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When Fear of Covid Is Not the Main Reason to Use Online Technology

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Abstract. *Purpose: analyzing how fear of Covid-19 influences technology utilization attitude towards intention to use. Design/methodology/approach: This study used a quantitative approach conducted post Covid-19. Involving a sample of 138 mobile application users for health insurance services in Bali, Indonesia, by utilizing the PLS-SEM model analysis tool. Findings: Technology Acceptance Model (TAM), through its two elements, Perceived usefulness (PU) and Perceived ease of use (PEOU), has proven to significantly form a supportive attitude about the use of information technology in the Covid-19 pandemic, as well as the influence of attitudes towards behavior intention to use (BIU) in the use of technology has also been proven clearly in the context of TAM. But TAM's ability to form intention directly can only be confirmed through PU, while PEOU has not been able to be proven. Fear of Covid-19 has not been shown to play a role in moderating the influence of attitude on intention. Practical/implications: Encouraging attitude is very important to use technology based on usability and ease of using technology. However, it is not feasible to consider fear of Covid-19 as a factor to encourage people's attitudes towards technology to promote intention to use application technology for transactions. Originality/value: This study provides new insights, first to collaborate on fear of Covid on TAM and TRA. Examining the impact of Covid-19 fear moderation on the acceptance of mobile applications in the health insurance service industry and providing important information that people's behavior does not consider the dangers of Covid-19 when adopting information technology services in the future.*

Keywords: *Technology acceptance model, perceived usefulness, perceive ease of use, attitude toward using, fear of Covid-19*

1. Introduction

Digital public services are a solution to change the conventional public service system, which is notoriously slow and wasteful. *Badan Penyelenggara Jaminan Sosial Kesehatan* (BPJS *Kesehatan*) or Social Security Agency on Health, strives to improve the service and satisfaction of National Health Insurance (JKN) participants by innovating by digitizing information systems and administrative services in the form of the JKN Mobile application. It is hoped that participants can more quickly and easily access information and administrative services only by using devices, so there is no need to come to the BPJS Kesehatan Branch Office. Especially in the Covid-19 pandemic, face-to-face services to participants are severely limited. In addition to the number of users still deficient, the JKN Mobile application registration trend from 2017-2022 has increased slowly in the first 3 years (2017-2019). User data in late 2020 experienced a surge in increase with 97,157 participants compared to the rise from 2018-2019, which was only 75,130. While in 2018, the increase was only 45,387 participants. The surge in 2020 was due to the Covid-19 pandemic, which forced JKN participants to make transactions using Mobile JKN to limit direct contact.

Although there was a surge in JKN participant registration, the number of registered participants was still far from expected. Data from the end of 2019 shows that JKN participants' interest in registering

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and utilizing Mobile JKN is still limited. As of September 2022, the number of JKN registered participants was only 9.01% or 380,820 of the number of JKN participants at BPJS *Kesehatan* Bali Region in September 2022 of 4,226,941. Mobile JKN utilization until September 2022 reached 394,057 (103.48%) participants registered for Mobile JKN (BPJS Kesehatan, 2023).

The results of observations made on BPJS *Kesehatan* participants provide directions for the formulation of meaning related to the use of Mobile JKN, namely, public perception of the usefulness and ease of using Mobile JKN, public attitudes, fear of contracting Covid-19 are vital factors that allegedly influence people's intention to use Mobile JKN (see Appendix 1). The background presented leads to the importance of research to test and analyze the influence of two dimensions of TAM, namely, perceived usefulness and ease of using the JKN Mobile application, towards the attitude of using JKN mobile to build the intention of using JKN mobile which is moderated by fear of Covid-19.

Research Gap

The Technology Acceptance Model (TAM) has been widely collaborated with TRA to predict attitude and intention. The results vary. Several studies of the effect of Perceived Usefulness (PU) on Behavior Intention to Use (BIU) showed significant positive outcomes (Wu and Liao, 2011; Hattami, 2021; To and Trinh, 2021; Aji et al., 2020; Nguyen and Tan, 2021). However, other studies have shown insignificant results (Emran et al., 2019; Mailizar et al., 2020). Research on the effect of Perceived Ease of Use (PEOU) on BIU states that it has a significant positive impact on BIU (Emran et al., 2019; AlHamad, 2020; To and Trinh, 2021; Winarno et al., 2021; Al-Hamad et al., 2021). However, different studies found an insignificant PEOU effect on BIU (such as; Harryanto et al., 2018; Mailizar et al., 2020).

During and post Covid 19, health insurance companies are relying on mobile apps to connect with their patients and clients to ensure business continuity (Hazem & Lamiaa, 2022). The implications of this policy cause companies to consider it important to encourage BIU applications.

The results of research in the context of the health insurance industry show that there is a gap in the results of PU and PEOU compared to BIU. The effect of PU on BIU was found to be significant (Chunyan et al., 2020; Dörfling, and Godspower-Akpomiemie, 2023; Hanaysha et al., 2023), On the other hand, other studies found insignificant results (Gunawan et al., 2019; Jorge de & Gené-Albesa, 2023). The effect of PEOU on BIU was found to be significant (Chunyan et al., 2020; Dörfling, and Godspower-Akpomiemie, 2023; Hanaysha et al., 2023) while the insignificant effect of PEOU on BIU was reported by Jorge de & Gené-Albesa, (2023).

To overcome this gap, an attitude toward using (ATU) is offered as a mediation of the influence of PU and PEOU on BIU, because various studies show ATU has proven significant as a TAM mediation (PU and PEOU) against BIU (such as; Buabeng-Andoh, 2018; Himel et al., 2021; Aiolfi, 2023), In fact, post-Covid-19 studies have a strong influence on attitude on intention (Dwivedi et al., 2022), but it was found that the role of ATU to build BIU was still weak (Anouze and Alamro, 2020; Mohamed et al., 2022; Hasan, 2023; Negm, 2023) as well as in the insurance context (Gebert-Persson et al., 2019), and some have even found insignificant influence of ATU on BIU (such as; Mailizar and Johar, 2020).

The business phenomenon shows that there has been an increase in the number of Mobile JKN technology users since Covid-19. This study adopts Fear of Covid-19 as a moderation of ATU's influence on BIU. The fear of contracting Covid has prompted people to support their attitude towards the intention of utilizing technology. Research results in the food industry have proven that

Fear of Covid-19 is capable of significantly moderating ATU against BIU (Hasan, 2023), but the adoption of Fear of Covid-19 in the insurance service industry has never been carried out (see Table 1); Likewise in the context of TAM and TRA, therefore, this study provides different insights based on other sectors and theoretical concepts.

Problem Formulation

The research problems that can be described are whether perceived usefulness and ease of use affect people's attitudes and behavioral intentions and whether fear of contracting Covid-19 has concrete evidence for moderating the relationship between attitudes and behavioral intentions in using the JKN Mobile application. And whether Attitude mediates the influence of perceived usefulness and ease of use on people's behavioral intentions in using the JKN Mobile application.

Theoretical frameworks

Technology Acceptance Model and Theory of Reasoned Action

One of the keys o the successful implementation of information and communication technology is the willingness of users to accept technology. Their attitude towards technology expresses user acceptance. Technology Acceptance Model (TAM) is a theory developed by Davis (1989), offering a theory as a foundation for studying and understanding user behavior in receiving and using information technology.

Initially, TAM introduced two dimensions that affect user acceptance of technology, namely user perception of the benefits of technology (Perceived Usefulness or PU), and Perceived Ease of Use (PEOU) (Davis, 1989). The TAM model states that users tend to have a supportive attitude toward using a technology system if the system is easy to use and realize the usefulness of the technology concerned. Therefore, TAM has been considered an adapted version of the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975) in the context of digital technology (Kejela and Porath, 2022). Fishbein and Ajzen (1975) mentioned that TRA assumes behavior is based on an individual's intention to engage in a particular action.

Intention is determined by three factors: individual attitudes towards the results of actions and opinions of the individual's social environment and subjective norms (Al-Swidi et al., 2014; Fishbein, 1967; Fishbein and Ajzen, 1975). Therefore, the best predictor to explain the tendency of behavior to use the actual technology system is the intention to use the system in question, which is shaped by attitudes (Kejela and Porath, 2022). Attitudes have been shown to play a role in mediating the influence of intention to behave with TAM (Himel et al., 2021; Kejela and Porath, 2022; Oloveze et al., 2022; Hasan, 2023), but the influence of attitudes built by TAM is still relatively weak to build intentions (Hasan, 2023), there needs to be other factors to strengthen the influence of attitudes to create intentions to use technology. In Covid-19 conditions, fear of contracting the Covid-19 virus (Fear of Covid-19) is one of the critical factors adopted as a driving factor to support people's attitudes toward using information technology (Hasan, 2022; Hasan, 2023).

This research provides new insights into the involvement of the Fear of Covid 19 variable in TRA and TAM collaboration in technology utilization in the service industry that began to develop online technology after the Covid-19 pandemic. Most Fear of Covid 19 research uses qualitative methods (Prince et al., 2020; Elizabeth and Rejoice, 2022; Janet and Sylvain, 2022). Table 1 shows the mapping of the previous studies' limitations using quantitative methods that adopted Fear of Covid 19, which put more weight on predictor contextual models. At the same time, TAM adoption is still very limited and has never been done in the context of health insurance services. There is only one research in the food product industry.

Fear of Covid-19

Fear in general, and fear of Covid-19 in particular, can cause people to reduce their behavioral intentions (Massimiliano et al., 2023) or otherwise increase his intention to behave (Ahmet et al., 2022; Zahed et al., 2023; Tatiyaporn et al. 2023). Fear of Covid-19 is a new concept that has been introduced in several fields of social science, marketing, and health research since the onset of Covid-19. Especially in marketing, limited studies still adopt fear of Covid-19.

Fear of Covid-19 refers to worry and anxiety among individuals that generate negative emotional states due to stress and depression as possible consequences of the Covid-19 pandemic, such as the possibility of being infected with the coronavirus (Jian et al., 2020). The fear of Covid-19 has panicked people because of its high mortality and transmission rate (Rahman and Arif, 2021). Encouraged by fear of Covid-19, forming a positive attitude towards the use of technology thereby strengthening the intention to use it.

Table 1

Mapping Fear of Covid-19 Research in Various Industries During and After Covid-19

Author	Variabel				Method and Model	Industry	Remark
	Independent	Mediating	Moderating	Dependent			
Arachchi et al,. (2022)	• Perceived corporate citizenship	• Consumer-Brand Identification • Brand trust	• Fear of Covid-19 • Personal norms	Consumer purchase intention	SEM-PLS; Contextual predictor	Ritel	Fear of Covid-19 significantly moderates all independent variables and mediates dependent variables.
Sakaya, (2023)	• Fear of Covid-19 Pandemic	• Customer empowerment • Customers' perceived value of digital service transactions	• -	Green bank services purchasing intention	SEM-PLS; Contextual predictor	Bank	Fear of Covid-19 Pandemic is significant for all mediating and dependent variables
Francioni et al. (2022)	• Fear of Covid-19 • Perceived hygiene • Quarantine hygiene • Perceived healthiness • Attitude	• -	• Gender	Continuance intention after Covid-19	SEM-PLS; Contextual predictor	Food	Health perception, quarantine procedures, hygiene perception, application ease of use and attitude significantly influence the intention to proceed.

Table 1. *(Continued)*

Author	Variabel				Method and Model	Industry	Remark
	Independent	**Mediating**	**Moderating**	**Dependent**			
Anas et al. (2022)	• Fear of Covid-19 • Shopping convenience • Resource availability	-	-	Impulse buying behavior.	Regresion; Contextual predictor	Retail	Fear and availability of resources are the most significant factors influencing consumers' impulse buying behavior during the pandemic.
Gajić et al. (2023)	• Innovators • Thinkers • Achievers • Experiencers • Believers • Strivers • Makers • Survivors	Fear of Covid 19	-	Decission for Traveling	SEM-PLS; Contextual predictor	Travel Service	The existence of a well-established type of fear in humans, associated with pandemics and similar crisis situations. People are most afraid of infections during travel, and lack of funds and job losses during critical times of the pandemic.
Dwivedi et al. (2022)	Green trust	• Fear of Covid-19 • Uncertainty of Covid-19 • Attitude	Environmental concern	Behavior Intention	SEM-PLS; Contextual predictor	Tourism	Fear of Covid-19 is significantly able to mediate the influence of Green Trust on behavior intention
Sakaya, (2023)	Fear of Covid19 Pandemic	• Customer empowerment • Customers' perceived value of digital service transactions •	-	Green bank services purchasing intention	SEM-PLS; Contextual predictor		There is a significant impact of fear of the Covid-19 pandemic on Customer empowerment, Customers' perceived value of digital service transactions, and Green bank services purchasing intention

Table 1. *(Continued)*

Author	Variabel				Method and Model	Industry	Remark
	Independent	Mediating	Moderating	Dependent			
Hasan (2023)	• Perceived usefulness • Perceived ease of use Perceived convenience	• Attitude partially	• Fear of Covid-19	Intentions to use	SEM-PLS; TAM, TRA, and contextual predictor	Food	Fear of Covid-19 Pandemic significantly moderates attitudes toward intention
Wiwik et al. (2023)	• Perceived usefulness Perceived ease of use	• Attitude	• Fear of Covid-19	Behavior Intention to Use	SEM-PLS; TAM, TRA, Contextual predictor	Healtd Insuran-ce	This research provides different insights, namely that Fear of Covid-19 has never been used as moderation and has never been carried out on Online Technology Services in the health insurance industry..

2. Literature Study / Hypotheses Development

Perceived Usefulness (PU) and Behavioral Intention to Use (BIU)

Perceived usefulness is the degree to which an individual believes using a particular system will improve their job performance (Davis, 1989). Behavioral intent is the tendency to continue using technology in the future. This construct is crucial in determining whether users will continue to use the technology in the future. Therefore, Behavioral Intention to Use is an individual's confidence level that he will continue to use a system (Arpaci, 2017).

Individuals' beliefs about continuing to intend to use a technological system in the future are primarily determined by their perceived usefulness (PU) of the technology in question, and this has been proven in various empirical findings (such as; Leon, 2018; Camoiras-Rodriguez and Varela, 2020; Trinh et al., 2020; Mew and Elena, 2021; Nikou and Maslov, 2021; Saheb et al., 2022; Kampa, 2023; Shaker et al., 2023; Early et al., 2023; Legramante et al., 2023). Based on the results of empirical studies of the influence of perceived usefulness on behavioral intentions, a hypothesis can be formulated:

Hypothesis 1: Perceived usefulness (PU) positively affects Behavior Intention to use (BIU)

Perceived Ease of Use and Behavioral Intention to Use

Perceived Ease of Use (PEOU) measures a person's confidence that using a particular system will ease difficulty or great effort (Davis, 1989). According to Venkatesh and Davis (2000), the perception of ease is the extent to which people believe using the system will be free from great sacrifice.

A person's behavior toward the use of a particular technology is determined by his perception that technology has ease of use, and this has been proven empirically by Leon (2018), Camoiras-Rodriguez and Varela (2020), Trinh et al. (2020), Ngoc et al. (2022) Shaker et al., (2023); Zhang and Lee (2023); Awal et al. (2023); Saheb et al. (2022). In the context of the insurance industry, a significant influence of PEOU on BIU was found (Dörfling, & Godspower-Akpomiemie, 2023). Based on the results of empirical studies of the influence of perceived ease of use on behavioral intentions, a hypothesis can be formulated:
Hypothesis 2: Perceived Ease of Use (PEOU) positively affects Behavior Intention to use (BIU)

Perceived Usefulness and Attitude Toward Using
Attitude Toward Using in TAM is conceptualized as an individual's attitude towards the technology system in the form of acceptance or rejection as an impact if someone has to use a technology in their work (Davis, 1989). An individual's attitude of acceptance or rejection towards technology is determined by the individual's perception of the utility of technology. This statement has been empirically proven that Perceived Usefulness has a positive effect on attitudes (such as; Rivera et al., 2015; Bashir and Madhavaiah, 2015; Rizkitysha and Hananto, 2022; Upadhyay et al., 2018; Mohhamadi, 2015; Wang et al., 2017; Chen et al., 2016; Safari et al., 2022; Admiral et al., 2022; Elhajar and Quaida, 2020; Sathar et al., 2022; Oloveze, et al., 2022; Kampa, 2023; Shaker et al., 2023).

In the context of health insurance, PU significantly influences ATU (Lee et al., 2015; Gunawan et al., 2019; Mohsen and Seyedeh, 2020; Lee, 2023) Based on the results of empirical studies on the influence of perceived usefulness on usage attitudes, hypothesis can be formulated:
Hypothesis 3: Perceived usefulness (PU) positively affects Attitude Toward Using (ATU)

Perceived Ease of Use and Attitude toward Using
Attitudes toward behavior are the extent to which a person has a pleasant or unpleasant evaluation or judgment of the behavior in question (Ajzen, 1991), and these attitudes are included in the context of using technology. The results of various studies further prove individual perceptions about the ease of using technology to have a positive support impact (such as; Bashir and Madhavaiah, 2015; Yu and Huang, 2020; Admiral et al., 2022; Elhajar and Quaida, 2020; Sathar et al., 2022; Oloveze et al., 2022; Nikou et al., 2022; Kampa, 2023;). In the context of health insurance, it was found to be significantly positive (Lee et al., 2015; Gunawan et al., 2019; Lee, 2023). Based on the results of empirical studies on the influence of perceived ease of use on attitude toward using, a hypothesis can be formulated:
Hypothesis 4: Perceived Ease of Use (PEOU) positively affects attitude toward using (ATU)

Attitude Toward Using (ATU) and Behavior Intention to Use (BIU)
As the TRA emphasizes, attitude tendencies will determine intention tendencies (Al-Swidi et al., 2014; Fishbein, 1967; Fishbein and Ajzen, 1975). Most research has proven that attitude toward using significantly and positively affects behavior intention (such as Leon, 2018; Kim et al, 2021; Hanafiah et al., 2021; Foroudi et al., 2021; Ngoc et al., 2022; Kashive et al., 2021; Sathar et al., 2022; Oloveze et al., 2022; Kampa, 2023; Shaker et al., 2023; El Moussaoui and Benbba, 2023). In the context of health insurance, ATU significantly influences BIU (Gowanit et al., 2016; Mohsen and Seyedeh, 2020; Lee, 2023). This empirical evidence led to the following hypothesis formulation:
Hypothesis 5: Attitude Toward Using (ATU) positively affects Behavior Intention to Use (BIU)

Fear of Covid-19 and Attitude to Behavioral Intentions
Fear can cause or reduce behavioral intentions (Meri et al., 2023; Yue et al., 2020; Mei-Fang et al., 2016). The fear of being

infected with Covid-19 increases behavioral intentions to protect (Zahed et al., 2023 Myoung-Gi & Hyojung, 2021). Or conversely, fear can have a negative impact on intentions, such as decreasing intentions to travel because of fear of Covid (Tatiyaporn et al., 2023).

Research on fear of contracting Covid-19 is still very limited, especially those that place these variables as moderating the influence of Attitude Toward Using technology on behavioral intentions. Research on fear of Covid-19 with moderation results strengthens the relationship between attitudes and behavioral intentions, one of which is Astari et.al., 2022; Hasan, 2023. In the context of technology use, fear of Covid-19 can encourage acceptance of technology towards the intention to use technology (Gastaldello *et al.,* 2023). The role of moderation is strengthening to promote the influence of Covid-19 fear on the intention to use technology (Eger et al., 2021; Sakaya, 2023; Hasan, 2023). Based on the results of empirical studies on the effect of fear of Covid-19 on behavioral intentions, two hypotheses can be formulated:

Hypothesis 6: Fear of Covid-19 moderates the relationship between the influence of Attitude Toward Using on Behavior Intention to Use

Hypothesis 7: Fear of Covid-19 influences Behavior Intention to Use.

Attitudes in Mediating Perceived Usefulness and Ease of Use on Behavioral Intentions

Research related to the influence of attitude toward using technology in mediating the perceived usefulness and ease of use on behavioral intentions with the results having a significant role, namely Hasan (2022); Astari et al. (2022); Sinurat and Sugiyanto (2022); William and Tjokrosaputro (2020); Handayati and Trisnawati (2023); Wang and Zhao (2017) and also by Mew and Millan (2021). Based on the results of empirical studies of attitudes in mediating perceived usefulness and ease of use to behavioral intentions, hypotheses can be formulated:

Hypothesis 8: Attitude Toward Using mediates perceived usefulness toward behavior intention to use

Hypothesis 9: Attitude Toward Using mediates Perceived Ease of Use toward Behavior Intention to Use

Based on the presentation of research problems, concepts, theories, and results of empirical studies, the conceptual framework and Hypotheses Formulation are shown in Figure 1.

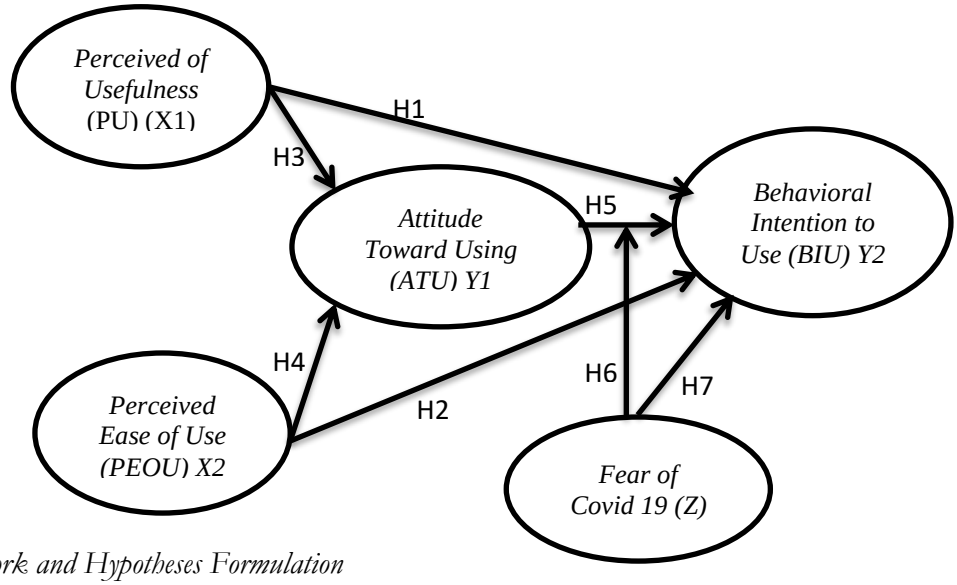

Figure 1
Conceptual Framework and Hypotheses Formulation

Annotation: PU (X_1) = Perceived Usefullness; PEOU (X_2) = Perceived Ease of Use; BIU (Y_1) = Attitude Toward Using; Z = Fear of Covid-19; BIU (Y_2) = Behavior Intention Use

3. Methodology

Variables and Measures

There are five latent variables in this study, namely: Perceived Usefulness and Perceived Ease of Use indicators are adapted from Oloveze et al. (2022), Attitude Toward Using and Fear of Covid-19 indicators are adapted from Hasan (2022), Behavior Intention to Use indicators are adapted from Esawe (2022). Each latent variable is measured using several items that have been empirically tested and used in previous empirical studies. All items as research instruments use the five-point Likert scale ranging from "strongly disagree i.e., 1 point" to "strongly agree i.e., 5 points."

Construct validity and reliability

Validity and reliability tests were conducted on 30 respondents. Validity and reliability tests of each construct indicator showed significant correlation values, and Cronbach Alpha exceeded 0.60 for each construct. This value corresponds to Nunnally's (1978) criteria. All indicators are valid because each indicator score has a significant bivariate correlation with the total indicator score (see Table 2).

Table 2.
Validity and Reliability Test

Variable	Reference	Indicator	Correlation coefficient	Cronbach Alpha
Perceived of Usefulness (PU) X_1	Oloveze et al. (2022)	Usefulness $X_{1.1}$	0,949**	0,963
		Helps to be efficient $X_{1.2}$	0,978**	
		Helpful $X_{1.3}$	0,967**	
Perceived Ease of Use (PEOU) X_2	Oloveze et al. (2022)	Ease of use $X_{2.1}$	0,955**	0,942
		Ease of the system $X_{2.2}$	0,951**	
		Easy to understand $X_{2.3}$	0,935**	
Attitude Toward Use (ATU) Y_1	Hasan (2022)	Using Mobile JKN for BPJS Health matters is wise $Y_{1.1}$	0,946**	0,967
		Using Mobile JKN to facilitate BPJS Health affairs$Y_{1.2}$	0,963**	
		Using the JKN Mobile application for BPJS Kesehatan matters makes sense $Y_{1.3}$	0,955**	
		Using the JKN Mobile application is very beneficial $Y_{1.4}$	0,951**	
Behavior Intention to Use (BIU) Y_2	Esawe (2022)	Intend to use $Y_{2.1}$	0,914**	0,930
		Estimate to use$Y_{2.2}$	0,919**	
		Plan to use$Y_{2.3}$	0,907**	
		Recommend to use$Y_{2.4}$	0,912**	
Fear of Covid-19 (Z)	Hasan (2022)	Fear of coronavirus Z_1	0.891**	0,914
		Uncomfortable with coronavirus Z_2	0.857**	
		Fear of losing life due to coronaZ_3	0.923**	
		Anxious or nervous if contract the coronavirusZ_4	0.894**	

Annotation: *p** =significant at level 0,01*

Sampling

This research was conducted in Bali because of the low number of JKN members (BPJS *Kesehatan*, 2023). The sampling technique uses the purposive sampling method. The amount of sample value was determined using the G Power analysis method, based on Correlation ρ H1= 0.3, α err prob = 0.05 and Power (1 – β err prob) = 0.95, obtaining the minimum value needed for as many as 138 respondents. The respondent selection technique was carried out using a non-probability random sampling method because it was not permitted to obtain data on BPJS members.

Table 3.
Characteristics of Respondents

No	Characteristics	Number (respondents)	Percentage (%)
1.	Age:		
	• 17-25 years	18	13,0
	• 26-35 years	51	37,0
	• 36-45 years	37	26,8
	• 46-55 years	27	19,6
	• 56-65 years	5	3,6
2.	Residency:		
	• Denpasar city	58	42,0
	• Badung Regency	44	31,9
	• Tabanan Regency	10	7,2
	• Gianyar Regency	14	10,1
	• Klungkung Regency	2	1,4
	• Bangli Regency	4	2,9
	• Karangasem Regency	1	0,7
	• Buleleng Regency	4	2,9
	• Jembrana Regency	1	0,7
3.	Gender:		
	• Male	56	40,6
	• Female	82	59,4
4.	Education:		
	• Elementary school	1	0,7
	• Junior high school	0	0,0
	• High school	0	0,0
	• Diploma	20	14,5
	• Bachelor	71	51,4
	• Master	7	5,1
	• Doctoral	1	0,7
	• Other	38	27,5

Table 3. *(Continued)*

No	Characteristics	Number (respondents)	Percentage (%)
5.	Experience using online applications		
	• < 1 year	50	36,2
	• >1 – 2 year	60	43,4
	• >2 -3 year	10	7,3
	• >3 – 4 year	10	7,3
	• >4 year	8	5,8
6.	Occupation:		
	• Unemployed	1	0,7
	• Self-employed	2	1,4
	• Civil servants	45	32,6
	• Private employee	66	47,8
	• Other	24	17,4
Total		138	100

Data Analysis

Inferential analysis uses Structural Equation Modeling (SEM), with a Partial Least Square (PLS) approach with Smart PLS software application program. The analysis output results show that all indicators have a loading factor value of > 0.70, with a p value of < 0.05, meeting the criteria of convergent validity (Hair et al., 2006). The average variance extracted (AVE) value of > 0.50 meets the convergent validity requirements (Fornell and Larcker, 1981), and discriminant validity is high. Composite reliability results are reliable because they have values above 0.70. This value corresponds to Nunnally's (1978) criteria. R Square of the dependent variable, namely attitudes and behavioral intentions above 0.75 classified as strong according to the requirements of Chin (1998); Hair et al. (2011); Henseler et al. (2009). For more details, see Tables 4 and 5.

Table 4.
Discriminant Validity Examination

Variable	Average Variance Extracted (AVE)	√AVE	PU	PEOU	ATU	BIU	Z
PU	0,930	0,965	1,000				
PEOU	0,897	0,947	0,886	1,000			
ATU	0,910	0,954	0,895	0,932	1,000		
BIU	0,833	0,913	0,841	0,843	0,886	1,000	
Z	0,784	0,885	0,056	0,062	0,110	0,111	1,000

Annotation: *PU= Perceived of Usefulness; PEOU= Perceived Ease of Use; ATU= Attitude Toward Use; BIU= Behavior Intention to Use; Z=Fear Covid 19*

Based on the overall evaluation results, both convergent, discriminant validity, and composite reliability, it can be concluded that indicators as measurement items of latent variables are valid and reliable.

Table 5.
Composite Reliability, R-Square

Variable	Composite Reliability (>0.70)	Cronbach Alpha	R-Square Result	
			R-Square	Criteria*
PU (X_1)	0,962	0,976	-	-
PEOU (X_2)	0,943	0,963	-	-
ATU (Y_1)	0,967	0,976	0,892	Strong
BIU (Y_2)	0,933	0,952	0,803	Strong

Annotation: **=Criteria Chin (1998); Hair et al., (2011); Henseler et al., (2009); PU= Perceived of Usefulness; PEOU= Perceived Ease of Use; ATU= Attitude Toward Use; BIU= Behavior Intention to Use; Z=Fear Covid 19*

The results of the Goodness of Fit evaluation of the structural model show that the Q2 value result is 0.9787, close to number 1. Thus, the results of this evaluation provide evidence that the structural model has a good fit (goodness of fit model). This Q2 value can be interpreted as the information contained in the data. The model can explain 97.87 percent, while the remaining 2.13 percent is explained by errors and other variables that are not yet included in the model.

Calculation Q2 = 1- (1-R12)(1-R22)
= 1- (1-0,892)(1-0,803)
= 1- (0,108)(0,197)
= 1- 0,0213
= 0,9787 or 97,87%

4. Findings and Discussion

Hypothesis Test

Figure 1 and Table 6 explain there are three unsupported hypotheses, namely Hypothesis 2 on the effect of PEOU on BIU, Hypothesis 6, where Z (Fear of Covid-19) does not have a moderating role on the influence of ATU on BIU, and Hypothesis 7 on the effect of Fear of Covid-19 on BIU. Each has a Statistical T below 0.96 and a P Value above 0.05. At the same time, other hypotheses are supported (see Table 6).

Table 6.
Hypothesis Test Results

Variable	*Original Sample*	T *Statistics*	P *Value*	Hypothesis	Remark
PU -> BIU	0,261	2,193	0,029	H1	Significant
PEOU -> BIU	0,054	0,328	0,743	H2	Not Significant
PU -> ATU	0,320	3,286	0,001	H3	Significant
PEOU-> ATU	0,648	7,246	0,000	H4	Significant
ATU -> BIU	0,580	3,147	0,002	H5	Significant
ATU*Z -> BIU	-0,060	1,282	0,201	H6	Not Significant
Z-> BIU	0,029	0,613	0,540	H7	Not Significant
PU-> ATU-> BIU	0,186	2,232	0,026	H8	Significant
PEOU-> ATU-> BIU	0,376	2,977	0,003	H9	Significant

Annotation: *PU= Perceived of Usefulness; PEOU= Perceived Ease of Use; ATU= Attitude Toward Use; BIU= Behavior Intention to Use; Z=Fear Covid 19*

Analysis of the Role of Mediation and Moderation

Table 5 shows the mediating relationship between latent variables is positively significant (T Statistic above 0.96 and P Value below 0.05). This means that Hypothesis eight (H8) and Hypothesis nine (H9) are accepted.

Table 7 shows the mediation test of Attitude Toward to Use (ATU) pathway on the effect of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) on Behavior Intention to Use (BIU). The PU path against BIU shows partial mediation, while the PEOU path against BIU shows complete mediation.

Table 7.
Mediation Analysis

Attitude Toward to Use Mediation	Independent influence on Mediating variable	Independent influence on dependent variables	The path of Independent, mediated, and dependent variable	Mediation Role Status
Perceived of Usefulness (PU) → Behavior Intention to Use (BIU)	PU→ATU (Sig.)	PU→BIU (Sig.)	PU→ATU →BIU (Sig.)	Partial Mediation
Perceived Ease of Use (PEOU) → Behavior Intention to Use (BIU)	PEOU→ATU (Sig.)	PEOU→BIU (No Sig.)	PEOU→ATU →BIU (Sig.)	Full Mediation

Annotation: *Sig = Significant; No Sig = Not Significant; PU = Perceived of Usefulness; PEOU = Perceived Ease of Use; ATU = Attitude Toward Use; BIU = Behavior Intention to Use; Z = Fear Covid-19*

The results of the moderation role examination of Fear Covid-19 show potential moderation (homologize moderator) because Fear Covid-19 as an interaction variable (moderating effect) has no significant role in encouraging the influence of attitude toward using on behavior intention to use so H6 is rejected. Then Fear Covid-19 does not significantly impact behavior intention to use, so H7 is rejected (see Table 5).

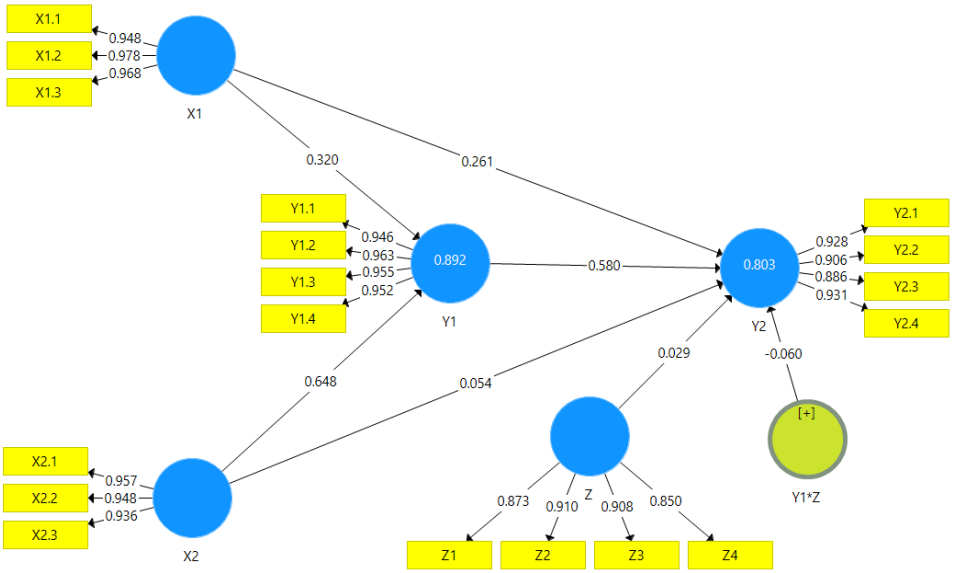

Figure 2.
Research Result

Annotation: X_1 = Perceived of Usefullness (PU); X_2 = Perceived Ease of Use (PEOU); Y_1 = Attitude Toward Using (ATU); Z = Fear of Covid-19; Y_2 = Behavior Intention Use (BIU)

Discussion

TAM, through its two elements, PU and PEOU, has proven to be able to form a supportive attitude toward the use of information technology in the Covid-19 Pandemic (supporting research during and after Covid-19; Ariffin et al., 2021; Kejela and Porath, 2022; Sumi and Ahmed, 2022; Alami and El, 2022; Mohamed et al., 2022; Aiolfi, 2023; before Covid-19; Buabeng-Andoh, 2018; Anouze and Alamro, 2020), as well as the influence of Attitude on BIU in the use of technology has also been proven in the context of TAM (Kejela and Porath, 2022; Himel et al., 2021; Oertzen, and Odekerken-Schröder, 2019; Hasan, 2023; Safari et al., 2022; Anouze and Alamro, 2020; Kampa, 2023).

But TAM's ability to form intention directly can only be proven by PU. These results support the results of several studies (such as Safari et al., 2022; Oloveze et al., 2022), while PEOU role has not been proven in this research (line with the research results of Nikou and Maslov, 2021; Camilleri and Falzon, 2021; Legramante et al., 2023), although there is research proving that PU and PEOU are both capable of influencing intention (Zhang and Lee, 2023). There is a unique character of young people who make up the majority of online insurance service technology users in this research (see Table 3). Young people, who usually find it easier to use technology (Naicker and Van Der Merwe, 2018), do not just want to form their intention to use applications without accepting their attitudes. This is proven by the fact that PEOU's influence has failed to be proven to have a direct influence on BIU and can only be realized if it is able to build BIU revenue.

The discussion will focus on the insignificance of the moderating effect of fear of Covid 19 on the relationship between attitudes and intentions and the direct influence of PEOU on BIU in the context of TAM, especially Covid-19 studies. Important information that can be reported based on the insignificant role of fear of Covid-19 moderation is that the development of behavior in post-Covid-19 shows that people no longer involve their level of worry about the troubling virus in 2020-2022. People have a supportive attitude toward using technology, so it raises the intention to use technology not because it is caused by a fear of being contaminated with Covid-19. This means that people fear contracting Covid-19, but it is not a reason to consider when adopting technology. The most vital consideration is the usability of technology, while ease of use (PEOU) is worth considering if it can build people's attitudes. The ease of using technology is not a guarantee that people will immediately intend to use it without an accepting attitude towards the ease of using it.

Fear of being contaminated by the Covid-19 virus is also not a consideration for people in forming intentions to use online service technology. This is proven by the insignificant direct influence of fear of Covid on BIU.

The function of ATU is to evaluate user attitudes whether favorable or unfavorable towards technology (Cunying, 2023). The role of ATU seems to be decisive as TAM's mediation towards BIU after Covid-19, in line with the research results of Al Amin et al. (2022); Asma & Daniel, (2023); Limeng et al. (2023); Pallavi & Arun (2023).

During Covid-19, PU and PEOU tend to prove to be able to build attitudes (Ariffin et al., 2021; Kejela and Porath, 2022), as well as before Covid-19 (Buabeng-Andoh, 2018), but not necessarily fully able to build intentions during Covid-19 and Post Covid-19. PU is better able to create intention than PEOU (Camilleri and Falzon, 2021).

5. Conclusions

Managerial and Research Implications

This research reveals that people no longer feel as panicked about Covid-19 as they did at the beginning of Covid. Fear of the dangers of the Covid-19 virus is not a reason to form attitudes to influence their intention to use technology, but rather consider the usefulness of digital technology. It does not exist because of the impact of psychological pressure, such as fear, but based on logical and realistic considerations about the benefits of technology. This is an exciting lesson for policymakers that, in developing digital technology or online systems, it is better to focus on the usefulness of technology and ease of use to attract user attention.

Limitations and future lines of research

This study has a limitation in that it does not detect the influence of PEOU on PU because the role of PEOU in building attitudes and intentions through PU is critical to detect. Another limitation is that this study uses existing scales. It is recommended for future research to develop its measurement scale by studying problems that have been formulated as listed in Appendix 1.

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Appendix 1.

JKN *Mobile* Application User Meaning Formulation

No	Complaint Statement	Meaning Formulation and Coding
1	The application is very complicated. You can't log in because you forgot your password, but when you want to change it, it still can't because the number registered doesn't match the current name. Try changing the data through the call center 165, I was told to go through the JKN mobile application, keep circling like that. Application does not make it easier, even make it more difficult... (PEU Code)	(PEOU: *Perceived Ease of Use*)
2	There is no option to reactivate membership after 21 years. (PU Code) Even though many steps have been explained in the online news, when opened, it does not match the flow at all, even the options. (PEU Code) So are the services on WhatsApp. Please fix it immediately.	● (PU: *Perceived Usefulness*) ● (PEOU: *Perceived Ease of Use*)
3	Just want to verify is difficult, cellphone numbers can't work. (PEU Code) How can you use it, if every time you want to use the feature, you need to log in. It can't be done right away, it's difficult to verify. Why is it easier to verify food apps? (Code A)	● (PEOU: *Perceived Ease of Use*) ● (A: *Attitude Forward Using)*
4	The application is less practical, (PU Code), and too much content is loaded. The article menu section should have been omitted, overloading applications and connections. (PEU Code) As a result, there are often repeated "offline" errors during registration. Please fix it again, as the users are mostly the elderly.	● (PU: *Perceived Usefulness*) ● (PEOU: *Perceived Ease of Use*)
5	The application is not a good version now (PU Code). Just wanting to log in is very difficult (PEU Code) has entered complete data such as kk number, name, nik number, date of birth, captcha, even can't log in... have reinstalled the application, still the same result (Code S)	● (A: *Attitude Forward Using)* ● (PU: *Perceived Usefulness*) ● (PEOU: *Perceived Ease of Use*)
6	The system often shows errors and is complicated, when you want to register for advanced health facilities services to get queue numbers, you can't even get it (PEU Code), even though it has been updated and uninstalled. Sometimes, even the queue number cannot be seen again (PU Code)	● (PEU: *Perceived Ease of Use*) ● (PU: *Perceived Usefulness*)

No	Complaint Statement	Meaning Formulation and Coding
7	Useless.. (PU Code) Updated instead of making it easier but complicating it (PEU Code), surprisingly, if you want to register to a referral hospital, you have to enter a phone number, after the data is filled in all by sucking up several thousand credits, you still can't register because there is no medical record he said, So what is the benefit of this application?? (Code A)	● (PU: *Perceived Usefulness*) ● (PEOU: *Perceived Ease of Use*) ● (A: *Attitude Forward Using)*

Source: *Mobile* JKN Homepage, 2023