



## Analysis of the Success of the Wilkerstat Reksosek BPS Application Using the ISSM Method

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### ABSTRACT

The Reksosek (Socioeconomic Registration) application developed by the Central Statistics Agency (BPS) is a strategic initiative aimed at supporting data-driven policies, particularly in ensuring more accurate targeting of social assistance distribution and development planning. This study aims to analyze the success level of the Wilkerstat Reksosek application by applying the Information System Success Model (ISSM) proposed by DeLone and McLean. The model evaluates six main dimensions: system quality, information quality, service quality, use, user satisfaction, and net benefits. Data were collected through questionnaires distributed to Reksosek application users across various institutions and regions. The analysis results indicate that information quality and service quality have a significant effect on user satisfaction, which in turn positively impacts the net benefits derived from the use of the application. This study provides recommendations for the further development and enhancement of the Reksosek application to ensure its sustainability and effectiveness in supporting the digital transformation of socioeconomic data in Indonesia.

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## 1. INTRODUCTION

Digital transformation in the government sector has become a major driver of bureaucratic efficiency, transparency in public services, and improved accuracy in data-driven decision-making. One innovation that represents this transformation in Indonesia is the launch of the Reksosek (Social–Economic Registration) application by Statistics Indonesia (BPS). Reksosek was developed to realize an integrated social–economic data system that serves as the basis for determining targets of social protection programs and community empowerment more accurately, inclusively, and adaptively to social dynamics.

As a strategic national-scale information system, the success of the Reksosek application is not solely assessed based on its functional existence, but also on the extent to which the system operates effectively, is widely used, delivers tangible benefits, and creates satisfaction among its users. Given the critical role of Reksosek in supporting development planning and policy decision-making, evaluating its success is therefore essential.

To comprehensively measure the success of an information system such as Reksosek, one widely recognized academic approach is the Information System Success Model (ISSM) developed by DeLone and McLean. This model evaluates information systems across six main dimensions: system quality, information quality, service quality, use, user satisfaction, and net benefits. The ISSM has been extensively applied in research to evaluate information systems across various sectors, including the public sector and social services.

Several studies indicate that information quality and service quality have a significant influence on user satisfaction and the net benefits of government information systems. In the Indonesian context, the ISSM has been applied to evaluate systems such as e-KTP, DTKS, and various digital public service platforms. However, to date, there have been limited scientific studies that specifically analyze the success of the Reksosek application using the ISSM framework.

In line with this background, this study aims to evaluate the success of the implementation of the BPS Reksosek application using the Information System Success Model (ISSM) approach. The findings of this study are expected to provide a comprehensive overview of the effectiveness of the Reksosek system and serve as a basis for evaluation and recommendations for developers and policymakers in efforts to improve the quality of the national social–economic information system.

## 2. METHODS

A quantitative research method is employed in this study to test hypotheses through the analysis of relationships among predetermined variables. This method utilizes survey instruments for data collection, producing numerical data that are subsequently analyzed using statistical approaches (Fadli, 2022). Such an approach is considered appropriate for evaluating the success of information system implementation in the governmental context, including the assessment of the effectiveness of the Reksosek Wilkerstat application developed by Statistics Indonesia (BPS).

The Reksosek application functions as an information system that provides integrated socio-economic population data to support data-driven social protection policies and development planning. Given the strategic role of this application, a comprehensive evaluation of both its technical aspects and the benefits derived from its use is required.

Therefore, this study applies the Information Systems Success Model (ISSM) as an analytical framework to assess the success of the Reksosek application based on the dimensions of system quality, information quality, service quality, use, user satisfaction, and net benefits. The use of a quantitative method in this research enables an objective measurement of the application's success from the users' perspective and provides a solid foundation for decision-making and future system improvements.

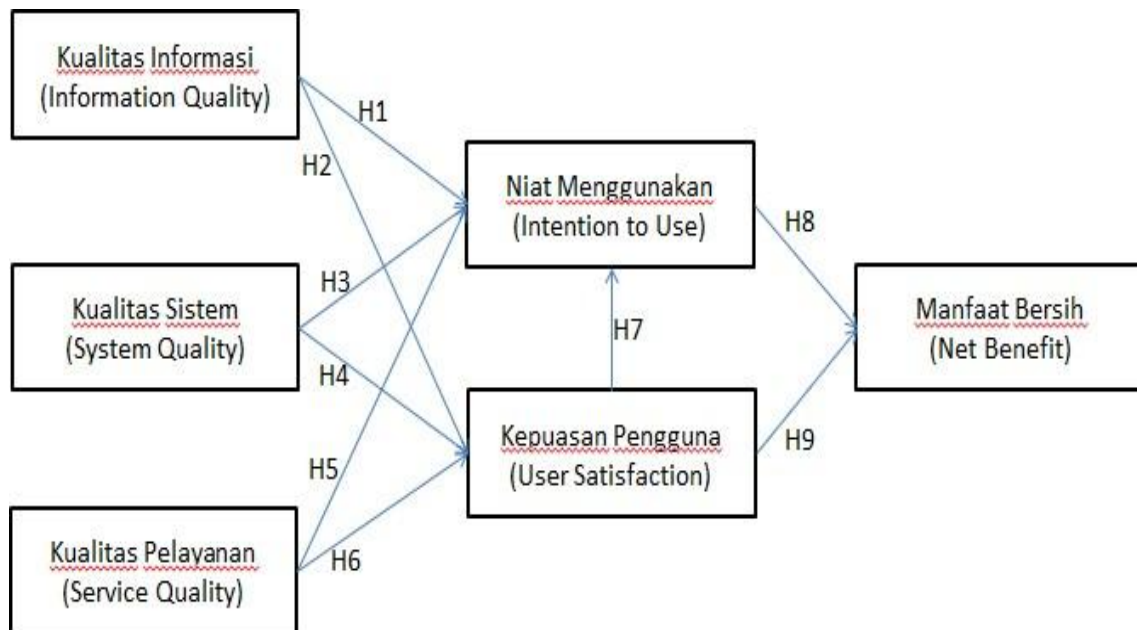
## 2.1. Population and Sampling

This study employs a saturated sampling technique by involving the entire population of application users within each institution. This technique was selected because the number of users of the Reksosek Wilkerstat application in each institution is known to be fewer than 100 individuals. According to Arikunto ([as cited in Yazdi et al., 2022](#)), when the population size is less than 100, all members of the population may be included as research samples. Conversely, if the population exceeds 100 individuals, sampling may be conducted by selecting 10–25% of the total population. In the context of this study, the researchers obtained direct information from the relevant institutions indicating that the number of active application users in each agency remains below 100 individuals ([Sains dan Teknologi et al., 2024](#)). Therefore, the entire population of users was included as research respondents. This approach is considered the most appropriate for obtaining a comprehensive overview, as all application users are able to fully represent the characteristics of the population. The use of this sampling technique also considers efficiency in data collection and minimizes the risk of result bias that may occur if only a portion of the population is examined. By involving the entire population, the data obtained are expected to have a high level of accuracy and representativeness in describing the perceptions and experiences of Reksosek application users within the relevant government institutions.

**Table 1. Scoring of Responses Using the Likert Scale**

| Skor | Keterangan                |
|------|---------------------------|
| 1    | Sangat Tidak Setuju (STS) |
| 2    | Tidak Setuju (TS)         |
| 3    | Ragu-Ragu (R)             |
| 4    | Setuju (S)                |
| 5    | Sangat Setuju (SS)        |

This study aims to evaluate the success of the implementation of the information system for the Survey conducted by Statistics Indonesia (BPS) of Lubuklinggau City by applying the Information System Success Model (ISSM) framework developed by DeLone and McLean.



**Figure 1. Kerangka Pemikiran**

Based on this framework, six variables are analyzed in this study, namely information quality, system quality, service quality, intention to use, user satisfaction, and net benefits. The hypotheses proposed in this study are presented as follows.

**Table 2. Hipotesis Penelitian**

| Hipotesis | Keterangan                                                                                    |
|-----------|-----------------------------------------------------------------------------------------------|
| H1        | Kualitas informasi(information quality) mempengaruhi niat untuk menggunakan(intention to use) |
| H2        | Kualitas Informasi (information Quality) mempengaruhi kepuasan pengguna                       |
| H3        | Kualitas Sistem (System Quality) mempengaruhi Niat untuk menggunakan (intention to use)       |
| H4        | Kualitas sistem (system quality) mempengaruhi                                                 |

|    |                                                                                                                              |
|----|------------------------------------------------------------------------------------------------------------------------------|
| H5 | Kualitas pelayanan(servicequality) mempengaruhi niat untuk menggunakan(intention to use)                                     |
| H6 | Kualitas pelayanan (servicequality) mempengaruhi kepuasan pengguna (user satisfaction) Kepuasan pengguna (user satisfaction) |
| H7 | Kepuasan pengguna (usersatisfaction) mempengaruhi niat untuk menggunakan (intention to use)                                  |
| H8 | Niat untuk menggunakan (intention to use) mempengaruhi manfaat bersih (net benefit)                                          |
| H9 | Kepuasan pengguna user satisfication mempengaruhi manfaat benefit                                                            |

## 2.2. Research Instruments

To obtain relevant data in observing natural or social phenomena, research instruments are required as the primary measurement tools. In this study, data were collected through a survey of staff members who use the application. The data collection process was conducted directly by meeting the respondents and distributing questionnaires as the measurement instrument. The questionnaire used in this study consisted of 23 items, and the measurements were conducted using a Likert scale to assess the level of respondents' perceptions and responses toward the various aspects examined (Fahrudy et al., 2022).

**Table 3. Isi Kuisioner**

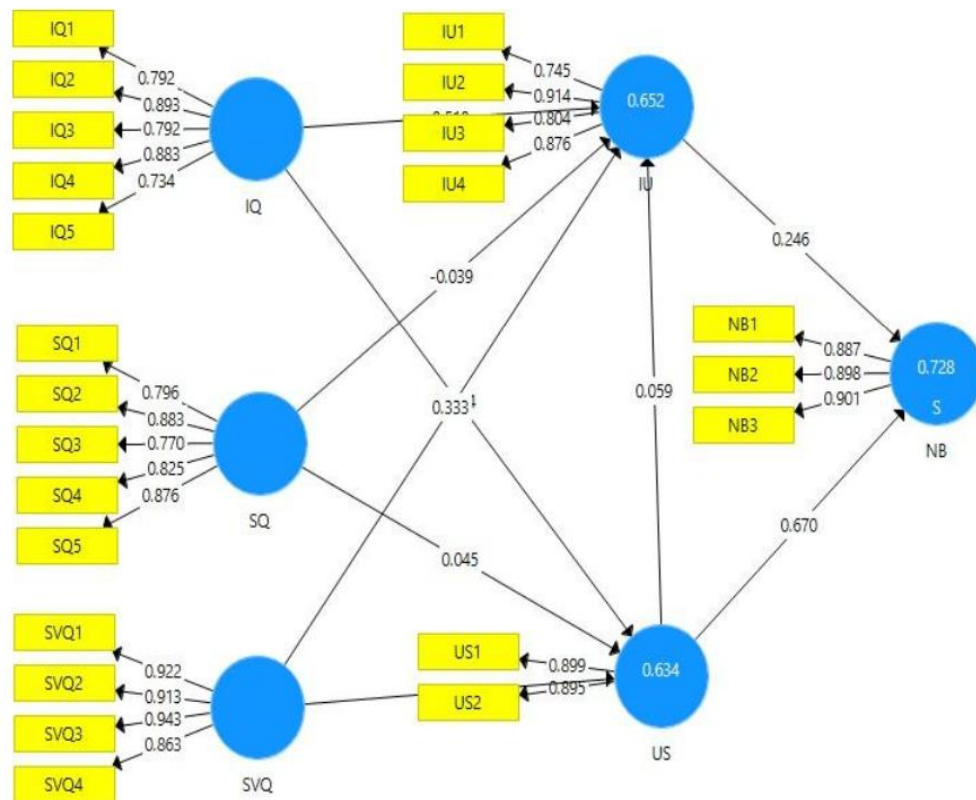
| Variabel            | Item | Pernyataan                                                              |
|---------------------|------|-------------------------------------------------------------------------|
| Information quality | IQ1  | Aplikasi Reksosek memberikan informasi yang Akurat                      |
|                     | IQ2  | Aplikasi Reksosek BPS memenuhi informasi yang saya Butuhkan             |
|                     | IQ3  | Aplikasi Reksosek BPS memberikan informasi sesuai kebutuhan saya        |
|                     | IQ4  | Aplikasi Reksosek BPS memberikan informasi yang upto date               |
|                     | IQ5  | Aplikasi Reksosek BPS memberikan informasi yang mudah dipahami          |
| System quality      | SQ1  | Aplikasi Reksosek BPS mudah digunakan                                   |
|                     | SQ2  | Aplikasi Reksosek BPS memudahkan saya dalam mengakses informasi         |
|                     | SQ3  | Saya merasa nyaman menggunakan Aplikasi Reksosek BPS                    |
|                     | SQ4  | Desain tampilan Aplikasi Reksosek BPS mudah Dipelajari                  |
|                     | SQ5  | Jarang terjadi error pada Aplikasi Reksosek BPS                         |
| Service quality     | SV1  | Ada panduan terhadap penggunaan Reksosek BPS                            |
|                     | SV2  | Aplikasi Reksosek BPS memberikan layanan yang cepat                     |
|                     | SV3  | Saya dapat menggunakan Aplikasi Reksosek BPS kapan saja dan dimana saja |

|                   |      |                                                                                                       |
|-------------------|------|-------------------------------------------------------------------------------------------------------|
|                   | SV4  | Aplikasi Reksosek BPS merahasiakan data yang saya Miliki                                              |
| Intention touse   | ITU1 | Saya merekomendasikan untuk menggunakan Aplikasi Reksosek BPS                                         |
|                   | ITU1 | Saya merekomendasikan untuk menggunakan Aplikasi Reksosek BPS                                         |
|                   | ITU3 | Saya akan merekomendasikan karyawan dan karyawan BPS lainnya untuk menggunakan Aplikasi Reksosek BPS  |
|                   | ITU4 | Menurut saya Aplikasi Reksosek sangat membantu saya dalam mencari informasi terkait survei masyarakat |
| User satisfaction | US1  | Saya puas dengan informasi yang saya peroleh dari Aplikasi Reksosek BPS                               |
|                   | US2  | Secara keseluruhan saya merasa puas menggunakan Aplikasi Reksosek BPS                                 |

### 3. RESULTS AND DISCUSSION

#### 3.1. Analisis Structural Equation Modeling (SEM)

This study utilizes SmartPLS software to conduct the data analysis. The results of the measurement model in this study are presented as follows.



**Figure 2. Hasil Pengukuran Model Untuk Badan Pusat Statistik**

Based on the figure above, several values do not meet the required criteria; therefore, a re-estimation process of the initial values is necessary in accordance with the indicators used. The loading factor values obtained after the re-estimation process are presented as follows.

**Table 4. Nilai Estimasi Ulang**

| Indikator   | Nilai Awal BPS | Nilai Estimasi Ulang BPS |
|-------------|----------------|--------------------------|
| <b>IQ1</b>  | <b>0.792</b>   | <b>0.792</b>             |
| <b>IQ2</b>  | <b>0.893</b>   | <b>0.893</b>             |
| <b>IQ3</b>  | <b>0.792</b>   | <b>0.793</b>             |
| <b>IQ4</b>  | <b>0.883</b>   | <b>0.883</b>             |
| <b>IQ5</b>  | <b>0.734</b>   | <b>0.734</b>             |
| <b>SQ1</b>  | <b>0.796</b>   | <b>0.796</b>             |
| <b>SQ2</b>  | <b>0.883</b>   | <b>0.883</b>             |
| <b>SQ3</b>  | <b>0.770</b>   | <b>0.770</b>             |
| <b>SQ4</b>  | <b>0.825</b>   | <b>0.825</b>             |
| <b>SQ5</b>  | <b>0.876</b>   | <b>0.876</b>             |
| <b>SVQ1</b> | <b>0.922</b>   | <b>0.922</b>             |
| <b>SVQ2</b> | <b>0.913</b>   | <b>0.913</b>             |



|      |       |       |
|------|-------|-------|
| SVQ3 | 0.943 | 0.943 |
| SVQ4 | 0.863 | 0.863 |
| IU1  | 0.745 | 0.745 |
| IU2  | 0.914 | 0.914 |
| IU3  | 0.804 | 0.804 |
| IU4  | 0.876 | 0.876 |
| US1  | 0.899 | 0.899 |
| US2  | 0.895 | 0.895 |
| NB1  | 0.887 | 0.887 |
| NB2  | 0.898 | 0.898 |
| NB3  | 0.901 | 0.901 |

From the table above, it can be observed that there is no difference between the initial values and the re-estimated values, as all values meet the required criteria to proceed to the next stage. The minimum acceptable value used for each element or variable is 0.70; therefore, the values for all variables presented above are considered acceptable, as they meet the minimum threshold without any deficiencies. This indicates that all variables of the Reksosek application are deemed valid and can be retained for further analysis without the need to remove or eliminate any indicators.

### 3.2 P Value dan T Statistic

In probability-based hypothesis testing, the alternative hypothesis ( $H_a$ ) is accepted if the p-value is less than 0.05 (Fadli, 2022). Hypothesis testing is conducted to determine the direct effects or relationships among variables. If the t-statistic value is greater than 1.96, the hypothesis is accepted; conversely, if the value is less than 1.96, the hypothesis is rejected (Yazdi et al., 2022). Table X presents the p-values and t-statistic results of this study.

**Table 5. p-values and t-statistic results of this study**

|           | T Statistics<br>( O/STDEV ) | P Values       |
|-----------|-----------------------------|----------------|
| IQ -> IU  | 2,156                       | 0,032 Diterima |
| IQ -> US  | 2,094                       | 0,037 Diterima |
| IU -> NB  | 1,317                       | 0,188          |
| SQ -> IU  | 0,263                       | 0,793          |
| SQ -> US  | 0,254                       | 0,799          |
| SVQ -> IU | 1,177                       | 0,240          |
| SVQ -> US | 1,903                       | 0,058          |
| US -> IU  | 0,273                       | 0,785          |
| US -> NB  | 4,431                       | 0,000 Diterima |

Based on Table 5, it can be concluded that several hypotheses in this study are accepted, while others are rejected, depending on the institution, as indicated by t-statistic values above or below the threshold of 1.96. The table also demonstrates the relationship between the t-statistic (t-test) and the p-value, whereby when the p-value is significant, the corresponding t-statistic is also significant.

#### 4. Conclusion

Based on the research problem formulation in this study, the success factors of the implementation of the BPS Survey (mapping) information system can be identified as follows:

- a. **Information quality** has a positive and significant effect on **intention to use** for the BPS category.
- b. **Information quality** has a positive and significant effect on **user satisfaction** in the BPS category.
- c. **System quality** does not have a positive and significant effect on **intention to use**; therefore, this hypothesis is rejected. This condition may be attributed to the Wilkerstat administrators' commitment to addressing system issues while restricting application access to certain parties only. As a result, problem resolution is perceived as slow. These access limitations reduce respondents' confidence in the system, causing the measured indicators to be insufficient in increasing the significance of this hypothesis.
- d. **System quality** has a positive and significant effect on **user satisfaction** in the Wilkerstat application category. This may occur because some respondents are employees who have limited understanding of the information quality provided by the Wilkerstat application. The system is used in a monotonous manner but is mandatory, and user guidelines are only provided during training sessions. These limitations affect field officers' ability to operate the application effectively, requiring many of them to learn independently, which subsequently influences their level of satisfaction.
- e. **Service quality** does not have a positive and significant effect on **intention to use** in the BPS category; therefore, this hypothesis is rejected. This may be due to respondents' limited understanding of the information quality within the Wilkerstat application, as the system is mandatory and used routinely in a monotonous manner.
- f. **Service quality** has a positive and significant effect on **user satisfaction** in the BPS category; therefore, this hypothesis is accepted.
- g. **User satisfaction** does not have a positive and significant effect on **intention to use**. This is indicated by a p-value of 0.969, as well as the BPS category result for H7 with a t-test value of 0.273 and a p-value of 0.785. These results indicate that H7 is rejected for both categories and is not statistically significant. This outcome is attributed to users' dissatisfaction due to frequent system errors, which negatively affects their intention to use the application beyond mandatory requirements.
- h. **Intention to use** does not have a positive and significant effect on **net benefits** in the BPS category. This is shown by the H8 result, with a t-test value of 1.317 and a p-value of 0.188, indicating that this hypothesis is rejected. Although the Wilkerstat BPS application supports the implementation of ministerial programs, frequent system

errors and the absence of a user manual reduce users' willingness to recommend the application.

- i. **User satisfaction** has a positive and significant effect on **net benefits**, and this hypothesis is accepted and significant for both applications. The presence of the Wilkerstat BPS application enables users to complete tasks and responsibilities more efficiently and on time, improves user performance quality, supports the Wilkerstat data collection process, reduces the risk of financial losses, and ultimately contributes to increased project revenue.

## ACKNOWLEDGMENT

Based on the conclusions above, it can be inferred that the Wilkerstat application used for the Regsosek activities of Statistics Indonesia (BPS) in Lubuklinggau City still requires further improvement. Several variables in the study led to the rejection of certain hypotheses, while others were accepted, indicating that not all aspects of the application have met the expected performance and effectiveness criteria.

## AUTHORS' NOTE

The authors declare that there are no conflicts of interest in the publication of this article and confirm that the manuscript is free from any elements of plagiarism.

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