose the hypothesis that follows based on the framework indicated above:

H_0: Accounting information system implementation are not affected by business processes that exist.

H_a: Accounting information system implementation are affected by business processes that exist.

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RESEARCH METHOD

A research methodology is a procedure or approach used in research. All approaches or procedures used to conduct research may be referred to as research methods (Kothari, 2004). According with collected data, it involves the inclusion of survey research. The survey technique is a key form of data collecting that employs both written being spoken inquiries (Indriantoro and Supomo, 1999). This method requires a contact or relationship between the researcher and the research subject to obtain the necessary data. This research can provide an overview of the phenomena related to the variables of Business Processes and Accounting Information Systems.

Two arguments are used to evaluate data using a structural equation model (SEM) based on variance. Firstly, latent variables are used in this study. It indicates that because variables cannot be measured directly, measurements must be generated from elements. Second, this SEM is acceptable for small numbers of respondents of between 30 and 100 respondents (Ghozali, 2014). The operational manager and staff in the accounting department served as the unit of observation in this study to address the phenomena and support the theoretical framework. The unit of analysis in this study was the banking sector. There were 50 respondents from the banking industry that took part in completing out this study questionnaire. According to Morley and Parker (2015: 470), managers, non-management staff, and external users make up the majority of the information system's users, which is the basis for the decision to adopt the observation unit. Managers can use information from information systems to take decisions.

RESULT

Utilizing the findings of statistical computations, verification analysis is utilized to evaluate the hypothesis. The proposed conceptual hypothesis is that Business Process (X) has an impact on AIS Implementation (Y). Structural Equation Modeling (SEM) using the Partial Least Square (PLS) method is the statistical technique used to assess the theoretical hypothesis. The measurement model (outer model) and structural model are the two forms of structural equation modeling (inner model). The measurement model specifies the magnitude of each variable manifes (indicator) that can be specified in the variable laten. Through the measurement model, it will be possible to determine which indicators will be dominant in the process of modifying variable laten. Following the development of a model for each variable latent, a structural model is developed to assess the impact of each variable latent eksogen

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(exogenous latent variable) on the variable latent endogen (endogenous latent variable). In this study, there are 12 manifest variables and 2 latent variables, namely Business Process (X) which is measured by 6 manifest variables and AIS Implementation (Y) which is measured by 6 manifest variables. In this section, the results of the verification analysis will be presented regarding the effect of Business Process (X) on AIS Implementation (Y) using Smart-PLS software. The following will present the model that will be tested in this study.
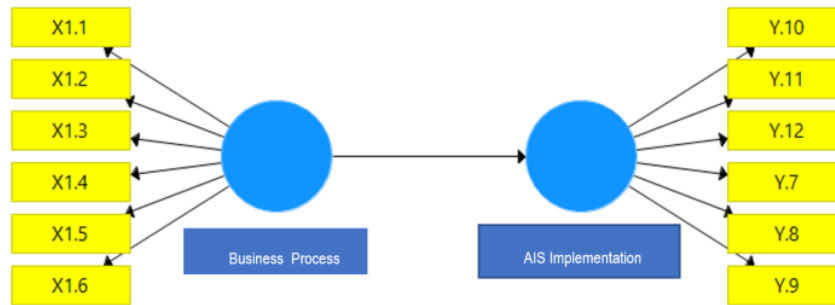
Picture 1. Structural Model

source: Data processed using Smart-PLS 3.0 software

The calculation results of the entire model using Smart-PLS 3.0 are as follows:
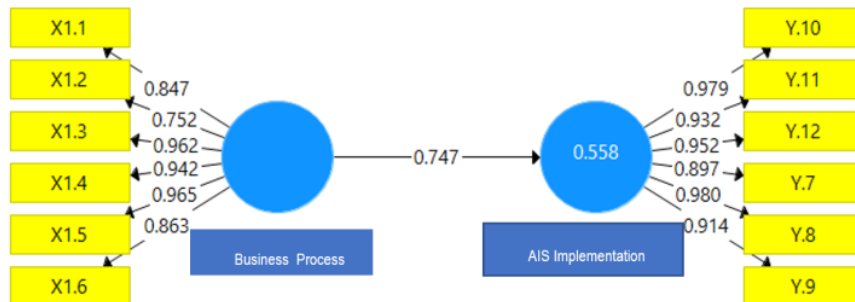
Picture 2. Measurement Model

source: Data processed using Smart-PLS 3.0 software

The PLS technique is used to test the findings of structural equation modeling by examining the results of the measurement model (outer model) and the structural model (inner model) of the model under consideration.

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Testing the Measurement Model (Outer Model)

To determine the link between the latent variable and the indicator or manifest variable, the outer model is evaluated (measurement model). Testing for validity and reliability is done on the outer model. Convergent Validity and Discriminant Validity are the two components of the validity test in Partial Least Square (PLS).

Validity Test

Convergent Validity

Convergent validity relates to the principle that indicators of a construct should be highly correlated. The outer loading value for each construct indicator can be seen from the convergent validity test with Smart-PLS software. In order to assess convergent validity, the outer loading value must be greater than 0.5–0.6; if it is greater than 0.7, it is classified as high; and the average variance extracted (AVE) and communality values must be ≥ 0.5.

Based on the test results using the Smart-PLS 3.0 software, the following results were obtained:

Table 1. Loading Factor

Manifest Variable	Loading Faktor	Standard Value	Description
Items X.1	0.847	0.600	Valid
Items X.2	0.752	0.600	Valid
Items X.3	0.962	0.600	Valid
Items X.4	0.942	0.600	Valid
Items X.5	0.965	0.600	Valid
Items X.6	0.863	0.600	Valid
Items Y.7	0.897	0.600	Valid
Items Y.8	0.980	0.600	Valid
Items Y.9	0.914	0.600	Valid
Items Y.10	0.979	0.600	Valid
Items Y.11	0.932	0.600	Valid
Items Y.12	0.952	0.600	Valid

Source: Data processed using Smart-PLS 3.0 software

According to the table above, the outer loading value for each indicator of Business Process (X) and AIS Implementation (Y) is 0.6, indicating that all indicators are considered to have excellent validity in describing the latent variables. Meanwhile, the extracted Average Variance Extracted (AVE) and communality values are as follows:

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Table 2. AVE

Latent Variable	AVE	Composite Reliability
Business Process (X)	0.795	0.959
AIS Implementation (Y)	0.889	0.980

Source: Data processed using Smart-PLS 3.0 software

And if it is seen from the AVE value and Composite Reliability value above each latent variable exceeds the specified limit, namely 0.5 which means all latent variables have good validity.

Discriminant Validity

Measurement of the cross loading factor with the concept and comparison of the AVE roots with the correlation of the latent variables both demonstrate discriminant validity. The latent construct exceeds the other constructs in predicting the indicator if the correlation between the construct and the primary measurement (each indicator) is stronger. The cross loadings factor's value is shown as follows:

Table 3. *Cross Loading Factor*

No Items	BPQ (X)	AISQ (Y)
Items X.1	0.847	0.897
Items X.2	0.752	0.472
Items X.3	0.962	0.681
Items X.4	0.942	0.631
Items X.5	0.965	0.628
Items X.6	0.863	0.518
Items Y.7	0.847	0.897
Items Y.8	0.759	0.980
Items Y.9	0.590	0.914
Items Y.10	0.679	0.979
Items Y.11	0.585	0.932
Items Y.12	0.687	0.952

Source: Data processed using Smart-PLS 3.0 software

According to the table above, the cross loading correlation value of basically all latent constructs for the indicator in issue is greater than the other constructs, implying that the indicators used to assess the latent variables meet the requirements.

Reliability Test

The reliability test in Partial Least Square (PLS) uses Composite Reliability (CR), which is presented as follows:

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Table 4. Composite Reliability

Latent Varible	Composite Reliability
BPQ (X)	0.959
AISQ (Y)	0.980

Source: Data processed using Smart-PLS 3.0 software

Determination Coefficient Analysis

The coefficient of determination is a number that expresses the independent variable's partial effect on the dependent variable. As can be observed, Business Process (X) has a 55.8% effect on AIS Implementation (Y).

Table 5. Determination Coefficient Analysis (R^2)

	R Square	R Square Adjusment
AISQ (Y)	0.558	0.548

source: Data processed using Smart-PLS 3.0 software

Hypotesis Testing

Partial hypothesis testing (t test) to determine whether the variable X has a significant effect on the variable Y.

Table 6. T test

	Original Sample (O)	Sample Mean (M)	Std. Deviation	T Statistics	P Values
BPQ→AISQ	0.747	0.766	0.067	11.227	0

Source: Data processed using Smart-PLS 3.0 software

$H0 = 0$: Business Process (X) has no significant effect on AIS Implementation (Y).

$Ha \neq 0$: Business Process (X) has a significant influence on AIS Implementation (Y).

Significance level (α): 0.05 (5%)

Criteria:

Reject H_O if t count > t table or reject HO if -t count > -t table

Accept H_O if t count < t table or HO if -t count < -t table

It can be seen from the above table that the amount of t-count that was applied is around 11.227. This number will be compared to the distribution table number in Microsoft Excel, which may be found by looking at the formula below (N-F-1=50-1-1=48), which is around 2.011. From the nilai-nilai above, it can be seen that the t-count, which was produced by a factor of 11.227 > t tabel of 2.011, complies with the criteria for the hypothesis that Ho

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is rejected and Ha is accepted. As stated, As stated, Business Process (X) has a positive correlation with SIA Implementation (Y).
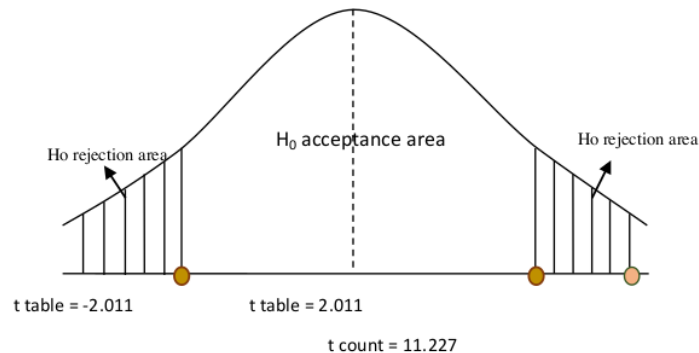
Picture 4. H_0 & Ha Rejection

Business Process (X) has a significant effect in a positive direction on AIS Implementation (Y) with an influence contribution of 55.8%.

CONCLUSION

There are two things that need to be taken into account in business processes in order to improve the implementation of accounting information systems. Business processes have an impact on how accounting information systems are implemented. The first step is to enhance the functionality of the accounting information system application so that it has a display that is simple to learn and easy to use, preventing long learning curves and impeding other people's productivity. The second step is to make accounting information system applications more adaptable to changing demands in order to anticipate the complexity of competition with other organizations. The findings of this research can help in finding solutions to issues that arise during the implementation of accounting information systems. The phenomena that occur can be fixed through supporting business processes in accordance with the theory created and the empirical evidence gathered. Regarding the issues that can be resolved, as mentioned in the background. To survive in the age of commercial competitiveness, information systems must focus on both core and auxiliary business operations. The term "business process" describes how work is planned and executed to deliver a high-quality good or service. The ability of the organization to execute its tasks must be evaluated by managers in order to decide if a plan will succeed or fail. Due to their connections, business processes have an impact on information systems. How they can assist businesses in

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achieving their objectives depends on the interaction between business processes and information systems. Business procedures, organizational culture, organizational politics, environment, and organizational structure are all crucial components of an organization's (company's) mobility. These attributes have an impact on the information system. Only business procedures were studied on this occasion. Other researchers can duplicate it by incorporating elements of organizational culture, organizational politics, the environment, and organizational structure.

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