PREDICTORS OF INVESTMENT INTENTION IN REAL ESTATE: EXTENDING THE THEORY OF PLANNED BEHAVIOR

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Abstract. This paper explores the factors affecting the investment intention of individual real estate investors utilizing the extended theory of planned behavior. With the help of self-administered questionnaire, data from 366 individual investors from India was collected. This data was analysed using two-step structural equation modelling. While significant direct effect of attitude, external influence, financial self-efficacy and perceived financial return was found, interpersonal influence, perceived financial risk, facilitating conditions and financial awareness had no significant direct impact on investment intention. Upon checking the mediating effect of attitude on the factors, all factors influenced investment intention through attitude except facilitating condition and financial awareness. It was also observed that attitude stands out as the most important aspect due to strongest influence on intention directly and also providing mediation to all variables except two. The study guides policymakers and investment institutions to develop strategies and utilize resources in a direction that can bring out a positive outcome by strengthening real estate investors' investment intentions. It brings out the fact that financial confidence should be boosted by enabling investors to handle and manage their finances which can bring in a positive attitude for investing.

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1. Introduction

In the light of finance, investment is an important aspect. Investment refers to the act when resources, usually money, are allocated to purchase various instruments or lending to any person or organization with the expectation of generating income or growth of the fund employed. Investing is important as it helps individuals and companies achieve future goals and safeguard against potential economic problems (Hudson-Wilson et al., 2005; Markowitz, 1952). Real estate is an important asset class due to various reasons. It gives a good diversification benefit in the portfolio due to low correlation with other asset classes and provides a hedge against inflation (Georgiev et al., 2003; Gulseven & Ekici, 2021; Yousaf & Ali, 2020). It is a tangible asset which investors can use themselves and also has great potential to generate income over a large time horizon (Melser & Hill, 2019). Talking about the Indian scenario, according to the report by Indian Brand Equity Foundation, real estate sector generates second highest income in India after agriculture. The picture looks good after the COVID-19 pandemic; the sector is booming at a compound annual growth rate (CAGR) of 19.5%

(IBEF, 2023). The sector will attract more investment from non-residential Indians due to favorable conditions created by real estate companies as well as many policies and regulations initiated by the government. These combined antecedents make real estate an interesting sector to be studied.

As investment is a thing that is done willingly, intention to invest plays a vital role in the decision-making process. Thus, to study the behavior of the investors and gain knowledge about the investment sector, study of intention becomes important (Dash et al., 2021). The study of intentions of consumers, investors and other decision-makers has always been an intriguing area for research (Meng & Choi, 2018; Nadeem et al., 2020). The decisions taken by investors are difficult and a result of complex processing of various ingredients like knowledge about the sector, behavior towards profit and loss occurrences, and outlook towards external factors like what others suggest and how they perceive the market conditions (Mishra et al., 2023). Due to these complexities, it becomes important to understand better what influences investors' intentions. By understanding this, financial analysts can better anticipate market trends and make informed decisions, identify

opportunities for better investment, and create better investment strategies that suit the preferences of investors. This can also help financial institutions to create better markets and regulations that resonate positively with investors. Such study shall also help in creating better financial literacy and awareness tools for investors about their beliefs so that they can make informed decisions.

The focus of this paper is on individual investors dealing in residential properties. They are also referred to as retail investors, who are individuals investing a smaller some of money as compared to institutional investors. These people buy or sell properties to earn out of it or have an asset for future use. This paper utilizes the extended or decomposed version of Theory of Planned Behavior (TPB) to predict factors that affect such intentions the most. According to the TPB model, attitude, subjective norms and perceived behavioral control are the three key constituents playing a crucial role in shaping the intention. As TPB allows adding field-specific constructs to aid better analysis, this paper introduces perceived financial risk, perceived financial return and financial awareness into the model. Along with this, subjective norms have been split into two factors that make it up: interpersonal and external influence. Similarly, perceived behavioral control has been split into financial self-efficacy and facilitating conditions. After gathering these factors based on the extant work, this study gauges which factors among these are the most influential ones in the real estate perspective.

Many previous works have utilized TPB in order to gauge the investment intentions in various sectors like stock market, mutual fund and cryptocurrency (Akhtar & Das, 2019; Kaur & Kaushik, 2016; Soomro et al., 2024), but very less study has been conducted on real estate sector and further less or nearly non-existent in the Indian perspective. Considering that a country like India is a developing one and in such economies the spectrum of effect of factors that influence intention can be quite vibrant due to the congregation of various mindsets resulting from a diverse range of socio-economic groups, such behavioral study can prove to be a useful addition in the arsenal of behavioral finance knowledge. The analysis of the extant works suggests that such studies are missing, and the real estate investment related knowledge falls behind the knowledge about other investment avenues. This paper aims to study this in the Indian perspective to understand the fine points of those factors that play a crucial role. This becomes more important as physical real estate is an investment instrument that involves a large sum of money compared to stock markets, where a much smaller amount can be invested (Ma et al., 2023). Also, the momentum gained by India in industrialization and economic growth has caused increasing demands for industrial spaces, housing spaces for migrating workers, and the opening of new offices country wide. These collective factors are expected to be the key drivers of increasing real estate investments, and thus more studies are needed to lighten up the knowledge in this area. This leads to following research questions that this study aims at exploring:

RQ-1: Are the components of TPB sufficient to explain the determinants of investment intention of real estate investors?

RQ-2: How do the components of subjective norms (interpersonal influence and external influence) act differently to influence investment intention?

RQ-3: How do the components of perceived behavioral control (facilitating conditions and financial self-efficacy) act differently to influence investment intention?

RQ-4: How does the perception of risk and return effects the investment intention of real estate investors?

RQ-5: How does financial awareness influence the investment intention of real estate investors?

The following sections discuss theoretical background, and hypothesis development (section 2). Research methodology (section 3) explains the data collection and questionnaire development process. Sample characteristics, common method bias, measurement model, and structural model assessment are discussed next in the result and data analysis (section 4). It is followed by discussion (section 5), which explains findings, theoretical and managerial implications. In the end, conclusion along with limitations and future direction is provided (section 6).

2. Theoretical background and hypothesis development

2.1. Investment in real estate in India

The Indian real estate saw development quite late due to many years of colonial rule. Post-independence, the development was focused on repairing the societal and economic damages that had been inflicted by colonial rule. The economic reform and liberalization in 1990s led to development of many small industries and IT sector (Newell & Kamineni, 2007). The economy has since then turned north with many cities becoming hubs for development. Cities like New Delhi, Mumbai, Bangalore, etc. have become centers for political activity, creative arts, IT services and manufacturing. This led to rapid urbanization with India witnessing a large migratory shift of population from villages to cities (Kundu & Saraswati, 2012). Such development increased the potential in all sectors and real estate wasn't left alone. Various government initiatives like rebate in income tax for interest paid on home loan, housing for all schemes, entry of housing finance institutions and establishment of acts like Real Estate (Regulation and Development) Act in 2016 boosted the real estate investment. The real estate sector grew from a mere $16 billion in 2006 to an estimated $0.33 trillion in 2024. The future trajectory looks promising with estimates showing a $1 trillion market by 2030 (IBEF, 2023). This is the proof of the growing interest of individuals to invest in real estate in India.

Talking about the psychological aspect of real estate investment in India, the notion of having a place to live and roof is deep-rooted with the feeling of being financially stable. While other investment methods like stocks

and bonds require some financial knowledge, real estate investment is easily understood even by the grass-root level population education-wise. It is thus often seen that people prefer to buy land in spite of depositing the money with banks or other financial institutions. The lower per-capita income and hard-to-attain financial stability in a developing country like India means that the population strives towards attaining stability but with very cautious steps so as to not lose money which makes real estate an ideal investment sector. This rapid development has now started receiving the attention of the research fraternity where the exploration into the dynamics of the thinking process of investor is of interest. These explorations are required in order to understand how the investors can be encouraged, educated and empowered so that this development phase of India is accelerated. The understanding of their attitudes, beliefs, risk appetite and desires that needs fulfillment along with the precursors that fuel the intention will help in this regard.

2.2. Theory of planned behavior (TPB) and extended or decomposed theory of planned behavior

Ajzen (1985), schemed the TPB which was an extension of Theory of Reasoned Actions (TRA). This theory encompasses four core components namely attitude, subjective norms, perceived behavioral control (PBC) and behavioral intention (Ajzen & Driver, 1992). The immediate precursor to behavior is an individual's behavioral intention which has been expansively used as an endpoint predictor according to the "attitude-intention-behavior" logical chain (Venkatesh et al., 2003; Z. Xu et al., 2021). The predictive power of TPB for individual's behavior has made it to be extensively used by researchers to analyze the individual's investment intention. Various other variables have been included by researchers in TPB model to enhance the model's predictive strength (Paul et al., 2016; Z. Xu et al., 2021).

The developments in psychology led to enhancement of the original TPB model which increased its predictive power. This enhanced version was termed as Decomposed Theory of Planned Behavior (DTPB) and it had higher capacity to explain and predict behaviors as it allows subdivision of the constructs of TPB to make the influencing elements more explicit (Hung et al., 2012). The elements of PBC have been explored more thoroughly by breaking it into distinct belief dimensions- self-efficacy and facilitating conditions in the DTPB (W. Li et al., 2021). Similarly, the elements of subjective norms, namely interpersonal influence and external influence, have been separated (Choi & Park, 2020). Thus, using the decomposed version of TPB instead of the original one gives a better evaluation prowess in this study.

There are several other models/theories that have been used in studying the behavioral intention but each is used for distinct purpose which doesn't align with the present case. In Social Cognitive Theory (SCT), the main precursor to a behavioral intention is experience-based learning which neglects the barriers one faces (PBC) and the influence of the society (Subjective Norms). In Self Determination Theory (SDT), the focus in on the motivation that one receives when their needs of competence and autonomy are met which makes it suitable for long-term broader behaviors as opposed to specific behaviors like investment intention in this case. Similarly, other popular theories are Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) and Diffusion of Innovation Theory (DIT) which are centered towards various ways to understand the human behavior and intention leading to acceptance and use of any new technology or innovations. Adding to this is the Health Belief Model which focusses on health-promoting behavior. Thus it becomes evident that while most of the theories do not align with the very nature of investment intention, theories like SDT, SCT and TRA either fall short of giving an all-inclusive framework or are too wide-scoped to include all relevant parameters that may influence the decision making of an investor. Thus, TPB comes up as the most useful one as it has all the factors and also gives the liberty to add any other (Abroud et al., 2015). This makes TPB the most widely used theory in investment intention context.

2.3. Previous research on investment intention using TPB

Studies in behavioral domain have extensively utilized the TPB model (Shaw et al., 2000) but when it comes to application of TPB in predicting individual's intention to invest in certain markets, only a limited number of studies are found. These studies have laid the foundation for applying TPB to investment intentions. Defining investment intention (INT) first requires defining behavioral intention, the immediate predictor for behavior (Ajzen, 2002). An individual's inclination to engage in a particular behavior is denoted by behavioral intention (Yadav & Pathak, 2017). An individual's behavioral intention involves the motivations that drive their decision to purchase a product. Individuals are likelier to perform a particular behavior when they have a strong behavioral intention (Xiao et al., 2011). The potentiality of execution of a specific behavior is revealed by assessing the strength of the consumer's intent. In the Indian context, TPB has been used by researchers to study intention in stock market and mutual funds (Adil et al., 2022; Akhtar & Das, 2019; Mishra et al., 2023). These studies have concluded the importance of the constructs in these investment avenues.

Attitude (ATT): It has been referred to as the degree to which a person perceives the benefits or drawbacks associated with engaging in the behavior (Mazambani & Mutambara, 2020). In other words, it refers to how strongly an individual feels either favorable or unfavorable about the behavior of interest. There is a likelihood that someone with a positive attitude toward a certain behavior will also have a positive intention toward engagement in that behavior (Akhtar & Das, 2019). Attitude is said to influence a lot of investment related factors (Daiyabu et al.,

2023). It influences the risk tolerance level of an individual. For example, someone with a risk-taking attitude will be more intent to invest in riskier investment avenues while someone with a safety-seeking attitude will prefer more conservative, low risk methods. Similarly, attitude affects the financial goals that one may consider and thus indulge in capital preserving, wealth accumulating or income generating investments. Moreover, attitude also shapes the market perception of an investor and he or she may find opportunity to grow wealth during market swing or play it safe to minimize potential losses (Sridharan et al., 2023). Studies have shown that attitude significantly and favorably affects intention (Akhtar & Das, 2019; Gopi & Ramayah, 2007). It is one of the important factors most frequently mentioned in research to determine why people tend to have particular behavioral intention (Rana & Paul, 2017). In the context of present investigation, development of intention of an individual to invest in real estate might be governed by the individual's attitude towards real estate with the desire to attain a certain degree of financial stability. Going by the Indian investor's mindset, housing is still a major achievement for an individual in a country where poverty rate is high and large population along with very high population density makes owning a house a mammoth task and achievement. Due to this, it is often observed that Indians generally have a strong positive attitude to own a house or in other words, have a roof over their head. Such desire also compels people to acquire land since the everlasting demand for housing makes land a highly rewarding and near-liquid asset.

Hypothesis H1: Attitude has a significant influence on investment intention.

Subjective Norms (*SN*)*:* In many previous research works, authors have found subjective norms to be another pivotal factor explaining certain behavior of individuals (Fu et al., 2006). The pressure from prevailing societal beliefs that an individual experiences about contemplating whether or not to carry out a specific behavior or action is termed as subjective norms (Schepers & Wetzels, 2007). It can also be explained as a situation where if someone important (friends, neighbor, family, etc.) to an individual feel that it is important to invest in real estate, then that individual will do so. It is often observed that individuals tend to abide by the expectations and perspective of those who have a certain influence on them (Khan et al., 2023). The perception of subjective norms and likelihood of conducting a behavior are directly proportional. This leads to the deduction that if the most significant people for an individual believe that they should invest in real estate then they are more likely to actually invest in it. In India, the highly social and inclusive human interaction system creates an environment where discussion with people who are important to an individual as well as following the groups whom the individual thinks to be elite in the context is common (Akhtar & Das, 2019). People tend to get confirmation and assurance when they can ascertain that their actions and decisions are justified by those people or

groups. Moreover, the population at large is still at a lower side of average literacy rate and thus people have more confidence when someone with higher knowledge or expertise confirms the correctness of their decision (Mishra et al., 2023). This suggests that such societal pressure of being correct can influence the intention.

These important groups have been divided into two parts wherein one part influences the investor internally, i.e. the group influences the investor personally or individually and the other part does so externally or in other words in a more general way to a larger mass (Taylor & Todd, 1995). Leading from this, bifurcation of subjective norms can be done into interpersonal influence (ISN) and external influence (ESN), both having individual predicting prowess in the context of investment behavior of an individual (Choi & Park, 2020). Interpersonal influence includes friends, family, relatives etc., and the external influence includes print media, mass media etc. Talking about interpersonal influence, one of the most important factors is the influence of reference group (Nair et al., 2022). This group usually consists of those people who are considered suitable for guidance or an individual aspires to be a part of such group (Mäder et al., 2024). Investors usually follow the endorsements and suggestions of such groups. In external influence, media and advertisements play a crucial role and investors often get influenced by the discussions and suggestion from certain media sources that they admire or follow. It is hence suggested that analyzing the divergence of both the factors can better help in understanding the influence of subjective norms on investor behavior (Leavell, 2015), which has been incorporated in this study. Also, several studies have reported that subjective norms are positively related to investors' attitude and investment intention (Tarkiainen & Sundqvist, 2005). Given this analysis, the study concludes the following hypotheses:

H2a: Interpersonal influence has a significant influence on investment intention.

H2b: External influence has a significant influence on investment intention.

H2c: Attitude plays a mediating effect on the relation between interpersonal influence and investment intention.

H2d: Attitude plays a mediating effect on the relation between external influence and investment intention.

Perceived behavioral control (*PBC*)*:* An individual's assessment of the level of ease or difficulty in performing an activity is influenced by their self-ability assessment which is known as perceived behavioral control (Dakhan et al., 2020). Higher perceived behavioral control arises when an investor feels little or no obstacle in their investment process, influencing the investment intention (Wang et al., 2018).

Perceived behavioral control encompasses two components, which are more compelling than PBC as a single factor (Y. Xu et al., 2022). The first one is an internally based component termed "self-efficacy" (Ajzen, 1991) which translates into an individual's confidence in the

capability to act successfully in a given situation (Bandura, 1986). The second is external resource limitations, also known as "facilitating conditions" (Triandis, 1979), which refer to the presence of resources required to carry out a specific behavior. This may entail having access to the necessary resources, such as time, money, and expertise.

Financial self-efficacy (*FSE*): Self-efficacy is elaborated as the person's confidence in their capability to plan and carry off a set of behaviors to reach a predetermined outcome (Bandura, 1977). It implies that persons with identical skill sets could act differently. The success of the decision made is said to be directly proportional to self-efficacy (Bandura, 1977; Tajurahim et al., 2020). It is said that higher the self-efficacy of an individual, more successful is their decision-making ability. Competence fuels the confidence in investment decision-making thus influencing the final decisions. Since self-efficacy increases one's confidence, it is one of the best indicators of how well one will accomplish a specific behavior (Akhtar & Das, 2019). Higher level of financial self-efficacy affects the attitude and intention of an investor in many ways. Such an individual has a clear understanding of how to manage their finances and hence can do better goal setting, be less prone to financial distress and anxiety, be adaptable to market dynamics and be more confident in taking decisions (Raut & Kumar, 2024). These things help investors to have a clearer outlook about their agenda for investing and hence it brings in a positive attitude. In India, the lower income per capita means that people are very frugal and cautious about how they are spending their money and what they are doing to have sufficient money for future. Such agenda is very deep-rooted in nearly every Indian household (Cherodian & Thirlwall, 2015). It would be thus interesting to see that whether the notion of being able to manage the finances fuel the investment intention or not. In the light of this study, financial self-efficacy reflects an individual's competency in uncertainty or the ability to find solutions to problems without much trouble when investing in real estate. Thus, the study hypothesizes that investors with higher financial self-efficacy will be more willing to invest in real estate.

Hypothesis:

H3a: Financial self-efficacy has a significant influence on investment intention.

H3b: Attitude plays a mediating effect on the relation between financial self-efficacy and investment intention.

Facilitating condition (*FC*): Perception of the resources and assistance available to carry out behavior is termed as facilitating condition which represents conceptualized knowledge, resources, and opportunities to carry out that behavior (C. Li et al., 2023; Venkatesh et al., 2012). The assumption taken in this study is that facilitating condition may assist real estate investors through knowledge gain and resourcefulness (availability of finance/loan, financial benefits/tax benefits from the government) and help them to invest in real estate. Easy access to information and tools to evaluate the market and investment method in-

stills confidence in an investor (Nair et al., 2022). Similarly, proper regulatory guidelines or rules ensures a transparent and safe investment environment which can boost the intention to invest in a positive way. In the process of real estate investment decision-making, the lack of proper knowledge and availability of funds could act as a barrier to investment decisions, as investment in real estate involves huge amount of funds for which investors may need support from banks and other sources. The unavailability or absence of support from banks, friends, family and the government could make investing in real estate tough. Availability of resources like easy loans and property search assistance can motivate an investor and thus influence investment intention. As discussed earlier, such supportive conditions can bring in a positive attitude and confidence in the investor. The hypotheses thus formulated are:

H4a: Facilitating conditions has a significant influence on investment intention.

H4b: Attitude plays a mediating effect on the relation between facilitating conditions and investment intention.

2.4. Incorporation of additional constructs into TPB

Previous studies have showcased that the predictive power of TPB can be boosted by addition of domain-specific constructs (Yadav & Pathak, 2017). Similarly, to analyze investment intention of real estate investors, three additional constructs, namely, perceived financial risk, perceived financial return and financial awareness have been incorporated into original TPB model.

Perceived financial risk (*PFR*): Risk is the most common factor that causes deterrence in carrying out any activity irrespective of the kind of activity or domain. In investment, financial risk is the possibility of loss of money due to multitude of reasons like market related risk, risk due to choice of investment sector, risk due to forgery or risk due to bad timing of purchase and sale (Kling et al., 2023). In real estate investment, financial risk may occur due to investment in a disputed property, selling a property at an inappropriate time, loss of money due to improper paperwork, natural calamity or socio-political issues. Perceived financial risk can be defined as the perception of an individual about the uncertainty or unfavorable outcome in monetary terms due to engagement in a particular activity. Financial risk affects real estate investment (Zhang et al., 2020). It is the most instrumental factor that affects the investment decision-making of investors. Risk perception shapes many important investment decisions like portfolio diversification and time horizon (Nair et al., 2022). This can work in favor of real estate investment as it may cause an investor to diversify between stock markets and real estate or any such investment avenues. It also causes an individual to seek more information and scrutinize the investment avenue leading to a more informed and well-considered decision-making (Raut & Kumar, 2024).

All financial decisions are influenced by risk perception, especially when dealing with unknown outcomes (Dholakia, 2001). Risk perception for a product differs from person to person depending on that person's product knowledge and experience (Mishra et al., 2023). The "Risk Perception Attitude" (hereafter, RPA), developed by Rimal and Real (2003), provides the best explanation for the perception towards risk. According to RPA, people's perceptions of risk drive their behavior, and their confidence in their abilities to change the behavior is essential. As a result, under the framework of RPA, it is reasonable to assume that real estate participants' behavioral intentions will be influenced by their perception of risk concerning their real estate investment choices. Investors' risk perception is negatively related to their investment intention (Nur Aini & Lutfi, 2019). If the investors feels that the risk-reward ratio is unfavorable, they tend to avoid investing (Jia et al., 2021). It has also been explained that the perception of risk negatively influences the attitude of investors towards investment (Kling et al., 2023; Lim et al., 2018). This leads to the deduction that an individual's greater perception of risk will negatively influence their investment intention in real estate market. As said earlier, a country like India has low per capita income with a larger part of population earning less (Cherodian & Thirlwall, 2015). This translates into people being very cautious and skeptical about their money going into some investment which translates into higher perception of risk or in other words, higher fear of losing money which may discourage them from investing. In real estate, the money involved is very large thus this fear tends to be high.

Hypothesis:

H5a: Perceived financial risk has a negative influence on investment intention.

H5b: Attitude plays a mediating effect on the relation between perceived financial risk and investment intention.

Perceived financial return (*PFRTN*): The return people believe will result from a particular behavior is perceived return (Chandon et al., 2018). Previous works have stated that people's perceptions of return related to their decisions greatly influence their propensity to act in a certain way (Rimal & Real, 2003). It is a forward-looking thinking wherein an individual anticipates certain favorable outcome based on his/her past experience, analysis or expectation from the market. Thus, the concept of "perceived financial return" in investment decision-making postulates the satisfaction and favorable results a person anticipates achieving through his/her decision to invest in the real estate market. The perception of financial return also drives the risk taking approach (Nair et al., 2022). A person who desires a higher financial return often becomes a higher risk taker. Both these behaviors influence the overall investment intention. Also, the literature suggests that an individual's attitude is positively influenced by their perception if they believe their decision will benefit them financially (Ali et al., 2021; Liu et al., 2013). As mentioned earlier, in case of Indian perspective, the goal of attaining a higher financial freedom and better living standards results in people getting attracted to possible good financial return. Similarly, it can be inferred from the discussion that perceived financial return positively influences the attitude and intention of individuals. Thus, the study hypothesizes that:

H6a: Perceived financial return has a positive significant influence on investment intention.

H6b: Attitude plays a mediating effect on the relation between perceived financial return and investment intention.

Financial awareness (*FA*)*:* It has been explained by Huhmann and McQuitty (2009) as being the knowledge and understanding of an individual about financial concepts and a pivotal factor for wealth creation (van Rooij et al., 2012; Xiao et al., 2014). It is directly proportional to the probability of an individual to indulge in financial transactions (Zhao & Zhang, 2021). It encompasses an individual's understanding of various financial topics like financial markets, inflation, time value of money, debit and credit, deposits, etc. together with one's assessment of their understanding of financial concepts (Raut & Kumar, 2024). As researchers have pointed out, the confidence that an individual has in their financial awareness positively drives their financial decision-making since making risky decisions requires confidence as the key ingredient (Vörös et al., 2021). Selection of a specific financial asset is also governed by this knowledge (Goyal & Kumar, 2020; Zhu & Xiao, 2022). Financial awareness drives responsible financial behavior (Fox et al., 2005). These understandings about financial awareness guide towards the possibility that financial awareness can influence the investment intention of an individual by increasing confidence and helping in decision-making. Such investigations have previously been performed in the context of mutual funds (Mishra et al., 2023), stock markets (Akhtar & Das, 2019), cryptocurrencies (Zhao & Zhang, 2021) and other financial markets and investment avenues bringing us to the suitability of such investigation in the context of real estate investment. As seen earlier, attitude of an individual encompasses his self-evaluation about a particular scenario or suitability of a behaviour, it is quite appropriate to say that having higher financial awareness may cause better evaluation of the associated behaviour resulting in influence over the intention through heightened positivity in attitude. This leads to the formation of following hypotheses:

H7a: Financial awareness has a positive effect on investment intention.

H7b: Attitude plays a mediating effect on the relation between financial awareness and investment intention.

2.5. The proposed conceptual model

A conceptual model is put forth in light of the literature review and the hypothesized relationships. This conceptual model is shown in Figure 1.
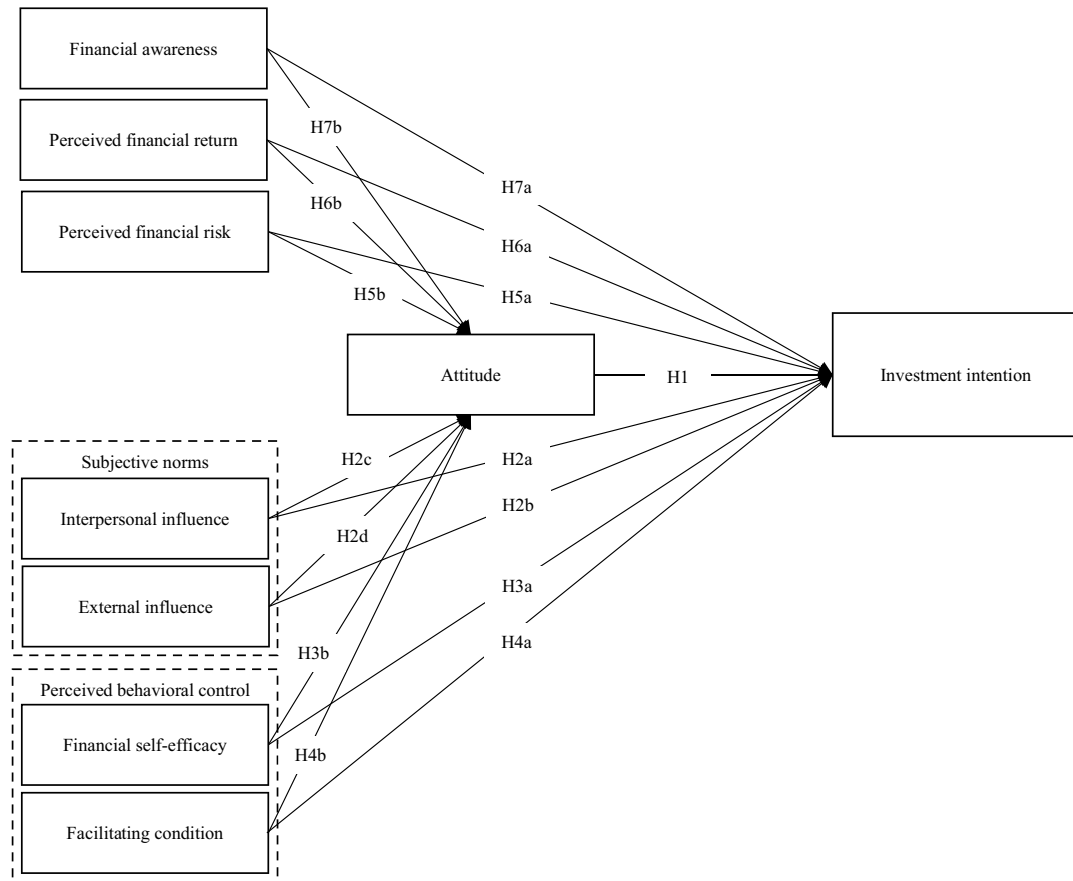
Figure 1. The conceptual model (source: Authors' contribution)

3. Research methodology

3.1. Data gathering process

The target group for data collection was individual real estate investors dealing in residential property hence the respondents were selected from an open online portal where individuals list their properties for rent or sale. The properties which were listed for sale were selected so that the investors who are into buying and selling properties could be isolated. The data was collected through a structured questionnaire, where the responses were gathered through a two-fold or mixed method approach. Here random probabilistic sampling and convenient snowball sampling method were used. This was done for primarily two reasons. First, random probabilistic sampling method helped in representing the population in an unbiased way so as to improve the generalization of the study (Xie et al., 2023). Second, convenient snowball sampling helped in reaching the real estate investors who are hard to reach but are essential for getting an expert insight into the exploratory angle of the study (Rana et al., 2023). The first group of responses (random probabilistic sampling) were gathered by collecting contact details of owners of listed properties on a famous online portal by searching for properties in six major cities of India, namely Mumbai, Delhi, Bangalore, Ahmedabad, Chennai, and Kolkata. These

cities were selected because they are the most populous cities and also hubs for major businesses and economy. From the search results obtained, every 10th listing was contacted. The second group of responses were collected through online distribution (convenient and snowball sampling). A control question asking whether they have invested in real estate or are intending to invest was asked to respondents and included in questionnaire to ensure only existing or potential investors are included.

The first group comprised 284 responses (72.26% of total responses), and the second group comprised 109 responses (27.74%). As both groups of respondents were selected through the same control question, the respondents represent the similar population. Also, in order to confirm this statistically, independent samples T-test was conducted using IBM SPSS v25. The significance level of the test was acceptable ($p < 0.05$) for all variables suggesting that there was no difference between the two groups. The collection process extended from November 2022 to April 2023. A total of 393 responses were received, with 366 being selected for final analysis after outliers were removed. According to the generally accepted rule, the sample size should be the 10th multiple of the number of paths leading to a given construct. However, the advised minimum sample size is given by the equation $N \geq 50 + 8\,m$, in which minimum sample size is represented by N, and m represents the number of constructs in the model (Green,

1991). According to the recommendation of Cohen, (1992), necessary minimum sample size was determined through power analysis in G*Power where effect size (f^2) was 0.15, error type 1 was 0.05, and error type 2 was 0.20. This calculation yielded $N = 184$ as the minimum sample size. As the summation of this analysis, the sample size of 366 adequately fits all the criteria.

3.2. Measures and instrument development

The measure items were obtained from the literature, which were then further modified to adapt to the real estate investment context, ensuring construct validity. The items of the questionnaire were originally drafted in English, but for a better and easier understanding of the target audience, the same was translated into Hindi also. Appendix A contains the overview of the questionnaire along with its sources. Under demographic details, a nominal scale was used to measure gender, type of real estate investment, and source of finance; 6-point ordinal scale was used to measure age; 5-point and 6-point interval scales were utilized to measure years of investment experience and annual income, respectively. 5-point Likert scales, where 1 represents "Strongly disagree" and 5 represents "Strongly agree" were utilized to measure other attitudinal scales. 5-point Likert scales were employed to reduce respondents' annoyance and increase response rate because 7-point Likert scales are lengthy and can cause confusion among the respondents (Pai & Huang, 2011). Using different point scales may reduce the method bias in the study (Padmavathy et al., 2019; Soon & Sharifah, 2017).

Before final fieldwork, a pretest and pilot test were conducted to ensure the measure's validity. The face and content validity of the survey instruments were assessed during the pretest by presenting the questionnaire to 2 professors and 10 research scholars. Based on their feedback on ambiguity in wording, minor amendments were made in the questionnaire. Similar to Kapoor et al. (2014), a pilot test was conducted by distributing the questionnaire to 50 real estate investors and found that Cronbach's alpha surpassed the value of 0.7, indicating good construct reliability.

3.3. Empirical test

The post-screening validity and usable dataset were assessed by conducting descriptive (using SPSS v25) and inferential analyses (using AMOS v23). In order to perform SEM, two widely used methods are CB-SEM and PLS-SEM. While considering both the methods, it is worth remembering that both of them are complimentary to each other and not competitive. When the objective is to test an existing theory through a series of hypothesis testing, CB-SEM has been adjudged to be more suitable (Anderson & Gerbing, 1988; Hair et al., 2011). Also, CB-SEM is more suitable for reflective measurements (Shi et al., 2021). As this study focuses on testing the TPB model in the context of real estate investment and the measurements were reflective in nature, CB-SEM has been selected as a method of choice.

As advised by Anderson and Gerbing (1988), a SEM two step procedure was followed. In the first step, measurement model was achieved through confirmatory factor analysis (CFA) while in the second step, structural model was created to test the proposed hypotheses. Following reasons support the use of structural modelling approach:

- *It is a strong and meticulous statistical approach to cope with complex models* (Hair et al., 2006).
- *It provides a methodical way to examine correlations between constructs in a single model and to confirm the existence of links between constructs and variables* (Hair et al., 2006; Byrne, 2001).

4. Data analysis and results

4.1. Sample characteristics

Out of the total sample, 25.14% (92) respondents were female, 74.32% (272) were male, and rest 0.55% (2) preferred not to say. The age group analysis shows that most respondents were from the 31–40 age group (49.73%) followed by the 41–50 age group (24.04%). 14.21% of respondents were from 21–30 years age group, while the rest had very little contribution. Upon looking at income groups of respondents, majority of the respondents were from ₹4,00,001 to ₹8,00,000 and ₹8,00,001 to ₹12,00,000 groups (31.97% and 28.14% respectively). The ₹12,00,001 to ₹16,00,000 group represented 25.14% of the sample, while the rest had very small contributions. The detailed demographic distribution is shown in Table 1.

Table 1. Demographic profile of respondents (source: Authors' contribution)

Demographic profile of respondents		
	Frequency	Percentage (%)
Gender		
Male	272	74.32
Female	92	25.14
Prefer not to say	2	0.55
Age group		
21–30 years	52	14.21
31–40 years	182	49.73
41–50 years	88	24.04
51–60 years	36	9.84
Above 60 years	8	2.19
Annual income (including other income)		
Less than ₹4,00,000	27	7.38
₹4,00,001–₹8,00,000	117	31.97
₹8,00,001–₹12,00,000	103	28.14
₹12,00,001–₹16,00,000	92	25.14
₹16,00,001–₹20,00,000	16	4.37
More than ₹20,00,000	11	3.01

Notes: 1 USD = ₹ 83.98 as on 02 October 2024.

4.2. Common method bias (CMB)

Since the same respondents responded to both the dependent and independent variables, there was a chance of common method bias (CMB). To test CMB, we used numerous techniques. Using Harman's one-factor test, we loaded all the items on one factor, and the result suggested that this one factor represented 32.1% of total variance, which is less than the threshold value of 50%, hence there is an absence of CMB (Kock, 2021; Podsakoff et al., 1990). A more robust method to check CMB, the Common Latent Method, was then applied in which a new common latent factor (CLF) was introduced along the lines that it will point its single-headed arrow at all of the observations. This CLF has variance limited to 1, and paths (single-headed) are restricted to be equal. This allows us to triangulate items that have the strongest ability to scatter the variance explained by them through CLF. Comparing the standardized regression weights from the constraint and unconstraint models, the estimate difference is then calculated by subtracting the estimates with and without CLF. If there is a significant difference between them, then the CLF construct is kept in the model (Lowry & Gaskin, 2014). However, in this case, the CLF analysis revealed that all the outcomes are very low and thus insignificant. At last, this study has used mediated relation, thereby minimizing CMB as respondents are unlikely to employ cognitive maps to comprehend such relationships.

4.3. Measurement model: CFA

CFA was carried out using AMOS to investigate the validity and reliability of the latent construct and to validate the multi-functional model. The factor loadings of all items were greater than the desired cutoff of 0.5 (Jabeen et al., 2023) except FA1 (0.42), thus it was dropped. Table 2 demonstrates that all the constructs had Cronbach's alpha coefficient value ranging from 0.803 to 0.924, and composite reliability value ranging from 0.821 to 0.927, more than 0.7 demonstrating the construct reliability (Schneider et al., 2005).

Construct validity was measured through convergent and discriminant validity. For convergent validity, Average Variance Extracted (AVE) was used. Table 2 shows that all of the constructs' AVE is above the threshold levels of 0.5 (Bagozzi & Yi, 2012), proving the convergent validity of the items. Discriminant validity of the items were checked using Fornell and Larcker criteria and HTMT ratio. Fornell and Larcker (1981) suggest that the constructs have discriminant validity if the square root of each construct is higher than the correlation of the constructs (Fornell and Larcker's criterion). On the other hand, HTMT ratio of lower than 0.9 among two constructs shows that there is discriminant validity (Henseler et al., 2015). Using this formulation it was found that all the constructs have ensured discriminant validity (Table 3 and 4). Potential multi-collinearity was also assessed through Variance Inflation Factor (VIF), which was under the cutoff value of 3.0 (Roldán & Sánchez-Franco, 2012), indicating absence of multi-collinearity problem in the model (Table 2).

Table 2. Measurement model summary (source: Authors' contribution)

Variables and Items	FL	Cronbach's Alpha	AVE	CR	VIF
Intention		0.924	0.761	0.927	–
INT1	0.898				
INT2	0.917				
INT3	0.905				
INT4	0.761				
Financial awareness		0.837	0.517	0.841	1.358
FA2	0.673				
FA3	0.824				
FA4	0.67				
FA5	0.747				
FA6	0.669				
Perceived financial risk		0.884	0.719	0.884	1.208
PFR1	0.799				
PFR2	0.866				
PFR3	0.876				
Perceived financial return		0.904	0.76	0.904	2.08
PFRTN1	0.83				
PFRTN2	0.922				
PFRTN3	0.86				
Attitude		0.914	0.783	0.915	2.115
ATT1	0.851				
ATT2	0.896				
ATT3	0.906				

End of Table 2

Variables and Items	FL	Cronbach's Alpha	AVE	CR	VIF
Interpersonal influence		0.803	0.61	0.821	1.354
ISN1	0.643				
ISN2	0.911				
ISN3	0.765				
External influence		0.901	0.704	0.904	1.613
ESN1	0.728				
ESN2	0.836				
ESN3	0.902				
ESN4	0.88				
Financial self-efficacy		0.884	0.719	0.884	1.208
FSE1	0.799				
FSE2	0.866				
FSE3	0.876				
FSE4	0.737				
Facilitating conditions		0.832	0.558	0.834	1.927
FC1	0.763				
FC2	0.807				
FC3	0.743				
FC4	0.668				

Table 3. Discriminant validity – Fornell & Larcker Criteria (source: Authors' contribution)

	INT	ATT	ISN	ESN	FSE	PFR	PFRTN	FC	FA
INT	**0.873**								
ATT	0.66	**0.885**							
ISN	0.349	0.375	**0.78**						
ESN	0.47	0.469	0.186	**0.839**					
FSE	0.534	0.575	0.464	0.313	**0.814**				
PFR	−0.22	−0.264	−0.059	0.12	−0.171	**0.848**			
PFRTN	0.596	0.689	0.341	0.556	0.435	−0.216	**0.872**		
FC	0.477	0.519	0.434	0.496	0.663	0.011	0.591	**0.747**	
FA	0.426	0.415	0.357	0.33	0.498	−0.152	0.385	0.457	**0.719**

Table 4. Discriminant validity – HTMT Ratio (source: Authors' contribution)

	INT	ATT	ISN	ESN	FSE	PFR	PFRTN	FC	FA
INT									
ATT	0.661								
ISN	0.351	0.377							
ESN	0.471	0.47	0.187						
FSE	0.536	0.577	0.467	0.314					
PFR	−0.22	−0.264	−0.059	0.12	−0.171				
PFRTN	0.597	0.689	0.343	0.557	0.436	−0.216			
FC	0.477	0.519	0.437	0.497	0.665	0.011	0.592		
FA	0.426	0.416	0.359	0.331	0.5	−0.152	0.385	0.457	

4.4. Structural model: Goodness-of-fit statistics

Various measures were used to gauge the model's goodness of fit. The CMIN/DF was 2.466 which is below 3 as per recommendation of Bagozzi and Yi (1988). A good fit for the measurement model was also shown by other fit indices. The GFI was 0.856 and AGFI was 0.817, above the threshold value of 0.8 (Chau & Hu, 2001; Seyal et al., 2002). The CFI and TLI were 0.924 and 0.910 respectively, above the threshold of 0.9 as recommended by Bentler and Bonett (1980). Moreover, the RMSEA was 0.063, which is below 0.08 as suggested by Browne and Cudeck (1993). The combination of these indicators demonstrates that the measurement model successfully fits the data.

4.5. Structural model: Path analysis and hypothesis testing

Hypotheses were tested at two stages: testing direct effects (*H1, H2a, H2b, H3a, H4a, H5a, H6a, and H7a*) and testing mediation effects (*H2c, H2d, H3b, H4b, H5b, H6b and H7b*). To assess both direct and mediation effects, a structural equation model with AMOS v23 was used. Table 5 and 6 represent the results of the test.

The result in Table 5 shows that attitude ($\beta = 0.337$; $p < 0.001$), external influence ($\beta = 0.191$; $p < 0.001$), financial self-efficacy ($\beta = 0.196$; $p < 0.01$), and perceived financial return ($\beta = 0.195$; $p < 0.01$) have a significant positive influence on investment intention of real estate investors. However, interpersonal influence ($\beta = 0.004$; $p > 0.05$), facilitating conditions ($\beta = -0.064$; $p > 0.05$), financial awareness ($\beta = 0.065$; $p > 0.05$) and perceived financial risk ($\beta = -0.052$; $p > 0.05$) did not have a significant direct influence on investment intention.

In the next step, mediation effect was analyzed. In order to test this, bias-correlated bootstrapping was done on AMOS v23 at 95% confidence interval for 5000 resamples (Schneider et al., 2005). Table 6 shows the results of this test. Mediation effect has been bifurcated into two subtypes: partial and full mediation. Partial mediation exists when there is significant direct and indirect effect.

However, full mediation is said to exist when there is only significant indirect effect (Cheung & Lau, 2008; Hayes, 2013). The result of bootstrapping shows that attitude partially mediates the effect of external influence (direct effect = 0.201**; indirect effect = 0.059**) and financial self-efficacy (direct effect = 0.1***; indirect effect = 0.164*) on investment intention of real estate investors. However, full mediation effect of attitude was observed in the relationship between investment intention and interpersonal influence (direct effect = 0.005ns; indirect effect = 0.049**), perceived financial risk (direct effect = –0.046ns; indirect effect = –0.034**), and perceived financial return (direct effect = 0.206ns; indirect effect = 0.165**). In case of facilitating condition (direct effect = –0.071ns; indirect effect = –0.056ns) and financial awareness (direct effect = 0.09ns; indirect effect = 0.007ns), it is observed that there is no mediating effect of attitude. Here Table 6 summarizes the mediation effects.

The R^2 value for attitude and investment intention is 0.602 and 0.555 respectively, which highlights that 60% variance in attitude and 55% variance in investment intention is explained by the proposed model (Table 7). Another statistics to estimate the predictive power of the model in Q^2 statistic which explains how well the model can predict new data (Hair et al., 2011). It gives a comprehensive understanding of the model's efficiency along with R^2. The Q^2 value is found for the dependent variables so it is 0.5 for attitude and 0.44 for intention in this study (Table 7). The value higher than 0.25 indicates medium predictive power and that higher than 0.5 indicates high predictive power (Hair et al., 2006). Hence, the proposed model has medium predictive power for intention while high predictive power for attitude. Next, the effect size or f^2 statistics was calculated (Table 8) which represents the explanatory power of the particular variable in determining the dependent variable. The calculation showed that for attitude, financial self-efficacy and perceived financial return had medium effect while external influence, interpersonal influence, facilitating condition, financial knowledge and perceived financial risk had low effect. For intention it was found that attitude and perceived financial return had

Table 5. Direct path (source: Authors' contribution)

Path	β	S.E.	Hypothesis
Financial awareness→Intention	0.065ns	0.068	Not supported
Facilitating condition→Intention	–0.064ns	0.098	Not supported
Perceived financial return→Intention	0.195**	0.077	**Supported**
Perceived financial risk→Intention	–0.052ns	0.041	Not supported
Financial self-efficacy→Intention	0.196**	0.06	**Supported**
External influence→Intention	0.191***	0.059	Supported
Interpersonal influence→Intention	0.004ns	0.063	Not supported
Attitude→Intention	0.337***	0.079	**Supported**

Notes: ***$p < 0.001$; **$p < 0.01$; ns = not significant, Fit indices CMIN/DF = 2.466 ($p < 0.001$), GFI = 0.852, AGFI = 0.817, CFI = 0.924, TLI = 0.910, NFI = 0.880, RMSEA = 0.063 where GFI = goodness-of-fit index, AGFI = adjusted goodness of fit index, CFI = comparative fit index, TLI = Tucker–Lewis index, NFI = normed fit index, RMSEA = root mean square error of approximation.

Table 6. Mediation effect (source: Authors' contribution)

Path	Effect	β	Bootstrap 95% CI		Hypothesis
			Lower	Upper	
ISN→ATT→INT	Indirect effect	0.049**	0.000	0.127	Full mediation
	Direct effect	0.005ns	−0.131	0.137	
ESN→ATT→INT	Indirect effect	0.059**	0.018	0.134	Partial mediation
	Direct effect	0.201**	0.085	0.359	
PFR→ATT→INT	Indirect effect	−0.034**	−0.08	−0.007	Full mediation
	Direct effect	−0.046 ns	−0.141	0.033	
PFRTN→ATT→INT	Indirect effect	0.165**	0.068	0.325	Full mediation
	Direct effect	0.206 ns	−0.033	0.451	
FSE→ATT→INT	Indirect effect	0.1***	0.046	0.179	Partial mediation
	Direct effect	0.164*	0.018	0.311	
FC→ATT→INT	Indirect effect	−0.056 ns	−0.165	0.038	No mediation
	Direct effect	−0.071 ns	−0.327	0.139	
FA→ATT→INT	Indirect effect	0.007 ns	−0.078	0.08	No mediation
	Direct effect	0.09 ns	−0.091	0.27	

Notes: ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; ns = not significant; CI = Confidence Interval.

Table 7. Q^2 and R^2 statistics (source: Authors' contribution)

Dependent variable	Q^2 predict	R^2
ATT	0.5	0.602
INT	0.444	0.555

Table 8. f^2 (Effect size) statistics (source: Authors' contribution)

Variables	ATT	INT
ATT	–	0.281
ESN	0.033	0.112
FC	0.012	0.009
FA	0.003	0.013
FSE	0.197	0.129
ISN	0.131	0.004
PFR	0.027	0.007
PFRTN	0.161	0.156

Notes: ≥0.02 = small effect; ≥0.15 = medium effect; ≥0.35 = large effect.

medium effect while external influence, interpersonal influence, facilitating condition, financial knowledge, financial self-efficacy and perceived financial risk had low effect. However, this statistic is not considered standalone but all other parameters should be considered in unison which suggest that the overall predictive and explanatory power of the model is good.

5. Discussion

The study shows that attitude is the most significant influencer (β = 0.337), indicating that attitude is the greater concern for investors when deciding whether to invest (Gopi & Ramayah, 2007). This leads to the acceptance of

hypothesis H1. No relevant studies were found that have studied the effect of attitude on real estate investment intention, but similar effect was studied in other financial markets. This finding aligns with the findings of (Shim et al., 2008; Vaidyanathan et al., 2000). The strong positive significance of attitude results from the strong opinion that the investors like and support the idea of investing in real estate. Given the different investment avenues available, real estate gives a stronger security since a real physical asset is involved, either by owning land or house or by being an investor in a larger real estate project, such as in the case of REITs. Also, if Indian societal perspective is considered then it is easily observable that the importance of having a roof over the head is deep-rooted. As land is considered to be a possession which doesn't degrade over time and cannot be lost due to events like market crashes, calamities or theft, it becomes one of the most pursued goals of an individual. These points work in favor of real estate and can be used by policymakers to develop and nourish the real estate scenario of a developing country like India, where public investment is crucial for the country's progress. The strong positive attitude of investors can be spearheaded by good and strong rules and regulations that will increase an investor's confidence by providing a safe environment for investing.

Previous studies that have taken subjective norms as a singular factor have mostly concluded that they significantly influence investment intention (Akhtar & Das, 2019; Gopi & Ramayah, 2007). The test shows that external influence directly influences investment intention, while interpersonal influence does not. This leads to the non-acceptance of hypothesis H2a and acceptance of hypothesis H2b. However, when attitude is introduced as a mediating factor, we see that both interpersonal and external influences affect the investor's attitude, affecting the

investment intention and leading to the acceptance of hypotheses H2c and H2d. The possible explanation for such occurrence could be the fact that real estate investments are often very high-value transactions; hence, investors do not completely rely on word of mouth by friends or family, which justifies the absence of direct influence, but this does influence their attitude by bringing in a change in how they feel about those investment decisions. This justifies the full mediation effect. Regarding external influence, investors rely on their first-hand source of information from different media types since these channels are assumed to give trusted information reviewed by experts. This results in a direct influence on investment intention as well as mediating effect. Therefore, the mediating effect of attitude is partial mediation in this case. It also aligns with the psychological point of view. If the source of information or learning (from friends, family or other people they deem important) is trustworthy or credible, the mind tries to inculcate those learnings as a cognitive process where people learn by observing others. This affects the attitude and brings in a positive change. This positivity boosts the intention to perform a behaviour which is investment in this case. Aligning these with the Indian society structure, it can be gathered that people are prone to confirmatory judgement regarding their decisions and the sense of being deeply connected to friends and family leads them to take the decision based on the recommendations and approval by their important people. This starts right from the childhood and thus influences the attitude of a person. It is thus not very surprising that although consciously people may think that they are independently taking decisions (reflected by non-significant direct effect of interpersonal influence), the reality is that they are getting influenced which brings a change in their attitude.

The bifurcation of the components of PBC showcases that financial self-efficacy and facilitating conditions both show different relationships toward investment intention. While financial self-efficacy influences intention both directly and indirectly through attitude (acceptance of hypotheses H3a and H3c), facilitating conditions don't influence investment intention either directly or indirectly through attitude (non-acceptance of hypotheses H3b and H3d). The relationship of financial self-efficacy and intention is consistent with the findings of (Z. Li, 2021; Y. Xu et al., 2022) and indicates that higher the confidence of an individual to be able to manage finances, more confident that person will be in investing and utilizing the resources in this regard. The presence of mediation effect portrays that the effect of financial self-efficacy is widespread and having a higher level of financial confidence will result in a boosted level of positive attitude so that an individual feels more inclined towards making investment. People who have higher financial self-efficacy feel more competent about their ability and are confident of getting higher returns or facing lower risks. This results in a positive attitude which in turn increases the investment intention. As in the case of facilitating conditions, it is seen that the mere availability of resources is not enough to encourage someone to invest. This is consistent with the finding of Abbasi et al. (2021). However, previous works have suggested that facilitating conditions helps people adopt things like new technology (Nyasulu & Dominic Chawinga, 2019). The possible cause of such difference in the case of investment intention can be the fact that although people have knowledge about various resources like easy loans, available properties to invest, and digital platforms to find such properties but this does not influence their investment intention as there are other factors like attitude, external influence and financial self-efficacy which shape the intention to invest. This arises from the fine difference between financial self-efficacy and facilitating conditions that is, while financial self-efficacy is the actual perception of self-ability, facilitating condition is the availability of external resources. Those who are confident of their ability to manage their finance may not be too much concerned about the availability of resources as they know they can find ways to help themselves if they want to invest while those who are not confident about their abilities to manage their finances are also not confident about using any available resources. Moreover, Indian population is in the phase of transition to be technologically aware that may help them to understand the resources that can help them invest. The majority of people in real estate investment are from the age group of 31–50 (reflected by 73.77% of total respondents) which is a bit farther from those resources as compared to the younger age group. This showcases that availability of resources is still not a significant factor for them.

The test shows that perceived financial risk has no significant influence directly, leading to non-acceptance of hypothesis H5a. Previous studies have shown that perceived risk has a significant influence on fintech adoption (Ali et al., 2021), cryptocurrency acceptance (Jariyapan et al., 2022) and stock markets (Akhter & Hoque, 2022). However, insignificant relation is seen in real estate investment. The mediation analysis shows that perceived risk negatively influences the investor's attitude, which in turn influences the intention, resulting in the acceptance of hypothesis H5b. The possible explanation could be that in case of real estate investment, investors get a physical property in return, which instills in them a sense of security, while in case of stocks, money is with a third-party company and investors only get a written confirmation of the same. Moreover, the land is always expected to appreciate; if not, neither depreciate. However, some risk is often involved, like documentation issues and other legal complications, due to which investors are somewhat conscious of the investment, which explains that their attitude is affected. Similar results were explained in the work of Walton and Johnston (2018). It says that trust-related risk affects the attitude but does not affect intention directly. Considering the Indian market, majority of real estate transactions happen with someone known to both the parties who acts as mediators. This instills a sense of security and low risk. This may be one of the underlying reasons for such results.

Contrary to risk perception, perceived financial return significantly influences the investor's investment intention and attitude, resulting in acceptance of hypotheses H6a and H6b. In line with the findings of (Akhter & Hoque, 2022; Mishra et al., 2023; Yang et al., 2017), high return, ever-appreciating value, hedge against inflation and economic downturns overweigh the risk involved, and thus this influences the intention directly and also brings in a change in investor's attitude. Another interesting finding that contradicts the findings of other investment avenues is the insignificant relation between financial awareness and investment intention, both directly and through attitude which leads to non-acceptance of hypotheses H7a and H7b. In most other investment avenues, a certain level of financial awareness is necessary to understand the terminologies involved, rules, regulations, and the study of market indicators. Real estate in India is still a very grassroots-level investment method for most people, where the process involves finding a right property, transaction, and documentation. This does not require any special financial awareness, and investors may only have a basic awareness to invest in this area. This explains the insignificant relationship. The presence of financial awareness could have impacted the attitude which could have affected intention but the insignificant relationship proves that just having the knowledge of financial aspects does not mean that the individual intends to invest. However, as financial self-efficacy influences intention, it can be said that only knowledge is not sufficient but the zeal and confidence to be able to manage ones finances plays a greater role in motivating people for investment. The study of mediating effect of attitude in this paper also reveals that attitude is the key to increased investment intention. Factors like interpersonal influence, external influence, financial self-efficacy, perceived financial risk and return influence the cognitive process of influencing the behaviour by bringing in a change in the attitude. In the Indian context, this is evident as the intrinsic characteristics like limited resources, less scope of losing money and the zeal to build a better financial future all come together to shape the attitude that makes an individual confident which in turn boosts the investment intention.

However, the study is just the beginning into this exploration and is yet a small one compared to the market. It should thus be considered as a pilot study that gives theoretical and practical understanding of how the scheme of things occur in the investor's mindset. It cannot give evidence conclusive enough to create a paradigm shift or some major changes but can surely be a stepping stone into the vast space of investor mindset in the Indian real estate market.

5.1. Theoretical implications

This study provides a theoretical base by identifying the factors that affect the investment intention. The study of various factors that influence investment intention through an Indian perspective gives a scope of geographical diversity in understanding investor behavior in general. This paper also gives a bifurcated view of subjective norms, which explains the sharp difference between the two contributing factors, namely interpersonal and external influence, and how they affect investment intention differently. Next, the paper proposes adding new variables (perceived financial risk, perceived financial return and financial awareness) to the existing TPB model, thus helping improve the model's conceptual robustness. The established influence of perceived financial return and perceived financial risk through attitude showcases that these variables can be incorporated into TPB to make it better. Lastly, the paper also checks and provides insights about the mediating effect of attitude on the factors, and the findings that suggest the larger role of attitude where it gets influenced by some factors and thus affects investment intention. On closer examination, it is revealed that for all those constructs which influence investment intention, attitude does mediate. While for all those constructs that do not influence intention, attitude does not mediate the relation. This can be a significant theoretical contribution that attitude has a greater role than just being one of the constructs of TPB. In reality, it should lie somewhere in the vicinity of investment intention. These insights can help in deeper concept building about the attitude of investors and prove to be some great options for future studies.

5.2. Managerial implications

The findings also give some managerial implications that will help policymakers, investment managers, and investors to enhance their intention to invest in real estate. The most prominent factor is attitude, both individually and through mediation, which showcases that the strategy should bring a positive attitude to the investor. Utilizing the significant influence of financial self-efficacy, programs can be developed to teach investors how to better manage their finances, along with complimentary financial management sessions, especially for young investors, to create a pool of confident real estate investors with high intentions to invest. Implementation of such confidence building scholastic measures during studies in schools and colleges can really help while investment firms can attract investors by offering some kind of bonus sessions which can boost the confidence by enhancing the financial self-efficacy. In the present scenario, successful implementation of such campaigns can be seen in consumer awareness programs run by government authorities regarding various topics like electricity consumption or safely investing in mutual funds. One important thing to note here is that financial knowledge does not show any influence on investment intention and it is very easy for a program to deviate from imparting financial self-efficacy and venture into imparting financial knowledge. This should be carefully avoided in order to reap the true benefits. Since the perceived financial return is also highly significant, investors can be further motivated by explaining real estate's high financial return and excellent hedging capabilities. The positive influence of external influence gives way to the need to utilize media (print or digital) to showcase the pros of investing in a real

estate project or company since people tend to be influenced by media-imparted knowledge. Pep talks by industry experts and their reviews on certain projects or market conditions can be good information consumption sources for investors. Lastly, the non-significant influence of financial knowledge, facilitating condition, and interpersonal influence gives an indication that a strategic shift is needed from imparting financial knowledge, various loan schemes, or word-to-mouth publicity to robust confidence-building financial awareness programs and use of media to impart knowledge and information to potential investors. Such shift is becoming evident as the websites and online portals for buying or selling properties are now gaining popularity over local brokers and acquaintances quickly, which establishes the findings of this study.

6. Conclusions, limitation and future direction

This study gives a thorough knowledge of the elements that impact investors' investment intentions in the real estate sector. It utilizes TPB as the central theme and adds more factors namely perceived financial risk, perceived financial return and financial awareness that can be relevant to the shaping up of intention of the investor. The findings explained the significant influence of attitude, external influence and financial self-efficacy from the original TPB model and also successfully demonstrates the significant influence of perceived financial return as an additional construct to it. It also explains the high importance of attitude as the pivotal factor by bringing forward the mediating effect of it on interpersonal influence, external influence, perceived financial risk and perceived financial return. It also presents how some factors may not be openly visible as the precursors but they do influence the attitude of the investor. This helps in understanding the fact that although attitude the focal point for influencing the investment intention, the change in attitude itself can be brought by focusing on other factors. Attitude as a whole might be a vast playground where strategists might find themselves astray about how to change it but when factors are available which influence attitude, it becomes easier to formulate strategies. This study gives a new understanding about what factors are more important so that fund managers and policy makers can channelize the available resources towards those strategies that resonate with the investors and can influence the intention in the most successful way possible. It also fills the gap that is present in the real estate investment arena by examining it in the direction that has been traversed by other investment methods. Given the rise of investment in real estate due to growing economy, such study will surely help future researchers in creating a strong conceptual framework that will reflect the interrelationships between investor behavior, strategy formulation and investment methods.

This study has certain limitations that must be considered. First of all the study falls under the category of a cross-sectional study, which implies that information was obtained during a specific, predetermined time horizon so as to examine the significance of influence between independent and dependent variables. It might be possible that the independent factors that influence the investment intention of real estate investors may alter with time. As a result, the outcome of the study is indicative of the present and may not be indicative of the future. Additionally, this study has only looked at the investment intention of Indian real estate investors with a limited sample size which can be a pilot study and thus be used as a reference and not a very conclusive picture of the Indian market. This may lead to a different result if researchers test the same research model on institutional investors or with a much larger sample size which may then give conclusive enough findings. It can also change by considering individual investors of other nations who will have diverse social habits and cultural spectrum. Therefore, the consistency of research results can be verified in different settings in future studies. Thus, it is suggested that future studies should consider institutional investors as their sample and also use a larger sample size. They may also test the result in different nations. Moreover, the study has only considered the protective and motivational factors that may influence the investment decision of individual real estate investors. Furthermore, various other factors like financial well-being, financial planning, and financial satisfaction can be added to improve the predictive power of the model. Considering the underlying effects of moderators and mediators, one important direction would be to use demographic variables, particularly income, gender and age group as moderators to see how they change the existing relationships between the factors.

Author contributions

Goel and Johri helped in ideation of the study. Kumar designed the model of the study while Singh worked towards data collection, analysis and drafting of the paper. All the four authors reviewed the manuscript critically.

Disclosure statement

Authors declare that they don't have any competing interest with any other party.

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Appendix A

Constructs	Measurement variables	Definition	Sources
Variables measured on 5-point Likert Scale (5 – strongly agree and 1 – strongly disagree)			
INT	Intention		Sivaramakrishnan et al. (2017)
INT1	I expect to invest in real estate	It is the inclination or willingness of an individual to engage in a certain act or behavior	
INT2	I want to invest in real estate		
INT3	I intend to invest in real estate		
INT4	I will encourage my friends and family to invest in real estate		

End of Appendix A

Constructs	Measurement variables	Definition	Sources
ATT	Attitude		Taylor and Todd (1995)
ATT1	Investing in real estate is a good idea	It is the perception of an individual in order to respond positively or adversely to a certain concept or circumstance	
ATT2	Investing in real estate is a wise choice		
ATT3	I like the idea of investing in real estate		
ISN	Interpersonal influence		Taylor and Todd (1995)
ISN1	My friends and colleagues are investing in real estate	It is the influence perceived by an individual due to their friends, family, peer group or a group that they aspire to be a part of	
ISN2	Those who have an important influence on me think that I should invest in real estate		
ISN3	People whose opinion I value would prefer that I should invest in real estate		
ESN	External influence		Hsu and Chiu (2004)
ESN1	I read what media suggests/talk about real estate	It is the influence perceived by an individual due to external sources like media and reports	
ESN2	The media (newspaper/magazine) expresses a positive opinion towards real estate investment		
ESN3	Electronic media (TV/radio/internet/blog/social network services, etc.) recommends investing in real estate		
ESN4	Mass media positively recommends investing in real estate		
FSE	Financial self-efficacy		Ajjan and Hartshorne (2008); Hsieh (2015); Choi and Park (2020)
FSE1	I am fully capable in my ability to invest in real estate	It is the confidence that a person has in the ability to manage his/her personal finances	
FSE2	I am confident in my ability to invest in real estate*		
FSE3	I feel I am not qualified enough for investing in real estate		
FSE4	My past experiences increase my confidence that I can successfully invest in real estate		
FC	Facilitating condition		Ajjan and Hartshorne (2008); Hsieh (2015); Choi and Park (2020)
FC1	I have information about various sources from where I can get a loan	It is the perception of the availability of resources that can assist in executing a particular behavior	
FC2	I can get bank loan for investing in real estate		
FC3	I can get financial benefits/tax benefits for investing in real estate		
FC4	I can use my savings to invest in real estate		
PFR	Perceived financial risk		Akhter and Hoque (2022)
PFR1	It is risky decision to invest in real estate	It is the perception of an individual about the negative outcomes resulting from a financial investment	
PFR2	I may lose money due to uncertainty in the real estate		
PFR3	Compared to other investments, investment in real estate is riskier		
PFRTN	Perceived financial return		Tingchi Liu et al. (2013); Hoque et al. (2019)
PFRTN1	I think investing in real estate is highly rewarding	It is the perception of an individual about the positive outcomes resulting from a financial investment	
PFRTN2	Higher return motivates me to invest in the real estate		
PFRTN3	The profit from real estate is higher than other investments		

Variables measured on 5-point Likert Scale (5 – a lot, 4 – a fair amount, 3 – some, 2 – very little and 1 – nothing)

FA	Financial awareness: How would you rate your understanding about the following?		Nadeem et al. (2020); Perry and Morris (2005)
FA1	Interest rates, finance charges and credit terms	It is the confidence level that an individual has on his/her knowledge about financial terms and aspects	
FA2	Managing personal finances		
FA3	Investing money		
FA4	Debit card, credit card, cheque book, taxes		
FA5	Stocks, bonds and government securities		
FA6	Real estate investment		

Note: * The item marked with asterisk is reverse coded.