

# The Effect Of Information System and Training On The Effectiveness Of State Property Management and Accounting Information System (SIMAK-BMN)

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**ABSTRACT** : The present study seeks to identify the effect of information system and training on the effective use of SIMAK-BMN at Universitas Terbuka. Within a population of the users of State Property Management and Accounting Information System (SIMAK-BMN) Universitas Terbuka, a group of 57 respondents are selected using non probability method, i.e., purposive sampling, on the basis of their ability to elucidate a specific concept concerning the topic of interest. Primary data is collected from the purposive samples using a questionnaire, which provides respondents with an easy method of indicating their answers. The collected questionnaires fit into a statistical set of correlation and multiple regression model that requires descriptive statistics, reliability test and validity test. Classical assumptions of the regression are tested using multicollinearity test prior to hypothesis testing and discussion in which the significance of the findings is interpreted. The results in the statistical modeling end up with a significant t-ratio test, suggesting empirical evidence of a positive and significant effect of information system and training on the effective use of SIMAK-BMN.

**KEYWORDS:** SIMAK-BMN, training, effectiveness

## I. INTRODUCTION

Recent years have seen significant advances in information technology, with profound impacts on enhancing performance, leading to faster, more precise and more accurate implementation of different tasks, and thus higher productivity. Information technology is generally a data-processing function performed by a collection of computers and the interconnection between one computer and another within a network system depending on one's needs. The current demand for IT capacities has become of great necessity to the extent to which industries, organizational forms and business models are able to keep up with the levels of efficiency and effectiveness and ensure that optimal outcomes are met.

Information technology generates valuable information with which individuals, businesses and government deploy for a myriad of purposes, most notably when it comes to supporting strategic operations, management and decision-making functions at various levels. From these IT capacities, increasingly diverse types of technology-based applications are emerging, from the likes of e-government, e-commerce, e-education, and e-laboratory. Information technology is an umbrella term used to encompass all rapidly emerging and evolving technologies that help to produce, manipulate, store, communicate and/or disseminate information.

The use of information technology systems within an organization has dramatically increased (Handayani 2005). As the role of information technology continues to increase, its place in an organization also moves up the ladder. Such increase is not only subject to the demand for modern organizational landscapes but also to the landmark in information society where the creation, dissemination and use of information plays a pivotal role in each fabric of life. Information systems help an organization to provide large quantities of information fast, accurately and blatantly about aspects of a business that are of particular interest to the public. As society becomes more advanced in the way of thinking, conventional manual methods have gradually been abandoned in favor of the complex sophistication of new technologies to obtain information. It is important to note that, however, exploring the concept of information technology management increases our understanding

that an organization is likely to face continued budget challenges. It is therefore necessary that management efforts be based on careful planning and well-integrated system to meet user needs.

The rapid development of information technology provides more convenient conditions for doing tasks, with its degree being deeper and its scope being wider. In the administrative environment, the development of technology-enhanced tools ushers manual procedures into radical changes that highlight computerization. These changes minimize the likelihood of errors in recording, archiving and organizing data entry. The concept of computerized administration procedures manifests in the vision of e-government. The core tenet of e-government, as defined by The World Bank Group, is associated with the use by government agencies of information technologies (such as Wide Area Networks, the Internet and mobile computing) that have the capacity to transform relations with citizens, businesses and other arms of government (Rahmawati 2014).

One effort of e-government in managing state assets in Indonesia is the implementation of State Property Management and Accounting Information System (SIMAK-BMN). SIMAK-BMN embraces a system that leverages on information and communication technology to facilitate information about the administration of state assets in each work unit across ministries, central agencies and regional institutions (Rahmawati 2014). SIMAK-BMN is a subsystem of Institution Accounting System (SAI) that makes up an aggregate of interrelated procedures for source-document processing in order to yield information for balance sheets, state-asset reports and other management reports in accordance with relevant regulations.

The Indonesian government has issued a number of regulations on public property management, one of which is Government Regulation number 27 of 2014 that regulates key aspects of state-asset management including planning of needs and budgeting, procurement, use, utilization, security and maintenance, assessment, termination, handover, administration, guidance, supervision and control.

The Indonesian government is faced with growing challenges to managing its assets. A number of factors such as budgeting, cost and workforce demand a new approach to public asset management. A skilled workforce is an important prerequisite for dealing with the information system. While technologies keep evolving and get integrated, skill requirements will continue to change. The challenge of finding workforce with right skillset in handling emerging technologies has become a strong concern; it is becoming even stronger in light of further technological advancements and their adoption. There is, and will be, a constant need to upskill human resources to not only ensure effective and efficient functioning of the information system application SIMAK-BMN to achieve optimal outcomes, but also continue to keep pace with new developments in the immediate future. Training events are crucial in the area where an institution invests in and embraces a new workplace technology. Crafting a training that engages employees and stimulate their expertise prior to and during the implementation and development of the information system can help boost their interest in the new technology and make the transition phase less of a struggle.

The Law of the Republic of Indonesia number 17 of 2003 concerning State Finance article 9 stipulates that all Ministries or State Institutions as the budget users or item users of the Ministries or Institutions have the tasks of managing the state property or assets that become the accountability of the Ministries or Institutions they lead. Each Government Institution that manages State-Owned Property (BMN) is called upon to use SIMAK-BMN.

Universitas Terbuka as a government institution is entitled to manage public assets that are diverse in number, value, type, form and lifecycle. Asset management includes all activities aimed at the maintenance and effective use of public assets. In its narrower, more practical sense, asset management embraces a multifaceted set of processes from procurement to disposal of public asset, with each displaying different characteristics of problems. This is where SIMAK-BMN becomes valuable; it provides critical information to the management for strategic planning, controlling and complex decision-making. However, investing in a new and emerging technology comes with challenges; institutions are concerned with adopting a new technology and training employees across diverse backgrounds as practices evolve in conjunction with technology with so many assets to track in each working unit. Training events are essential to ensure that the employees can adapt to the integration and, with support of department heads, guarantee that the skillset and competency are aligned with the requirements of the system application. A well-designed introduction based on a collaborative effort has the best chance to ease the transition by consulting and identifying problems. Common problems include poor

knowledge base in the governance and administration of state property, and the lack of coordination that creates gaps in the acquisition and distribution of information about the practical application of SIMAK-BMN.(10)

## II. LITERATURE REVIEW

SIMAK-BMN is a subset of Institutional Accounting System in addition to Financial Accounting System, primarily designed to enhance systematic understanding and control for those who are vested with formal authority over an organization or its working units that make up the administration division, and the likes, in conjunction with organizational structures (Muldiyanto 2015).

SIMAK-BMN deals with an aggregate of both manual and computerized procedures that deal with source documents, accounting organizations and accounting processes with the objective of providing various outputs prerequisite for the management and the accountability of public property (Muldiyanto 2015). In its practical sense, SIMAK-BMN involves the standards of recording, managing or administering state-owned property so that assets are safeguarded through the proper recording of the purchase, transfer within work units, change in asset, disposal and other documents or reports associated with state-owned property (Nasrudin 2015).

In its technical sense, information system is governed by a specified set of interconnected and organized components that collect, process, store and distribute information to support decision making and control in an organization (Laudon 2008).

Gomes proposes (2009) that training is any effort for improving one's performance to enable him or her to do a particular job that becomes his or her responsibility or one task that is associated with his or her core job. While both aim at improving one's performance and productivity, Umar (2008) observes a difference between the two concepts in terms of time; training focuses on improving job expertise for the current job, while development is concerned with skill and knowledge building for overcoming future challenges in a long run and preparing one's next step or position of responsibility, hence career-oriented. Job training has a specific goal of one's capability of operating a system to prepare him or her for the initial operation of the system (Mulyadidalam(Nastiti 2013)).

The present study highlights the notion of information system associated with the role of training with the objective of enabling employees to adapt to the system integration at the workplace. The purpose is obvious; to empirically examine the effect of information system and training on the effective use of Accounting and Management Information System for State Property (SIMAK-BMN).

## III. RESEARCH METHODS

The study takes on a population of the employees of Universitas Terbuka who use SIMAK-BMN at UPBJJ-UTs (a regional branch of Universitas Terbuka) and the Central UT, from which 65 respondents are drawn including the Heads of UPBJJ-UT, Heads of Administration and the entities in charge of government-owned property. The study is limited to purposive sampling based upon a variety of criteria for choosing the members of a given population to participate in the study. Findings are acquired from quantitative data defined in the form of numbers or counts for statistical analysis (Sugiyono 2012).

Data collection is executed using field work through which questionnaires from prior studies are administered. This method executes the task of actual data collection and to eventually get dataset ready to fit into the analysis. To secure a sufficient number of samples and the reach of the questionnaires, the distribution method calls for on-site questionnaires conducted at UPBJJ-UT. Techniques for data testing adopt correlation analysis and regression model in SPSS program. Results of the analysis are presented in descriptive statistics, data quality test, classical assumption test, regression analysis and hypothesis testing prior to discussion.

## IV. RESULTS AND DISCUSSION

65 copies of questionnaires are returned from the study site, and 57 respondents are eligible for data processing. The demographic profiles of the respondents include sex, age, education and year period of using SIMAK-BMN UT as below tables show.

Table 1  
Respondents' Profile by Sex

	Frequency	Percent	Valid Percent
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	M	41	72	72
Valid	F	16	28	28
	Total	57	100	100

The male respondents make up the majority of SIMAK-BMN users (72% or 41 users) with female respondents accounting for 28% or 16 users.

**Table 2**  
**Respondents' Profile by Age**

	Frequency	Percent	Valid Percent
17-26 years	-	-	-
27-36 years	2	4	4
Valid 37-46 years	24	42	42
> 47 years	31	54	54
Total	57	100	100

Source: Research data processing results

Data in Table 2 highlights 4 groups of respondent age with the majority in the age group > 47 years, constituting 31 users (54%).

**Table 3**  
**Respondents' Profile by Education**

	Frequency	Percent	Valid Percent
Senior High School	9	16	24,6
Diploma	1	2	
Valid Bachelor	32	56	58,8
Master	13	23	7,9
Doctor	2	4	8,8
Total	57	100	100,0

Source: Research data processing results

In Table 3, the majority of respondents have at least bachelor's degree (32 users or 56%). The indication is evident; the use of SIMAK-BMN is a key selection in the management of state-owned assets.

**Table 4**  
**Year Period of Using SIMAK-BMN**

	Frequency	Percent	Valid Percent
< 1 year	16	28	28
1-3 year	19	33	33
> 3 year	22	39	39
Total	57	100	100

Source: Research data processing results

In Table 4, the length of time the respondents in majority (22 users or 39%) have used SIMAK-BMN is more than 3 years.

The assessment of the research instrument for each variable demonstrates evidence of reliability construct of the research instrument with Cronbach's Alpha at 0.60 (Nunally, 1967 in Ghazali, 2006). The value is desirable when developing a test of scientific knowledge and understanding as Table 5 below shows.

**Table 5**  
**Result of Reliability Test**

No	Variable	Cronbach's Alpha	Description
1	Information System	0,728	Reliable
2	Training	0,683	Reliable
3	Effectiveness	0,767	Reliable

Source: Research data processing results

In Table 5, each variable is found to score an alpha of  $> 0,60$ , claiming that the research instrument constructed or adopted for the study project is reliable, and thus fit for purpose.

The result of validity test reflected in a Pearson's correlation in Table 6 marks that the correlation coefficients between individual item scores and total scores of the variables attest to statistical significance at 0,01 (two-tailed) as summarized in Table 6.

**Table 6**  
**Results of Validity Test**

Variable	Item	Pearson's Corelation	Description
Information System	IS1	0,632	Valid
	IS2	0,606	Valid
	IS3	0,774	Valid
	IS4	0,734	Valid
	IS5	0,525	Valid
Training	T1	0,655	Valid
	T2	0,766	Valid
	T3	0,722	Valid
	T4	0,716	Valid
Effectiveness	EF1	0,824	Valid
	EF2	0,864	Valid
	EF3	0,807	Valid

Source: Research data processing results

The Pearson correlation in Table 6 produces  $r\text{-table}(n;0.05) = (57;0.05) = 0.2564$ , indicating that the correlation value for each variable is above 0,2564. This value provides a statistical basis that each question item relating to the construct or variable demonstrates validity evidence in an acceptable level.

The result of multicollinearity test is presented in Table 7 which is detected with the help of tolerance and its reciprocal, Variance Inflation Factor (VIF). Each construct has a tolerance value less than 0,10, and VIF 10 and less.

**Table 7**  
**Result of Multicollinearity Test**

Model		Effectiveness	
		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Information System	0.779	1.284
	Training	0.814	1.229

Source: Research data processing results

Looking at the resulting correlation values of both independent variables above that range no more than 0,10 for confidence interval exceeding 95%, multicollinearity is not severely problematic between both variables within the regression model. Similarly, the VIFs of both variables are less than 10, also representing that multicollinearity is not at hand.

Multiple linear regression test looks at whether there is a presence or absence of the functional relationship between the dependent and independent variables. The effect size of independent variables on a dependent variable can be calculated simultaneously in a multiple regression equation.

**Table 8**  
**Multiple Linear Regression Test**

Model	Unstandardized Coefficients	
	B	Std. Error
1 (Constant)	2,776	2.729
Information System	.233	.072
Training	.214	.099

a. Dependent Variable: Effectiveness

Data in Table 8 fits into the following regression equation:

$$Y = 2.776 + 0.233 X_1 + 0.214 X_2$$

In the regression equation, constant ( $\beta_0$ ) is 2.776, indicating no change in the variable of Information System ( $X_1$ ) and Training ( $X_2$ ). On that basis, the use of SIMAK-BMN at Universitas Terbuka amounts to 2.776.

The analysis of the coefficient of determination explains the degree to which the variables of transparency and accountability affect the use of SIMAK-BMN.

**Table 9**  
**Coefficient of Determination ( $R^2$ )**

Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate	Durbin-Watson
1	.596 <sup>a</sup>	.355	.305	1.207	2.099

a. Predictors: (Constant), Training, Information System

b. Dependent Variable: Effectiveness

In the table of the coefficient of determination, the resulting R squared displays that system information accounts for 0,355 and training for 35,5% in the variability in the use of SIMAK-BMN. The remaining 64,5% is attributed to undeterminable and unknown factors.

T test for partial regression coefficient reflects the spirit of assessing the effectiveness and efficiency of the use of SIMAK-BMN as Table 10 summarizes below.

**Table 10**  
**T Test on the Effectiveness of SIMAK-BMN Use**  
 Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.776	2.729		1.017	.314
Information System	.233	.072	.409	3.239	.002
Training	.214	.099	.267	2.164	.035

a. Dependent Variable: Effectiveness

1. Based on the testing for the effect of information system on the effectiveness of SIMAK-BMN use, t count results in a significance level at 0,002. Within the acceptable significance range of 0,05, information system is statistically significant in the effective use of SIMAK-BMN at Universitas Terbuka. This result corroborates findings from early studies (Sykes, T. A., Venkatesh, V., and Gosain, S. 2009) and (Latifah 2019), which identify a profound relationship between the use of system and the effective use of SIMAK-BMN that merits the timely and effective process of asset reporting.

In terms of the effect of training and the effective use of SIMAK-BMN, the resulting t count is significant at 0,035. The desired outcome becomes determinative of the statistical finding that training exerts an effect on the effective use of SIMAK-BMN. Such finding is confirmed by a prior study by Christabella Pingkan A Patitingan (2016). On the statistical basis, it is essential that employee training becomes a routine given the constant updates of tax system in Indonesia

## V. CONCLUSION

Major points of evidence concerning the effect of information system and training on the effective use of SIMAK-BMN are highlighted below:

1. Empirical evidence within t test framework attests to the relationship between information system and the effective use of SIMAK-BMN with a significance of 0,002, less than 0,05, in a multiple linear regression model.
2. The output of t test with respect to training and the effective use of SIMAK-BMN finds that training affects how SIMAK-BMN is run effectively with a significance of 0,035 reflected in a multiple linear regression model.

A key objective of the study is to address research evidence on what it means to set up information system and mobilize training for the effective operation of SIMAK-BMN with broad implications that correspond with future considerations relevant across accounting fields within public sector with a fundamental aim of enhancing effectiveness upon operating SIMAK-BMN.

The findings make up practical contributions for Universitas Terbuka to settle on activities that take on the use of SIMAK-BMN and upon which effective use can be drawn to boost user engagement. There is also a justification that the study will add to theoretical development in the relevant areas of accounting within public sector, most notably concerning SIMAK-BMN.

Future studies may add new constructs or variables to the conceptual framework, given that there is a wide area that encompasses technical aspects that foster the implementation of SIMAK-BMN. Larger samples are equally recommendable, which allows future researchers to expand sampling into more institutions that cover central and regional government. To top it off, it is necessary to develop research instrument that is adaptable with the condition and environment of the object of interest.

## REFERENCES

- {1} Christabella Pingkan A Patitingan. 2016. "Pengaruh pelatihan online Support dan Peer advicetierhadap kepuasan Sistem Informasi Manajemen Barang Milik Negara."
- {2} Gomes, Faustino Cardoso. 2009. *Manajemen Sumber Daya Manusia*. Yogyakarta: Penerbit Andi.
- {3} Latifah, & Sularto. 2019. "Analysis Of Factors Affecting The Effectiveness Of State Property Financial Accounting Management Information Systems (SIMAK-BMN) At The Ministry Of Women's Empowerment And Child Protection." 2019 VII(8).
- {4} Laudon, Kenneth C. dan Jane P. Laudon. 2008. "Sistem Informasi Manajemen." Edisi 10.
- {5} Muldiyanto. 2015. "Sistem Informasi Manajemen Dan Akuntansi Barang Milik Negara (SIMAK-BMN) - Memahami Filosofi Perolehan BMN Dalam Aplikasi Simak BMN. Artikel Anggaran dan Perbendaharaan Badan Pendidikan dan Pelatihan Keuangan Kementerian Keuangan."
- {6} Nasrudin, E. 2015. "Efektifitas SIMAK-BMN terhadap Pengelolaan Aset Negara." *Jurnal Akuntansi Universitas Jember* 13.
- {7} Nastiti, A. D. 2013. Pengaruh Pendidikan, Pelatihan dan Pengalaman Kerjaterhadap Kualitas. *Jurnal Fakultas Ekonomi dan Bisnis, Universitas Dian Nuswantoro*.

- {8} Rahmawati, N. 2014. Penerapan Sistem Informasi dan Manajemen Akuntansi Barang Milik Negara (SIMAK BMN) di Kantor Pusat Humaniora, Kebijakan Kesehatan dan Pemberdayaan Surabaya. Skripsi tidak diterbitkan. Surabaya: Ilmu Administrasi Negara Universitas Negeri Surabaya.
- {9} Sugiyono. 2012. Statistika Untuk Penelitian. Bandung: Alfabeta.
- {10} Suyanto, M. 2005. Pengantar Teknologi Informasi Untuk Bisnis. Yogyakarta: Andi.
- {11} Sykes, T. A., Venkatesh, V., dan Gosain, S. 2009. "Model Of Acceptance With Peer Support: A Social Network Perspective to Understand Employees' System Use. MIS Quarterly Vol 33." MIS Quarterly Vol 33.
- {12} Umar, Husein. 2008. Desain Penelitian MSDM dan Perilaku Karyawan, Seri Desain Penelitian Bisnis. Vol. 1. Jakarta: PT. Rajagrafindo Persada.
- {13} Peraturan Pemerintah Nomor 27 tahun 2014 tentang Pengelolaan Barang Milik Negara/Daerah
- {14} Undang-Undang Nomor 17 tahun 2003 tentang Keuangan Negara