ASSESSING USER SATISFACTION OF THE INTEGRATED ELECTRONIC BUSINESS LICENSING MANAGEMENT INFORMATION SYSTEM AS A SUSTAINABLE SOLUTION FOR ENVIRONMENTAL BUSINESSES

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Article Information

Abstract

This study aimed to investigate the impact of user satisfaction on the effectiveness of the Indonesia Integrated Electronic Business Licensing Management Information System. The research population comprised members of Business Actors and Licensing Associations in Indonesia, with a sample size of 44 members selected using a simple random sampling technique. Multiple linear regression analysis using SPSS version 26 was used for data analysis. The findings indicate that the effectiveness of the integrated licensing management information system is influenced by user satisfaction. The results indicate that the system is highly effective in terms of user satisfaction. This research can be utilized as an evaluation tool for improving and developing the Electronically Integrated Business Licensing Management Information System in Indonesia.

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INTRODUCTION

Management information systems, comprising hardware and software, play a crucial role in supporting the operational functions of organizations (Dalle & Baharuddin, 2020). Technological advancements have facilitated the development of efficient information processing. The introduction of e-government in the public sector has enhanced the quality of public services and reduced costs. Additionally, it has helped overcome bureaucratic barriers within organizations (DeLone & McLean, 2016; Wirawan, 2020).

Effectiveness is a vital measure of the success of public services. In this study, effectiveness refers to the level of achievement of government information systems in facilitating business licensing procedures. DeLone and McLean (2016) emphasize that effectiveness is key to the success of an information system. Furthermore, effectiveness is linked to the subjective assessment responses received after utilizing the system (Rizkiani & Sudjana, 2022). Evaluating user responses to the information system is critical in assessing its effectiveness since

user satisfaction determines their continued usage of the system (Al-Mamary, 2019). Improving the quality of services, particularly in the domain of business licensing, has been a priority for the government. The Integrated Electronic Business Licensing System is an innovative technological solution implemented to streamline business licensing services. This system has expedited the licensing process and enabled integration. Nevertheless, several challenges persist, indicating user dissatisfaction with the system.

Ronald Walla, Chair of the Indonesian Association (Apindo) in the SME Sector, highlighted errors in the system resulting in the suspension of numerous business permits in certain areas (Agustinus, 2022). The Secretary General of the Association of Indonesian Aromatic, Olefin, and Plastic Industries (Inaplas) further emphasized issues such as slow data updates in the OSS system and sudden disappearance of submitted company expansion plans (Emeria, 2022).

Considering the problems encountered in the system, it is essential to conduct further research on the effectiveness of the Integrated

Electronic Business Licensing System implementation in Indonesia. The findings of this study are expected to contribute to the development of a more efficient integrated electronic business licensing management information system in the future.

Hyphotesis Development

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┌─────────────────────────────────────┐
│   Integrated Electronic Business     │
│      Licensing Management            │
│      Information System              │
└─────────────────────────────────────┘
┌──────────────────┐ ┌──────────────────────────────────────┐
│ User Satisfaction│─│  Integrated Electronic Business Licensing │
│                  │ │  Management Information System Effectiveness │
└──────────────────┘ └──────────────────────────────────────┘
                     ┌──────────────────────────────────────┐
                     │             Hypothesis               │
                     └──────────────────────────────────────┘
                     ┌──────────────────────────────────────┐
                     │   Multiple Linear Regression Analysis │
                     └──────────────────────────────────────┘
                     ┌──────────────────────────────────────┐
                     │       Results and Discussion         │
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                     │            Conclusion                │
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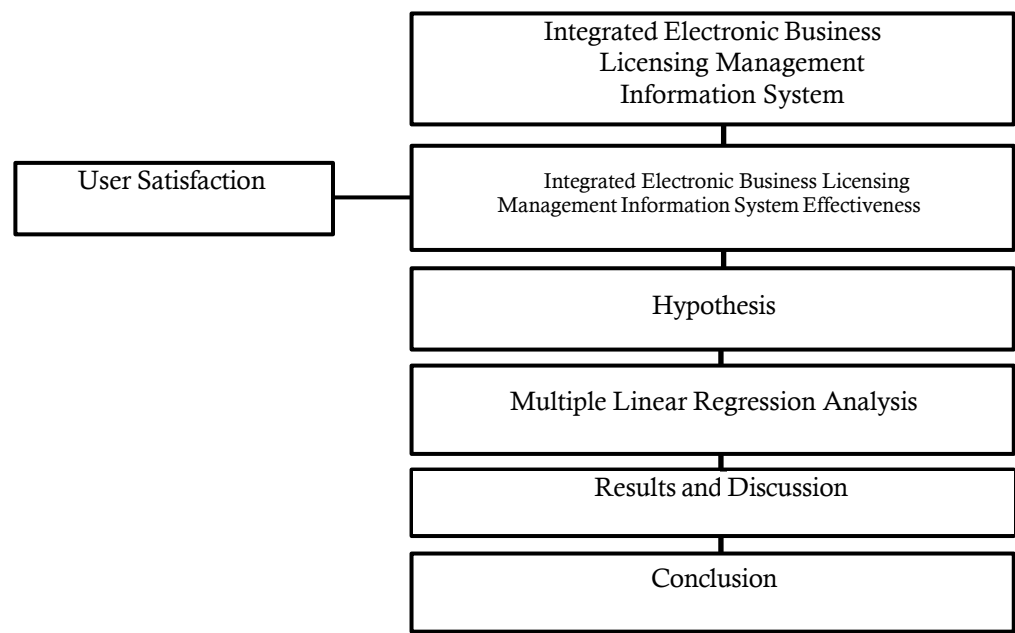
Figure 1. Theoretical Framework

The Management Information System (MIS) is a comprehensive system comprising hardware and software that provides information to aid in organizational decision-making and management (Purnama, 2016). The MIS plays a crucial role in generating high-quality information management and achieving system effectiveness.

Effectiveness refers to the extent to which outputs are produced in accordance with organizational objectives, serving as a measure of the quality of these outputs (Suartika & Widhiyani, 2019). In the context of this study, effectiveness pertains to the level of success of government information systems in facilitating convenient business licensing processes.

User satisfaction refers to the response of users after utilizing a system, representing the impression formed by users regarding the system (DeLone & McLean, 2016). The aspect of user satisfaction is evaluated by considering overall user satisfaction with the system.

H_1 : The satisfaction of users impacts the effectiveness of management information systems.

METHOD

This study focuses on examining the impact of User Satisfaction on the Effectiveness of the Management Information System. Specifically, the research is limited to evaluating the Effectiveness of the Integrated Electronic Business Licensing Management Information System in Indonesia, from the perspective of business actors.

This research adopts a quantitative approach, where data is collected in numerical form, and hypothesis testing is conducted through statistical analysis. The research was conducted online using a Google Form questionnaire, which was distributed to the Association of Business Actors and Licensing in Indonesia.

The target population for this research consists of members of the Association of Business Actors and Licensing in Indonesia. The sampling technique employed was probability sampling, utilizing a simple random sampling approach. A sample size of 44 members was obtained from the Association of Business Actors and Licensing. For this study, the data analysis technique employed is multiple regression analysis, which aims to establish the relationship between a dependent variable and one or more independent variables. The data quality was assessed through validity and reliability tests, ensuring the questionnaire instrument's validity and reliability. The statistical analysis was performed using the IBM Statistical Package for the Social Sciences (SPSS) version 26.

This study involves two variables: one independent variable and one dependent variable. The independent variable is user satisfaction, while the dependent variable is the effectiveness of the electronically integrated business licensing management information system. The variables in this study are operationally defined as follows:

Table 1. Operational Definitions of Variables

Variable	Operational Definitions of Variables	Indicator	Scale of Measurement	References
User Satisfaction (X)	User satisfaction is the response that the user gets after using the system.	According to **DeLone & McLean** (2016) : - system satisfaction, - information satisfaction, - service satisfaction, - overall satisfaction.	Measured with a Likert scale of 1-4, namely 4 (SA = Strongly Agree), 3 (A = Agree), 2 (DS = Disagree), 1 (SD = Strongly Disagree).	DeLone & McLean (2016)
Management Information System Effectiveness(Y)	The effectiveness of the management information system is a measure that assesses whether an activity is good or not and the output is aligned with the goals to be achieved.	According to Scott et al. (2015) : - cost, - time, - convenience, - personalization, - communication, - ease of information retrieval, - trust, - well-informedness, - participation in decision-making.	Measured with a Likert scale of 1-4, namely 4 (SA = Strongly Agree), 3 (A = Agree), 2 (DS = Disagree), 1 (SD = Strongly Disagree).	Scott et al., (2015)

RESULT AND DISCUSSION

The data collected from the questionnaires were analyzed to determine the characteristics of the respondents, including their names, positions, ages, genders, highest education level, and business categories. However, some respondents did not provide their names, resulting in the researcher categorizing the data based on five criteria: position, age, gender, education level, and business category.

Respondent Characteristics Based on Position. The respondents' characteristics were categorized based on their positions in the study, which included Business Actors, Notaries, Legal Consultants, Banking professionals, and Other Parties.

Table 2. Respondent Characteristics Based on Position

No.	Position	Total	Percentage (%)
1	Business Actors	21	47.7
2	Notaries	2	4.5
3	Legal Consultant	1	2.3
4	Banking	2	4.5
5	Others	18	40.9
	Total	44	100

Based on the table, it is evident that the respondents in this study were composed of 21 individuals (47.7%) classified as Business Actors, 18 individuals (40.9%) falling into the Others category, 2 individuals (4.5%) identified as Notaries, 2 individuals (4.5%) as Banking professionals, and 1 individual (2.3%) categorized as a Legal Consultant. These findings indicate that the majority of respondents in this study are engaged as business actors. Based on Age, the respondents' characteristics were further analyzed based on age, categorized into four ranges: 20 to 30 years, 31 to 40 years, 41 to 50 years, and equal to or above 51 years.

Table 3. Respondent Characteristics Based on Age

No.	Age	Total	Percentage (%)
1	20 – 30 years	8	18.2
2	31 – 40 years	13	29.5
3	41 – 50 years	20	45.5
4	>= 51 years	3	6.8
	Total	44	100

According to the table, the respondents in this study consisted of 20 individuals (45.5%) in the age range of 41-50 years, 13 individuals (29.5%) in the age range of 31-40 years, 8 individuals (18.2%) in the age range of 20-30 years, and 3 individuals (6.8%) aged equal to or above 51 years. These findings suggest that the majority of respondents in this study fall within the age range of 41 to 50 years.

Based on Gender, the characteristics of respondents were also examined based on gender, classifying them as either male or female.

Table 4. Respondent Characteristics Based on Gender

No.	Gender	Total	Percentage (%)
1	Male	26	59.1
2	Female	18	40.9
	Total	44	100

As shown in the table, the study comprised 26 male respondents, accounting for 59.1%, while there were 18 female respondents, representing 40.9%. These results indicate that the majority of respondents in this study were male.

Based on Education, the respondents' characteristics based on their highest education level were categorized into several levels, including junior high school, high school, D3, D4/S1, S2, and S3.

Table 5. Respondent Characteristics Based on Education

No.	Education	Total	Percentage (%)
1	SMP	1	2.3
2	SMA	4	9.1
3	D3	1	2.3
4	D4/S1	31	70.5
5	S2	6	13.6
6	S3	1	2.3
	Total	44	100

According to the table, the respondents' last education level revealed that 31 individuals (70.5%) held a D4/S1 degree, 6 individuals (13.6%) possessed an S2 degree, 4 individuals (9.1%) attained a high school education level, 1 individual (2.3%) completed junior high school, 1 individual (2.3%) graduated with a D3 degree, and 1 individual (2.3%) achieved an S3 degree.

These findings indicate that the majority of respondents in this study obtained a D4/S1 degree as their highest educational qualification.

Based on Business Categories, the characteristics of respondents were also analyzed based on their business categories, which encompassed Micro, Small, Medium, and Large.

Table 6. Respondent Characteristics Based on Business Categories

No.	Business Categories	Total	Percentage (%)
1	Micro	2	4.5
2	Small	4	9.1
3	Medium	9	20.5
4	Large	29	65.9
	Total	44	100

Based on the table, it is evident that the respondents in this study had businesses belonging to various categories. Specifically, 29 individuals (65.9%) were categorized as being in the large business category, 9 individuals (20.5%) were in the medium business category, 4 individuals (9.1%) belonged to the small business category, and 2 individuals (4.5%) fell into the micro business category. These findings indicate that the majority of respondents in this study were associated with businesses in the large category.

Table 7. Variable Descriptive Statistics

Variable	N	Minimum	Maksimum	*Mean*	*Std. Deviation*
User Satisfaction (X)	44	6	16	10.84	2.787
Management Information System Effectiveness (Y)	44	13	36	25.55	5.896

The total number of respondents in this study was 44, comprising individuals from various professional backgrounds, including Business Actors, Notaries, Legal Consultants, Banking professionals, and Other Parties who are members of the Business World Association and Licensing. The variable of User Satisfaction ranged from a minimum value of 6 to a maximum value of 16. On the other hand, the Information System Effectiveness variable (Y) had a minimum value of 13 and a maximum value of 36. The User Satisfaction variable consisted of 4 statement items, while the Information System Effectiveness variable had 9 statement items.

Table 8. User Satisfaction Validity Test Results

Statement	r count	r table	Result
1	0.729	0.297	Valid
2	0.696	0.297	Valid
3	0.681	0.297	Valid
4	0.743	0.297	Valid

Table 9. Management Information System Effectiveness Validity Test Results

Statement	r count	r table	Result
1	0.731	0.297	Valid
2	0.704	0.297	Valid
3	0.849	0.297	Valid
4	0.592	0.297	Valid
5	0.853	0.297	Valid
6	0.636	0.297	Valid
7	0.812	0.297	Valid
8	0.786	0.297	Valid
9	0.475	0.297	Valid

The validity test results, as depicted in the table, indicate that all statement items related to user satisfaction and the effectiveness of information systems are deemed valid. This is evident from the calculated correlation coefficients (r count) being greater than the tabled correlation coefficients (r table).

Table 10. Reliability Test Results

Variable	Cronbach Alpha	Result
X : User Satisfaction	0.866	Reliable
Y : Information System Effectiveness	0.920	Reliable

The reliability test results demonstrate that both the user satisfaction and information system effectiveness variables exhibit satisfactory reliability. This is inferred from the Cronbach's Alpha values surpassing 0.70, indicating acceptable internal consistency.

To ensure the validity of the regression analysis, several tests were conducted to evaluate the classical assumptions, including multicollinearity, heteroscedasticity, and autocorrelation. The multicollinearity test revealed that all research variables have tolerances greater than one and VIF (Variance Inflation Factor) values below ten, suggesting no issues of multicollinearity. The heteroscedasticity test indicated that the significance value of the independent variable is larger than 0.05 (sig>0.05).

Furthermore, the Durbin-Watson test for autocorrelation demonstrated that the Durbin-Watson value (d) exceeds the upper limit (du), which is less than 4 - du. According to the decision criteria of the Durbin-Watson test, where du < d < 4 - du, there are no indications or concerns regarding autocorrelation.

Based on these results, it can be concluded that the classical assumptions are not violated, allowing for the continuation of the multiple linear regression analysis. Overall, the test outcomes indicate that the necessary conditions for further analysis have been met.

Table 11. Statistical F Test Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1214.847	4	303.712	42.293	0.000[b]
	Residual	280.062	39	7.181		
	Total	494.909	43			

Based on the provided table, it is evident that the calculated F value is 42.293, whereas the critical F value from the table is 2.61. Since the calculated F value is greater than the critical F value (42.293 > 2.61), it indicates that the model is statistically significant. Additionally, the significance value is 0.000, which is less than the significance level of 0.05. This implies that user satisfaction significantly influences the effectiveness of information systems. Therefore, the model is considered appropriate and valid for use in analyzing the relationship between these variables.

Table 12. Statistical t Test Result

Variable	t count	t table	Sig.	Result
User Satisfaction	3.744	2.023	0.001	Accepted

The findings of this study reveal that the variable of user satisfaction significantly influences the effectiveness of the integrated electronic business licensing management information system at a 99.9% significance level. This implies that user satisfaction plays a crucial role in determining the effectiveness of the system.

The close relationship between user satisfaction and information system effectiveness can be explained through DeLone and McLean's theory on information system effectiveness (DeLone & McLean, 2016). According to this theory, user satisfaction is a vital indicator of the effectiveness of an information system.

In order for the integrated electronic business licensing management information system to be effective, it is essential to ensure high levels of user satisfaction with the system.

Conversely, if users are not satisfied with the system, it will hinder the system's effectiveness.

Based on the questionnaire responses from the study participants who are users of the integrated electronic business licensing management information system, it can be observed that the majority of them expressed satisfaction with the system despite its shortcomings. This is evident from the agreement of respondents with the statements in the questionnaire. These findings demonstrate that despite the system's deficiencies, users are satisfied and perceive the system as beneficial in facilitating their business licensing processes. Therefore, in this study, the satisfaction variable has a significant impact on the effectiveness of the integrated electronic business licensing management information system. The results of this study are consistent with the research conducted by Al Mamary, which also found that user satisfaction influences the effectiveness of information systems (Al-Mamary, 2019).

CONCLUSSION AND RECOMMENDATION

In conclusion, this study investigated the impact of user satisfaction on the integrated electronic business licensing management information system. The research involved distributing questionnaires to 44 participants who are members of the Association of Business Actors and Licensing. The findings indicate that user satisfaction significantly influences the effectiveness of the integrated electronic business licensing management information system, with a significance level of 99.9%. Therefore, the hypothesis that user satisfaction affects the system's effectiveness is supported.

The results suggest that the integrated electronic business licensing management information system is operating effectively compared to the previous system. Despite the presence of some deficiencies, users expressed satisfaction with the system. This indicates that the system has been successful in facilitating business licensing processes. Hence, user satisfaction is a crucial factor in determining the effectiveness of the integrated electronic business licensing management information system.

In summary, this study demonstrates the importance of user satisfaction in ensuring the effectiveness of the integrated electronic business licensing management information system. The findings highlight the system's positive impact on

users, despite its limitations. These results contribute to the understanding and improvement of information systems in the context of business licensing management.

REFERENCES

Karim, A., Bangun, B., Purnama, I., Harahap, S. Z., Irmayani, D., Nasution, M., ... & Munthe, I. R. (2020). *Pengantar teknologi informasi*. Yayasan Labuhanbatu Berbagi Gemilang.

DeLone, W. H., & McLean, E. R. (2016). Information systems success measurement. *Foundations and Trends® in Information Systems*, *2*(1), 1-116.

Wirawan, V. (2020). Penerapan E-Government dalam Menyongsong Era Revolusi Industri 4.0 Kontemporer di Indonesia. *Jurnal Penegakan Hukum Dan Keadilan*, *1*(1), 1-16.

Rizkiani, Q. D. (2022). Pengukuran Efektivitas Sistem Pelayanan Perizinan Berusaha Online Single Submission di Dinas Penanaman Modal dan Perizinan Terpadu Kabupaten Garut. *Indonesian Accounting Research Journal*, *2*(3), 209-217.

Al-Mamary, Y. H. S. (2019). Measuring information systems success in yemen: Potential of delone and mcleans model. *International Journal of Scientific & Technology Research*, *8*(7), 793-799.

Agustinus, M. (2022) Steve Jobs Pun Tak Bisa Selesaikan, Ini Deretan Permasalahan Sistem OSS, Kumparan.com.

Emeria, D. C. (2022) Lelet dan Data Hilang!Begini Curhat Pengusaha Soal OSS, CNBC Indonesia. [Online].

Purnama, C. (2016) Sistem Informasi Manajemen.

Suartika, K. A., & Widhiyani, N. L. S. (2017). Kemampuan teknik personal pada efektivitas penggunaan sistem informasi akuntansi dengan pendidikan dan pelatihan sebagai pemoderasi. *E-Jurnal Akuntansi Universitas Udayana*, *18*(2), 1485-1512.

Scott, M., DeLone, W., & Golden, W. (2016). Measuring eGovernment success: a public value approach. *European Journal of Information Systems*, *25*, 187-208.