The Role Of Psychological Factors In Shaping Investment Decisions: A Model Testing In Reference To Real-Estate Investors

[1]Shivani Singh, [2] Dr. Sanjay Kumar Sah

[1]Research Scholar, [2]Professor
[1,2] Faculty of Commerce
[1,2] D.A.V. P.G. College, Banaras Hindu University, Varanasi, India

Abstract: Decision-making is a psychological phenomenon. It includes cognitive processes and is hence affected by the psychology of humans. Biases are the influencers that influence human psychology; particularly in the finance domain, and result in either financial loss or gain. The real-estate market is an imperfect market, which change its nature from person to person and location to location. This study is conducted to assess the influence of psychological factors (heuristic, Herding and prospect) on the investment decisions of real-estate investors. In this research samples have been collected using the stratified random sampling method from individual investors using an instrument formed using a Likert scale and with the medium of personal survey. For analysis of data, SMART PLS 4 software is used. This research coincides with the previous researches on the theme that psychological behaviour influence investment decisions but heuristic and prospect has a significant influence; however, herding does not significantly influence investment decision of the real-estate investors.

Index Terms - Heuristic, Herding, Prospect, Psychological behaviours, investment, investment decision

1.INTRODUCTION

Standard finance assumes that while dealing in the market, investors normally behave rationally **(Baker and Nofsinger, 2010)**. However, the assumption of behavioural finance is that human beings are not perfect and tend to easily make decisions that are mostly influenced by behavioral biases **(Riaz & Iqbal, 2015).** There are three primary themes under which behavioral biases are divided: heuristics, framing, emotions, and market impact **(Baker and Nofsinger, 2010).** Individual stock market investors decisions are significantly influenced by psychological factors **(Bakar & Yi, 2016).** Psychological factors play a significant role in shaping investment decisions, often overriding rational analysis and objective data, as human behaviour is more subjective rather than being objective. Various researchers contributed towards the exploration of the investor behaviour of four specified themes, and these researches are still significant for further exploration. Decision-makers blindly follow heuristics in uncertain and complex situations to simplify the decision-making process **(Ritter, 2003),** reducing the complexity of measuring probabilities and forecasting values to simpler judgements **(Kahneman and Tversky, 1974).** Heuristics enable individuals to expedite decision-making relative to the logical analysis of given information. Generally, heuristics are advantageous and effective when time is constrained **(Waweru et al., 2008),** but sometimes they result in biases **(Kahneman and Tversky, 1974; Ritter, 2003).** Heuristics are nothing but a form of effort reduction, analysing only a few clues, integrating less information, or analysing only a few alternatives **(Shah & Oppenheimer, 2008).** Prospect theory of Kahneman and Tversky (1979) suggests how people choose between alternatives that are inclusive of risk and uncertainty. Prospect theory holds that investors' actions are influenced by expected profits and losses, but the final result is irrelevant. Extreme risk aversion at the point of zero is the most significant aspect of prospect theory. Under normal circumstances, herd behaviour

is one of the most common types of human behaviour. Behavioural similarities are more common among group socialisers. Herding and demographics are more associated except for age **(Gunay, 2011).**

2. LITERATURE REVIEW & RESEARCH GAP

Herding behaviour is more apparent during market losses **(Demirer, 2010). Premium et al. (2003)** inferred that investors who monitor their investments on a regular basis are more loss averse. Cognitive biases influence personal assessments of the investment's gains and losses. Prospect theory, unlike anticipated utility theory—which analyses the decisions of fully rational agents—aims to depict genuine human behaviour. Another consequence of prospect theory is that individuals are more inclined to undertake greater risks to avoid losses than to secure gains. Overconfidence represents a significant heuristic bias, characterised by an unjustified belief in one's intuitive reasoning, judgements, and cognitive capabilities. The phenomenon wherein individuals possess an inflated perception of their own knowledge and abilities serves as a clear illustration of overconfidence **(De Bondt & Thaler, 1995; Hvide, 2002).** "Too many people overvalue what they are not and undervalue what they are" **(Pompain, 2006).** Individual investors tend to buy stocks that are in the news, a behaviour driven by the availability heuristic **(Barber & Odean, 2008).** A lot of researchers say that heuristic biases can have a big effect on how decisions are made and how earnings and material profits are predicted **(Debondt and Thaler, 1990; Abarbanell and Bernard, 1992).** This study is an attempt to determine the impact of heuristics, herding, and prospect factors on real estate investor behaviour.
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3. CONCEPTUAL FRAMEWORK

This study is based on the concepts of psychological factors. Mainly three important factors—herding, heuristics, and prospects—are taken, and their direct impact on individual investor behaviour was assessed through this framework (Figure 1).
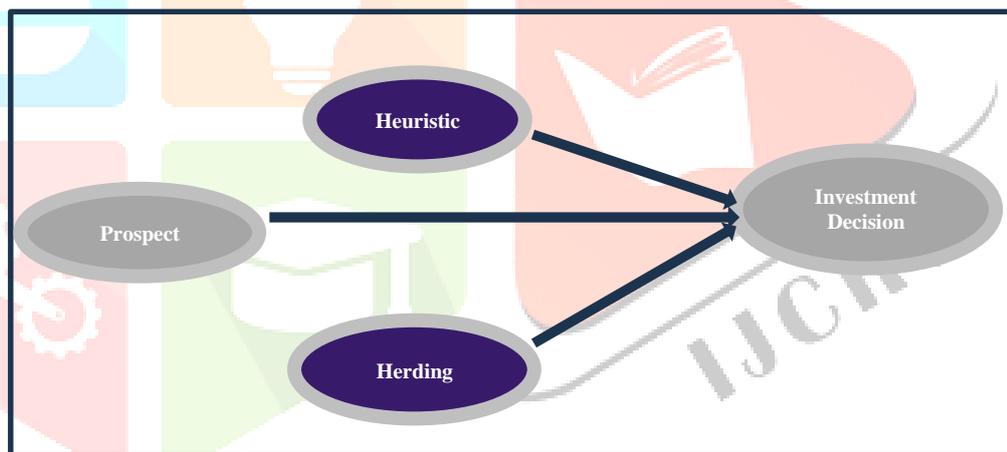
Figure-1 Conceptual framework of the study

4. RESEARCH OBJECTIVES AND HYPOTHESES

This study is based on the main objective of evaluating the impact of psychological factors on the investment decisions of real-

estate investors. Following are the main sub-objectives of this study:

* ❖ To examine the effect of heuristic on investment decisions of the real-estate investors.
* ❖ To examine the effect of herding on investment decisions of the real-estate investors.
* ❖ To examine the effect of prospect on investment decisions of the real-estate investors.

5. RESEARCH METHODOLOGY

Instruments for Data collection

Real-estate investors of Varanasi district were the explicit objective of the stratified random sampling technique used in this study to get a large sample. In order to provide more generalizable results across various populations within the district, this technique was used to guarantee a representative and varied sample. The data collection instrument has been carefully designed with a structured approach to measure heuristic, Herding and Perception factors related to psychology of human behaviours and their investment decisions. A

Likert scale was utilized for this purpose. To access any individual's psychology Likert scale is considered as the best technique **(Nemoto & Beglar, 2014).**

Table 1: Research Instrument

Construct		
Investment Decision (ID)	3 items (ID1, ID2, ID3)	(Meshak et.al.,2016)
Heuristic	6 items (PH1, PH2, PH3, PH4, PH5,PH6)	(Ngoc, 2014; Dispa, 2020)
Herding	5 items (PHERD1, PHERD2, PHERD3, PHERD4, PHERD5)	
Prospect	4 items (PRO1, PRO2, PRO3, PRO4)	(kimani 2011;Ngoc, 2014)

The Likert scale, with its range from strongly agree to strongly disagree, allows respondents to convey different levels of agreement with specific statements, which in turn provides valuable insights about their behaviours and decision-making processes. In order to include non-digital population, for ease of participation and for building trust and comfort among respondents, data was gathered using personal surveys. The personal surveys created a space for direct engagement with respondents, promoting a relaxed atmosphere for candid conversations about sensitive financial subjects. Part A of questionnaire consist of demographic details .The demographics of the participants were age, gender, marital status, education level. Investment decision consist of 3 items adopted from. while part B of questionnaire consist of 3 items of investment decision, 6 items of heuristic, 5 items of herding and 4 items of prospect. Detailed information of this part is presented through table 1.

6. ANALYSIS & MAJOR FINDINGS

Table 2: Demographic Profile of the Respondents

Gender	Frequency (n)	Percent (%)
Male	178.00	71.2
Female	72.00	28.8
Marital Status	**Frequency (n)**	**Percent (%)**
Single	57	22.8
Married	193	77.2
Age	**Frequency (n)**	**Percent (%)**
25-35	77	30.8
35-45	91	36.4
45-55	58	23.2
Above 55	24	9.6
Level of Education	**Frequency (n)**	**Percent (%)**
Doctorate	57	22.8
Post Graduation	79	31.6
Graduation	40	16.0
10+2	25	10.0
Highschool	49	19.6

Source(s): Authors' own work

Table 2 shows the demographic characteristics of the participants while Table 3 Shows there is strong internal consistency among all the measurement scales.

Table 3: Descriptive statistics and Discriminant validity

Construct	Mean	S.D.	1	2	3	4
HEU	3.42	0.726	*0.750*			
HER	3.67	0.591	0.742	*0.773*		
PRO	3.51	0.747	0.734	0.768	*0.803*	
ID	3.89	0.693	0.735	0.770	0.793	*0.826*

*Note(s): *Italics represent the square root of AVE*
Source(s): Authors' own work

Common Method bias

When self-reported data is obtained from an associated source, there exists a potential for common method bias **(Podsakoff et al., 2003).** To assess the common method bias, VIF values have been employed. Given that the VIF levels for all items remain below 3. Therefore, it can be concluded that there was an absence of shared bias **(Kock and Lynn, 2012).**
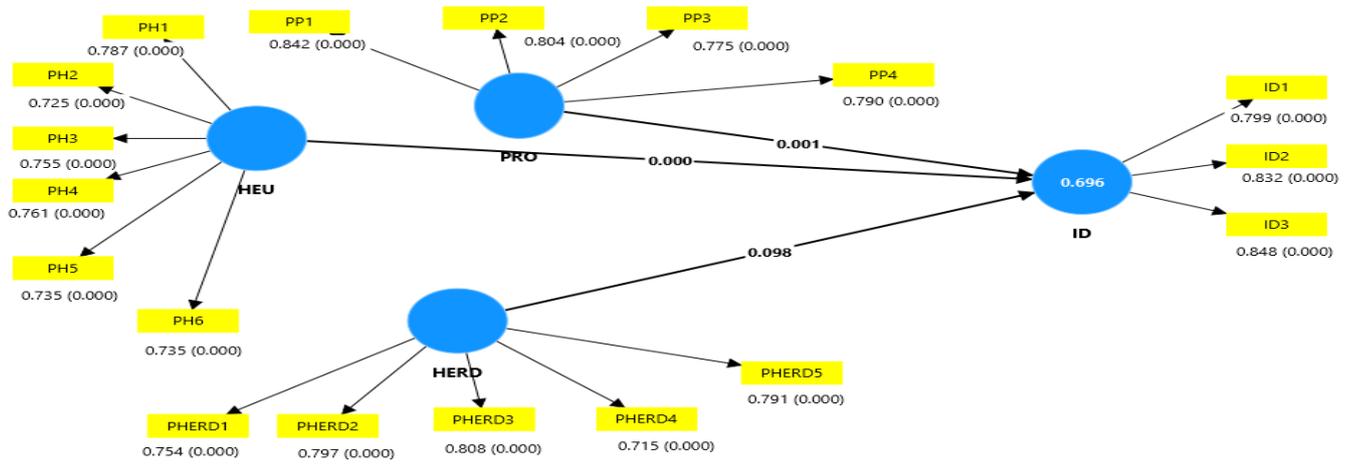
Assessment of model

PLS-SEM was used though Smart PLS 4 software to test the measurement model of the study and further evaluate each of the constructs' structural relationships. For this purpose, first outer model was assessed. Next, the inner model was assessed. Factor loadings of all items are found to be satisfactory (refer to Table 3 & Figure 2).

As there was no concept of higher-order construct, the measurement model was evaluated only one time **(Sarstedt et al.,2019).**The constructs demonstrated adequate reliability, with Cronbach's alpha values ranging from 0.832 to 0.768 and composite reliability values ranging between 0.839 and 0.768 (refer to Table 4). Results revealed that the average variance extracted for all constructs was above the 0.335 threshold, thus supporting convergent validity (refer to Table 4) **(Anderson & Gerbing, 1988).** Discriminant validity was also supported, as the square root of AVE was larger than the correlations between the constructs in the model **(Fornell & Larcker, 1981**), and heterotrait–monotrait values were below the threshold value of 0.90 **(Henseler et al., 2015).**

Table 4: Outer loadings, Reliability and validity

	Outer loadings	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
PH1	0.787	0.846	0.853	0.885	0.563
PH2	0.725				
PH3	0.755				
PH4	0.761				
PH5	0.735				
PH6	0.735				
PHERD1	0.754	0.832	0.839	0.882	0.599
PHERD2	0.797				
PHERD3	0.808				
PHERD4	0.715				
PHERD5	0.791				
PP1	0.842	0.816	0.817	0.879	0.645
PP2	0.804				
PP3	0.775				
PP4	0.790				
ID1	0.799	0.768	0.768	0.866	0.683

ID2	0.832					
ID3	0.848					

Figure 2: Visual Presentation of Relationships

H_a1: Heuristic has a significant influence on investment decisions of real-estate investors

The path coefficient (β) between heuristic and investment decision is 0.585, which suggests a positive relationship. This implies that heuristic is positively associated with investment decision of real estate investor. This relationship is statistically significant, as indicated by a t-value of 9.85 and p-value of 0.000, which is well below the typical significance level of 0.05. This means that the relationship between heuristic and investment decision is statistically significant, indicating that null hypothesis could be rejected. This result demonstrate that heuristic has a significant and substantial influence on the investment decisions of real estate investors.

Ha2: Herding has a significant influence on investment decisions of real-estate investors.

The path coefficient (β) demonstrates a weak positive relationship between herding and investment decision. However, the t-statistic of 1.657 does not exceed the critical threshold of 1.96, and the p-value of 0.098 is above the significance level of 0.05.Tthe results indicate that herding does not have a statistically significant influence on the investment decisions of real estate investors.

Table 5: Evaluation of the structural model

	β	*T value*
Path Relationship (Direct)		
HEU→ID	*0.585***	*9.850*
HER→ID	*0.098*	*1.968*
PRO→ID	*0.191***	*3.387*
F^2 of relationships		
HEU→ID	*0.007*	
HER→ID	*0.294*	
PRO→ID	*0.031*	

Note(s): ***p < 0.05
Source(s): Authors' own work

H_a3: Prospect has a significant influence on investment decisions of real-estate investors.

The path coefficient (β) demonstrates a moderate positive relationship between prospect and investment decision. However, the t-statistic of 3.387 exceed the critical threshold of 1.96, and the p-value of 0.001 confirms statistical significance at the 0.05 level. These findings suggest that prospect plays a meaningful and statistically significant influence on the investment decisions of real estate investors.

7. CONCLUSION & FUTURE RESEARCH SCOPE

Considering the findings of this study it could be concluded that psychological biases influence investment decision of the real-estate investors. Heuristic and prospect have significant influence while herding does not have significant influence. Significance of heuristic implies that real estate investors heavily rely on cognitive shortcuts. This could include relying on past experiences, intuitive judgment, or quick assessments of risks and rewards without a detailed analysis. The considerable impact of the prospect factor suggests that investors are driven by their interpretations of possible gains or losses. This supports Prospect Theory, which claims that people assess investment results by framing possible risks and rewards rather than by using objective probabilities. The notable correlation suggests that the manner in which investment opportunities are framed (such as in terms of gains or losses) profoundly influences the decision-making processes of real estate investors. Non-significance of herding indicates that the real estate investors examined in the study do not significantly depend on the actions of others when formulating their decisions. Alternatively, it may suggest that participants in this market favour individual or analytical reasoning rather than adhering to prevailing trends or market sentiment. In future a study could be done using mediation and moderation approach as well as considering any one bias in more analytical manner to understand the effect of behavioural biases in more depth.

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