Consumer Attitude Towards Intention to Invest Private Retirement Scheme (PRS) in Structure Equation Modelling

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ABSTRACT

Manuscript type: Research paper

Research aims: The study examines the factors influencing the intention to invest in Private Retirement Schemes (PRS), with attitudes as moderating variables.

Design/Methodology/Approach: A quantitative approach was employed using a structured Google Form survey. Data on PRS investment intention were collected from respondents, assessing social (firm-generated/user-generated social media, social influence), marketing (transaction cost, advertisement), and personal factors (brand image, financial literacy, risk tolerance, trust, investment experience). Path analysis was used to examine relationships among variables and test the moderating effects of attitudes.

Research findings: Attitudes mediate the relationship between the determinants and PRS investment intention. Advertising, financial literacy, and social influence significantly impact attitudes, shaping investment desire.

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Theoretical contribution/Originality: This study integrates the theory of planned behaviour (TPB), life cycle theory (LCT), and symbolic interaction theory (SIT) to provide a comprehensive understanding of the factors influencing PRS investment. It extends TPB by confirming attitudes as a mediating factor, incorporates LCT to explain investment behaviour across different stages of life, and applies SIT to explore the role of social influences and perceptions in shaping investment intentions. This multidimensional approach contributes to retirement investment research by offering a holistic perspective on the determinants of PRS investment.
Practitioner/Policy implications: Findings suggest policymakers promote PRS through targeted advertising, financial literacy initiatives, and leveraging social influence, with tailored strategies for different income groups.
Research limitation: The study may overlook systemic factors, lacks generalisability, and excludes psychological issues.

Keywords: Social aspects, Marketing aspects, Personal aspects, Private Retirement Scheme, Malaysia
JEL Classification: D11, D14, D15

1. Introduction

It is essential for individuals to ensure that they have sufficient funds for retirement in order to maintain their financial stability. The absence of a consistent income during this phase can have a considerable influence on retirees, affecting not only the financial situation of their families, but also the living standards of their communities. Financial obligations associated with retirement may include covering daily living expenses such as housing, food, and utilities; managing healthcare costs for medical treatments and medications; addressing long-term care needs; and, in some cases, continuing to support dependents or repaying outstanding debts. As revealed by the Credit Counselling and Debt Management Agency (AKPK), it is concerning that more than 50% of Malaysians may have difficulty meeting these financial obligations associated with their retirement. This is due to the fact that there are not enough savings, as evidenced by the statistic that approximately 6.3 million Employees Provident Fund (EPF) members under the age of 55—representing 48% of this demographic—have less than RM10,000 in their accounts, highlighting the critical need for enhanced retirement planning (MOF, 2023).

Adding insult to injury is the fact that it is anticipated that by the year 2035, Malaysia will have become an ageing society, with 30% of the population aged 60 years or older. According to Daim and Yunus (2021), this demographic transition raises concerns about

the ability of the national budget to sustain retirees, particularly as the population ages and the proportion of retirees relative to the working population increases. This challenge is compounded by the growth in government spending on pensions, healthcare, and social welfare programmes, which is projected to increase significantly, from RM9.88 billion in 2010 to RM26.38 billion in 2020. A substantial portion of this spending is allocated to public sector pensions, retirement gratuities, and healthcare subsidies for retirees, as well as social assistance programmes aimed at supporting elderly individuals without sufficient income or savings. This significant rise indicates mounting pressure on public resources to address these obligations. Civil servants and retirees who rely on government pensions may face uncertainty if fiscal constraints force reductions in benefits or delays in disbursement. Moreover, increased spending in these areas may lead to reduced allocations for other essential services, such as education, infrastructure development, and economic growth initiatives. These trends underscore the urgency of implementing policies to promote private retirement savings and reduce over-reliance on public funds, ensuring a sustainable fiscal future.

A significant portion of Malaysians are unprepared for retirement, with only 33% of active EPF members achieving the basic savings threshold of RM240,000 as of 2023, a slight improvement from 31% in 2021 (*The Star*, 2024). This shortfall is attributed to factors such as the rising cost of living and economic instability. Recognising the urgency of this issue, the Financial Education Network (FEN) launched the National Strategy for Financial Literacy 2019–2023, aiming to enhance Malaysians' financial literacy and well-being by increasing access to financial management information and resources (FEN, 2023).

It is noteworthy that a sizeable proportion of Malaysians under the age of 55 have inadequate savings for retirement. According to Kamarulzaidi and Mahanum (2023), 51.5% of the population, or 6.62 million members, have less than RM10,000 in savings, while 3.2 million have less than RM1,000. This underscores the possibility that Malaysians could face widespread financial difficulties in their senior years. In the private sector, where savings are completely dependent on contributions from members and employers, the sufficiency of retirement savings is a specific cause for concern. At the age of 55, fewer than 25% percent of EPF members achieve the minimal basic savings criterion. This criterion requires funds that are sufficient to cover 20 years' worth of expenses that are at or above the poverty line, which is presently RM240,000. Despite the fact that 30% of

the workforce does not have EPF or Social Security Organisation (SOCSO) coverage, the former system now permits members to invest a portion of their assets with approved managers. For this reason, the Private Retirement Scheme (PRS) was established as an alternative retirement fund (Jamaludin, 2012). PRS is one of the alternative investment schemes that assists individuals in saving for their retirement. The structure of PRS is depicted in Figure 1, which demonstrates that 70% of the funds are held in account A and 30% are held in account B.
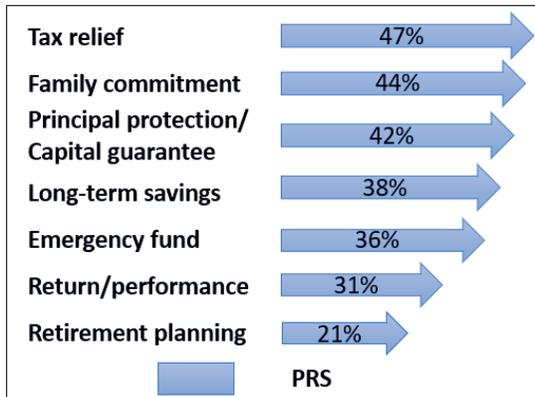
Figure 1: PRS account structure
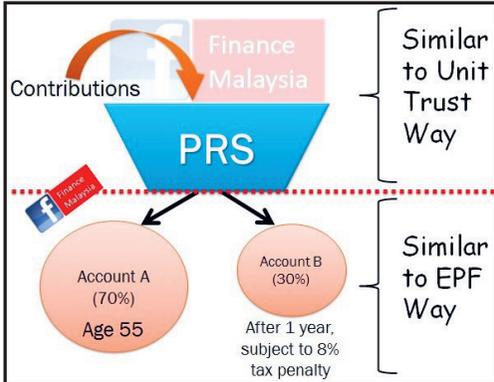
Source: Yeoh (2012)

Based on the survey, Figure 2 shows the seven primary factors that motivated investors to invest in the PRS scheme. The reasons for this include the optimisation of tax incentives, dedication to family, safeguarding of principal, assurance of long-term savings, establishment of an emergency fund, consideration of return and performance, and preparation for retirement. These findings emphasise the wide array of incentives that drive investors to join the PRS scheme and provide insight into the many financial goals and priorities that individuals consider when making investment decisions.

Figure 2: Investors' investment objectives — PRS

Objective	Percentage
Tax relief	47%
Family commitment	44%
Principal protection/Capital guarantee	42%
Long-term savings	38%
Emergency fund	36%
Return/performance	31%
Retirement planning	21%

PRS

Source: FIMM Nationwide Survey (2019)

According to recent studies, awareness and interest in the PRS remain low among Malaysians, particularly in rural areas, due to limited financial literacy and motivation to participate (RinggitPlus, 2023; FEN, 2020). PRS faces challenges as it is a voluntary scheme and does not guarantee returns, making it less attractive to potential investors. This study seeks to address the following research questions: what are the key social, marketing, and personal factors influencing Malaysian consumers' attitudes toward PRS products? To what extent do government support, age, and income moderate the relationship between these factors and attitudes toward PRS? By answering these questions, the study aims to provide insights into the interplay of these factors and offer recommendations for improving PRS awareness and participation.

2. Literature Review

2.1 Life Cycle Theory

The life cycle theory (LCT) posits that individuals tend to choose a stable lifestyle and are rational planners of their consumption and saving needs over their lifetime (Shanmugam et al., 2017; Mitchell & Utkus, 2003). This perspective assumes that people are future-oriented, capable of identifying necessary savings, and judicious in utilising income sources throughout their lives.

However, deviations from this theory have been observed due to behavioural, economic, and demographic factors. For instance, behavioural tendencies such as procrastination, myopia, and overconfidence often lead individuals to prioritise present

consumption over future savings, contradicting the rational planning assumption. Economic factors, such as sudden income shocks, unemployment, or insufficient earnings, can disrupt planned savings trajectories, forcing individuals to deplete their reserves prematurely. Additionally, demographic factors, including longer life expectancies and rising healthcare costs, often leave individuals underprepared for retirement despite their initial plans. Such deviations highlight the complexities of real-world financial decision-making, which may diverge significantly from the theoretical model's predictions.

Figure 3: Life cycle theory
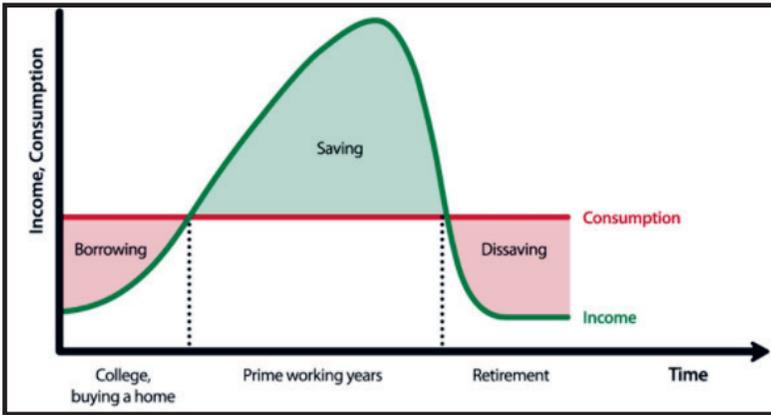
Source: Stasinopoulos (2015)

Figure 3 illustrates the areas where individuals save or spend more than their incomes as they progress from their working years to retirement. Furthermore, it is postulated that individuals possess a future-oriented mindset and engage in rational planning when it comes to their consumption and saving requirements throughout their lifetime (Mitchell & Utkus, 2003). They are responsible for determining the required savings amount and managing the allocation of income sources throughout their lifetime. However, there are observed deviations from this idea. Research indicates that many people lack the financial knowledge to estimate their retirement needs, leading to inadequate savings and negligence in retirement planning, regardless of whether they reside in developed or developing countries (Ghilarducci et al., 2015). Additionally, Mokaya (2018) notes contradictions to the theory's prediction of a decline in savings during retirement. Some retirees, driven by increased risk aversion, continue saving during retirement to bolster

their precautionary savings. Others may benefit from well-managed pension programmes or save more due to profitable investments made in their youth (Deaton, 2005).

2.2 *Theory of Planned Behaviour (TPB)*

Ajzen's (2002) theory of planned behaviour (TPB) serves as a foundational paradigm connecting consumer attitudes to purchasing intention, providing valuable insights into the study of consumer perceptions, particularly in the context of Malaysia's PRS. This theory posits that an individual's intention to participate in a particular activity is the key determinant of their actual behaviour, with this intention being influenced by their attitude towards the behaviour, subjective norms, and perceived behavioural control.

In essence, TPB suggests that individuals are more likely to engage in a specific behaviour if their intentions are strong and favourable. The strength of these intentions is crucial in predicting actual behaviour. However, TPB recognises that external factors, referred to as intervening events, can influence and potentially alter intentions or perceptions of behavioural control, thereby impacting the accuracy of behaviour predictions.

Figure 4: Structure of the theory of planned behaviour
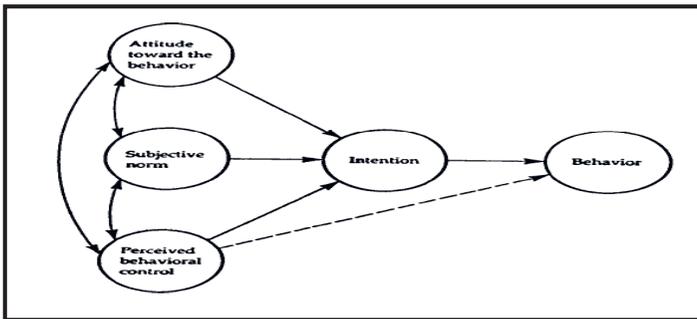
Source: Ajzen (2002)

Figure 4 provides a structural diagram of the TPB, illustrating the interconnectedness of attitude, subjective norms, perceived behavioural control, and intentions. Notably, the diagram omits the feedback effects of conduct on antecedent variables for clarity. Intentions, as a central concept in TPB, signify the motivating factors behind conduct and offer insights into the level of effort an individual is willing to exert.

The general premise is that as the strength of intention to engage in a specific behaviour increases, so does the likelihood of the behaviour being carried out. This theoretical framework is particularly relevant in the examination of consumer perceptions of the PRS in Malaysia. By applying TPB, researchers can gain a deeper understanding of the factors influencing individuals' intentions to participate in retirement planning and investment activities, ultimately shedding light on the effectiveness of PRS initiatives. It is important to note that while TPB provides a robust framework, it acknowledges the dynamic nature of human behaviour and the potential impact of external factors on behavioural intentions. This literature review sets the stage for the subsequent exploration of consumer attitudes towards PRS products in Malaysia, emphasising the relevance and applicability of TPB in uncovering the intricacies of retirement planning behaviour.

2.3   *Attitude towards PRS*

The literature on attitudes towards PRS in Malaysia emphasises the crucial significance of addressing many issues, including awareness, perceived complexity, government backing, and demographic variations. These elements have a substantial impact on how people perceive and make decisions about participating in PRS. Ajzen's (2002) TPB serves as a relevant framework to understand attitudes toward PRS, as it suggests that individual behaviour is influenced by attitudes, subjective norms, and perceived behavioural control. The TPB provides a basis for exploring how positive attitudes, supportive social environments, and an individual's confidence in managing PRS-related processes can drive participation. LCT also aligns with PRS engagement, as it posits that individuals plan their consumption and savings over their lifetime to ensure financial security during retirement. However, deviations from this theory due to behavioural tendencies, such as procrastination or low financial literacy, may hinder effective participation in PRS.

To improve retirement planning activities in Malaysia, authorities and financial institutions must have a detailed grasp of consumer attitudes about PRS. By thoroughly examining the intricacies of consumer attitudes, governments, and financial institutions can customise actions and tactics to successfully promote engagement in PRS. Targeted educational programmes can address low awareness levels and demystify PRS, reducing perceived complexities and making it more accessible and appealing to potential investors (Zabri et al., 2016; Ali, 2017). For instance, financial literacy

initiatives informed by the TPB could focus on reshaping attitudes and strengthening perceived behavioural control, fostering greater confidence in PRS participation. Furthermore, utilising government assistance and incentives can also motivate Malaysians to participate in PRS and foster trust in their retirement planning endeavours. Incentives such as tax relief or matching contributions, when effectively communicated, can reinforce positive subjective norms and encourage individuals to view PRS as a viable component of their retirement strategy (Shanmugam et al., 2017).

Demographic disparities, such as variations in age, income level, and cultural origins, further highlight the importance of tailored interventions. Younger individuals may perceive retirement planning as less urgent compared to older cohorts, while lower-income groups may view PRS contributions as an unaffordable luxury. Cultural factors, including family-oriented financial practices, may also shape attitudes toward PRS. According to the symbolic interaction theory (SIT) (Blumer, 1969), social interactions and cultural norms significantly influence individual attitudes and behaviour. Acknowledging these variations can help in developing customised communication methods and financial education programmes that cater to the distinct requirements and inclinations of various groups.

Addressing attitudes regarding PRS in Malaysia is crucial for the success of retirement planning activities and the achievement of a financially secure future for Malaysians. To enhance the overall financial well-being and retirement security of the Malaysian population, policymakers and financial institutions can empower individuals by promoting positive attitudes and increasing participation in PRS. By leveraging theoretical frameworks such as the TPB, LCT, and SIT, they can implement targeted strategies that encourage individuals to take proactive steps toward building a strong retirement fund.

2.4 *Firm-Created Social Media*

Firm-created social media refers to a platform established and controlled by a corporation to interact with its audience, enhance brand visibility, and foster customer connections (Kaplan & Haenlein, 2010). This study examines the relationship between attitudes and firm-generated social media within the framework of PRS products. Operating under Web 2.0 principles, firm-created social media enables the sharing of user-generated content and promotes interactive communication between companies and their audiences.

TPB provides a relevant framework for understanding this

relationship. TPB posits that attitudes, subjective norms, and perceived behavioural control influence an individual's intention to engage in a behaviour. In the context of PRS, firm-created social media can shape positive attitudes by providing clear, engaging content about PRS benefits, while fostering supportive subjective norms through testimonials and community interaction. Additionally, social media platforms can enhance perceived behavioural control by simplifying access to information and facilitating informed decision-making about PRS participation.

The first hypothesis, H_1, suggests a connection between firm-created social media and consumer attitudes toward PRS. By strategically leveraging social media to align with TPB constructs, companies can build trust, encourage interaction, and positively influence consumer perceptions. This study will test H_1, offering insights into how firm-controlled social media can improve financial literacy and promote greater engagement with PRS products.

2.5 *Social Influence*

Social influence encompasses the dynamics and interactions that shape individuals' attitudes and behaviours toward financial products and services. Extensive research underscores its pivotal role in building trust in financial institutions and influencing the adoption of financial products. Recent studies have found that family and peer opinions significantly impact individuals' financial planning attitudes and retirement saving decisions. For instance, Alshebami and Aldhyani (2022) observe that parental and peer influences positively predict financial literacy among Saudi youth, which in turn affects their saving behaviours. Similarly, a 2023 study highlighted that parental socialisation and peer influence significantly determine saving behaviours among the workforce of a state college in Davao de Oro, Philippines (Parroco, 2023). These findings emphasise that societal norms, cultural values, and peer networks play crucial roles in shaping financial attitudes and behaviours.

Hypothesis H_3 suggests a correlation between the social influence of different social factors and attitudes towards PRS. The study seeks to illuminate the intricate relationship between social dynamics and retirement investment behaviour by examining how social factors, including family, friends, and broader social networks, influence individuals' views about PRS. Gaining a comprehensive understanding of this connection is crucial for formulating specific tactics to improve membership in PRS and strengthen retirement stability in response to societal factors.

2.6   Transaction Cost

To analyse consumers' willingness to participate in PRS, it is essential to have a thorough comprehension of transaction costs, which play a crucial role in affecting decision-making processes. According to Sunstein and Thaler (2008), people tend to choose alternatives that are viewed as less difficult or burdensome, highlighting the important influence of transaction costs in shaping decisions. Within the framework of PRS, transaction costs refer to various expenditures such as administrative fees, sales commissions, and taxes. These costs can diminish the appeal of the scheme to potential investors (Hsiao, 2020).

In contrast, Lusardi (2014) demonstrates that decreased transaction expenses can make PRS more attractive, thereby raising the probability of investment. As such, the study will examine hypothesis H_4, which investigates the correlation between transaction costs and attitudes towards PRS. This project seeks to analyse the impact of transaction costs on individuals' perceptions of PRS. The objective is to gain useful insights into the elements that influence investment decisions in retirement planning. Ultimately, the findings will inspire initiatives to reduce barriers and encourage more people to participate in PRS.

2.7   Advertisement

Advertising has a crucial role in influencing customers' inclination to invest in PRS by creating knowledge of its characteristics and benefits, therefore helping them make well-informed decisions. An influential process employed by advertising is the elicitation of a feeling of urgency or necessity. Advertisements often emphasise the need for retirement planning by drawing attention to the potential dangers that come with ignoring this crucial element of financial stability. Advertising aims to motivate customers by emphasising these themes, urging them to take proactive measures to protect their future financial well-being (Hsiao, 2020).

The study will investigate hypothesis H_5, which analyses the complex correlation between marketing elements depicted in advertising and persons' opinions about PRS. The study will uncover the fundamental mechanisms via which advertising influences investment decision-making in the field of retirement planning. The project seeks to analyse these dynamics to gain useful insights that can be used to design more successful advertising campaigns. These techniques will be tailored to boost PRS involvement and increase engagement among potential investors.

2.8 Brand Image

Mohd Suki and Mohd Suki (2015) find that consumers' inclination to purchase Islamic PRS was positively correlated with their opinion of the brand image. This study illuminated the substantial influence of customers' brand impressions on their trust levels and overall satisfaction, thereby affecting their likelihood to make a purchase. Expanding on these observations, Chong et al. (2017) highlight the crucial significance of brand image in influencing consumers' choices to allocate funds towards retirement solutions. According to their research, when people perceive a product or service to be valuable and credible, they are more likely to engage with it.

TPB provides a useful framework for understanding the influence of brand image on consumer attitudes and behaviour. The theory posits that attitudes, subjective norms, and perceived behavioural control shape behavioural intentions. In the context of PRS, a strong and positive brand image can directly enhance consumers' attitudes toward the product, which, in turn, increases their intention to participate. Additionally, a credible brand can reinforce supportive subjective norms by signalling reliability and trustworthiness, encouraging consumers to align their decisions with the perceived preferences of their social environment.

The study puts forth hypothesis H_6, which focuses on the complex interaction between brand image in marketing and individuals' views about PRS, in alignment with TPB constructs. This research aims to uncover how brand image influences attitudes and intentions, particularly in the context of retirement planning. Understanding this relationship is essential for developing targeted marketing strategies that leverage brand credibility and consumer trust to encourage greater involvement in PRS investment activities. By applying TPB, the study offers insights into how marketers can craft brand narratives that positively influence consumer perceptions, thereby enhancing engagement with PRS.

2.9 Financial Literacy

Financial literacy, defined as the ability to comprehend and address personal financial matters based on one's grasp of financial concepts (Kurniawan et al., 2019), is a crucial factor in the landscape of contemporary investment options. Despite the expanding array of choices available to investors, educating the public about PRS products remains a formidable challenge. The anticipated level of financial knowledge often falls short, with both a dearth of

understanding and an abundance of information posing potential hazards.

Compounding this issue, a Securities Commission of Malaysia survey highlighted inflated expectations among Malaysians regarding investment returns (FEN, 2020). Astonishingly, respondents considered an annual return of 12.4% as low, 24% as average, and 42.9% as high. This unrealistic anticipation of substantial profits not only raises vulnerability to fraud and dubious financial schemes but may also act as a deterrent for investors considering PRS. There is a risk that investors, expecting disproportionately high returns from PRS, might perceive the scheme's actual returns as insufficient. In light of these considerations, hypothesis H_7 is examined in this study, probing the intricate relationship between the financial literacy of personal aspects and attitudes towards the PRS.

2.10   Financial Risk Tolerance

An individual's decision to invest in a private retirement plan is greatly influenced by their level of financial risk tolerance. Financial risk tolerance pertains to an individual's inclination to embrace investment opportunities that may generate greater earnings, but also entail heightened risk. Mokhtar et al. (2018) reveal a significant and favourable link between individuals' willingness to take financial risks and their tendency to buy PRS. Their study revealed that people with a higher propensity for taking financial risks showed a larger desire to invest in a private retirement plan, whereas those with a lower tolerance for risk displayed less interest in doing so. The main goal of this study was to investigate the complex relationship between financial risk tolerance and PRS investment, which is summarised in hypothesis H_8. This research seeks to further our comprehension of the elements that influence investment decisions in the field of retirement planning by examining the relationship between an individual's financial risk tolerance and their views about PRS. Understanding the impact of financial risk tolerance on PRS attitudes is essential for developing customised investment strategies and financial education programmes that align with individuals' risk preferences. This will ultimately promote more involvement and participation in PRS efforts.

2.11   Personal Trust

The decision of individuals to invest in PRS is closely tied to their level of confidence in the financial institution providing the

programme. Trust plays a pivotal role in shaping individuals' perceptions and intentions to engage with PRS, as it influences their willingness to commit to the plan. Within the framework of the TPB, trust serves as a key factor influencing attitudes, subjective norms, and perceived behavioural control, which together shape behavioural intentions. When individuals perceive the financial institution as trustworthy and capable, they are more likely to form positive attitudes toward PRS, align their decisions with supportive social norms, and feel confident in their ability to manage their investment in the scheme.

Furthermore, SIT provides another lens to understand the role of trust in PRS adoption. This theory posits that individuals' perceptions and behaviours are shaped by the meanings they attribute to social interactions and symbols. In the context of PRS, trust in a financial institution can be seen as a symbolic representation of reliability, security, and professionalism. This symbolic trust is reinforced through consistent communication, branding, and positive testimonials, which collectively influence how individuals perceive and engage with PRS.

Personal trust is also intertwined with the perceived dependability and competence of the financial institution. A financial institution that demonstrates transparency, expertise, and reliability fosters trust, reducing the perceived risks associated with long-term investments like PRS. According to TPB, this trust not only strengthens attitudes but also supports the subjective norms of investing, as individuals are influenced by the positive perceptions of their social environment regarding the institution.

The present study evaluates hypothesis H_9, which explores the complex relationship between personal trust as an individual characteristic and views toward PRS. By examining how personal trust impacts individuals' perceptions and attitudes, this research aims to uncover the underlying factors that drive investment decisions in retirement planning. Through the integration of TPB and SIT, the study highlights how trust, both as a functional and symbolic attribute, plays a critical role in shaping consumer behaviour. Financial institutions must leverage these insights to build and maintain trust through clear communication, consistent performance, and fostering positive social signals. This will ultimately encourage greater involvement and engagement in PRS, supporting broader retirement planning efforts.

2.12 Investment Experience

People who have a lot of experience in investing have a detailed awareness of the benefits and possible dangers of PRS. This level of expertise breeds assurance in their capacity to assess the appropriateness of the plan for their financial objectives and risk tolerance thresholds. According to Aslam et al. (2020), increased acquaintance with PRS improves individuals' ability to evaluate the potential advantages and disadvantages, leading to a greater likelihood of considering investing in PRS.

Furthermore, the extent of an individual's financial literacy and understanding of investment principles is significantly influenced by their investment experience. According to Kilincarslan et al. (2018), people who have a strong understanding of financial complexities and investment concepts are more inclined to acknowledge the long-term advantages of PRS. Having a deeper understanding of financial matters, along with practical experience in investing, encourages individuals to be more prepared to make the financial commitments needed for PRS investment.

This study investigates hypothesis H_{10}, which explores the complex correlation between investment experience as an individual characteristic and views towards PRS. This research seeks to gain a deeper understanding of the fundamental mechanisms that drive investment decisions in the context of retirement planning by examining how individuals' perceptions and attitudes regarding PRS are influenced by their investment experience. Gaining insight into how investing experience influences attitudes towards PRS is crucial for customising educational campaigns and communication tactics to successfully include investors and encourage more participation in PRS.

2.13 Demographic Characteristics (Government Support, Age and Income)

The influence of government assistance on views towards PRS becomes apparent as a potential mediator. The government's proactive involvement in promoting and providing incentives for membership in PRS can have a substantial impact on individuals' perceptions and attitudes regarding retirement preparation. Research, such as the study conducted by Ali (2017), has highlighted the concerns of PRS providers over their limited knowledge, especially in rural locations. By implementing focused government activities and conducting awareness campaigns, this issue can be effectively

addressed, leading to a potential improvement in individuals' comprehension and recognition of the benefits of PRS.

Moreover, age and income operate as supplementary moderating variables that can impact attitudes towards PRS. Various age cohorts may possess distinct viewpoints towards retirement preparation, which can be shaped by variables such as life phases, financial responsibilities, and retirement objectives. Likewise, those with greater earnings may have a distinct perception of PRS in comparison to those with lower salaries, considering aspects such as their ability to invest, willingness to take risks, and level of financial stability. It is crucial to acknowledge these demographic differences to customise communication tactics and create successful financial education programmes that promote good attitudes about PRS among various demographic groups. To boost engagement and involvement in retirement planning programmes, legislators and PRS providers can improve individuals' long-term financial well-being by comprehending and meeting the distinct requirements and preferences of various demographic groups.

3. Research Model Development

3.1 Model Specification

In this study, the conceptual framework integrates variables derived from social, marketing, and personal dimensions, supported by the integration of TPB, LCT, and SIT. These variables include firm-created social media (*FC*), user-generated social media communication (*UG*), social influence (*SI*), transaction cost (*TC*), advertisement (*AD*), brand image (*BI*), financial literacy (*FL*), financial risk tolerance (*FR*), personal trust (*PT*), and investment experience (*IE*). Each of these variables is treated as an independent variable influencing individuals' attitudes and intention to invest in PRS.

The dependent variable is the intention to purchase PRS, reflecting individuals' behavioural inclinations toward investment in PRS. This framework also incorporates attitude toward PRS products as a mediating factor, highlighting its critical role in linking independent variables to the dependent variable. Additionally, government support, age, and income serve as moderating variables, providing insights into how demographic and contextual factors influence the relationships within the model.

Figure 5 illustrates the research framework, offering a systematic approach to analyse the connections between these variables. This hybrid model extends traditional behavioural frameworks

by integrating the TPB focus on attitudes and intention with the LCT emphasis on life stages and SIT insights into the role of social interactions and symbolic meanings. The framework aims to provide a comprehensive understanding of the factors shaping attitudes and intentions toward PRS investment in Malaysia.

Figure 5: Research framework of social, marketing and personal of consumers' attitude towards PRS product in Malaysia
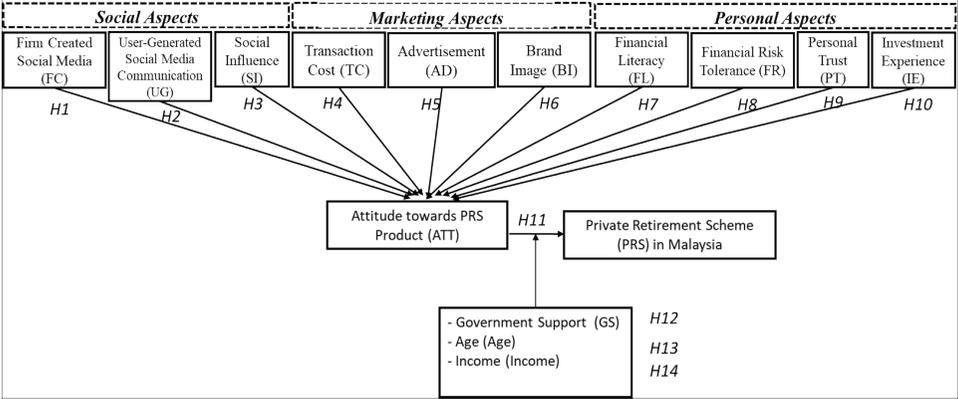
3.2 Model Estimation

3.2.1 Frequency analysis of demographic profiles

Table 1: Frequency analysis of demographic profiles

Attribute	Value	Frequency	Percentage
Age	21–30	36	7.2%
	31–40	163	32.5%
	41–50	224	44.7%
	51–60	72	14.4%
	Over 60	6	1.2%
Gender	Male	219	43.7%
	Female	282	56.3%
Education	Secondary school	48	9.6%
	Diploma	41	8.2%
	Bachelor's degree	320	63.9%
	Master's degree	58	11.6%
	PhD	32	6.4%
	Other	2	0.4%

Attribute	Value	Frequency	Percentage
Employment	Employed (full-time)	296	59.1%
	Employed (part-time)	6	1.2%
	Self-employed	194	38.7%
	Unemployed	5	1.0%
Occupation	Professional (self-employed)	133	26.5%
	Non-professional (self-employed)	48	9.6%
	Executive/management	183	36.5%
	Non-executive	6	1.2%
	Private sector employee	118	23.6%
	Public sector employee	13	2.6%
Income	Less than or equal to RM4,000	17	3.4%
	Between RM4,001 and RM5,000	24	4.8%
	Between RM5,001 and RM6,000	38	7.6%
	Between RM6,001 and RM7,000	53	10.6%
	Between RM7,001 and RM8,000	68	13.6%
	Between RM8,001 and RM9,000	65	13.0%
	Between RM9,001 and RM10,000	25	5.0%
	RM10,001 and above	211	42.1%
Government	No	16	3.2%
	Yes	485	96.8%

The demographic characteristics of the participants in this study, such as age, gender, education, employment, occupation, income, and government support, were examined using frequency analysis conducted with SPSS. Among the 501 respondents, the age distribution showed that the largest number of participants were between the ages of 41 and 50, making up 44.7% of the total. On the other hand, those over the age of 60 made up the smallest proportion, accounting for only 6%. The gender breakdown revealed that 43.7% of the population were male, while 56.3% were female. The majority of respondents possessed a Bachelor's degree (63.9%), followed by a Master's degree (11.6%), secondary school education (9.6%), diploma (8.2%), and PhD (6.4%). Only a small fraction of respondents (0.4%) fell into the 'other' category. The employment status breakdown showed that 59.1% of individuals were engaged in full-time employment, 38.7% were self-employed, 1.2% were involved in part-time employment, and 1% were without employment. Regarding employment, 36.5% held executive or managerial roles, 23.6% worked in the private sector, 26.5% were self-employed professionals, 1.2% had non-executive jobs, and 2.6% were engaged in the public sector.

The majority of participants indicated an income of RM10,001 and more (42.1%), while a minority earned RM4,000 or less (3.4%). Overwhelmingly, 96.8% of individuals were knowledgeable with the tax incentives associated with investing in PRS, as the government provides tax relief of up to RM3,000.

3.2.2 Exploratory factor analysis

A comprehensive analysis was conducted using factor analysis to examine a wide range of factors including firm-created social media, user-generated social media communication, social influence, transaction cost, advertisement, brand image, financial literacy, financial risk tolerance, personal trust, and investment experience. This analytical study utilised the route analysis methodology to thoroughly investigate the complex interactions among these components. The study utilised path analysis to explore the intricate relationships between variables, revealing the intricate dynamics that influence firm interactions, social influences, and financial decision-making processes. This comprehensive method not only clarifies the complex connections between the variables, but also offers significant insights into the underlying mechanisms that influence individuals' attitudes and behaviours towards PRS.

3.2.3 Reliability analysis

The Cronbach's alpha coefficient serves as a widely employed metric for gauging the internal consistency reliability of a scale or test, signifying the extent to which its items effectively measure a singular construct or concept. In this study, Cronbach's alpha was calculated for each construct to evaluate their individual internal consistency reliability. Table 1 presents the Cronbach's alpha values for all constructs alongside the overall value for the scale.

Table 1: Cronbach's alpha for individual constructs

Construct	Cronbach's alpha
Firm-created social media	0.942
User-generated social media	0.945
Social influence	0.931
Transaction cost	0.916
Advertisement	0.912
Brand image	0.948

Construct	Cronbach's alpha
Financial literacy	0.910
Financial risk tolerance	0.921
Personal trust	0.934
Investment experience	0.899
Attitude towards PRS	0.914
Intention to invest in PRS	0.917

Overall, the calculated Cronbach's alpha coefficient for the scale stands at 0.937, as shown in Table 2, indicative of an exceptionally high level of internal consistency reliability. This implies that the items within the scale or test consistently capture the designated construct or concept, yielding dependable and uniform results.

Table 2: Result of Cronbach's alpha

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardised items	N of items
.937	.941	501

3.2.4   KMO and Bartlett's test

Table 3: KMO and Bartlett's test

KMO measure of sampling adequacy	Bartlett's test of sphericity		
	Approx. chi-square	df	Sig.
0.852	22576.960	1326	.000

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy assesses the suitability of the data for factor analysis by considering the correlation structure across variables as presented in Table 3. Greater numerical values indicate a greater degree of relevance for factor analysis. The KMO value ranges from 0 to 1. The KMO rating in this case was 0.852, which is commonly considered to be favourable.

The Bartlett's test of sphericity yielded a statistically significant result, with a p-value of less than the $\alpha = 0.01$ threshold. This supports the presence of factors in the correlation matrix. According to the principal component analysis, these initial communalities indicate the correlation between the variable and all other variables

prior to rotation. The majority of communities have a large size, with a value greater than 0.3, making the data appropriate for factor analysis.

3.2.5 *Confirmatory factor analysis (CFA)*

A confirmatory factor analysis (CFA) was conducted to assess the validity of all constructs used in this study, with a focus on ensuring that the measurement model was robust and reliable prior to structural analysis. The CFA assessed convergent validity, using indicator loadings and average variance extracted (AVE), and discriminant validity to confirm that the constructs effectively captured their intended theoretical dimensions. The detailed results of the CFA, including indicator loadings and AVE values for each construct, are summarised in Table 4.

Table 4: Summary of CFA results for all constructs

Construct	Indicator loadings (range)	AVE	Remarks on convergent validity
Firm-created social media	0.962–0.972	0.935	High convergent validity
User-generated social media	0.965–0.975	0.941	High convergent validity
Social influence	0.711–0.946	0.763	Robust construct validity
Transaction cost	0.715–0.872	0.732	Robust construct validity
Advertisement	0.701–0.844	0.706	Robust construct validity
Brand image	0.949–0.965	0.912	High convergent validity
Financial literacy	0.778–0.875	0.704	Robust construct validity
Financial risk tolerance	0.716–0.824	0.766	Robust construct validity
Personal trust	0.865–0.949	0.742	Robust construct validity
Investment experience	0.796–0.848	0.767	Robust construct validity
Attitude towards PRS	0.717–0.920	0.769	Robust construct validity
Intention to invest in PRS	0.706–0.882	0.704	Robust construct validity

The use of CFA in this study follows a sequential approach to measurement validation, where exploratory factor analysis (EFA) was first performed to explore the underlying structure of the constructs. EFA was necessary to identify and refine items, especially given the context of newly adapted constructs for PRS investment behaviour in Malaysia. By addressing potential cross-loadings and underperforming items, EFA ensured that the constructs represented

their latent variables effectively. Following this, CFA was employed to confirm the factor structure identified during EFA, ensuring that the constructs demonstrated strong convergent validity, discriminant validity, and reliability, as assessed through composite reliability and Cronbach's alpha.

The decision to conduct reliability and validity analysis through EFA and CFA, rather than directly using partial least squares structural equation modelling (PLS-SEM), is grounded in methodological best practices. While PLS-SEM is capable of simultaneously estimating measurement and structural models, it focuses primarily on predictive modelling and hypothesis testing, which may limit its ability to refine and validate the measurement model. By conducting EFA and CFA prior to PLS-SEM, this study ensures that only well-defined and rigorously validated constructs are included in the structural model, thereby reducing the risk of measurement bias and model misspecification.

Moreover, the complexity of the theoretical framework in this study, which integrates constructs from TPB, LCT, and SIT, necessitates a systematic approach to construct validation. Given the multidimensional nature of the constructs, the sequential use of EFA and CFA allows for a more granular examination of the psychometric properties of the variables. This ensures that the constructs align with theoretical expectations and are contextually relevant to PRS investment behaviour in Malaysia.

This approach is consistent with best practices in behavioural research, particularly in studies involving newly adapted or multidimensional constructs. Hair et al. (2017) and Byrne (2016), for instance, advocate for the use of EFA and CFA as a precursor to PLS-SEM to enhance the robustness of the measurement model. By addressing any measurement issues early, this study establishes a solid foundation for the subsequent structural analysis, ensuring the reliability and interpretability of the findings. The results of the CFA, consolidated in Table 4, demonstrate the validity and reliability of the constructs, supporting the robustness of the research framework and its alignment with the study's objectives.

3.2.6 Path analysis

Path analysis, sometimes referred to as structural equation modelling (SEM), is a statistical technique employed to examine the direct and indirect impacts of factors on a specific end variable. This is achieved by creating a path diagram that visually shows the proposed causal relationship.

4. Results

This section presents the findings of the study and establishes direct links between the results and the hypotheses tested. The analysis employs SEM to evaluate direct effects, mediation, and moderation influences on PRS investment intention.

4.1 Direct Effects Analysis

The results of the bootstrapping analysis (refer to Table 5) confirmed that advertising (H_5), financial literacy (H_7), financial risk tolerance (H_8), investment experience (H_{10}), personal trust (H_9), social influence (H_3), and transaction cost (H_4) significantly impact attitude towards PRS, as their p-values were below 0.05. These findings validate the hypotheses that these factors positively shape attitudes toward PRS investment. However, hypotheses H_6 (brand image), H_1 (firm-created social media), and H_2 (user-generated social media) were not supported, as they did not exhibit significant effects on attitude. This suggests that brand image and social media interactions may not play a critical role in shaping individuals' perspectives on PRS.

Table 5: Assessment of bootstrapping (direct effect)

Hypothesis	OS	SM	SD	t	P values	Results
AD ≥ attitude	0.328	0.325	0.038	8.587	0.0000	Significant
attitude ≥ PRS	0.358	0.360	0.042	8.580	0.0000	Significant
BI ≥ attitude	0.064	0.065	0.033	1.921	0.0550	Not significant
FC ≥ attitude	0.009	0.007	0.039	0.234	0.8150	Not significant
FL ≥ attitude	0.255	0.255	0.03	8.406	0.0000	Significant
FR ≥ attitude	0.121	0.123	0.041	2.916	0.0040	Significant
IE ≥ attitude	0.146	0.147	0.047	3.127	0.0020	Significant
PT ≥ attitude	0.086	0.086	0.031	2.793	0.0050	Significant
SI ≥ attitude	0.090	0.091	0.033	2.720	0.0070	Significant
TC ≥ attitude	0.217	0.219	0.031	6.944	0.0000	Significant
UG ≥ attitude	-0.056	-0.055	0.04	1.401	0.1610	Not significant

Note: OS = original sample, SM = sample mean, SD = standard deviation

4.2 Mediation Analysis

Table 6 presents the mediation effects of attitude in linking various factors to PRS investment intention. The findings confirm that attitude mediates the relationship between PRS investment intention

and investment experience (H_{10}), transaction cost (H_4), personal trust (H_9), advertisement (H_5), financial risk tolerance (H_8), financial literacy (H_7), and social influence (H_3). These results suggest that these factors indirectly influence PRS investment intention through attitude. Conversely, no significant mediation effect was found for firm-created social media (H_1), brand image (H_6), or user-generated social media (H_2), indicating that these factors do not contribute meaningfully to PRS investment intention via attitude.

Table 6: Assessment of mediating effect

Hypothesis	OS	SM	SD	t	Sig.	2.50%	97.50%	Results
IE ≥ attitude ≥ PRS	0.05	0.05	0.02	2.74	0.01	0.019	0.096	Significant
TC ≥ attitude ≥ PRS	0.08	0.08	0.01	5.72	0.00	0.053	0.106	Significant
FC ≥ attitude ≥ PRS	0.00	0.00	0.01	0.23	0.82	-0.024	0.033	Not significant
PT ≥ attitude ≥ PRS	0.03	0.03	0.01	2.74	0.01	0.009	0.053	Significant
AD ≥ attitude ≥ PRS	0.12	0.12	0.02	6.03	0.00	0.083	0.159	Significant
BI ≥ attitude ≥ PRS	0.02	0.02	0.01	1.87	0.06	-0.001	0.048	Not significant
FR ≥ attitude ≥ PRS	0.04	0.04	0.02	2.73	0.01	0.014	0.076	Significant
UG ≥ attitude ≥ PRS	-0.02	-0.02	0.01	1.37	0.17	-0.05	0.007	Not significant
FL ≥ attitude ≥ PRS	0.09	0.09	0.02	6.30	0.00	0.064	0.123	Significant
SI ≥ attitude ≥ PRS	0.03	0.03	0.01	2.64	0.01	0.008	0.055	Significant

Note: OS = original sample, SM = sample mean, SD = standard deviation

4.3 Moderation Analysis

Table 7 examines the moderating effects of government support, age, and income on the relationship between attitude and PRS investment intention. The analysis revealed that income significantly moderates the relationship, supporting hypothesis H_{11}. Specifically, individuals with higher incomes experience a stronger positive relationship between attitude and PRS investment intention compared to those

with lower incomes. However, hypotheses H_{12} (government support) and H_{13} (age) were not supported, as they did not exhibit significant moderating effects. These findings suggest that while income influences the strength of the attitude-PRS relationship, government support and age do not significantly alter this relationship.

Table 7: Moderating effect

Hypothesis	OS	SM	SD	t	sig.	Results
Government x attitude ≥ PRS	-0.03	-0.03	0.04	0.73	0.47	Not significant
Income x attitude ≥ PRS	0.12	0.12	0.05	2.65	0.01	Significant
Age x attitude ≥ PRS	0.03	0.03	0.04	0.79	0.43	Not significant

Note: OS = original sample, SM = sample mean, SD = standard deviation

By incorporating a moderating effect (refer to Table 7 above) into a PLS-SEM study, it becomes possible to investigate conditional correlations. It is beneficial to ascertain whether the connection between the independent and dependent variables varies based on the amounts of the moderating variable. This offers valuable insights into the specific conditions that determine the stability or variability of the relationship. This study examined the moderating effects of government support, income, and age on the connection between attitude toward relationships and PRS. The results confirmed that the relationship between income and attitude has a substantial influence on PRS. The coefficient (B) was 0.12, the t-value was 2.65, and the p-value was less than 0.05. Nevertheless, the relationship between government support and attitude ($B = -0.03$, $t = 0.73$, $p > 0.05$), as well as age and attitude ($B = 0.03$, $t = 0.79$, $p > 0.05$), had no significant impact on PRS.

Figure 6. PLS-SEM analysis: Structure model assessment
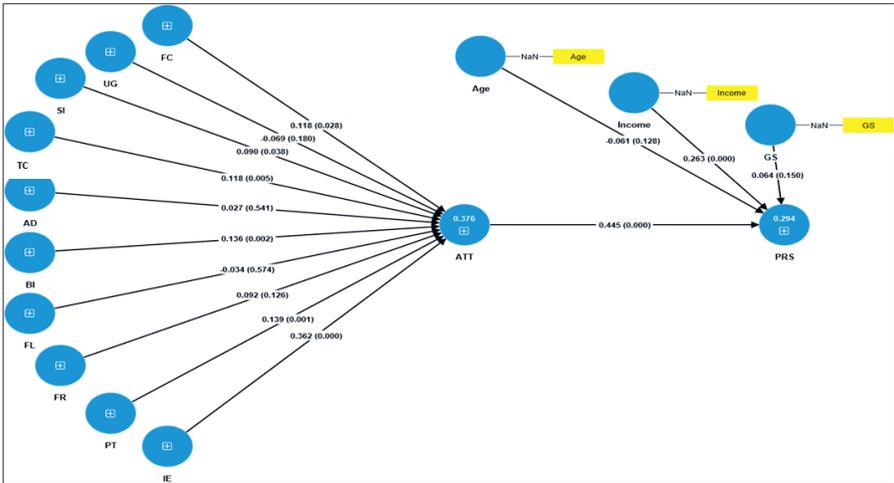
As illustrated in Figure 6, the model reveals that advertisement, financial literacy, financial risk tolerance, investment experience, personal trust, social influence, and transaction cost exhibit statistically significant direct positive effects on attitude. Conversely, brand image, firm-created social media, and user-generated social media do not demonstrate statistically significant direct effects on attitude within the established model.

Moreover, attitude is identified as having a statistically significant direct positive effect on PRS. Notably, the relationship between attitude and PRS is moderated by income, indicating that the influence of attitude on PRS is contingent upon individuals' income levels. Specifically, individuals with higher incomes experience a more pronounced positive effect on PRS compared to their counterparts with lower incomes. However, it is noteworthy that government support and age do not exert a significant moderating effect on this relationship.

These findings contribute to a nuanced understanding of the intricate dynamics between various factors, shedding light on both the direct influences on attitude and the moderating role of income in the relationship between attitude and PRS. This insight holds practical implications for stakeholders and underscores the complexity of factors influencing individuals' retirement perceptions.

4.4   Interpretation and Implications

The study underscores the importance of advertisement, financial literacy, financial risk tolerance, investment experience, personal trust, social influence, and transaction cost in shaping attitudes toward PRS investment. Policymakers and financial institutions should leverage these insights to design targeted campaigns that enhance PRS adoption. Given the significant role of income as a moderator, strategies should be tailored to accommodate varying income levels to optimise engagement.

On the other hand, brand image and social media interactions were found to be less impactful, suggesting that PRS providers may need to refine their digital engagement strategies or focus on more influential factors such as financial literacy and advertisements. The findings provide a robust framework for understanding PRS investment behaviour, reinforcing the theoretical foundations of the TPB, LCT, and SIT within the context of retirement planning.

5.   Discussion

This study reinforces the significant role of advertisement, financial literacy, financial risk tolerance, investment experience, personal trust, social influence, and transaction cost in shaping attitudes toward PRS investment. These findings align with previous research, such as Lusardi and Mitchell (2014), who emphasise the importance of financial literacy in driving investment decisions. Similarly, Alshebami and Aldhyani (2022) highlight the influence of social factors, particularly peer and family guidance, in shaping financial behaviours. Additionally, Mohd Suki and Mohd Suki (2015) demonstrate the strong correlation between trust and participation in Islamic financial products, which parallels the findings on PRS investment in this study, while Sunstein and Thaler (2008) argue that lower transaction costs encourage financial participation, further validating this study's conclusions.

However, some results contradict prior literature and require further analysis. For instance, while Chong et al. (2017) suggest that brand image significantly influences consumer trust in financial products, this study finds no significant effect of brand image on PRS investment attitudes. This discrepancy may arise from PRS being perceived as a long-term necessity rather than a consumer product, reducing the impact of branding in favour of financial literacy and trust. Similarly, findings on social media engagement contradict Kaplan and Haenlein (2010), who argue that firm-created and user-

generated social media influence investment behaviour. The lack of a significant effect in this study may be due to the complexity of PRS, which requires more direct financial consultation than digital marketing alone can provide.

Another key contradiction concerns government support and age as moderating factors. While Ali (2017) suggests that government incentives strongly influence PRS participation, this study finds no substantial moderating effect. This could be due to poor communication or inadequate perception of these incentives. Age also did not significantly moderate PRS investment attitudes, possibly because financial awareness has become more uniform across different generations.

Overall, these findings provide valuable insights into PRS investment behaviour, suggesting that financial literacy, trust, and social influence are stronger determinants than branding and social media engagement. Policymakers and financial institutions should focus on education and targeted communication strategies to enhance participation. Future research should explore qualitative aspects of investment behaviour and investigate the reasons behind the limited role of branding and social media in PRS decision-making.

6. Conclusion

This study offers a comprehensive understanding of the factors influencing PRS investment attitudes and intentions. The results highlight the critical role of financial literacy, trust, social influence, and transaction costs in shaping investment behaviours. While branding and social media engagement do not significantly impact attitudes, this suggests that PRS investors prioritise financial knowledge and credibility over marketing influences. Additionally, income moderates the relationship between attitude and PRS investment intention, with higher-income individuals displaying a stronger link, whereas government support and age do not exert significant moderating effects.

These findings underscore the importance of targeted financial education and advisory services in improving PRS adoption. Enhancing financial literacy and leveraging social influence may prove more effective than branding or social media engagement. Additionally, improved communication of government incentives may help bridge the gap in policy effectiveness.

Future research should explore how evolving financial education and policy initiatives impact PRS investment behaviour over time. Conducting qualitative and longitudinal studies can provide deeper

insights into how financial awareness and decision-making evolve across different demographic groups. By addressing these areas, policymakers and financial institutions can develop more effective strategies to ensure better retirement planning and financial security for a broader population.

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