The role of insurance technology adoption in leveraging elderly well-being mediated by insurance inclusion and societal value

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Abstract

This study examines the impact on Elderly Well-Being (EWB), focusing on implementing Insurtech and the mediating variables of Insurance Inclusion (INL) and Societal Value (SV). The subject of the study is a segment of the pension group for police and military personnel who adopt Insurtech to process their pension claims. This study uses 384 samples, obtained through proportional stratified random sampling for groups of Police, Army, Navy, and Air Force retirees. It employs four variables: Insurtech Adoption (IA), INL, SV, and EWB, with 37 indicators, analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that IA exerts a significant effect (T-statistic = 5.995) on EWB. One significant finding is that when sequentially mediated by INL and SV, IA exhibits a significantly leveraged influence on EWB (T-statistic = 6.338). The mediating roles of INL and SV are effectively leveraged to enhance EWB, while the sole mediating impact on EWB is significantly diminished. Furthermore, the study could be expanded to include additional variables and the broader general population. The practical implication of this study is that when applying technology to the elderly, it is essential to always consider societal value, making it a valuable recommendation for policymakers.

Keywords: Elderly well-being, Insurance inclusion, Insurtech adoption, Social insurance, Societal value.

1. Introduction

The population of the elderly in Indonesia continues to grow, and these issues are becoming increasingly salient. Projections indicate that the growth rate of the elderly population in Indonesia will exceed the overall population growth rate. Specifically, the population of Indonesia is expected to rise by 33% between 2010 and 2045. The challenges confronting the elderly population are multifaceted, encompassing social, economic, psychological, and health-related issues [1]. As the population of the elderly continues to rise, these issues become increasingly salient. Projections indicate that the growth rate of the elderly population in Indonesia will exceed the overall population growth rate. Specifically, the population of Indonesia is expected to rise by 33% between 2010 and 2045, while the elderly population is projected to increase at an even higher rate, more than three times, reaching 44.9 million by 2045 from 11.9 million in 2010. This phenomenon is further exacerbated by the fact that the life expectancy of Indonesians has increased by approximately 8% [2]. According to data from the United Nations in 2022, the proportion of the elderly in the global population is projected to rise from 10% to 13% over this decade [3].

In contrast, the World Mega-Trend includes technological change as one of 10 notable similarities across numerous nations. Besides technological change, the other 9 of The World Mega-Trends encompass global demographics, urbanization, geoeconomic shifts, the escalating role of emerging economies in Asia, international trade integration, financial changes on the global stage, the rise of the middle-income class, intensified competition for natural resources, climate change, and geopolitical developments. The trend of technological change in the future will be dominated by information and communication technology, in addition to other technologies such as automation, robotics, and artificial intelligence [2].

This shift has also transformed how individuals engage with financial services, including the modalities of payments, borrowing, and savings [4]. Integrating digital technology into various facets of life has yielded novel benefits for businesses and consumers. These benefits encompass enhanced convenience in daily transactions, augmented financial inclusion, and an improvement in well-being [5].

The advent of interconnected technology has precipitated a paradigm shift in how individuals transact, thereby rendering physical interaction increasingly obsolete. The present study seeks to address the question of whether the integration of technology, ostensibly designed to enhance human functionality, is effective and beneficial [6-8] has a positive impact on the well-being of the elderly population [9].

The growing trend and the advent of Insurtech in the digital economy also have the potential to yield both novel benefits and efficiency gains. However, it is worth noting that this development also introduces new risks [10]. These risks are compounded by the challenges posed by societal factors, especially for the elderly. The term 'elderly' is typically used to denote an individual who has surpassed 60 [1]. The concept of 'Elderly Well-Being' encompasses aspects related to the comfort, happiness, and health of the elderly population [1]. It is frequently interpreted as synonymous with quality of life, happiness, and life satisfaction, or similar terms [2]. The World Health Organization (WHO) characterizes well-being as a state of happiness and a healthy, positive life free from disease, enabling optimal functioning [3].

The elderly who are in direct contact with InsurTech to claim their monthly pension fund face several problems or challenges, including the transition from traditional insurance to InsurTech. It brings four considerations: changing demographics, reduced physical interaction with customers, the significance of financial well-being, and mounting customer expectations [11].

This research builds on a previous study by Kiwanuka and Sibindi [12] who looked at how digital literacy, insurtech adoption, and insurance inclusion are connected in Uganda. The present study is limited to insurtech adoption in social insurance, specifically concerning the pensions of soldiers and police officers in Indonesia. Social support for military/police retirees tends to be more specific because of several characteristics, including a narrower network, so that the loss of social support has a greater impact. Additionally, they face significant challenges in managing stress during the transition back to civilian life (due to post-traumatic stress disorder), higher exposure to trauma among military/police personnel, and the need for organizational support and personal development (hobbies, new interests) for identity

reconstruction and well-being, which may be more acute for military/police personnel due to their stronger occupational identity [13, 14].

This study aims to determine how Insurtech adoption can enhance the well-being of military and police retirees in Indonesia.

2. Literature Review

The term 'Elderly' is typically used to denote an individual who has surpassed 60 [1]. The concept of 'Elderly Well-Being' encompasses aspects related to the comfort, happiness, and health of the elderly population [1]. The term 'Well-Being' is inherently broad in its scope, and a single definition cannot adequately capture its complexity. It is frequently interpreted as synonymous with quality of life, happiness, and life satisfaction, or similar terms [15]. The World Health Organization (WHO) characterizes well-being as a state of happiness and a healthy, positive life free from disease, enabling optimal functioning [16].

The theoretical basis for this research is Positive Psychology as a Grand Theory that focuses on Well-Being. Positive Psychology is based on the psychological elements of positivity in humans, rather than the deficiencies commonly found in clinical psychology. This theory emphasizes the power of individuals to create comfort within themselves. The form of individual strength not only helps individuals develop themselves but also enables them to experience happiness, well-being, and life satisfaction, which is referred to in this context as well-being [17].

The theory of Positive Psychology, mentioned above, was developed by Fredrickson [18] with a focus on positive human emotions such as happiness, gratitude, hope, and love, which play a crucial role in enhancing individual well-being, particularly among the elderly. These positive emotions can broaden an individual's perspective and ability to cope with life's challenges, which in turn contributes to better psychological, social, and physical development [18]. Positive emotions not only bring short-term happiness but also enable individuals to manage stress more effectively, build stronger social relationships, and feel more connected to their social environment.

A relatively recent approach, known as Positive Technology, is a combination of positive psychology and specific technology, offering a scientific and practical approach to utilizing technology to enhance the quality of individual experience through the structuring, augmentation, or replacement of human-computer interactions [19]. The application of Positive Technology for elderly well-being within the scope of Information and Communication Technology (ICT) aims to support activities, social relationships, and independence among the elderly. The impact of these activities on well-being can be categorized into three aspects: (i) engagement and cognitive reasoning, (ii) emotional and affective quality, and (iii) social connectedness [20].

This study employs the Technology Acceptance Model (TAM), developed by Davis [21] and the Diffusion of Innovation (DOI) theory, introduced by Rogers [22] to examine the impact of Insurtech adoption on societal value. It also applies positive psychology, as introduced by Riva et al. [19] and Positive Technology for Elderly Well-Being, as proposed by Grossi et al. [20] to identify signs of Elderly Well-Being. It also utilizes those theories to determine indicators for Elderly Well-Being [19, 20]. The TAM, initially introduced by Davis [21] is employed to investigate the impact of Insurtech adoption on insurance inclusion. The study's findings underscore the pivotal role of perceived usefulness in influencing user acceptance of information technology [21]. The perceived usefulness is defined as the prospective user's subjective probability that using a specific application system will increase his or her job performance within the organizational context [21]. Further, Davis [21] also defined perceived ease of use as "the degree to which the prospective user expects the target system to be free of effort." Overall, this concept concerns how much technology can enhance their effectiveness or performance within a specific context. Additionally, perceived ease of use emerges as a pivotal factor, shedding light on whether users perceive technology as offering substantial benefits. This notion is pivotal in shaping their inclination to utilize technology.

The theory of TAM is also used as a research reference by Kiwanuka and Sibindi [12], which this research builds upon by specifically taking the scope of Social Insurance. From that research, it was found that Insurtech adoption positively influenced insurance inclusion, indicating that technological innovations in the insurance sector can broaden access to insurance services [12].

Diffusion of Innovation theory (DOI) posits that the adoption of new technology is often met with resistance, particularly in instances where it does not offer direct societal benefits, which can result in a decline in perceived social value [22]. The theory underscores the pivotal role of peer communication in the diffusion process, delineating the stages through which individuals adopt ideas, products, and practices. Another study on processes and how digital technology could be used to enhance the life activities of older adults and their well-being by increasing their social networks also underlies this study to use this DOI as one of the theories. Regarding that study, it explored the barriers to digital technology use among older adults, the sociocultural factors that have led to its widespread use, and the ways in which older adults utilize digital technology to foster self-empowerment and mitigate the adverse effects of the digital divide [23].

From the technological perspective, information technology applications have the highest impact on improving the acceptance of self-welfare among the elderly through convenience, the provision of digital mentors, and easily accessible training [24]. Despite the potential to enhance well-being, older adults demonstrate a lower propensity to utilize Internet services compared to younger demographics [25, 26]. This phenomenon gives rise to an age-related digital divide, defined as the disparity in technological aptitude between individuals who possess proficiency and those who do not [27, 28].

While research on enhancing the well-being of older adults in the service sector acknowledges their challenges regarding service inclusion [29] there is a paucity of research exploring how older adults can enhance their well-being by collaborating to create value when using technology-based services. This is of particular importance in addressing the age-

related digital divide [28] that affects well-being and service inclusion [30, 31]. Evolving societal needs and social tensions are also on the minds of social insurance. The massive savings and retirement gaps could further exacerbate well-being issues related to income inequality and prompt governments to take action [32].

The behavioral changes of retirees when adopting insurtech are associated with the theory of behavior change [33] about self-efficacy. It is a modeling theory that demonstrates individuals can make a difference in the way they feel, think, and ultimately act [33]. The technological impetus that influences well-being is a variable that has the appropriate theoretical basis [34]. The process by which this attraction occurs is what defines self-efficacy. A lack of ability or interest may characterize initial changes; however, as self-efficacy develops, internal interest is stimulated, thereby encouraging behavioral change [33].

A relatively recent approach, known as Positive Technology, is a scientific and applicable approach to the use of technology to improve the quality of individual experience through structuring, augmentation, or replacement of the interaction between humans and computers [19]. The application of Positive Technology for elderly well-being within the scope of Information and Communication Technology (ICT) aims to support activities, social relationships, and independence among the elderly. The impact of these activities on well-being can be categorized into three aspects: (i) engagement and cognitive reasoning, (ii) emotional and affective quality, and (iii) social connectedness [20].

3. Hypothesis Development

In public services, particularly within the scope of this study, which focuses on social insurance, the digitization of public services designed for convenience may result in older people losing access to essential services, thereby affecting their social value in society [23]. In addition, the ongoing development of increasingly accessible digital services and resources is also an effort to enhance efficiency and affordability [35, 36]. For the elderly population, possessing digital literacy is increasingly regarded as a necessary requirement to ensure a good quality of life and overall well-being [37]. Based on these concerns, previous studies, and underlying theories, the following hypothesis was formulated, and the research model can be seen below in Figure 1.

H_1: *IA influences EWB (Insurtech Adoption ➔ Elderly Well-Being)*

H_2: *IA influence EWB mediated by SV (Insurtech Adoption ➔ Societal Value ➔ Elderly Well-Being)*

H_3: *IA influences EWB mediated by INL and SV (Insurtech Adoption ➔ Insurance Inclusion ➔ Societal Value ➔ Elderly Well-Being).*
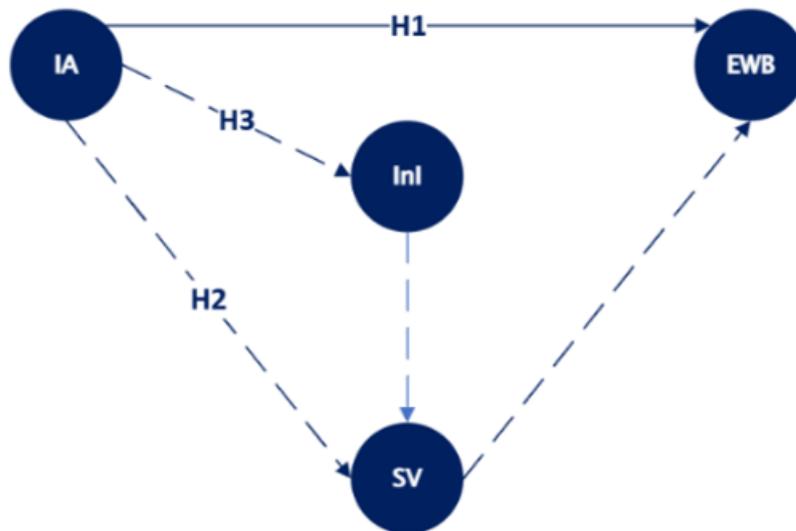

Figure 1.
Research Model.

4. Materials and Methods

This study adopted a quantitative approach, focusing on army and police pensions in Indonesia. The population of retirees from the Indonesian National Armed Forces (TNI) and the Indonesian Police Force (Polri) who had retired in mid-2024 is 476,869. The sample size was determined using simple random sampling with the proportion formula (n = Npq / (N - 1)D + pq), which yielded a sample size of 384 [38]. The D value was obtained from the formula $(B/Z_{1-\alpha/2})^2$) using a significance level α of 5%. The 384 samples were obtained, representing the retired proportion in the Police, Army, Navy, and Air Force.

Data were collected through structured survey questionnaires concerning 37 indicators from 4 latent variables and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). This method was selected due to its capacity as a multivariate statistical technique, enabling the examination of relationships and influences between observed variables and latent variables. The latent variables include one independent variable, Insurtech Adoption (IA), with 9 indicators; the dependent variable, Elderly Well-Being (EWB), with 9 indicators; and two mediating variables, namely Insurance Inclusion (INL), with 9 indicators, and Societal Value (SV), with 10 indicators. Based on previous research, the

indicators forming IA are as follows: Easy to use, Easy to learn, Confidence to use, User-friendly, Easily monitored, Easy in transactions, Efficiency, Transparency, and User Experience. The indicators forming INL are: Appropriateness, Ease of Access, Response Needs, Responsiveness, Easy Requirements, Intent to Use, Likelihood to Recommend, Service Variety, and Satisfaction. The EWB variable is constructed using indicators from Grossi et al.'s studies [19], which include Empowering, Emotional State, Happiness, Social Connectedness, Social Communication, Health Monitoring, Satisfying Activities, and Prompt Assistance. The additional mediating variable SV is compiled from indicators with reference to Davis [39] and Singh [40], namely Supported by friends and family; Experience; Appreciation; Acceptance; Involvement; Joyful; Contribution; Reliance; Community [39, 40].

The characteristics of the respondents will be analyzed descriptively, followed by quantitative data processing arranged on a Likert scale of 1 to 5 for empirical analysis using Structural Equation Modeling (SEM-PLS). Before conducting this survey, a pre-survey was conducted to test the validity and reliability with 50 samples. The results show that all variables have Cronbach's Alpha values greater than 0.9, indicating excellent reliability. The validity test using Pearson correlation (r-table > 0.2787) yielded results indicating that each indicator possesses a correlation value greater than r-table, confirming the validity of all indicators. The primary survey was then conducted with 384 retired respondents from the Indonesian National Police (Polri) and the Indonesian National Armed Forces (TNI). The data underwent analysis using Structural Equation Modeling (SEM-PLS), which comprises two components: measurement model evaluation and structural model evaluation.

5. Results

The 384 samples obtained by means of simple random sampling are expected to represent the characteristics of the population as a whole. The largest portion of respondents was from the Army at 50%, followed by the Police at 33.3%, then the Navy at 10.4%, and the Air Force at 5.4%. The majority of the sample, 79.43%, possessed only social insurance, while a comparatively smaller percentage, 20.57%, possessed other insurance.

A majority of the respondents (54%) reported no additional income, while the remaining 46% indicated they still had other income. In terms of their rank, more than half of the respondents (51.82%) were non-commissioned officers (the second rank group out of five rank groups). A closer look at the data reveals a striking reliance on monthly pension benefits among respondents, underscoring the importance of swift service processes, precise data management, and streamlined claim procedures in improving the well-being of this demographic.

However, the survey results indicated that the highest priority for welfare was social well-being (40%) in the form of togetherness, connectedness with family, relatives, and the environment. The second most prioritized domain was physical well-being (29%), followed by spiritual well-being (22%), and financial well-being (9%) in the lowest position.

In evaluating the measurement model, it was observed that all the loading factors (λ) are greater than 0.7, indicating that all the indicators used are valid in measuring the latent variable. Similarly, the reliability test results demonstrate the degree of reliability and stability of the research measuring instrument, with the composite reliability value exceeding 0.7. Therefore, the latent variable is considered reliable.

Table 1.
Validity Test Result.

Insurtech Adoption		Insurance Inclusion		Societal Value		Elderly Well-Being	
Indicator	**Loading Factor**	**Indicator**	**Loading Factor**	**Indicator**	**Loading Factor**	**Indicator**	**Loading Factor**
IA1	0.818	INL1	0.788	SV1	0.801	EWB1	0.811
IA2	0.854	INL2	0.832	SV2	0.778	EWB2	0.777
IA3	0.859	**INL3**	**0.87**	SV3	0.795	EWB3	0.828
IA4	0.866	INL4	0.793	SV4	0.868	EWB4	0.854
IA5	**0.874**	INL5	0.853	**SV5**	**0.871**	**EWB5**	**0.867**
IA6	0.863	INL6	0.853	SV6	0.846	**EWB6**	**0.867**
IA7	0.847	INL7	0.82	SV7	0.867	EWB7	0.833
IA8	0.869	INL8	0.853	SV8	0.717	EWB8	0.813
IA9	0.837	INL9	0.832	SV9	0.822	EWB9	0.716
				SV10	0,814		

Table 2.
List of Indicators.

Code	Indicator	Code	Indicator	Code	Indicator	Code	Indicator
Insurtech Adoption (IA)		**Insurance Inclusion (INL)**		**Societal Value (SV)**		**Elderly Well-Being (EWB)**	
IA1	Easy to use	INL1	Appropriateness	SV1	Support	EWB1	Empowering
IA2	Easy to learn	INL2	Ease of Access	SV2	Experience	EWB2	State Detection
IA3	Confidence to use	INL3	Needs	SV3	Appreciation	EWB3	Happiness
IA4	User Friendly	INL4	Responsiveness	SV4	Acceptance	EWB4	Social Connectedness
IA5	Easily monitored	INL5	Easy Requirements	SV5	Involvement	EWB5	Social Communication
IA6	Easy transaction	INL6	Intention	SV6	Joyful	EWB6	Actualization
IA7	Efficiency	INL7	Recommendation	SV7	Contribution	EWB7	Health Monitoring
IA8	Transparency	INL8	Variety	SV8	Reliance	EWB8	Satisfying Activities
IA9	User Experience	INL9	Satisfaction	SV9	Community support	EWB9	Prompt Assistant
				SV10	Presence		

As illustrated in Table 1, the IA5 indicator, characterized by its ease of monitoring, emerges as the most significant among the other indicators within the IA variable. This finding suggests that the Insurtech application's ease of monitoring has a substantial influence on the adoption and utilization of Insurtech by the elderly population.

In the INL variable, the indicator that exerts the most significant effect is INL3 (response need). This finding indicates that the insurtech application under review has effectively addressed the needs of the elderly population. In a similar way, in the SV variable, it can be seen that the indicator SV5 (involvement) in the form of social participation has the most significant effect on societal value for the elderly. The form of social connectedness, encompassing social communication and actualization, is a determining indicator among other indicators in the variable of elderly well-being. However, it is crucial to note that all indicators have the capacity to influence each latent variable, and the outcomes of this investigation align with the findings of previous studies [12, 20, 39]. These studies served as a foundation for the operationalization of the IA, INL, SV, and EWB variables.

Before conducting empirical tests, exploratory factor analysis (EFA) is performed as the first stage to understand the correlation patterns between variables and to explain most of the variance in a large number of observed variables [41]. Table 3 shows that the KMO Bartlett test results indicate that the data fulfill the assumptions of data adequacy. The results of insurtech adoption indicators explain 73% of the variation in insurtech adoption. The variation in insurance inclusion is explained by 70% of the indicators used. Regarding societal value, the variation can be explained by 67% of the variable indicators used.

Table 3.
Exploratory Factor Analysis for Independent Variable

Insurtech adoption (IA)	
Eigen Value	6.567
Variance%	72.965%
KMO	0.950
Barlett Test	3041.912
Significance Level	0.000
Insurance Inclusion (InI)	
Eigen Value	6.245
Variance%	69.391
KMO	0.949
Barlett Test	2665.409
Significance Level	0.000
Societal Value (SV)	
Eigen Value	6.711
Variance%	67.110
KMO	0.948
Barlett Test	2973.006
Significance Level	0.000

The subsequent evaluation involves a structural model to ascertain the relationship between variables, with the research model arranged as depicted in Figure 1. The research model consists of four variables: Insurtech Adoption (IA) as the independent variable, Elderly Well-Being (EWB) as the dependent variable, and Insurance Inclusion (INL) and Societal

Value (SV) as mediating variables. In the path analysis with path coefficients, the data is obtained as shown in the Table 2 and Table 3. The T-statistic value obtained from the structural model evaluation indicates a direct impact of IA on EWB, with a significant level of 5.995. However, when considering the mediating effects of INL and SV, IA exhibits a significantly augmented influence on EWB, with a T-statistic value of 6.338. The mediating role of INL and SV in enhancing the impact of IA on EWB is substantiated by the available evidence.

However, when the mediating role is played only by SV, the effect of IA on EWB is substantially weaker at 2.316 than the direct relationship of IA to EWB, which is 5.995. The significance of the indirect relationship of IA to EWB through SV is weakened because the path coefficient of IA on SV is -0.178 (as shown in Table 4). However, all hypotheses, as in Table 3, H1, H2, and H3, remain acceptable with a significance level of alpha 5% ($\alpha = 0.05$). Theoretically, the significant results for all hypotheses support the TAM and DOI theories, which will be discussed in the Discussion section.

Table 4.
Path analysis with T-statistics and P-value.

	Path	Original Sample(O)	T-statistics	P-Value	Decision
H1	IA → EWB	0.376	5.995	0.000	Accept H1
H2	IA → SV → EWB	-0.111	2.316	0.021	Accept H2
H3	IA → INL → SV → EWB	0.348	6.338	0.000	Accept H3

Source: Output from SEM-PLS.

Table 5.
Path Coefficient.

Variable	Insurtech Adoption	Insurance Inclusion	Societal Value	Elderly Well-Being
Insurtech Adoption		0.770	-0.178	0.124
Insurance Inclusion			0.728	
Societal Value				0.659
Elderly Well-Being				

6. Discussion

There is a phenomenon that shows an inverse relationship between IA and SV with a path coefficient of -0.178. It can be interpreted that the higher the adoption of insurtech by retirees, the lower the perceived social value. For this reason, the mediating role of the INL variable is important so that SV does not stand alone as a mediator in the relationship between IA and EWB. The role of the two mediators is very important, where the relationship between IA and EWB is able to significantly influence when through INL and SV sequentially as mediating variables.

The findings of path analysis, particularly H2, which resulted in a diminishing influence relationship from IA to EWB through SV, also constituted a novel contribution to this study. The notion that an improvement in IA directly decreases SV can be explained by the DOI theory. According to the DOI theory, the introduction of new technology often leads to resistance when it does not provide immediate benefits that are easily perceived [22]. This, in turn, can result in a decrease in perceived social value.

The primary novelty of this research is the significant role played by artificial intelligence (AI) in enhancing elderly well-being (EWB) through the mediating effects of internal and social variables (INL and SV). Additionally, the study surveyed police and military veterans, providing a comprehensive perspective on the subject. From a managerial standpoint, ensuring inclusivity for retirees is essential. Insurtech applications must be designed with elderly users in mind, employing legible fonts and sizes, incorporating common symbols, and structuring stages with limited complexity. These design elements help elderly individuals perceive the application as suitable for their needs. Furthermore, societal value can be realized through flexibility in the timing and location of claim submissions. Authentication can be facilitated via various media and devices, including those owned by the individual or their family members. Educational content, such as articles, video tutorials, demonstrations, and quizzes, can enhance the attractiveness and social value perceived by the elderly, encouraging participation and involvement, which benefits their well-being. This assertion is further supported by Bandura's theory, which emphasizes that the process through which this attraction occurs is crucial in determining the importance of self-efficacy. Ultimately, this self-efficacy promotes self-actualization and happiness, both of which are vital components of elderly well-being.

6.1. Implications of Theory

The Technology Acceptance Model theory Davis [42], as mentioned in the Literature Review, the implications have been proven by the compatibility of the theory with the results of this study. The perceived Ease of Use and Perceived Usefulness, as dimensions that form IA, can explain the significant influence of IA directly on EWB.

All indicators within the dimensions of Perceived Ease of Use and Perceived Usefulness demonstrate valid and sufficiently high factor loadings, contributing to their respective latent variables. Therefore, it can be concluded that IA influences older adults to feel more confident and comfortable (improved well-being) when accessing digital technology, particularly Insurtech for social insurance claims. With this ability, the elderly can be more independent and obtain benefits that meet their daily needs, thereby improving their overall well-being and confirming this theory.

The implications of this study are related to theories that combine Positive Psychology with Technology, using a scientific and applied approach to study the interaction between humans and computers [19]. In this study, we primarily

focus on the domain related to well-being in social and interpersonal contexts. The role of the mediating variables INL and SV enables retirees to experience comfort (networked flow), as described in Chapter II on the scope of positive technology. They can easily access and utilize services that align with their insurance needs without encountering significant barriers. Thus, through this research, the positive technology theory, which is linked to the scope of well-being, can be confirmed.

7. Conclusions

The emergence of insurance technology, known as insurtech, in social insurance is one of the challenges, especially for the elderly. The transformation of retiree habits from conventional to digital means of obtaining their monthly pension necessitates a unique structure, prioritizing insurance inclusion and societal value. The adoption of insurance technology should not only be perceived as a necessity but also as a means of improving the well-being of the elderly. This research demonstrates that insurance inclusion and societal value act as sequential mediators, exerting a substantial influence on the adoption of insurtech for elderly well-being. Conversely, if societal value solely mediates the impact, the effect on elderly well-being is expected to be significantly diminished.

The necessity of inclusivity for the elderly is essential. Insurtech applications for social insurance must be designed with elderly users in mind, employing fonts and sizes that are legible, incorporating common symbols, and structuring stages with limited complexity. These design elements ensure that elderly individuals perceive the application as being suitable for their needs. Consequently, the Elderly Well-Being initiative, which prioritizes social well-being, can be enhanced by the adoption of insurance technology, provided that the application is designed to be elderly-friendly, offering the necessary social value while maintaining accessibility and ease of use.

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