



The Influence of Information and System Quality Towards *SIREMUN* (Developer Perception Versus User Perception)

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Abstrak

Penelitian ini bertujuan untuk mengevaluasi implementasi sistem remunerasi Universitas Negeri Semarang (*Siremun*). Sebagai upaya transparansi laporan keuangan dalam mewujudkan *clean government* dan *good university governance*. Penelitian ini membandingkan persepsi perancang dan pengguna *Siremun*. Populasi penelitian ini adalah karyawan Universitas Negeri Semarang (UNNES) sebesar 1667. Sampel diperoleh melalui kuesioner kepada 85 responden sebagai perancang dan pengguna *Siremun*. Pengumpulan data menggunakan teknik kuesioner. Teknik pengambilan sampel yang digunakan adalah *probability sampling* yaitu *propotionate stratified random sampling*. Teknik analisis data yang digunakan adalah analisis statistik deskriptif, analisis regresi berganda dan *independent simple t-test*. Hasil penelitian menunjukkan bahwa kualitas sistem dan kualitas informasi berpengaruh positif terhadap kepuasan. Hasil analisis lanjutan, terdapat perbedaan persepsi antara perancang dan pengguna sistem pada kepuasan implementasi *Siremun*. Berdasarkan hasil penelitian, dapat disimpulkan bahwa kepuasan implementasi *Siremun* dipengaruhi oleh kualitas informasi dan kualitas sistem.

Abstract

This study aims to evaluate the Implementation Remuneration System of Universitas Negeri Semarang (*Siremun*), as an effort to transparency of annual report to create *clean government* and *good university governance*. This study compares the perceptions of developer and user of the system. The research population is 1667 employees of Universitas Negeri Semarang (UNNES). The sample in this study was conducted with a survey by using a questionnaire to 85 respondents as developer and users of *Siremun*. Data collection is using questionnaire technique. Sampling technique used is *probability sampling* that is *proportionate stratified random sampling*. The analysis technique used is *descriptive statistical analysis*, *multiple regression analysis* and *independent simple t-test*. The results showed that the quality of system and information has positive effect on satisfaction. Results of continuation analysis show that there is a difference of perception between the developer and the user system towards implementation satisfaction of *Siremun*. Based on the research results, it can be concluded that the satisfaction implementation *Siremun* is influenced by quality of information and quality of system.

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INTRODUCTION

Implementation of online-based remuneration system is a tool of financial statement transparency nowadays. The importance of financial governance transparency is to prevent abuse of power and corruption. According to Clause 2 Paragraph 2 of Ministry of Finance Regulation No. 10 Year 2006 About Guidance of Remuneration Determination for Managing Officer, Supervisory Board and Public Service Agency Officer, Remuneration is work wage in form of salary, honorarium, fixed allowance, incentive, bonus or achievement, severance pay, and or pension. It is one of efforts to create clean government and good university governance so that several organizations implement this online remuneration system. An effective policy and remuneration system can help organisation to control salary budget so that the amount will not surpass the ability of the organisation and to eradicate corruption, collusion, and nepotism (*KKM*). The success of remuneration is supported by the enhancement of the use of information technology (IT). The use of IT has given mediums to the management in controlling its activities and decision making. Therefore, online-based remuneration system was made and is already implemented in several universities in Indonesia.

UNNES has policy of income generating university enhancement, one of it is the enhancement of UNNES asset in income generating. The use of asset meant in this research is human resource utilisation and information technology utilisation thus led UNNES to develop *Siremun* in 2014. *Siremun* is online-based application that is used by Semarang State University to manage payment which consists of salary, honorarium, and work incentive. The purpose of *Siremun* are used as remuneration transparency tool and to overcome remuneration system which is susceptible to several problems such as slow in information presentation because of complicated data processing, miscalculation which can cause inaccurate information, and time completion use inefficiency. *Siremun* is helpful in remuneration transparency because it is able to give information and is developed on the basis of freedom in gaining related information directly by the user. In this case, term transparency is related to procedure, rule, policy, and calculation with its result which are expected to be gained by the users through *Siremun*. The more complete the information, the higher the transparency level which is in line with user's satisfaction with *Siremun* and vice versa. *Siremun* implementation gives contribution to the success of UNNES remuneration but it means that there is no problem at all. In fact, there are still some problems such as (i) lecturing complaint, thesis and dissertation ignorance.(ii) Remuneration is not considered as means to enhance performance but it is considered as additional income. (iii) complaint is also happens in many letter of assignment which is unpaid, which is actually has been paid through remuneration (Safrimen, 2017). In the fourth year of *Siremun* implementation, all of previous problems are expected to be solved as making *Siremun* as a remuneration accountability and transparency tool in UNNES.

This research is referred to previous research conducted by Nightisabha (2009) which investigated the success of system which uses End User Computing Satisfaction (EUCS) model Torkezadeh and Doll (1991). Users' satisfaction is the benchmark of system success. According to Seddn and Kiew (1994) in Octavia, et. al. (2016), users satisfaction is an entire evaluation and user's experience in using information system and potential effect of the information system. Investment success in technology can play important role in increasing productivity in which the failed system will lead to undesirable consequences like financial loss and end-user computing unsatisfaction (Fajarini, 2010). Variables used in this study are satisfaction, information quality, and system quality. This study also investigates the influence of information quality and system quality towards system user's satisfaction refers to the research conducted by Istianingsih and Wijayanto (2008), Livari (2005), McGill, et al. (2003),Oktavia, et al. (2016). In the other side, researches conducted by

Susanty (2013) and Arifin & Pratolo (2012) shows that information quality has no significant influence towards user's satisfaction.

This study aimed to know the influence of information quality and system quality on the satisfaction of Siremun implementation. Furthermore, this research also examine the comparative test on the developer's satisfaction and Siremun user. Hypothesis development is taken based on previous researches related to system satisfaction. Grand theory of this research is *Harapan* theory. According to Lubis (2010), *harapan* theory or expectancy theory of motivation is a theory which is based on motivation and determined by the expected result will be gained by a person based on the person's act. In this case, expectancy is related to remuneration. Each employee has high expectation on remuneration system the employee gained. If remuneration transparency supports their performance entirely then the effort given is also higher.

The quality of information is output level generated by information system and is able to meet the expectation of information user. The output is expected to has the information as a unit as it does not lessen the value of the information itself. The user feels satisfied when gaining a high-value information, the information which is able to help the user to do the expected act. The value of information is determined by the usefulness level of the information. The advantage perceived by the user is information which is able to meet user's need. Relevance is related to user's need and the suitability of the information gained. The higher the usefulness level, the higher the user's satisfaction. Urgency, information is available anytime and not holding up decision-making process so that the user is satisfied by information availability. Expectancy theory explains that satisfaction on output that is generated by a system is a level of users trust towards the output available for them and is able to meet their needs of information. An information which is able to meet users' expectancy will strengthen the satisfaction. Previous researches of Istianingsih and Wijayanto (2008), Livari (2005) and McGill, et al. (2003), and Oktavia et al. (2016) show that information quality is related positively with the satisfaction of end user information system.

H₁ : Information quality has positive influence on the satisfaction of *Siremun* implementation

System quality means the quality of hardware and software combination in information system. The focus are system's performance, refers to hardware and software ability, policy, and procedures of information system which are able to provide information as what the user need (DeLone and McLean, 1992). If the quality of the system information is good, the users will tend to be satisfied with the system. The higher the quality of information system used will be influential on the level of satisfaction of end user information system. System quality is related to whether the evaluation of information processing system is in line with expectancy theory, Kotler (2003), the user will be stisfied if the performance of the used product is able to meet or even overcome the user's expectancy. This theory is supported by empirical study by McGill, Hobs, and Klobas (2003). The test is undertaken in which the user is also the developer system. The result shows that system quality influences the user's satisfaction. The same researches are also conducted by Istianingsih and Wijayanto (2008),Livari (2005) and Oktavia, et al. (2016).

H₂ : System quality has positive influence on the satisfaction of Siremun implementation

The difference of perception of the user and the developer appears as an impact of system developer's ignorance of system quality expected by the user. The developer act upon what they think about the user, not by ask the user directly or any other direct interaction to the user. The perception then will cause the success or failure of the system as user's expectation may not the same. Thus, developer perception is not accurate. Perception similarity of the developer and the user may state that the system is success, but unable to guarantee that the system is in high quality. A good qualified system will generate qualified information so that the information will be helpful in making decision. A system assessment is one of the way to help the developer to create a qualified system through suggestions and system improvement. The other similar researches to measure the

success of system implementation measured with end user satisfaction by using End User Computing Satisfaction (*EUCS*) Torkzadeh & Doll (1991) is a research of Nightisabha (2009). The result shows that there is difference of perception of the provisioning committee and goods and services supplier.

H₃ :There is difference of perception of the user and the system developer on Siremun implementation satisfaction.

METHODS

This research is using quantitative approach. The data in this study is primary data. The population are 1667 UNNES staffs which are using Siremun. Samples are taken by using probability sampling, aproportionate stratified random sampling by using slovin formula. The amount of the sample in this research is determined by slovin formula. Population in this research are people and the determined precision or the significance level is 0.1. Thus the amount of the sample in this study is in the following:

$$N = \frac{N}{1 + Ne^2} = \frac{1667}{1 + (1667 \cdot 0,1^2)} = 94$$

Note :

n : Element amount / sample members

N : Element amount / population member

e : Error level

Thus, the entire respondents in this research are 94 persons.

The data is taken by using questionnaire to the research object, they are UNNES staff as the developer of Siremun and the end user of Siremunas research respondent. There are 94 questionnaires as the amount of the population. The questionnaires which can be processed are 85 questionnaires. The instrument of the research is tested through validity and reliability test. The 94 questionnaire had been tested and are appropriate according to the result of validity and reliability test. Research data is analysed by using descriptive statistic analysis and inferential statistic analysis by using multiple regression analysis and Independent Sample t-test, with Statistical Package for Social Science (SPSS) 24 application. This research is using 8 research variables which consist of one dependent variable and two independent variables. The dependent variable is satisfaction and the independent variables are information quality and system quality. Operational variable definition can be seen in Table 1

Table 1. Variables Operational Definition

Research Variable	Definition	Indicator	Measurement Scale
Satisfaction	User satisfaction is the entire evaluation of user experience in using information system and potential impact of the information system. (Seddon and Kiew, 1994)	content, accuracy, format, timeliness, easiness (Source: Doll and Torkzadeh,1991)	Likert Scale 1-5 point SDA,DA,DK,A,S A
Information quality	Information quality is an output from the information system used. (DeLone and McLean 1992)	accuracy, timeliness, relevance, informative, competitive (Source: McGill,et al., 2003)	Likert Scale 1-5 point SDA,DA,DK,A,S A
System Quality	System quality is the ability of hardware, software, policy, and procedures of the information system which is able to provide information as what the user need (DeLone and McLean, 1992).	Economy, Portability, Reliability, Understandbility, User friendliness (Source: McGill,et al., 2003)	Likert Scale 1-5 point SDA,DA,DK,A,S A

Source: Processed Primary Data, 2017

RESULT AND DISCUSSION

Respondents answer in questionnaire, the description of independent variable presented in table 2 shows that descriptive statistic include minimum score, maximum score, mean, standard deviation with the amount of analysis unit is 85.

Table 2. Descriptive Statistic Result

	N	Min	Max	Mean	Deviation Std.
Satisfaction	85	19	60	43.66	7.796
Information quality	85	16	30	22.75	2.786
System quality	85	36	95	68.59	10.485

The data gained from questionnaire can be processed as the research for the data have been met the prerequisite test before the hypothesis test, classic assumption test as stated in table 3

Table 3. Classical Assumption Test

Test	Decision-Making Criteria	Test Result
Normality test	One sample-Kolmogorov Smirnov	
	1. Kolmogrov-Smirnov Z	0.081
	2. Asymp. Sig. (2-tailed)	0.200 ^{c,d}
Multicollinearity test	VIF and Tolerance test	
	Information quality	
	1. Tolerance	0.887
	2. VIF	1.127
	System quality	
	1. Tolerance	0.887
2. VIF	1.127	
Heteroscedasticity test	White test	
	N	85
	R ²	0.369
	c ² test	31.369
	c ² table	107.520

Source: Processed Primary Data, 2017

Partially, regression model can be tested its meaningfulness by using t test which is shown in table 4

Table 4. Hypothesis Test Result

Test	Decision-Making Criteria	Test Result	
T test	Information quality	t	3.137
		Sig	0.002
	System quality	t	8.934
		Sig	0.000
Determination Coefficient	Adjusted R Square	0.589	
Comparative test Independent Samples t-test	Mean	Developer	47.74
		User	42.15
	Levene's Test for Equality of Variances	F	0.348
		Sig	0.557
	t-test for Equality of Means	t	-3.084
		sig	0.003

Source: Processed Primary Data, 2017

The result of statistic test on information quality variable is $t_{test} = 3.137$ and significance value of 0.002 or less than 0.05 significance with trust level of 95%, thus it can be concluded that the understanding of information quality has positive influence on satisfaction. The conclusion is that H_1 which states that information quality has positive influence on users satisfaction is accepted (H_1

accepted). Statistic test result on system quality variable is $t_{\text{test}} = 8.934$ and significance value of 0.000 or more than 0.05 significance value with trust level 95%, thus it can be concluded that system quality has positive influence on significance. The conclusion is that H_2 which states that system quality has positive influence on users satisfaction is accepted (H_2 accepted). The result of R^2 determination coefficient on table 3 shows that adjusted R square value is 0.589 or 58.9%. It means that 58.9% of the satisfaction variable can be explained by information quality and system quality variable. While the rest of 41.1% (100% - 58.9%) can be explained by the other variable which is not investigated in this research.

The information on table 3, the result of mean statistic descriptive, on comparative test shows that the average satisfaction on users is 42.15 while on the developers is 47.74. According to mean value, user perception on Siremun implementation satisfaction has less scores rather than the perception of Siremun developers. The average value of the developers is more than those on the users show that the knowledge of system developer is better than the system users. The result of homogeneity variant of both sample groups gained F value of 0,348 with significance level of 0.557. Significance of more than 0.05 value shows that the variants of the samples are homogeneous. Then, the result of equal variance assumed is t value of -3.084 with significance value of 0.003. With significance value is less than 0.05, thus the hypotheses is accepted. The hypotheses states that there is difference of perception of the user and the system developer on Siremun implementation satisfaction. Hypotheses test of satisfaction of Siremun implementation is presented briefly on table 5. After the hypotheses are tested by using SPSS 24, all of the hypotheses are accepted.

Table 5. Hypotheses Test Recapitulation Result

Hypothesis	Statement	Result
H_1	Information Quality has positive influence on satisfaction.	Accepted
H_2	System Quality has positive influence on satisfaction.	Accepted
H_3	There is difference of perception of the users and system developers on the implementation of remuneration system of Semarang State University (Siremun).	Accepted

Source: Processed Primary Data, 2017

The result finds that the first hypothesis (H_1) is accepted and it can be concluded that information quality is influential on satisfaction. This result is in line with those researches conducted by Seddon and Kiew (1994), Livari (2005) Istianingsih & Wijayanto (2008), Oktavia, et al. (2016), that information quality can influence user satisfaction. Information quality variable test on satisfaction shows that the higher the information quality on Siremun, the higher the satisfaction of Siremun implementation. This result is in line with descriptive result which shows that information quality has high-categorized mean. Information quality is related to information system output. Commonly, respondents state that the information meets the availability aspect, in this case the information presents the data needed by the users entirely. Accuracy, which means that there is no mistake in the information provided and shows the actual information.

This research is success in giving the evidence of the influence of information quality on satisfaction. Information quality meets the users need, it is provided by the evidence that the users are still using the Siremun as they have gained satisfaction from the previous uses. The information generated is advantageous to the users, thus it shows the result of remuneration data processing based on the entire staffs performances. The result of remuneration calculation meets the standard as it has to be. It shows that Siremun can be used as salary expenditure transparency.

Information relevance in Siremun has been recognised by the users. Previously dismissed activities have been ordered properly by using Siremun so that the accepted salary, honorarium,

bonus, etc., are suitable with the activities of the employee in a semester. Information quality is unable to reach maximum value as the information can be accepted only once in a semester. Thus, the information is unable to be seen in real time. Besides, Siremun is unable to give precious data history so that the users are unable compare the present information with the previous one. Expectancy theory relates information quality as the influence of system implementation satisfaction. User perception on information quality is a trust level of the users on the output provided. User motivation is the output which will be gained and is able to meet users information needs so that the users trust that information quality is able to influence system user satisfaction. High quality information will make higher satisfaction, and vice versa.

Statistic result on this research finds that the second hypothesis (H_2) is accepted and it can be concluded that system quality is influential on satisfaction. This result is in line with those result of researches conducted by Seddon and Kiew (1996), McGill, *et al.* (2003), Oktavia, *et al* (2016), Livari (2005), that system quality can influence users satisfaction. System quality on satisfaction variable test finds that the higher the Siremun system quality, the higher satisfaction level on Siremun implementation. This result is compatible with the descriptive result which shows that information system quality has high-categorised mean. Commonly, respondents state that system performance generated is the same with users expectation so that the users satisfied with Siremun. System quality related to the evaluation of information processing system which is in line with expectancy theory, Kotler (2003), the users will be satisfied if the product performance can meet or overcome the users' expectation. Siremun use easiness also influences user satisfaction. In average, users can use Siremun easily even if the system is not used in a quite long time. Siremun system quality shows that the system is reliable so that the users satisfied and keep using it. The sustainable use of the system shows the level of satisfaction that the users gained as the effect of the system quality. It can be concluded that system quality influences user satisfaction.

Siremun system quality is an asset which supports the operational productivity of the educational staffs and lecturers. With the existence of Siremun all activities become transparent and it increases Siremun user satisfaction. The system quality is a reflection of accountability in remuneration processing as Siremun is integrated with the other systems owned by UNNES, such as Siradi (Sistem Informasi Surat Dinas), Sistem Informasi Manajemen Kepegawaian (Simpeg), Sistem Informasi Penelitian dan Pengabdian kepada Masyarakat (SIPP) and etc.

The previous test result shows that system developer perception is better than the users'. It can be seen from the mean value of the developers which is bigger than the users. Difference of perception of Siremun implementation satisfaction caused by the developers who have more understanding than the users. The users have limited understanding on the information in Siremun. The lack of detailed explanation about the procedures and conditions about remuneration system makes the users less satisfied. Several things related to policies that should be known by the users such as lecturer activities which are not recognised on remuneration calculation but there no reasons on Siremun of why the activities are not recognised.

The output appearance is less simple that it confuses the users in understanding the remuneration calculation. The users are unable to access previous semesters remuneration, thus the users are unable to compare the present remuneration with the previous ones. Siremun access can only be used during remuneration is issued thus it makes the users less interested to use Siremun as the users do not know when to access. The inexistence of Siremun access time makes several users ignore Siremun. Perception difference of the users and the system developers appears as the impact of system developers' ignorance of what the users want and expect. System developers develop based on only their thought, not interaction or asking the users directly. Direct observation on the users related to their expectation and need of Siremun users has not been maximalized yet by the Siremun developers. Therefore, the users should be involved in the process of developing a system

(Prabowo, 2014). It can be concluded from the perception difference of the system developers and users that Siremun still has gap. It shows that the developers is still unable to meet what the users is expected, and vice versa. The success evaluation of Siremun can be concluded that the system is not success yet as the users satisfaction is not fulfilled yet. Therefore, there still be gap in Siremun implementation.

This research is in line with Istianingsih and Wijayanto(2008) which state that in assessing user perception on the success, a system still undergoes perception difference so that there is a gap in the implemented system. The perception difference can be used as a suggestion to the system developers to improve the system as the user expectation and to solve the gap. The developers can improve Siremun as the criteria expected by the users so that in the future the system will be success. It should be understood that thing that causes perception difference of the users and the provider, there are reasons, and the solution of the gap is narrowed down. In this statement, expectancy theory acts in-between the developers and the users to improve the system quality in fulfilling information needs. This research is expected to connect the communication of the developers and the users and suggesting the user needs that should be fulfilled.

CONCLUSION

The result of the study states that information quality and system quality has positive influence on satisfaction. Also, there is difference of perception of the user and the developer of the system in implementation satisfaction of Remuneration System of Semarang State University (Siremun). Further research is suggested to undertake the research when Siremun can be accessed so that the result will be more up to date and it will be better if the questionnaires for the user and developer are differentiated. Developer's questionnaire can also be specified as for educational staffs and lectures because the performances of both are different. The developer is expected to improve Siremun's appearance to ease the users in evaluate remuneration gained in semester.

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