Original Article

User Acceptance Evaluation Model of IT Service Management Information Systems (SIMFONI) at BPJS Ketenagakerjaan Based on Self-Efficacy and Cognitive Absorption

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Abstract - As information technology progresses, BPJS Ketenagakerjaan is required to improve its effectiveness and efficiency in all business processes through digitalization. BPJS Ketenagakerjaan changed the organizational structure by centralizing IT staff in Regional Offices and Head Offices and substituting the IT Service Management Information System (SIMFONI) for them under Directors' Regulation No. 37 of 2020. According to a SIMFONI user satisfaction survey, there was a yearly decline in satisfaction, as shown in the BPJS Ketenagakerjaan data for February 2023. This study uses the Technology Adoption Model (TAM) and the external variables of self-efficacy and cognitive absorption to evaluate user adoption of SIMFONI and identify the elements that contribute to its success. This study employed a quantitative method with data from 400 respondents that was collected through a broadcast questionnaire distributed to all SIMFONI users and processed using SEM-PLS3. According to the study's findings, Self-Efficacy (SE) and Cognitive Absorption (CA) have a significant and favorable impact on Perceived Usefulness (PU) and perceived ease of use (PEU), as well as PEU on PU and Behavioral Intention (BI), which are both significantly positively influenced by PU and PEU. This shows that the self-confidence and involvement of non-IT employees toward SIMFONI affect their perceived ease of use, usefulness, and intention to use SIMFONI. Regarding this, BPJS Ketenagakerjaan's non-IT staff have adopted the SIMFONI system. This study significantly advances BPJS Ketenagakerjaan's understanding of the variables affecting institutional information system acceptability and implementation. Institutions can find effective approaches and interventions to boost the use of SIMFONI by focusing on self-efficacy and cognitive absorption. This study differs from earlier studies and offers theoretical advances in understanding the user acceptability of information systems.

Keywords - Helpdesk systems, Technology acceptance model, Acceptance system information, Self-efficacy, Cognitive absorption.

1. Introduction

The National Social Security System (SJSN) is a social security system established by the government through Indonesia Constitution Law Number 40 of 2004 and Number 24 of 2011 concerning the Social Security Administrator (BPJS) to ensure that all Indonesian citizens can meet their life needs. Social Security Administrator for Health (BPJS Kesehatan) and Social Security Administrator for Employment (BPJS Ketenagakerjaan) are among these BPJS. BPJS Ketenagakerjaan has five protection programs, including workplace accidents, death insurance, elderly insurance, pension insurance, and job loss insurance are all available. The program was developed to give Indonesia's labour market assured protection. According to data from April 2022, BPJS Ketenagakerjaan has a total of 32 million active workers and 726 thousand active employers/companies. The employers fall into four categories: wage earners, nonwage earners, construction services, and migrant Indonesian labour. With 1 Head Office, 11 Regional Offices, and 325 Branch Offices around Indonesia, BPJS Ketenagakerjaan now employs 3,937 people in active roles.

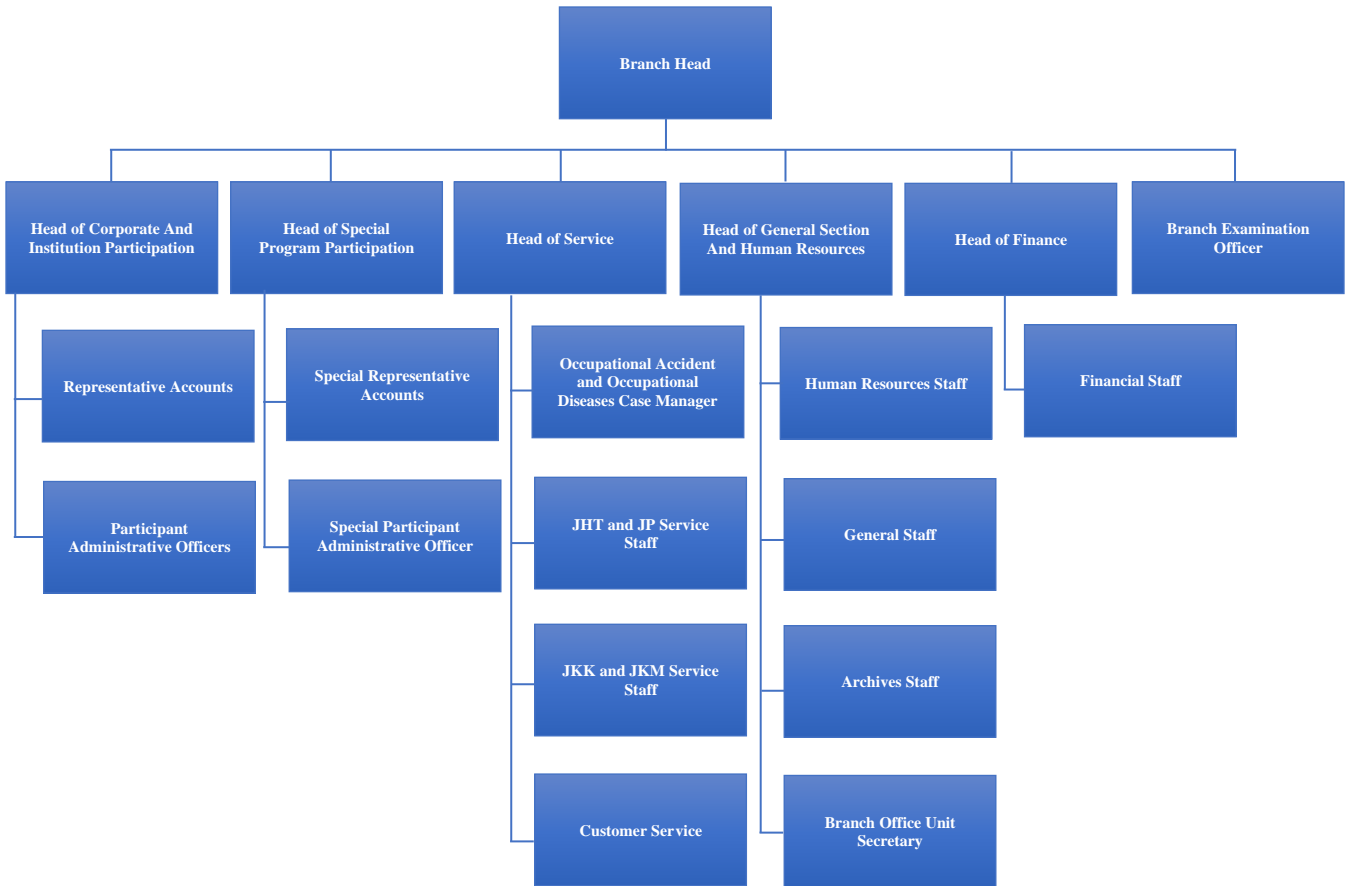81% of Indonesia's population is using the internet. This number has grown massively throughout the years.

Fig. 1 New branch organizational structure (Directorate of strategic planning and IT BPJS Ketenagakerjaan, 2020)

Consequently, BPJS Ketenagakerjaan is developing various information systems to meet the needs of more effective and efficient business processes to speed up service to participants. These systems use website-based technology and cloud computing, which can be accessed effortlessly at any time and anywhere, so there are no longer any restrictions in managing and processing data. BPJS Ketenagakerjaan has implemented several website-based and cloud-computing systems, one of which is the IT Service Management Information System (SIMFONI).

Since October 2020, SIMFONI has acted as the interface for administrative data processing between Regional Office IT staff and Head Office IT staff, as SIMFONI is the only help desk system at BPJS Ketenagakerjaan that can accommodate issues with administrative failures and participants' data processing. BPJS Ketenagakerjaan must improve its efficacy and efficiency to stay up with technological advancements. One way to do this is through the Regulation of the Board Directors of BPJS Ketenagakerjaan Number 37 dated October 2020, which concerns the optimization of Man Power Planning, particularly for IT employees who are in Branch offices and should be centralized to the Head Office or Regional Offices as can be seen in Figure 1.

In the results of the user satisfaction survey for SIMFONI, which was sent by the Deputy Director for IT Operations via corporate email at each problem ticket closing, the results were less than satisfactory, where the results of the user satisfaction survey for SIMFONI decreased the average satisfaction value. According to data from the Deputy Director for IT Operations in February 2023, in 2021, the satisfaction level had an average of 7.38.

In 2022, the average was 6.95, a very drastic decrease in the average from 2021 to 2022. This will affect the efficient performance of a help desk system at SIMFONI, where SIMFONI aims to speed up and provide efficiency for BPJS Ketenagakerjaan as a Public Legal Entity.

With the release of the Directors' Regulation and the results of user satisfaction surveys have decreased towards SIMFONI, it is necessary to research user acceptance while assessing the success factors for SIMFONI at BPJS Ketenagakerjaan for SIMFONI by determining success factors based on self-efficacy and cognitive absorption with the Technology Acceptance Model (TAM).

One of the models to measure and predict acceptance of this technology is to use the TAM model [14]. TAM is one

of the information technology research frameworks created by Davis (1989), which is a remake of the Theory of Rational Action (TRA), a behavioural theory that relies on the assumption that a person's response to something and his perception of something will determine his attitude and behaviour [17]. Acceptance of technology and the willingness to keep using it have become extremely crucial as a result of the enormous impact that information technology adoption in businesses has on the workplace and individual computer use [28]. As defined by Davis, perceived usefulness is the degree to which an individual believes utilizing a specific system will improve job performance. This implies that the benefits of using information technology might raise a person's desire to use the system and even improve their performance and work performance. Perceived ease of use, according to Davis, is the absolute comfort level one should experience when utilizing a given system. An individual's view that using information technology will not take much work is referred to as perceived ease of use.

Lee (2018) previously investigated the effect of cognitive absorption on the core factors of the Technology Acceptance Model (TAM), namely perceived utility and perceived ease of use, as well as the external variable impulsive-buying inclination, on mobile purchasing attitudes. According to the study, cognitive absorption as an affective component (intrinsic motivation) is linked positively with cognitive factors (extrinsic motivation). Furthermore, cognitive absorption showed a strong favorable influence on impulsive purchasing. The perceived utility has a beneficial effect on impulsive purchasing inclinations. However, perceived ease of use did not affect impulsive purchasing behaviors. The research also found that impulsive buying tendencies had a positive impact on mobile shopping attitudes. The focus of Lee's (2018) study was external user approval of the mobile shopping system. Because research is conducted to gauge the internal user acceptability of SIMFONI at BPJS Ketenagakerjaan, particularly on behavioural intention through external factors of self-efficacy and cognitive absorption, and this research uses the SEM-PLS method, which causes the outcomes of this study could differ from previous ones.

Beliefs in self-efficacy are critical for motivating users to recognize and feel their prior task performance and their ability to do similar behaviors in the years to come [50]. The belief is that someone can carry out certain tasks or achieve certain goals [34]. Compared to cognitive capacity, self-efficacy is a superior indicator of goal achievement [5]. Given that not all employees are self-confident about utilizing a new system, SIMFONI, newly introduced to non-IT staff in 2020, is essential to gauge self-efficacy among BPJS Ketenagakerjaan employees. Students frequently do not demonstrate optimal learning results for their skills because they are uncertain about their ability to perform the activities given to them [32]. Albert Bandura was the person

who initially introduced the idea of self-efficacy. Self-efficacy is the outcome of cognitive processes, such as decisions, beliefs, or awards, concerning how much people believe they can do particular tasks or take certain actions to produce the intended results [6. Self-efficacy has nothing to do with abilities but rather the individual's belief that they can do something no matter how much ability they have, and self-efficacy highlights the component of one's confidence in facing ambiguous, unpredictable, and often future situations that are full of pressure [29].

Cognitive absorption is a state of intense engagement with information systems or information technology to gain a deeper understanding of the formation of user trust and user intentions, including flow over time, technological innocence, and usability, which are all important considerations. The more people experience the flow, computing playfulness, and ease of use, the greater the extent to which they are intellectually absorbed [51]. Cognitive absorption states that cognitive absorption is one of a person's intense interest in software [2]. Individuals' perceptions about the usage of information technology will be impacted by cognitive absorption, which in turn could impact their tendencies to use it. As people become more involved with information technology, they become more convinced that this technology will help improve their performance [40]. Cognitive absorption is influenced by two distinct traits: personal IT innovation and self-efficacy. This indicates that persons who are more inventive in experimenting with information technology have higher sentiments of self-efficacy. Since all non-IT employees at BPJS Ketenagakerjaan use SIMFONI to resolve administrative failures and data management issues that require acceleration, this research is crucial to conduct. Based on the context of this research, we are interested in learning what factors can affect employee acceptance of the SIMFONI application—employing TAM with external variables for self-efficacy and cognitive absorption.

2. Theoretical View
2.1. SIMFONI

SIMFONI is one of the systems that BPJS Ketenagakerjaan deliberately creates to facilitate problem-solving services due to administrative failures or the opening of a key that arises in business processes at each BPJS Ketenagakerjaan branch office [11]. SIMFONI is also a system that aims to replace expert IT staff in each branch office based on website processing. However, to access SIMFONI, users are required to use a Virtual Private Network (VPN) that BPJS Ketenagakerjaan has regulated.

As of the present day, SIMFONI is the only helpdesk system at BPJS Ketenagakerjaan, which the Deputy manages for Operations and IT. This flow explains that the user must use the VPN provided by BPJS Ketenagakerjaan to access SIMFONI.
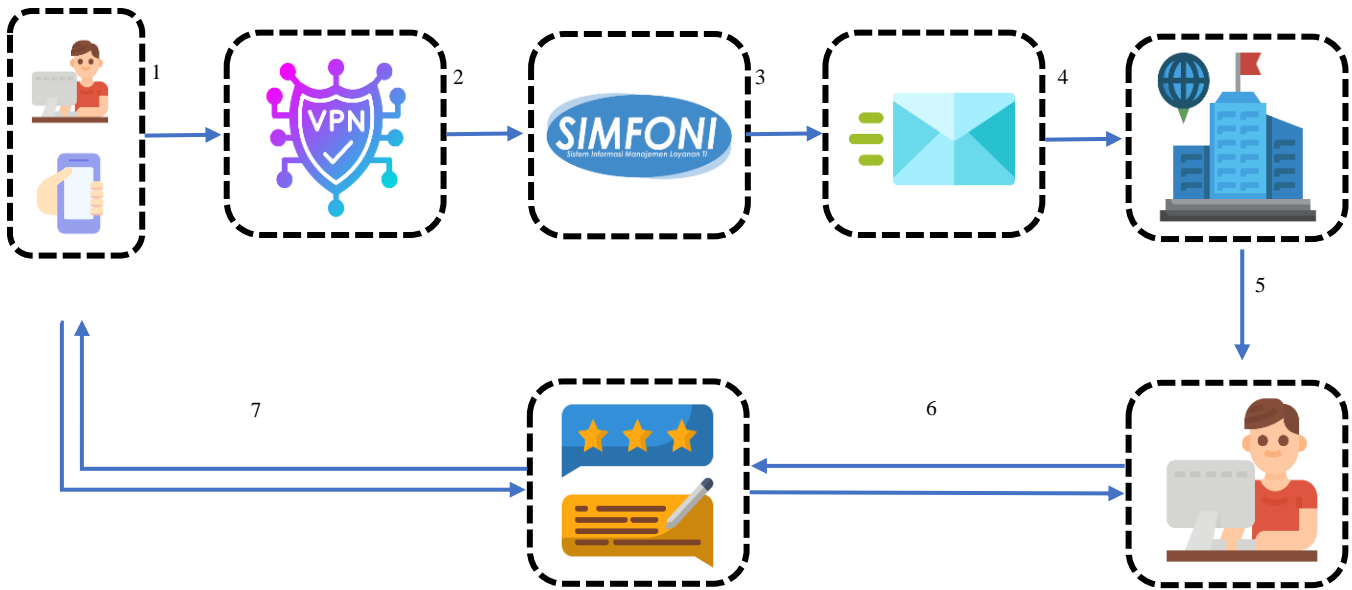
Fig. 2 Workflow SIMFONI (User Guide BPJS Ketenagakerjaan, 2020)
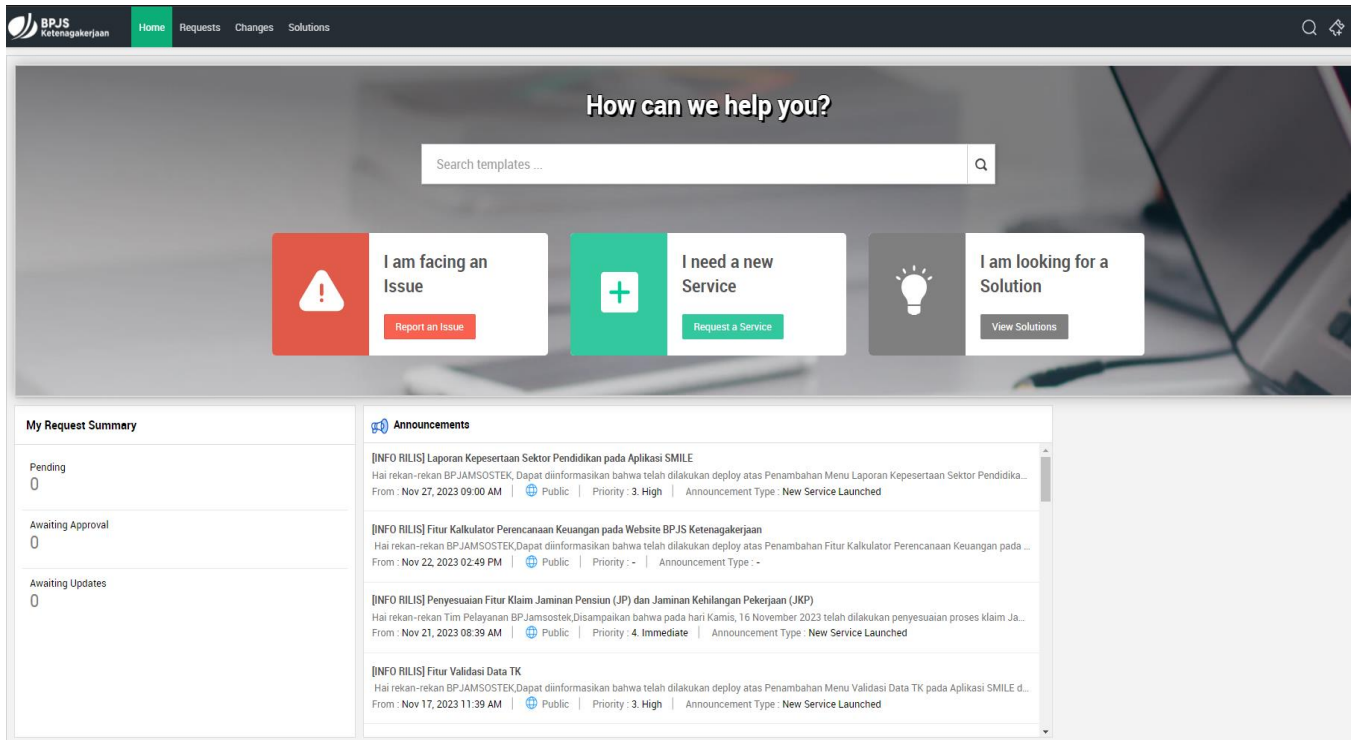

Fig. 3 Dashboard SIMFONI

SIMFONI will send the document to the Head Office, and in steps 4 and 5, the head office will process the document so that in step 7, there will be a solution to a problem. SIMFONI is a system that acts as a bridge between branch office employees and head office IT employees, with a system in which requests submitted by branch office employees will be processed. SIMFONI has a menu that allows for both automatic and human problem-solving; therefore, IT staff at the head office must handle it.

An online dashboard called simfoni.bpjsketenagakerjaan.go.id serves as the foundation for the SIMFONI system, which is based on the menus shown in Figures 3 and 4 to establish a single group of segmentation problems. Figure 5 illustrates an issue ticket form that needs to be completed by the user and submitted to the head office. Figure 6 demonstrates how the issue ticket is successfully closed and how a corporate email is used to notify the parties involved.
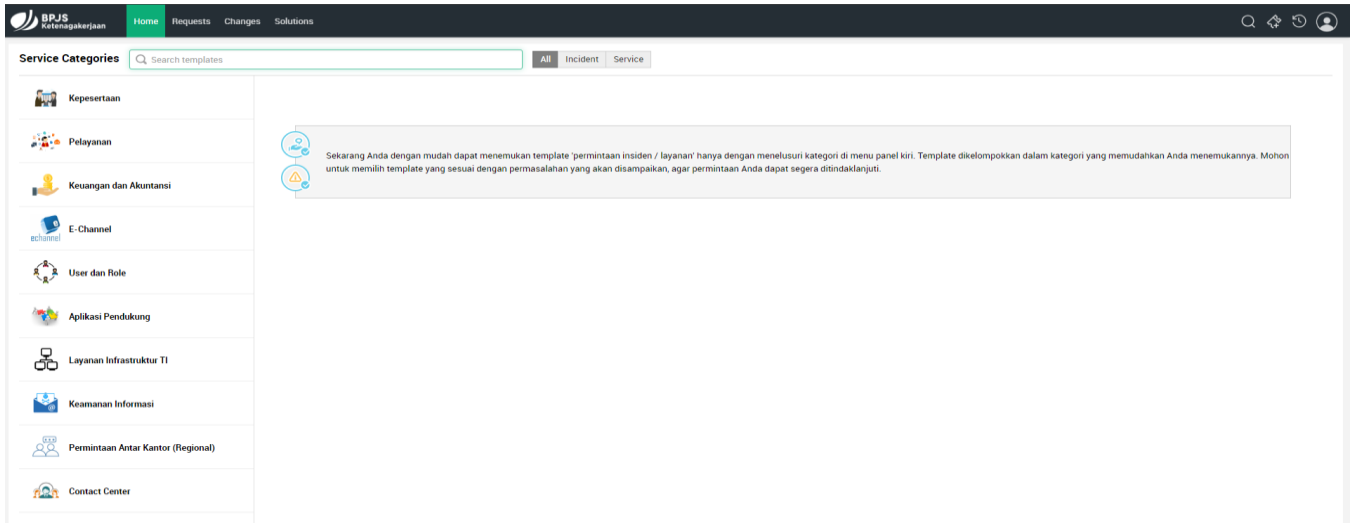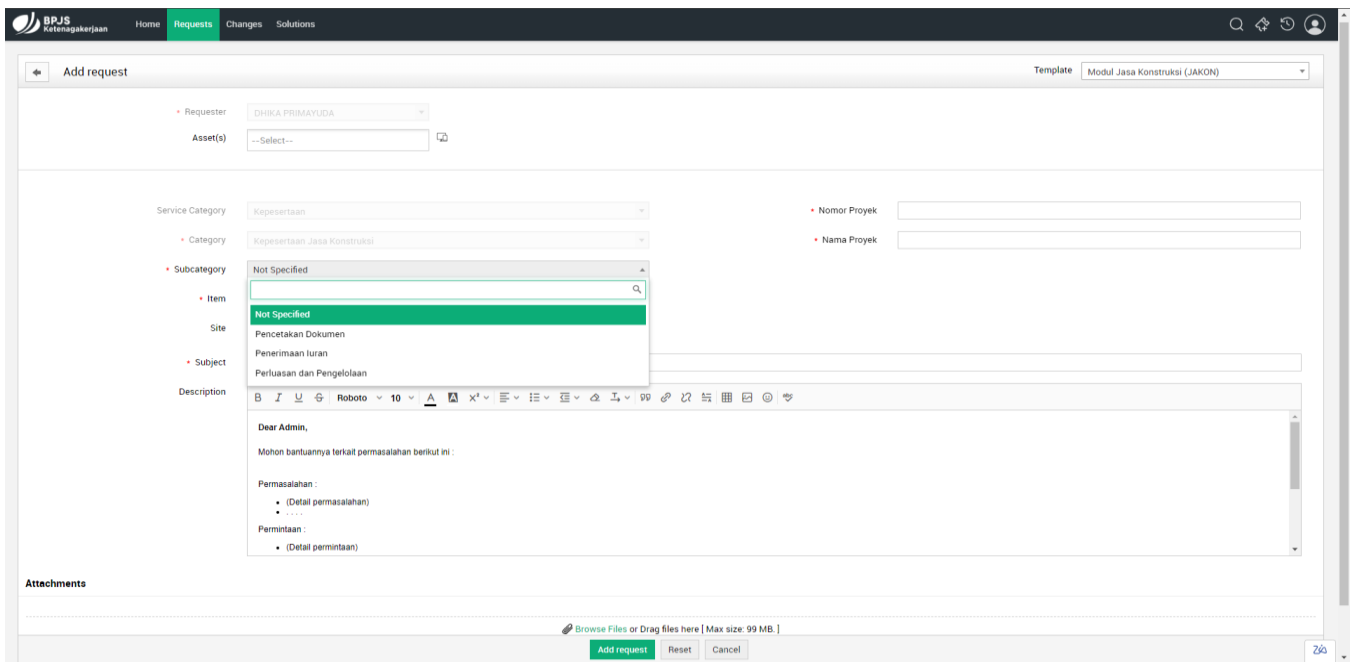
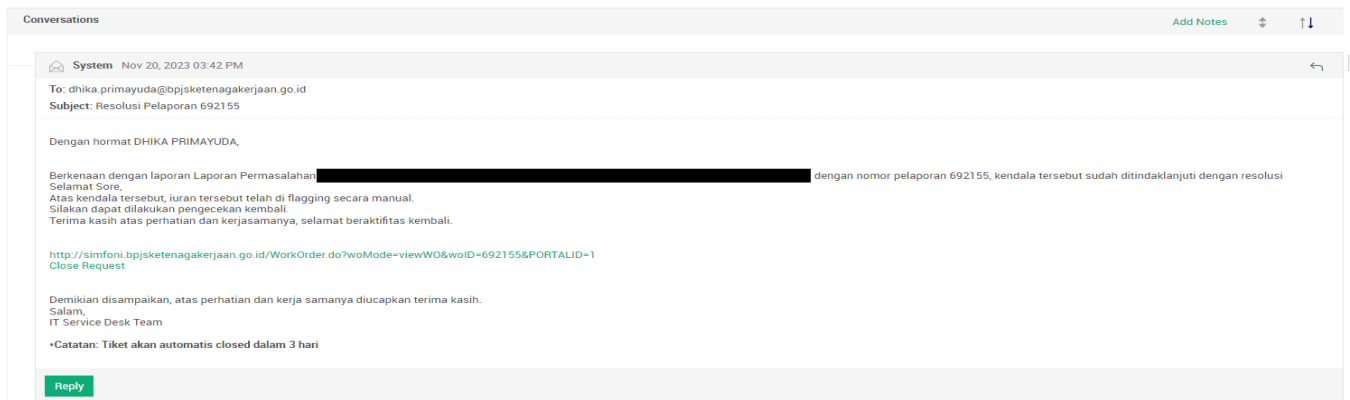**Fig. 4 Menu SIMFONI**

Fig. 5 Formulir SIMFONI

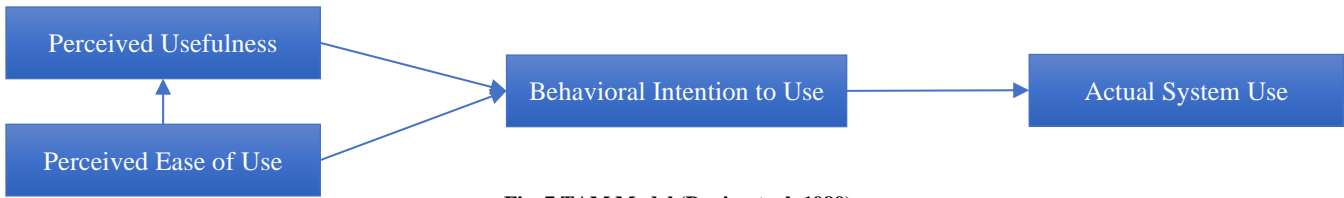**Fig. 6 SIMFONI problem solve notification**

Fig. 7 TAM Model (Davis, et, al, 1989)

2.2. Technology Acceptance Model

TAM, which Davis first proposed, is an application and development of TRA, specifically for modeling user acceptance of information systems [10]. The goals of TAM include elucidating the factors that influence the public acceptance of information-based technology and the behavior of end users, or (end users) of information technology, across a range of user groups and wide variances. The model should ideally be a User. For researchers and practitioners to understand why a given system is unsatisfactory and why corrective action is consequently required to overcome it, a model must be a prediction supported by an explanation.

As shown in Figure 7, Davis describes TAM as an information system theory that seeks to explain how consumers perceive and use information technology. To determine the extent of respondents' use of recipient information technology, TAM uses TRA [17]. Davis developed the initial structure of TAM as perceived utility, perceived ease of use, behavioral intention, and actual usage and added additional viewpoints like experience and complexity.

Perceived usefulness relates to a person's belief that using a specific system will improve that person's job performance. According to this definition, the use of information and communication technology (ICT) can improve performance, namely the work performance of everyone who uses it [45]. Thompson also stated that someone will use information technology if that person has a good understanding of the benefits or usefulness of its use.

Perceived ease of use encompasses the capacity to employ information technology in a way that persuades people that the application is simple and does not burden them. ICT that is not difficult to use will continue to be used by companies. Additionally, Davis wrote in his book that consumers believe utilizing a certain system requires less work because of its apparent simplicity of use.

2.3. Self Efficacy

Self-efficacy is described as people's beliefs about their ability to perform at designated levels in order to influence events in their lives. People's self-efficacy beliefs influence how they feel, think, and inspire themselves and their behavior [5]. Based on cognitive social theory, Bandura created the concept of self-efficacy. In his theory, Bandura maintained that human behavior is a three-way link between humans, the environment, and behavior (ternary causality). The Freudian concept that persons are ruled by their impulses is rejected by cognitive social theory.

Furthermore, he opposes a behavioral viewpoint that focuses solely on external factors as determinants of human behavior. According to cognitive social theory, humans are active individuals who use their cognitive abilities to explain events, predict outcomes, and choose actions. According to this theory, humans are not passive beings who solely respond to instinctive impulses or external environmental stimuli [36].

Bandura divides self-efficacy into three dimensions, namely level; this dimension denotes the ease or complexity of the work at hand. Acceptance and belief in a task differ from person to person. Everyone's assessment of work difficulty will differ. Perceptions of difficult tasks are influenced by individual abilities. Some people may find the task difficult, while others may not. This notion is founded on his comprehension of the work.

The generality of this dimension thus refers to how much people trust in their own talents in a variety of task settings, from doing activities that are typically done or conditions that have never been done to a variety of challenging and different tasks or situations. The last level of strength is the strength of one's belief in one's skills when confronted with the demands of a task or challenge. This relates to the resilience and tenacity of individuals in carrying out their responsibilities.

2.4. Cognitive Absorption

The platform's attraction for users is called cognitive immersion, allowing users to perform various activities on it [37]. Cognitive absorption is a state in which a person is deeply involved with software [2]. As noted by Roche, McConkey and [2], the concept of cognitive absorption is the preparation for new experiences through deep involvement, undivided attention, undisturbed states, and non-routine evaluation of information.

Cognitive absorption is a factor in determining two beliefs: a person's level of involvement and overall computer technology experience [2]. Cognitive absorption is divided into three categories, including temporal dissociation and the incapacity to take time into account when using technology [38]. Then, focused immersion concentrates on when someone interacts with the internet.
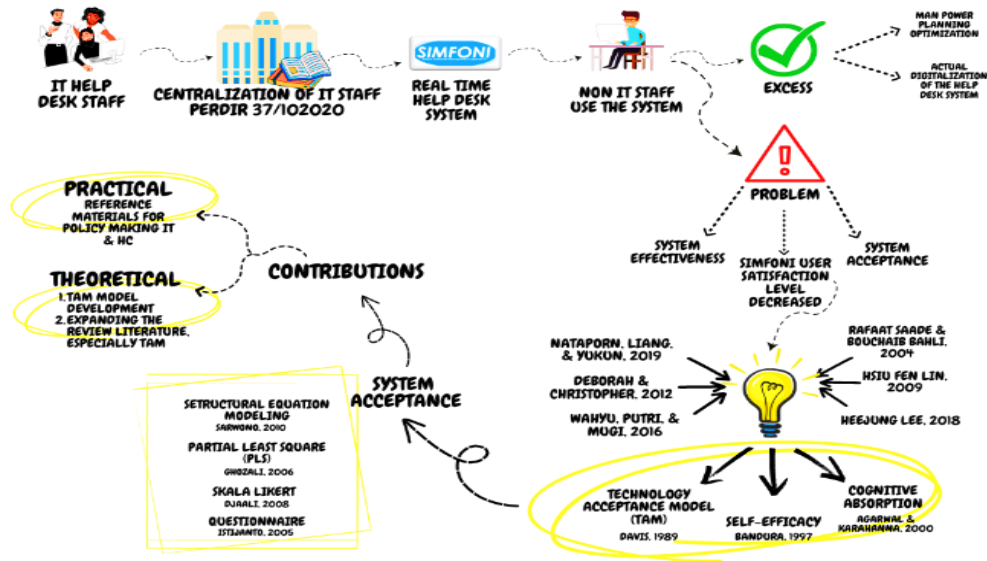
Fig. 8 Research framework

Furthermore, heightened enjoyment of a person gets pleasure from interacting with the internet. Then, control the perception of the way in which internet users interact. Furthermore, curiosity, the desire to expand experience, enhances individual sensory (sensitivity) and cognitive curiosity [2].

3. Research Framework / Methodology
3.1. Research Framework
Figure 8, which depicts the framework for this study, uses a flow with a rich picture; the flow shown in the figure corresponds to the flow of this study.

The research framework shows that this research departs from 2 problems that arise through the Regulation of the Director of BPJS Ketenagakerjaan Number 37 of 2020 concerning changes in organizational structure and the results of user satisfaction surveys for SIMFONI which have decreased based on data for 2021 and 2022. The research framework shows step-by-step using the method rich picture from problems to research contributions.

3.2. Research Stages
This study used a framework of seven steps: problem identification, literature study, TAM modelling specifications, validity and reliability tests, data processing, conclusions and suggestions, and results. At the problem identification stage, this research formulated a problem formulation in user acceptance of SIMFONI carried out at BPJS Ketenagakerjaan. In the second stage, this research conducted a literature study to connect the problem formulation with previous studies so that this research can apply model variables/indicators and formulate hypotheses following the research problem formulation. In the third stage, this research would perform the TAM modelling

specifications where the results of the literature study will lead this research to determine the specifications of the modelling that will be carried out research, and the fourth stage was the preparation and distribution of questionnaires with a total of 400 BPJS Employment employee respondents and using random sampling techniques, the fifth stage of this research examined the accuracy and reliability of the study's indicators, the sixth stage the researcher processed the data using SEM-PLS to identify acceptance of SIMFONI, and the seventh stage was conclusions and suggestions.
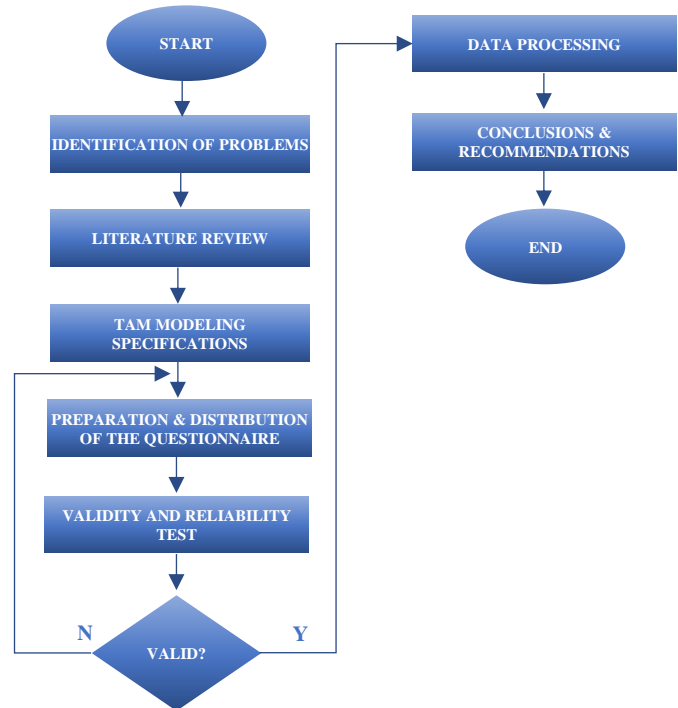

Fig. 9 Research stages

In the seven stages described, we got the results of this research on user acceptance of the SIMFONI. The research method used was quantitative. This research used a questionnaire to measure and collect data from SIMFONI users and BPJS Employment employees. The following is a mapping of indicators and questionnaires used, shown in Table 1.

Table 1. Variable indicator

No	Variables	Questions
1	Perceived Usefulness	I get the information I need through SIMFONI.
2		I get enough additional information through SIMFONI.
3		SIMFONI increases my effectiveness in my work.
4		The use of SIMFONI can facilitate the completion of my administration.
5		I am conscious of the benefits of utilizing SIMFONI.
6		I am aware of the disadvantages of not using SYMPHONY.
7	Perceived Ease of Use	SIMFONI is simple to use.
8		SIMFONI is simple to grasp.
9		SIMFONI is simple for anyone to understand.
10		SIMFONI is simple to use.
11		SIMFONI is a flexible system.
12	Behavioral Intention	I recommend to colleagues to use SIMFONI.
13		SIMFONI is a proper system to use.
14		I save the URL address of the SIMFONI in my bookmarks or memorize it.
15		I agree that in the future, SIMFONI will still be used as a helpdesk system.
16	Self-efficacy	I am sure I can overcome administrative failures on the SIMFONI system.
17		I am sure there are no problems with using SIMFONI (except for internet problems).
18		I can use the SIMFONI system if someone helps me to start the process.
19		I am sure I can use the SIMFONI system well.
20	Cognitive Absorption	I believe all administrative issues can still be managed while using the SIMFONI system.
21		When using the SIMFONI system, I feel that time flies quickly.
22		While using the SIMFONI system, I feel my curiosity increase.
23		I feel comfortable when using the SIMFONI system.
24		My focus is not distracted when using SIMFONI.

Research variables are characteristics or traits of a person or thing that vary depending on the research examined and conclusions drawn [49]. A questionnaire was utilized to collect data for the study. The variables of each type of strategy in the study were measured using a Likert scale (LSR) 1-5, each of which has a meaning: the values 1 and 2 strongly agree, the value 3 is neutral, the value 4 does not agree, and the value 5 strongly disagree.

The instrument's validity and reliability were employed in this study to assess how accurate the questionnaire results were. The data analysis procedure will analyze the validity and reliability of test results if they are valid. If it is invalid, its dependability and validity will be checked once more. Data from the survey's results will be processed in order to do data analysis. The statistical method SEM (Structural Equation Model) was applied to process the data in this investigation. The Chi-Square hypothesis computation will then be continued.

SEM is a statistical approach for developing and testing statistical models, typically causal models. Structural equation modeling is a cross-sectional, linear, and broad statistical modeling technique. This SEM includes factor analysis, route analysis, and regression. According to another definition, the structural equation model (SEM) is a common and extremely effective multivariate analysis tool that contains special versions of various other analytical methods as special instances [1].

3.3. Research Model of Self-Efficacy and Cognitive Absorption Variables

Referring to previous research conducted by (Maulana, Iskandar, and Mailany, 2018) in a study entitled "The Influence of Using Mobile Banking on Customer Interest in Making Transactions" using the Technology Acceptance Model (TAM) which identified variables influencing the usability of use (X) and what significant influences they had given to the transaction interest variable (Y). The coefficient was 11.127 with a significance level of 0.002, and the regression coefficient for perceived usefulness (X) was 0.640, stating that for every 1% increase in usefulness value, the interest value increased by 0.640. The regression coefficient was positive, so it can be said that the direction of influence of variable X on Y was positive. From these results, an evaluation model using TAM is used to determine and assess what factors support the success of SIMFONI.

Citing earlier research conducted by Lee (2018) in research entitled Intrinsic and Extrinsic Motivations Affecting Impulsive-Buying Tendency in Mobile Shopping Attitude, the results showed that cognitive absorption had a significant positive influence on Impulsive-buying tendencies. Perceived usefulness has a positive influence on impulsive buying tendencies. However, perceived ease of use did not significantly affect the impulsive buying tendency.

The research also found that impulsive buying tendencies had a positive impact on mobile shopping attitudes. This research develops This research is developed from previous research on Intrinsic and Extrinsic Motivations Affecting Impulsive-Buying Tendencies in Mobile Shopping (Lee, 2018). Nevertheless, this research uses a different model by adding the external variable of self-efficacy and TAM behavioral intention, which aims to assess user acceptance of SIMFONI at BPJS Ketenagakerjaan as a help desk system.

The effect of problem-based learning methods on self-efficacy and mathematical problem-solving abilities in terms of high school students' initial mathematics abilities is discussed in a previous study by Suyono, Deniyanti, and Masri (2018). According to this study, students who used the PBM method had higher levels of self-efficacy than students who had Initial Mathematical Ability (KAM) but continued to use conventional learning methods. This study employs a different paradigm by utilizing the TAM model and including the external variable of cognitive absorption.

Based on the results of literature studies and review results from journals, a method is found to test user acceptance and success factors for SIMFONI with a combined model using the TAM variables perceived usefulness, perceived ease of use, and behavioral intention and two external variables of self-efficacy and cognitive absorption which are where the model created is different and more complete from previous research models which can be seen in Figure 10.
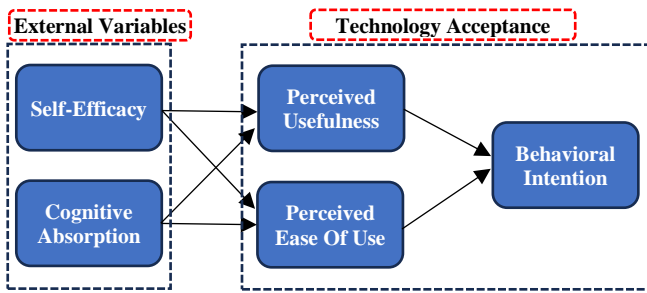
Fig. 10 Research model with self-efficacy and cognitive absorption variables

4. Result and Discussion

4.1. General Description

Based on the questionnaire, the number of respondents was 400 respondents consisting of all BPJS Employment employees. The data has met the requirements for statistical tests using the SEM method using SmartPLS3. Figure 11 presents the age distribution of all respondents who use SIMFONI, Figure 12 shows the locations of respondents' offices throughout Indonesia, Figure 13 shows the gender distribution of respondents, and Figure 14 shows the duration of respondents' employment at BPJS Ketenagakerjaan.
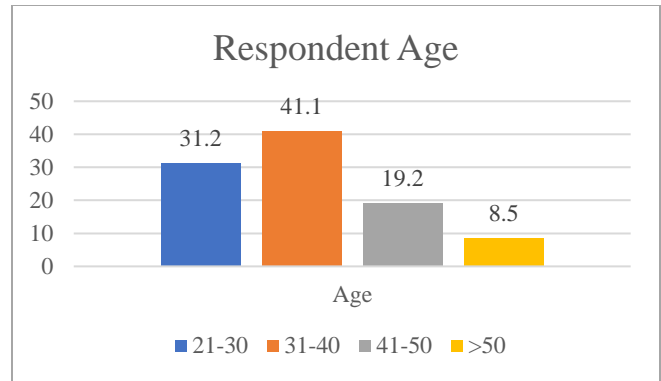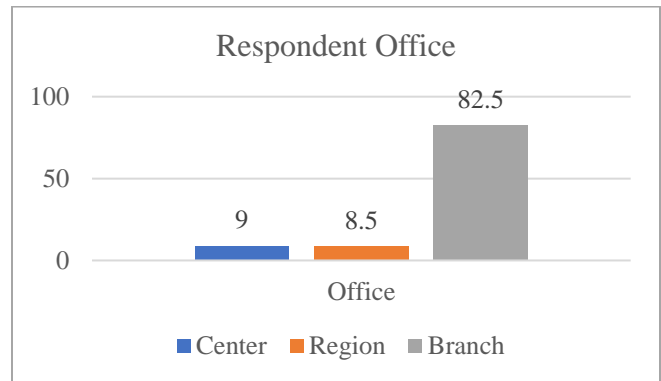
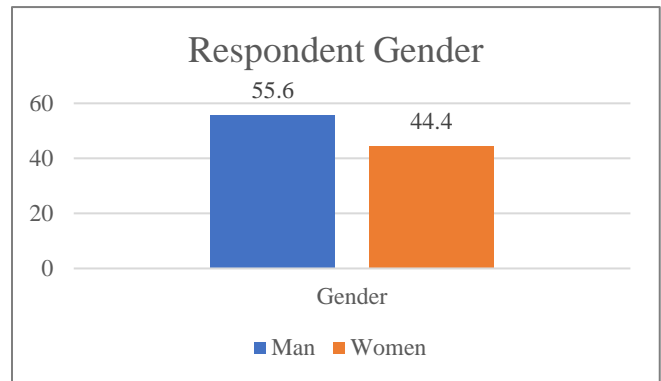**Fig. 11 Chart respondent age**

Fig. 12 Chart respondent office
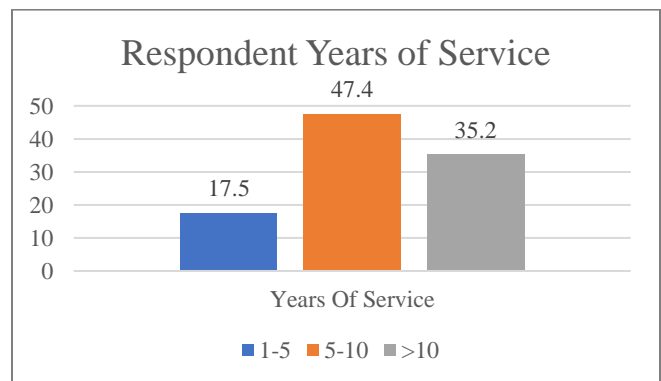
Fig. 13 Chart respondent gender

Fig. 14 Chart respondent years of service

4.2. SEM-PLS Analysis Result

The Smart PLS application has been used to test each variable and indicator following the research model that has been established through the analysis of the literature, as shown in Figure 15.

4.2.1. Validity Test / Outer Loading

Analysis using outer loading aims to show the correlation between indicators and constructs. Therefore, when the indicator loading value < 0.7 indicates that the indicator is not in accordance with the model made. The expected or required range of outer loading values is > 0.7, so it can be considered legitimate.
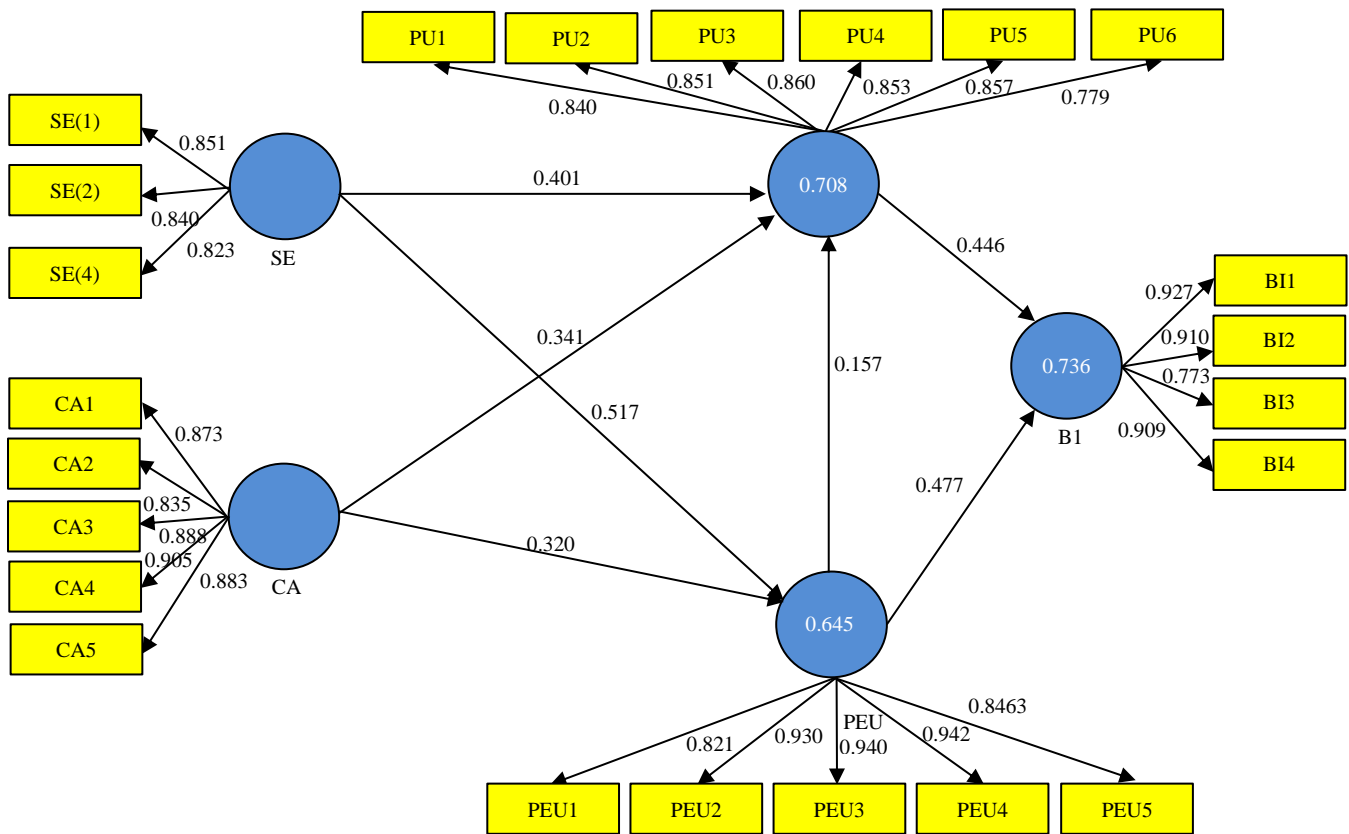
Thus, in the results of the outer loading analysis that has been formed, there is SE3 with a value of 0.649, an indicator with an outer loading value of 0.70, and an indicator with an outer loading value less than 0.70.

Therefore, this indicator is considered inappropriate based on the situation in Table 2. So, it must be removed from the model.

From these results, the decline indicators declared inappropriate affect the resulting model structure. The modifications made to the created structural model are listed below.

Table 2. Outer model result

Indicator	Outer Loading Value	Notes
PU1	0,840	acceptable
PU2	0,850	acceptable
PU3	0,861	acceptable
PU4	0,853	acceptable
PU5	0,857	acceptable
PU6	0,779	acceptable
PEU1	0,821	acceptable
PEU2	0,930	acceptable
PEU3	0,939	acceptable
PEU4	0,942	acceptable
PEU5	0,843	acceptable
BI1	0,927	acceptable
BI2	0,910	acceptable
BI3	0,773	acceptable
BI4	0,909	acceptable
SE1	0,879	acceptable
SE2	0,873	acceptable
SE3	0,649	not acceptable
SE4	0,816	acceptable
CA1	0,873	acceptable
CA2	0,835	acceptable
CA3	0,888	acceptable
CA4	0,905	acceptable
CA5	0,883	acceptable

Fig. 15 SEM-PLS analysis result

4.2.2. Average Variance Extracted

After measuring the outer loading value of each indicator, it will be calculated using AVE to measure the correlation between indicators in the model. Therefore, if a metric has a correlation value above 0.5, it can be said that the metric is valid or not. The following is the AVE value obtained. Table 3 shows the findings of the Smart-PLS analysis.

Table 3. AVE result

Indicator	AVE	Notes
BI	0,778	Valid
CA	0,770	Valid
PEU	0,804	Valid
PU	0,706	Valid
SE	0,759	Valid

The average variance extraction analysis results demonstrate that the value of each index is greater than 0.5, implying that each variable to be examined is viable and legitimate.

4.2.3. Reliability Test

The weight of Cronbach's alpha and composite reliability scores provided in each measure is used for reliability testing. An indicator is considered adequate if its combined reliability and Cronbach's alpha are between 0.7 and 0.9. Meanwhile, the indication is deemed pretty excellent if the composite reliability score weight and Cronbach's alpha are both 0.6-0.7. Cronbach's alpha and composite reliability are shown in Table 4.

Table 4 displays the Cronbach's alpha and composite reliability values for the specified variables, suggesting that all construct variables included have sufficient values, indicating that all variables used in this study are reliable and can be employed.

Table 4. Reliability test

	Cronbach's Alpha	Composite Reliability	Notes
BI	0,903	0,933	Satisfactory
CA	0,925	0,943	Satisfactory
PEU	0,938	0,953	Satisfactory
PU	0,917	0,935	Satisfactory
SE	0,841	0,904	Satisfactory

4.2.4. Coefficient of Determination

The R2 value is used to determine the degree to which endogenous variables can be explained by exogenous variables, and this R2 number also illustrates the degree to which the dependent variable is dependent on the independent variable. Like the combined theory, the assessment of the R2 value will be divided into 3 parts:

moderate and weak. Table 5 shows the breakdown of this into the three resulting values of 0.75, 0.50, and 0.25.

Table 5. Coefficient of determination

	R Square	Notes
BI	0,736	Moderate
PEU	0,645	Moderate
PU	0,708	Moderate

4.2.5. Effect Size (f2)

The effect size f2 is used in Partial Least Squares (PLS) to understand the strength of the independent variable's influence on the dependent variable. The value of the effect size f2 can provide an indication of whether the effect is considered small (weak), moderate (moderate), or large (strong).

Table 6. Effect size

	Exogen Variable	Endogen Variable	Effect Size	Notes
H1	Self-Efficacy	Perceived Usefulness	0,138	Moderate
H2	Self-Efficacy	Perceived Ease of Use	0,232	Strong
H3	Cognitive Absorption	Perceived Usefulness	0,113	Moderate
H4	Cognitive Absorption	Perceived Ease of Use	0,089	Moderate
H5	Perceived Ease of Use	Perceived Usefulness	0,030	Moderate
H6	Perceived Usefulness	Behavioural Intention	0,356	Strong
H7	Perceived Ease of Use	Behavioural Intention	0,407	Strong

Although there is no single consensus regarding the range of numbers that specifically describes the segmentation in terms of the effect size f2. If the value is in the range of less than 0.02, it can be concluded that it has a weak effect, while the range of 0.02 – 0.15 is moderate, and a range of more than 0.15 is strong. The following are the effect size values for each variable, as shown in Table 6.

4.2.6. Path Coefficients

Examining the path coefficient value is another way to assess the internal model in addition to assessing the R2 value. Using the Smart PLS program, first compute the bootstrap to test the path coefficient. Bootstrap with 500 subsamples at a 0.5 level of significance. As a result, if the calculation's output indicates a p-value of less than 0.1, a relationship between the variables is present. It is important and conclusive for the theory to be accepted. Table 7 shows that all factors have a p-value of less than 0.1, indicating that the influence of the variables taken together has a significant impact.

Table 7. Path coefficients

	T Statistics	P Values	Hasil
CA -> PEU	3.623	0.000	Significant
CA -> PU	4.801	0.000	Significant
PEU -> BI	7.832	0.000	Significant
PEU -> PU	2.350	0.019	Significant
PU -> BI	6.553	0.000	Significant
SE -> PEU	5.989	0.000	Significant
SE -> PU	5.322	0.000	Significant

These path coefficients show how much influence one variable has on other variables in the structural model and show the sign (positive or negative) of the model's connection between the variables. If the path coefficient is positive, the relationship between these variables is positive; if the path coefficient is negative, the link between these variables is negative.

Table 8. Route coefficients

	PU	PEU	BI	Notes
CA	0.341	0.320		The CA variable influences PU and PEU positively.
PEU	0.157		0.477	PEU has a beneficial effect on PU and BI.
PU			0.446	The PU variable has a favorable effect on BI.
SE	0.401	0.517		The SE variable has a favorable effect on PU and PEU.

The route coefficient has a positive effect if the endogenous variable has a value of 0 - 1 but a negative effect if the endogenous variable has a value of 0 - (-1).

According to the data in Table 8, all exogenous factors with values ranging from 0 to 1 have a positive effect on all endogenous variables.

4.2.7. Hypothesis Testing
To establish whether a hypothesis is accepted or rejected, the path coefficient value must be larger than 0.1, and the p-value must be less than 0.05. It is clear from the table that all hypotheses can be accepted.

Table 9. Hypothesis testing

	Paths	Original Sample	P Values	Notes
H1	SE → PU	0.401	0.000	Accepted
H2	SE → PEU	0.517	0.000	Accepted
H3	CA → PU	0.341	0.000	Accepted
H4	CA → PEU	0.320	0.000	Accepted
H5	PEU → PU	0.157	0.019	Accepted
H6	PU → BI	0.446	0.000	Accepted
H7	PEU → BI	0.477	0.000	Accepted

According to the findings of statistical analysis, two external variables, self-efficacy and cognitive absorption, have a positive and significant influence directly on the Technology Acceptance Model (TAM) model variables, namely perceived usefulness and perceived ease of use, and indirectly on the TAM model variables. (TAM) stands for behavioral intention. These two external elements indirectly influence the intention to deploy the SIMFONI system at BPJS Ketenagakerjaan.
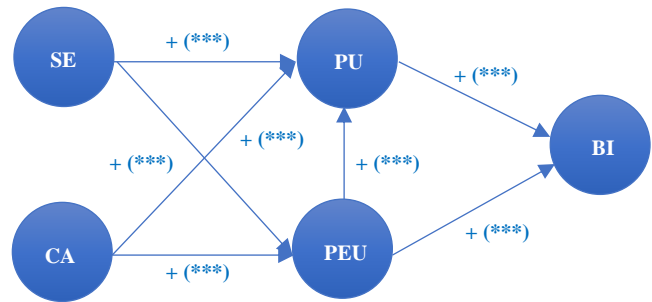
Fig. 16 External variables impact on TAM

The User Acceptance Evaluation Model of IT Service Management Information Systems (SIMFONI) at BPJS Ketenagakerjaan based on Self-Efficacy and Cognitive Absorption research results have several practical implications in addition to theoretical and managerial ones.

This study emphasizes the value of enhancing employees' self-efficacy in implementing and utilizing information technologies. Where in Lee's previous research (2018) with the research title Intrinsic and Extrinsic Motivations Affecting Impulsive-Buying Tendency in Mobile Shopping using the Technology Acceptance Model (TAM) model and one external variable: cognitive absorption. By including one external variable, self-efficacy, this research offers a distinct model from other studies and yields positive findings about accepting information technologies in BPJS Ketenagakerjaan. It is intended that this will serve as a useful source of information for scholarly discourse, particularly in extending the scope of knowledge regarding the elements that facilitate the effective adoption of information systems.

According to the statistical data from this investigation, all of the variables employed in this study had a favorable and significant impact on the acceptability of the SIMPHONI system. This study demonstrates that two external characteristics, self-efficacy and cognitive absorption, favourably impact employee intentions to use the SIMFONI system via perceived usefulness and reported ease of use.

By conducting development on SIMFONI, such as developing the UI/UX in terms of visuals, navigation, and features, and developing the presentation of information in a clear, structured, and easily understandable manner, BPJS

Ketenagakerjaan can support the success of SIMFONI by strengthening cognitive absorption and self-efficacy in employees. The use of text, graphics, multimedia, and interactive elements like buttons, animation, and responsive features; additionally, it can be developed by offering metrics and assessments like usage duration, interaction level, ticket resolution speed, and surveys that include success factors and can enhance SIMFONI.

5. Conclusion

The results of hypothesis testing through research conducted on 400 users of the SIMFONI help desk system throughout Indonesia show that all hypotheses are proven to have a significant positive influence. Behavioural intention as the final variable studied gave quite satisfactory results. It can be seen that behavioural intention is strongly influenced by perceived usefulness and perceived ease of use, and perceived ease of use significantly influences perceived

usefulness. However, perceived usefulness and perceived ease of use are also strongly influenced by two external variables: self-efficacy and cognitive absorption. The results of the statistical data show and assess that the success factors of SIMFONI can be applied by using and considering the TAM variable and the external variables of self-efficacy and cognitive absorption. This research has answered the aim of determining and assessing the factors that support the success of SIMFONI.

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