Exploring The Drivers of Millennial's Purchase Intention for Digital Pension Financial Products

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Abstract. The rapid aging of the world's population is putting enormous pressure on the pension system. China's approximately 400 million millennials have digital talents and are more receptive to and proficient in Internet technology. Although they are the main force of today's productivity, they also hope to prepare sufficient pension funds after retirement. Millennials' purchase intention of digital retirement financial products is an important issue. However, scholars have not yet conducted research on this topic. This paper aims to investigate the drivers of millennials' purchase intention for digital pension financial products. After collecting 395 valid online questionnaires, this study validated the proposed conceptual model using Partial Least Squares structural equation modelling. The result shows that perceived risk negatively affects perceived behavioral control, perceived value, and perceived trust, which in turn positively affects purchase intention. In addition, this study proposes relevant theoretical implications and practical applications and provides suggestions for future research directions.

Keywords: Millennials, Digital Pension Financial Products, Perceived value, Perceived Behavioral Control, Perceived Risk, Perceived Trust, Purchase Intention

1 Introduction

The world's population is growing rapidly, and it is estimated that the global population over 65 years old will increase to 1.6 billion by 2050 [1]. According to the data [2], the population of China's seniors exceeded 200 million, accounting for 14.2% of the total population. The aging problem faces severe challenges. Although China has established the world's largest social security network, covering basic pension insurance for over 1 billion people, the intertwined development trend of fewer children and rapid aging will bring new challenges to the basic pension system [3]. There will be a shortage of labor in the future, and the large-scale seniors' population in need of support will continue to grow, which poses a huge challenge to the public pension system (PS). Currently, the lack of retirement plans, increased consumer debt, and an aging population may put enormous pressure on the PS [4].

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Millennials refer to individuals born between 1981 and 1996. They grew up in the modern era of technological progress [5]. 38% of them will face income shortages after retirement due to a decrease in social security benefits, a continuous decline in traditional pensions, and insufficient savings in their accounts [6]. There are approximately 400 million millennials in China who are talented in digitization and are more receptive and proficient in Internet technology (IT). As the main force of today's productivity, this generation has witnessed significant changes in China's economy [7]. Due to the enormous pressure brought by the PS, few millennials believe that they will receive sufficient social security funds upon their normal retirement, which makes them feel anxious about retirement, and have a strong perceived risk (PR) in their future retirement life. Millennials have a strong perceived trust (PT) in digital platforms for investment [8]. This generation uses high-tech products to extend their abilities, as well as working and learning through the Internet. This experience has given them a clearer understanding of digital platforms and enhanced their perceived behavioral control (PBC) over digital platform products [9]. They understand relying on traditional pension plans to sustain their future life is no longer the best option. They need to prepare for retirement, develop clear savings plans and investment strategies, which increase their perceived value (PV) and purchase intention (PI) of digital seniors' pension products [10].

The Chinese people's PS heavily relies on government mechanisms, and the private PS funded by personal savings is still in its infancy [11]. To promote the development of the pension insurance market, the Chinese government has introduced a policy that allows people to defer tax when using their personal income to purchase commercial pension insurance. Personal retirement financial products will become the core business of the future retirement financial system. These products conform to the development of the Internet and are reshaping the service form of seniors' retirement financial products under the development of digital technology, which is more in line with the consumption habits of millennials [12]. There is no research exploring millennials' views on the demand for digital pension financial products (DPFPs). To fill the research gap, this study summarizes the literature and suggests incorporating five key constructs—PR, PV, PBC, PT, and PI—into the research framework and examining their relationships in millennials' demand for DPFPs.

2 Method

2.1 Measures

This study adapted the measurement items from previous studies. The items for each construct are listed as follows: three items (e.g., *I think I can use e-banking well for DPFPs*) for PBC [13], three items (e.g., *The chances of using the e-banking for DPFPs and losing control over the privacy of my payment information are high*) for PR [14], three items (e.g., *DPFPs of e-banking have high value in use*) for PV [15], three items (e.g., *I think that the e-banking of DPFPs will keep its promises and commitments*) for PT [16], five items (e.g., *DPFPs of e-banking can arouse my interest in purchasing*) for PI [17]. All questions were measured on a five-point Likert scale (1 for strong disagreement and 5 for strong agreement).

2.2 Sampling and Data Collection

In practice, the patterns of relationships in random and convenience samples are very similar [18]. Thus, this study adopted convenience sampling, which is by far the most common sampling strategy in psychological research. The survey was conducted in the Pearl River Delta (PRD) region, which accounts for 55% of Guangdong's population and whose economic and cultural development has a decisive impact on the entire province [19]. Qualified samples were residents of the region who were millennials, born between 1981 and 1996 (ages 27 to 42 years old). The data collection period was from June to September 2024. After eliminating invalid questionnaires (such as missing values, incomplete answers, all items on the same line, etc.), 395 valid questionnaires were collected, with a valid return rate of 94%. The answer obtained was higher than the recommended minimum sample size of 305 [20].

As shown in Table 1, the respondents were mainly male (62.3%), had a monthly personal income of less than RMB 5,000 (63.3%), and had a college degree or above (54.9%). Although a sample size larger than the recommended minimum is beneficial for improving statistical power, most participants in this survey were male millennials, who appear to have higher educational attainment than the Chinese millennial population. It may have a significant impact on the expected changes in the construct being measured. Ensuring a more balanced and representative sample will improve the robustness of the findings.

Table 1. Sample characteristics

Demographics	Characteristic	Frequency	Percentage
Gender	Male	246	62.3
	Female	149	37.7
Monthly income (RMB)	5,000 or less	250	63.3
	5,000 above	145	36.7
Education	High school and below	178	45.1
	College and above	217	54.9

3 Results

3.1 Measurement Model

The value of Cronbach's alpha (α) for each latent construct ranged from 0.81 to 0.90, which was higher than the suggested threshold of 0.70 [21]. Therefore, it implied good internal consistency and reliability of the measurements. Convergent validity of the measurement items in each construct should meet three conditions: (1) factor loadings (λ) should be significantly greater than 0.50; (2) the values of composite reliability (CR) should be greater than 0.70; and (3) the values of average variance extracted (AVE) should be greater than 0.50 [22]. The data in this study indicated that all the λ were above the threshold value of 0.70 (ranging from 0.73 to 0.91). The CR of constructs ranged from 0.88 to 0.93, which was higher than the threshold value of 0.70. Finally,

the AVE of constructs ranged from 0.64 to 0.76, which was also higher than the threshold of 0.50. The reliability and convergent validity of the constructs are summarized in Table 2.

Table 2. Reliability and convergent validity of constructs

Construct	Items	λ	AVE	CR	α
PI	5	0.82*-0.91*	0.76	0.93	0.90
PBC	3	0.73*-0.84*	0.64	0.88	0.81
PR	3	0.81*-0.89*	0.74	0.89	0.82
PT	3	0.80*-0.87*	0.69	0.90	0.85
PV	3	0.83*-0.89*	0.76	0.90	0.84
Criteria	-	0.50*	0.50	0.70	0.70

Note: * $p < 0.001$

Discriminant validity is examined by comparing the correlation between the construct and the square root of AVE. Discriminant validity is indicated if the AVE for each multi-item construct is greater than the shared variance between constructs. Because the square roots of the construct AVE values were all significantly greater than the correlation values, the constructs in this study demonstrated acceptable discriminant validity [22]. The correlations and AVE of the study constructs are summarized in Table 3.

Table 3. Discriminant Validity of constructs

Construct	PI	PBC	PR	PT	PV
PI	**0.87**				
PBC	0.74	**0.80**			
PR	0.41	0.51	**0.86**		
PT	0.83	0.73	0.42	**0.83**	
PV	0.81	0.81	0.46	0.79	**0.87**

Note: The bold numbers on the diagonal are the square roots of the AVEs. The off-diagonal elements are correlations between constructs.

3.2 Structure Model

The assessment of the model's quality is based on its ability to predict endogenous constructs [23]. The coefficient of determination (R^2), the path coefficients (βs) and their respective p-values are three assessments used to evaluate the proposed model. R^2, which represents the percentage of the variance explained for the dependent constructs, is used to measure a model's predictive accuracy. The βs and their *p*-values represent the hypothesized relationships between the constructs. By specifying a structural model in PLS and running its algorithm along with the bootstrapping procedure with 5,000 bootstrap samples in SmartPLS, this study obtained the βs, their respective *p*-values and the R^2 coefficients of the endogenous constructs. Figure 1 indicated that PBC, PV, PT, and PI had R^2 values of 0.26, 0.32, 0.27, and 0.85, respectively, all were

greater than 0.25 [23]. The result shows that the structure model met the standards set forth by researchers, and this model had acceptable forecasting ability. This model indicated that millennials' PR negatively influenced their PBC, PV, and PT with path coefficients of -0.46 ($p < 0.001$), -0.51 ($p < 0.001$) and -0.42 ($p < 0.001$), respectively. Millennials' PBC, PV and PT positively influenced their PI, with path coefficients of 0.13 ($p < 0.05$), 0.33 ($p < 0.001$) and 0.48 ($p < 0.001$), respectively.

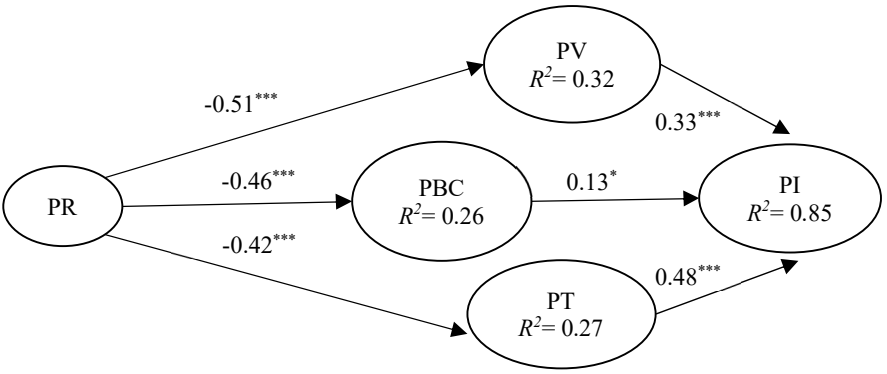

Fig. 1. Result of research framework

Note: $^{***}p < 0.001$; $^{**}p < 0.01$, $^{*}p < 0.05$.

4 Discussion and Conclusions

4.1 Research Findings and Discussions

Empirical research has found that millennials in the PRD region are extremely valuable potential target customers for DPFPs and will help ease Guangdong's PS pressure. First, the data in Figure 1 show that PBC, PT, and PV are determinants of PI among millennials. In other words, to encourage millennials to purchase DPFPs for their future retirement while facing the increasing challenges of an aging population, it is necessary to strengthen their PBC, PT, and PV for DPFPs. Finally, the data in the structural model showed that PR significantly reduced PBC, PT, and PV. This phenomenon suggests that it is worth paying attention to how to weaken the PR of millennials to improve their PBC PT and PV.

While understanding the level of engagement of Chinese millennials in the DPFPs can provide valuable lessons, caution must be exercised when generalizing these findings to other countries or regions. When assessing the generalizability of the findings regarding millennial participation in the DPFPs, it is important to consider the various factors that influence retirement systems and consumer behavior in different countries and regions. While some key insights may have global relevance, other contextual variables such as cultural differences, regulatory environment, economic factors, technology adoption, and policy landscape and support systems may affect their applicability. More comprehensive research that considers these contextual factors in different set-

tings could verify whether the patterns observed in China resonate similarly with millennials around the world. Cross-national comparative studies can provide richer insights into how different factors influence pension behaviors and attitudes in an increasingly interconnected world.

4.2 Theoretical Implications

The study findings enhance academic significance and make the following important contributions to existing literature. First, it fills a significant gap in academic research on PI of millennials' DPFPs behavior. This helps build a foundational understanding of how millennials view and interact with DPFPs. Second, it integrates constructs such as PR, PBC, PV, and PT in the context of the DPFPs, providing a nuanced understanding of how these factors interact to influence millennials' PI. Third, by integrating PR and PT into consumer behavior models, the study can propose a deeper and more comprehensive framework to understand millennial consumer behavior related to DPFPs. The interaction between PR and PT is crucial. Lower PR (consistent with the Technology Acceptance Model and Expectancy Confirmation Theory) and higher PT (consistent with the Elaboration Likelihood Model and the Theory of Planned Behavior) can lead to positive PI. Finally, by focusing on digitally literate and technologically competent Millennials, it reveals broader trends in young consumers' behavior regarding financial planning and investing.

4.3 Managerial Implications

Millennials are a valuable potential target for the DPFPs market, helping to relieve pressure on government PS. To effectively address their needs and concerns about DPFPs, governments and financial institutions can implement some feasible policies and strategies to foster a savings culture and enhance their financial security. First, improve financial literacy: Develop financial literacy courses, workshops, and online resources that cover DPFPs to enhance millennials' understanding of retirement savings (RS). Social media can also be used to conduct targeted campaigns to promote the importance of RS. Second, promote accessible digital tools: User-friendly digital platforms and mobile applications should be developed to simplify the retirement planning and investment selection process, enhance the user experience, and provide educational resources to increase engagement and encourage regular use. Third, governments should provide regulatory support for flexible retirement options (e.g., policy frameworks that encourage innovation and incentivize employers) and encourage employer-sponsored retirement plans (e.g., incentives for employer participation and educational support). Financial institutions should build trust through transparency and security (e.g., by emphasizing data security and clearly communicating product features). Finally, encouraging employers to sponsor retirement plans (e.g., participation incentives, employer education support), developing customized communication strategies (e.g., using multiple communication channels, peer-to-peer learning), and feedback mechanisms (e.g., regular surveys, focus groups, and user testing of new products) can all help millennials meet their unique needs.

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