The Effect of Jamsostek Mobile Application Usage Effectiveness InAccelerating Old Age Security (JHT) Claim Disbursement For BPJS Ketenagakerjaan Participants at The Pematangsiantar Branch

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Abstract.
This study aims to determine the effect of the effectiveness of the Jamsostek Mobile (JMO) application in accelerating Old Age Security (Jaminan Hari Tua/JHT) claim disbursement for participants of BPJS Ketenagakerjaan, Pematangsiantar Branch, and to identify the technical and non-technical obstacles participants face. The study is grounded in the digitalization of public services, which demands faster and more efficient service, while system disruptions, login failures, facial verification errors, and low digital literacy among some participants persist. A quantitative survey design was used. The population consisted of 100 active participants selected through simple random sampling, and data from 35 respondents were analyzed using a Likert-scale questionnaire tested for validity and reliability. Data were analyzed with simple linear regression, a partial t-test, and the coefficient of determination (R^2). The results show that JMO usage has a positive and significant effect on JHT claim disbursement (t-value = 12.728 > t-table = 1.694; Sig. = 0.000 < 0.05), so H0 is rejected. The Adjusted R Square of 0.834 indicates that 83.4% of the variation in claim disbursement is explained by application usage, while 16.6% is influenced by other factors. Technical obstacles (system disruptions, unstable networks, facial verification failures) and non-technical obstacles (low digital literacy, limited devices) still lead some participants to visit the branch office in person. Improving system stability, continuous education, and wider digital infrastructure access are recommended, particularly for elderly participants.

Keywords: *Jamsostek Mobile, application usage effectiveness, claim disbursement, Old Age Security (JHT) and BPJS Ketenagakerjaan.*

I. INTRODUCTION

Advances in information technology are driving all levels of organizations, both private and public, to provide services that are increasingly fast, easy, and accessible at all times. Information technology not only automates tasks and processes but also transforms the way organizations serve their customers. In the public sector, digitalization is now part of the government's efforts to ensure that every citizen receives adequate services, including social security services for workers.

BPJS Ketenagakerjaan is a public legal entity established under Law Number 24 of 2011 concerning the Social Security Administering Body (Afifah & Paruntu, 2015) and began operating on January 1, 2014, as a transformation of PT Jamsostek (Persero). This institution organizes five programs, namely Work Accident Insurance (JKK), Old Age Security (JHT), Pension Security (JP), Death Security (JKM), and Job Loss Security (JKP). The existence of these programs is important for the welfare of the workforce (Sutrisno, 2020), because workers are the main drivers of economic development, so their social protection needs to be guaranteed adequately.

To expand and simplify service access, BPJS Ketenagakerjaan (the Employment Social Security Agency) has developed the Jamsostek Mobile (JMO) application, which can be downloaded on Android and iOS devices. Through this application, participants can simulate their JHT (Javanese Pension Fund) benefits, check their balances, view details of their JHT and pension contributions, and submit JHT claims without having to visit a branch office, queue, or travel long distances. Claims submitted through JMO for balances under IDR 10 million can be disbursed within one business day at the latest. The ease of JHT disbursement through JMO is also intended to reduce face-to-face interactions during the COVID-19 pandemic.

However, application utilization is not yet fully optimized. Participants still report login failures, server disruptions, data input errors, and facial scan failures. Facial verification only allows three attempts, so participant accounts are automatically blocked if they fail repeatedly. Non-technical factors also play a role, including limited mobile devices, low digital skills, and a lack of information about the existence and use of JMO. Workers aged 40 and over tend to prefer visiting branches in person, resulting in persistent queues and the primary goal of service digitization not being fully achieved.

Several studies have examined JMO from the perspective of public service innovation (Samudera & Pertiwi, 2022), the implementation of online JHT claims services (Cahyani et al., 2024), and user satisfaction (Putri, 2024). These studies were conducted in other regions, and, to the authors' knowledge, none have quantitatively tested the effectiveness of JMO use on JHT claim disbursement for participants in Pematangsiantar City. This study fills this gap.

The JHT disbursement process itself has characteristics that make service speed crucial. JHT is a participant's right in the form of accumulated contributions and their growth, which in many cases is needed immediately after the participant retires. If the application process is slow, complicated, or fails midway, participants lose time and money, while branch offices bear the burden of queues. Therefore, the question of how much the JMO application truly helps expedite and streamline JHT claim disbursement is not simply a technological issue, but rather a question of the quality of public service that directly impacts participants' interests.

Based on the description above, the formulation of the research problem is: (1) how does the effectiveness of using the Jamsostek Mobile application affect the disbursement of Old Age Security claims for BPJS Ketenagakerjaan participants in the Pematangsiantar City Branch; and (2) what are the technical and non-technical obstacles faced by participants in using the application. Theoretically, this research is expected to enrich the study of public service management and information systems, while practically the results can be used as evaluation material for BPJS Ketenagakerjaan and a reference for further researchers.

II. LITERATURE REVIEW

2.1 Effectiveness of Application Usage

Effectiveness is understood as the degree to which an organization achieves its goals (Daft, 2010). In the context of information technology, application effectiveness refers to the extent to which the application helps users complete tasks more quickly, easily, and efficiently. Effective applications are characterized by improved performance, time savings, and ease of access to services. In public services, effectiveness is not only measured by the final result, but also by the process experienced by users, including speed, ease, and satisfaction.

This study operationalizes the effectiveness of the JMO application through six indicators: goal achievement, timeliness, efficiency, ease of use, user satisfaction, and service quality. The goal achievement indicator demonstrates the extent to which JMO achieves its primary function of accelerating the disbursement of JHT claims. Timeliness and efficiency assess the speed of the process and savings in time, costs, and effort compared to manual processes. Ease of use, user satisfaction, and service quality assess participants' experience while using the application.

2.2 Theoretical Basis for Acceptance and Success of Information Systems

*Technology Acceptance Model*Davis's (1989) TAM (Teaching and Adoption Model) states that technology acceptance and use are determined by perceived ease of use and perceived usefulness. The easier and more useful an application is, the more likely users are to use it. DeLone and McLean's (2003) information system success model adds that system success is assessed by system quality, information quality, service quality, usage, user satisfaction, and net benefit.

Furthermore, Venkatesh et al. (2003) through the Unified Theory of Acceptance and Use of Technology (UTAUT) emphasized the role of facilitating conditions, such as the availability of adequate internet networks and devices, as well as user capabilities. These three frameworks are relevant to JMO because BPJS Ketenagakerjaan participants are highly diverse in terms of age, education, device ownership, and digital literacy.

2.3 Jamsostek Mobile Application

Jamsostek Mobile (JMO) is a digital service that allows participants to access BPJS Ketenagakerjaan services via smartphones, from membership and balance information to online JHT claim submission. Aisyah and Novianti (2019) examined the use of the BPJSTK Mobile application in the marketing information system at the Langsa Branch, while Pande and Gunawan (2023) highlighted the need to

introduce JMO services through promotional videos and banners at the Makassar Branch. These findings indicate that socialization is a crucial part of the application's success.

JMO characteristics that can be used to assess the level of utilization include:

- perceived ease of use, which is the extent to which the application is easy to understand without much effort;
- perceived usefulness, namely the belief that the application makes activities such as JHT claims easier;
- speed of access (efficiency) and system reliability, namely fast response and minimal disruption;
- completeness of features (system quality), such as balance checks, claims, and participant information;
- user satisfaction and user ability are influenced by the level of digital literacy.

2.4 Disbursement of Old Age Security Claims

Claim disbursement is an administrative process from submission and document verification to cash benefit payment to eligible participants. JHT benefits can be disbursed if a participant stops working and has passed the one-month waiting period, reaches retirement age 56, experiences permanent total disability, leaves Indonesia permanently, or dies, resulting in a claim being submitted by an heir. Participants who are still actively working with a minimum membership period of 10 years can submit a partial claim of 10% or 30%.

Documents generally required include a participant card, e-KTP (e-KTP), family card, an active savings book in the participant's name, and a Taxpayer Identification Number (NPWP) for balances above IDR 50 million. Applications through the JMO require three system validations: inactive participant status (the company has reported the deactivation), facial verification (liveness detection) that must match the KTP data, and synchronization of BPJS Ketenagakerjaan data with population data. For balances under IDR 10 million, claims through the JMO are processed within one business day, while balances above IDR 10 million are submitted through other channels with an estimated three to ten business days. The quality of electronic JHT claim services has also been studied by Anggraini (2021) in Makassar City.

In terms of benefit value, JHT is designed as retirement savings. Participants' balances continue to grow through compounding even when they no longer pay contributions, so benefits tend to be greater when claims are filed at a later age. Consequently, claims services must be able to serve two groups simultaneously: participants who require immediate disbursement due to retirement, and elderly participants who may be less familiar with digital services. Both groups need to be considered when assessing the effectiveness of JMO as a disbursement channel.

The differences between the submission channel through JMO and other channels are summarized in Table 1. This summary shows that JMO is most beneficial for participants with balances below IDR 10 million who have met all system validations, while claims of larger values or with verification issues still require further processing.

Table 1. Summary of Conditions, Validation, and Estimated Time for Disbursement of JHT Claims

Aspect	Provision	Information
Disbursement conditions	Stopped working (waiting period 1 month), 56 years old, permanent total disability, left Indonesia permanently, died	Claims made before the waiting period ends will be rejected.
Partial claim	10% or 30% of the balance	Participants are still active with a minimum membership period of 10 years
Document	Participant card, e-KTP, family card, savings book, NPWP	NPWP is required for balances above IDR 50 million
JMO system validation	Inactive status, facial verification, data synchronized with population data	Three times facial verification failure blocks account
Estimated time	Balances under IDR 10 million via JMO: 1 business day; balances over IDR 10 million: 3–10 business days	The balance limit provisions follow the provisions of BPJS Employment

Source: processed by the author from the BPJS Employment JHT claim service provisions

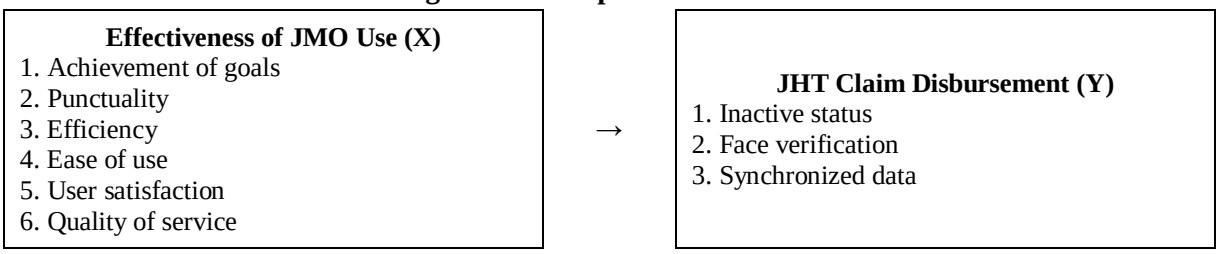
2.5 Previous Research

Previous studies on JMO and JHT claim services cover several perspectives. Samudera and Pertiwi (2022) examined JMO as a public service innovation at the Rungkut Branch, Surabaya. Cahyani et al. (2024) examined the implementation of JMO in improving online JHT claim services at the Kepanjen Branch Office. Putri (2024) analyzed the level of JMO user satisfaction in the JHT claim process at the Yogyakarta Branch Office, while Anggraini (2021) examined the service quality of the JHT e-claim application in Makassar City. These studies provide the basis for JMO's relevance as an object of service effectiveness studies, but have not yet statistically tested its effect on claim disbursement for participants in Pematangsiantar.

2.6 Conceptual Framework and Hypothesis

Based on TAM, the information system success model, and previous research, this study positions the effectiveness of JMO application use (X) as the independent variable and JHT claim disbursement (Y) as the dependent variable. The previously manual and time-consuming process can be shortened because participants can upload documents, verify them, and monitor claim status online. However, this relationship can be weakened by user capabilities, network quality, and system reliability. The conceptual framework is shown in Figure 1.

Figure 1. Conceptual Framework



The basis for this hypothesis is the logic that the speed of claims disbursement is largely determined by three system validations within the JMO: inactive status, facial verification, and data synchronization. An application that is easy to use, fast to access, and reliable will help participants navigate these three stages without error, allowing claims to be processed quickly. Conversely, an application that frequently experiences glitches or is difficult to operate will slow down the process and force participants to return to in-person services. Therefore, the more effective the JMO is used, the smoother and faster the JHT claim disbursement will be for participants.

The hypothesis proposed in this study is as follows.

1. **H1:**There is a positive and significant influence on the effectiveness of using the Jamsostek Mobile application on the disbursement of Old Age Security claims for BPJS Employment participants in the Pematangsiantar City Branch.
2. **H0:**There is no influence on the effectiveness of using the Jamsostek Mobile application on the disbursement of Old Age Security claims for BPJS Employment participants in the Pematangsiantar City Branch.

III. RESEARCH METHODS

3.1 Type and Design of Research

This study used a quantitative approach with a survey design. This approach was chosen because the data is in numerical form and is analyzed statistically to test hypotheses on a specific population or sample (Sugiyono, 2016). Primary data were collected through a closed-ended questionnaire and then analyzed using simple linear regression to measure the magnitude and direction of the influence of the independent variables on the dependent variable.

The research procedure was carried out in several stages. The researcher began with a preliminary study to identify the phenomenon of slow or delayed disbursement of JHT claims and obstacles to JMO utilization. The next stage was to formulate the problem and hypotheses based on theoretical studies and previous research, develop a questionnaire instrument, test its validity and reliability, distribute the

questionnaire to respondents, process the data, test the hypotheses, and draw conclusions and recommendations for the organization studied.

3.2 Research Location

The research was conducted at the BPJS Ketenagakerjaan Branch Office in Pematangsiantar City, Jl. Sakti Lubis No. 5, Timbang Galung, West Siantar District, Pematangsiantar City, North Sumatra. This location was chosen because it allowed researchers to obtain data and information relevant to the problem being studied.

3.3 Population and Sample

The study population was 100 active BPJS Ketenagakerjaan participants registered at the Pematangsiantar Branch Office, comprising both formal and informal workers. The sample was determined using simple random sampling, and questionnaires collected and analyzed from 35 respondents.

3.4 Variables and Operational Definitions

The independent variable in this study is the effectiveness of the Jamsostek Mobile application (X), and the dependent variable is the disbursement of Old Age Security claims (Y). The definition and indicators of each variable are presented in Table 2.

Table 2. Operational Definition of Variables

Variables	Definition	Indicator	Scale
Effectiveness of using the JMO application (X)	The success rate of the JMO application helps participants access services and file claims quickly, easily, and efficiently (Daft, 2010; Davis, 1989; DeLone & McLean, 2003)	Goal achievement Punctuality Efficiency Ease of use User satisfaction Quality of service	Likert 1–5
JHT claim disbursement (Y)	The process of submitting and paying JHT benefits to participants who meet the requirements and pass system validation.	Inactive status Face verification (liveness detection) Synchronized data	Likert 1–5

Source: processed by the author (2026)

3.5 Data Collection Techniques and Instruments

Data were collected through four techniques. First, a closed-ended questionnaire consisting of 18 statements for variable X and 9 statements for variable Y. Second, direct observation of the service process at the branch office. Third, documentation in the form of written documents and relevant images. Fourth, a literature review from books, journals, and online sources. All statements were measured using a five-level Likert scale, namely Strongly Agree (5), Agree (4), Somewhat Agree (3), Disagree (2), and Strongly Disagree (1).

3.6 Data Analysis Techniques

Data processing was performed using SPSS software. Analysis was carried out through the following stages.

1. **Validity test.**The statement item is declared valid if the calculated r is greater than the table r at the 5% significance level.
2. **Reliability test.**Using the one-shot method with Cronbach Alpha; the instrument is reliable if the alpha value is greater than 0.60.
3. **Classical assumption test.**Includes normality tests (One Sample Kolmogorov-Smirnov), multicollinearity (tolerance and VIF), heteroscedasticity (scatterplot), and linearity (test for linearity).
4. **Simple linear regression analysis.**The equation used is $Y = \alpha + bX + e$, with Y as the JHT claim disbursement, α the constant, b the regression coefficient, X the effectiveness of JMO use, and e the error.
5. **Partial t-test.**H0 is rejected if the significance value is less than 0.05 or the calculated t is greater than the table t.
6. **Coefficient of determination (R^2).**Measuring the model's ability to explain variations in the dependent variable; Adjusted R Square is used to avoid bias due to the number of variables.

IV. RESULTS AND DISCUSSION

4.1 General Description of Research Object

The Pematangsiantar Branch of BPJS Ketenagakerjaan (Employment Social Security Agency) is part of the BPJS Ketenagakerjaan (Employment Social Security Agency) that administers the employment social security program for workers in Pematangsiantar and the surrounding areas. Its vision is to become a trustworthy, well-governed, and superior social security provider in terms of operations and service. Its mission includes protecting and ensuring the welfare of all workers and their families, increasing worker productivity and competitiveness, and providing a sense of security, convenience, and comfort for participants.

Branch office functions include benefit payments (JHT, JKM, JKK, and JKP claims), protection for vulnerable workers such as online motorcycle taxi drivers, farmers, and fishermen with affordable contributions, collaboration with city governments to expand coverage, and digitalization of services through JMO. Organizationally, branch offices consist of a Guarantee Management Business Unit, a Development and Partnership Business Unit, and an Operational and Administration Unit that handles information systems and participant complaint services, among other things.

Before the establishment of BPJS Ketenagakerjaan, the social protection system for workers in Indonesia was fragmented across several institutions, resulting in difficulties in accessing services, lack of data synchronization, and uneven coverage. Similar conditions were experienced in Pematangsiantar, particularly among workers in the micro, small, and medium enterprises (MSMEs) and informal workers. The branch office then worked to increase public literacy about social security and strengthen collaboration with local governments, labor offices, employer associations, and labor unions.

4.2 Respondent Characteristics

Questionnaires were analyzed from 35 BPJS Ketenagakerjaan participants. Respondent characteristics based on gender, education, and age are presented in Table 3.

Table 3. Respondent Characteristics (n = 35)

Characteristics	Category	Amount	Percentage (%)
Gender	Man	18	51.4
	Woman	17	48.6
Education	High School	19	54.3
	D3	3	8.6
	S1	13	37.1
Age	< 20 years	1	2.9
	20–39 years	5	14.3
	40–49 years	1	2.9
	> 50 years	28	80.0

Source: processed primary data, 2026

Respondents were almost evenly divided between men (51.4%) and women (48.6%). More than half of the respondents had a high school education (54.3%). In terms of age, respondents were predominantly aged 50 and over (80.0%). This composition is important because older adults generally have lower digital literacy, making it relevant to the discussion of non-technical challenges in subchapter 4.7.

4.3 Validity and Reliability Test

The validity test results show that all statement items in both variables have a calculated r greater than the table r (0.281), so all items are declared valid (Table 4). In variable X, the calculated r ranges between 0.456 and 0.889, while in variable Y it ranges between 0.738 and 0.861.

Table 4. Summary of Validity Test Results

Variables	Number of Grains	Range of r count	r table	Information
Effectiveness of using JMO (X)	18	0.456 – 0.889	0.281	All valid

Variables	Number of Grains	Range of r count	r table	Information
JHT claim disbursement (Y)	9	0.738 – 0.861	0.281	All valid

Source: primary data processed with SPSS, 2026

The Cronbach Alpha reliability test yielded values of 0.863 for variable X and 0.794 for variable Y (Table 5). Both values were above the 0.60 threshold, indicating that the instrument was reliable, meaning it consistently measured the same construct.

Table 5. Reliability Test Results

Variables	Cronbach's Alpha	Number of Grains	Information
Effectiveness of using JMO (X)	0.863	18	Reliable
JHT claim disbursement (Y)	0.794	9	Reliable

Source: primary data processed with SPSS, 2026

4.4 Classical Assumption Test

Prior to the regression analysis, a classical assumption test was conducted, and the results are summarized in Table 6. The normality test for the residuals yielded a test statistic of 0.132 with a significance level of 0.127 (>0.05), indicating a normal distribution of the residuals. A tolerance value of 1.000 and a VIF of 1.000 indicate no signs of multicollinearity; this result is reasonable because the model only contains one independent variable. The scatterplot graph shows that the residual points are randomly distributed above and below zero without any particular pattern, thus preventing heteroscedasticity. Finally, the deviation from linearity significance value of 0.880 (>0.05) indicates a linear relationship between X and Y.

Table 6. Summary of Classical Assumption Test Results

Test	Criteria	Results	Conclusion
Normality (KS)	Sig. > 0.05	D = 0.132; Sig. = 0.127	Normally distributed
Multicollinearity	Tolerance > 0.10; VIF < 10	Tolerance = 1,000; VIF = 1,000	There is no multicollinearity
Heteroscedasticity	The points spread randomly without any pattern.	Spread randomly	There is no heteroscedasticity
Linearity	Sig. deviation from linearity > 0.05	F = 0.553; Sig. = 0.880	Linear relationship

Source: primary data processed with SPSS, 2026

4.5 Simple Linear Regression Analysis

The results of the simple linear regression estimation are presented in Table 7. The regression coefficient of the JMO usage effectiveness variable is 0.526 with a constant of −2.251.

Table 7. Results of Simple Linear Regression Analysis

Variables	B	Std. Error	Beta	t count	Sig.
(Constant)	−2,251	–	–	−0.766	0.450
Effectiveness of using JMO (X)	0.526	0.041	0.916	12,728	0,000

Source: primary data processed with SPSS, 2026. Dependent variable: JHT claim disbursement (Y).

Thus, the regression equation obtained is:

$$Y = -2.251 + 0.526X$$

The regression coefficient is positive, meaning that every one-unit increase in the JMO effectiveness score is followed by a 0.526-unit increase in the JHT claim disbursement score, assuming other factors remain constant. The constant is not significant (Sig. 0.450), so it does not affect the main interpretation of the model.

4.6 Hypothesis Testing and Coefficient of Determination

t-test. The calculated t-value for the effectiveness variable of JMO usage is 12.728 with a significance level of 0.000. This value is greater than the t-table of 1.694 and a significance level less than 0.05, so H0 is rejected and H1 is accepted. This means that the effectiveness of using the Jamsostek Mobile application has a positive and significant effect on the disbursement of Old Age Security claims.

Coefficient of determination. Table 8 shows an R value of 0.916, indicating a very strong relationship. The Adjusted R Square value of 0.834 means that 83.4% of the variation in JHT claim disbursement can be explained by the effectiveness of the JMO application, while the remaining 16.6% is influenced by other variables outside the model, such as the quality of branch office services, completeness of documents, and readiness of participant data.

Table 8. Results of the Determination Coefficient Test

Model	R	R Square	Adjusted R Square	Std. Error
1	0.916	0.839	0.834	2,740

Source: primary data processed with SPSS, 2026

4.7 Discussion

The effect of the effectiveness of JMO use on the disbursement of JHT claims. The t-test results demonstrated a positive and significant effect, consistent with the research's conceptual framework. This finding is consistent with TAM (Davis, 1989), which states that applications perceived as easy and useful are more likely to be used and more helpful. This finding also aligns with the DeLone and McLean (2003) model, which views system and service quality as determinants of usage, satisfaction, and net benefits. In the context of JMO, these net benefits include savings in time, costs, and effort because participants no longer need to queue at branch offices, and balances under IDR 10 million can be disbursed within one business day. These results support previous research findings that JMO is relevant as an innovation in JHT claims services (Cahyani et al., 2024; Samudera & Pertiwi, 2022).

The Adjusted R Square value of 0.834 is considered very high. This figure should be interpreted cautiously. Both variables were measured from the same respondents' perceptions through a single questionnaire, so some of the close relationship may stem from the shared data source. The relatively small number of respondents (35) and the predominance of the age group over 50 also limit the generalizability of the results. Nevertheless, the direction and significance of the effect are consistent with the theoretical basis, making this finding meaningful as preliminary evidence.

Relation to system validation. Claim disbursement variables were measured through three system validations: inactive status, facial verification, and data synchronization. The positive effect found indicates that participants who rated JMO as effective tended to rate all three stages as running smoothly. However, inactive status depends on employer compliance in reporting inactivation, facial verification depends on device quality and image capture conditions, and data synchronization depends on population and membership data updates. Therefore, some factors determining claim speed are beyond the control of app users. This may explain why 16.6% of the variation in claim disbursement is still influenced by other factors, and why collaboration with employers and population agencies needs to be strengthened.

Technical and non-technical constraints. In addition to the significant impact, this study identified obstacles still faced by participants. Technical challenges included system or server disruptions, login failures, data verification errors, facial scan failures, and unstable internet connections. Facial scans were a critical issue, as three failed attempts resulted in account blocking, forcing participants to visit a branch office. From a UTAUT perspective (Venkatesh et al., 2003), this reflects weak facilitating conditions.

Non-technical barriers include low digital literacy, limited mobile device availability, and a lack of information on how to use JMO. Respondent characteristics support this finding, as 80% were over 50 years old. This group tends to be more comfortable with face-to-face services. Pande and Gunawan (2023) emphasize the importance of introducing JMO services through promotional media, suggesting that outreach and mentoring need to go hand in hand with application development. Thus, JMO's effectiveness is determined by the quality of the technology, as well as user readiness and service support.

A summary of the identified constraints, their impact on claims disbursement, and possible improvement measures are presented in Table 9.

Table 9. Summary of Constraints in JMO Use and Improvement Efforts

Type	Constraint	Impact	Improvement Efforts
Technical	Server outages, login failures, data input and verification errors	Claims pending or failed to be submitted	Improved system reliability and outage monitoring
Technical	Face scan failure (three times limit)	Account blocked, participants must go to the branch office	Clear verification guidelines and help lines before blocking
Technical	The internet network is unstable	Process interrupted during data upload or verification	Network infrastructure expansion and application optimization on low connections
Non-technical	Low digital literacy, especially among elderly participants	Participants are reluctant or unable to use JMO	Ongoing socialization and mentoring
Non-technical	Mobile device limitations	JMO feature cannot be run	Help desk at branch offices or service outlets
Non-technical	Lack of information about JMO	Participants still come to queue	Education through promotional media and collaboration with companies

Source: processed by the author from research results and discussions

4.8 Research Implications

Theoretical implications. The research findings reinforce the relevance of TAM and the information systems success model in the context of social security services at the branch office level. The effectiveness of application use, as measured by goal achievement, timeliness, efficiency, ease of use, satisfaction, and service quality, was shown to be closely related to the smoothness of claims disbursement. These findings suggest that effectiveness indicators commonly used in technology adoption research can also be applied to assess transactional digital public services, such as cash benefit disbursement.

Practical implications. For BPJS Ketenagakerjaan, these findings demonstrate that investing in app quality yields tangible results in service speed. Improvements should be prioritized on three areas: first, system reliability, especially during peak hours, to minimize server disruptions and login failures. second, the facial verification process, for example, with clearer image-taking guidance, lighting indicators, and a helpline before accounts are blocked. third, outreach and assistance, for example, through the JMO service desk at branch offices, which helps elderly participants navigate the app with staff. In this way, branch offices not only handle claims directly but also gradually shift some of the service burden to digital channels.

For participants, the study's findings confirm that data availability and document completeness determine the smoothness of claims. Participants need to ensure their membership status has been deactivated by their company, their demographic data is accurate, and their device is capable of running facial verification. For local governments and policymakers, these findings demonstrate the need for network infrastructure support and digital literacy programs for workers, as the success of digital public services is determined not only by service providers but also by the readiness of the user community.

4.9 Research Limitations

This study has several limitations that should be considered. First, the number of respondents analyzed was relatively small and predominantly in the age group over 50, so the results may not necessarily represent all BPJS Ketenagakerjaan participants. Second, both variables were measured based on respondents' perceptions using the same questionnaire, so the possibility of data source bias cannot be ruled out. Third, the model only includes one independent variable, although the remaining 16.6% variation suggests other factors may be at play. Fourth, technical and non-technical barriers were identified descriptively and have not been statistically tested. Further research could address these limitations with a larger and more diverse

sample, objective data such as claims disbursement times recorded in the system, and a multiple regression model incorporating digital literacy and network quality.

V. CONCLUSION AND SUGGESTIONS

5.1 Conclusion

Based on the research results, the following conclusions can be drawn.

1. The effectiveness of using the Jamsostek Mobile application has a positive and significant effect on the disbursement of Old Age Security claims for BPJS Ketenagakerjaan participants in the Pematangsiantar City Branch (t count = 12.728 > t table = 1.694; Sig. = 0.000 < 0.05). This application explains 83.4% of the variation in JHT claim disbursement (Adjusted R Square = 0.834), while 16.6% is influenced by other factors.
2. Technical challenges persist, including system disruptions, login failures, data verification or facial scan errors, and unstable networks. Non-technical challenges include low digital literacy, particularly among elderly participants, a lack of understanding of app usage, and limited devices. These challenges force some participants to continue submitting claims directly to branch offices.

5.2 Suggestions

1. **For BPJS Employment:**improving system stability, data security, and ease of facial verification (for example, with assistance options before an account is blocked), as well as providing ongoing outreach and support, especially for elderly participants.
2. **For participants:**Make optimal use of JMO by studying the available features and ensuring participant data is always updated so that claims run smoothly.
3. **For further researchers:**increasing the number of respondents, including other variables such as service quality, digital literacy, and supporting conditions, and considering mixed methods to explore user constraints in more depth.

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REFERENCE

[1]. Afifah, W., & Paruntu, DN (2015). Legal protection of citizens' health rights based on Law Number 24 of 2011 concerning the Social Security Administration Agency. Mimbar Keadilan, 150, 169.

[2]. Aisyah, S., & Novianti, D. (2019). Analysis of the use of the BPJSTK Mobile application in the marketing information system at the Langsa Branch of BPJS Employment. ***Gamma-Pi Journal***, 1(1), 4–7.

[3]. Anggraini, M. (2021). Service quality of the e-claim application for the Old Age Security (JHT) program at the Makassar City Social Security Administration (BPJS) for Manpower (case study of PT Sari Agrotama Persada) [Thesis]. Makassar State University.

[4]. Cahyani, ZN, Setiawan, ER, & Sunindya, BR (2024). Implementation of Jamsostek Mobile (JMO) in improving online services for Old Age Security (JHT) claims at BPJS Ketenagakerjaan KCP Kepanjen. ***Indonesian Journal of Health Insurance and Medical Records (IJHIMR)***, 1(2), 28–35.

[5]. Daft, R.L. (2010). Organization theory and design. South-Western Cengage Learning.

[6]. Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340.

[7]. DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. ***Journal of Management Information Systems***, 19(4), 9–30.

[8]. Pande, JS, & Gunawan, M. (2023). Introduction of Jamsostek Mobile application services through promotional videos and banners at the Makassar Branch of BPJS Ketenagakerjaan. ADMIT: ***Journal of Applied Administration***, 1(1), 107–122.

[9]. Putri, ZDK (2024). Analysis of the level of satisfaction of digital finance users through the Jamsostek Mobile (JMO) application in the Old Age Security (JHT) claim process for BPJS Ketenagakerjaan participants at the Yogyakarta Branch Office [Thesis]. Islamic University of Indonesia.

[10]. Samudera, MFD, & Pertiwi, VI (2022). Public service innovation through Jamsostek Mobile (JMO) (case study at BPJS Ketenagakerjaan Rungkut Branch, Surabaya City). ***JPAP: Journal of Public Administration Research***, 8(1), 152–172.

[11]. Sugiyono. (2016). Quantitative, qualitative, and R&D research methods. Alfabeta.

[12]. Sutrisno, H. (2020). The influence of BPJS Employment in improving worker welfare. ***PREPOTIF: Journal of Public Health***, 4(1), 78–84.

[13]. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425–478.