



Personality Traits and Financial Risk Tolerance Capacity of Generation Z Investors towards Herding Behaviour

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Abstract

The research tries to explore how personality traits (Compliant, Aggressive & Detached) and financial risk tolerance capacity play a role among Generation Z investors concerning their herding behaviour. The current studies explain how Generation Z investors are inclined to herding behaviour with different personality traits. A structured questionnaire was developed, and constructs were measured using the 5 point Likert scaling technique to study the variables. The questionnaire had been circulated online among various social media platforms to the Generation Z investors who belong to the age group from 18 - 27. A total of 150 data have been collected and used for analysis using the PLS-SEM technique. The study reveals that Generation Z investors with the personality traits of Complaint and Aggressive are Insignificant and negatively associated with herding behaviour. In contrast, the investors with Detached personality traits indicate a positive relationship with herding behaviour. Also, Detached personality is positively influenced by the financial risk tolerance towards the herding behaviour on the other hand, there is no association with the Complaint and Aggressive personality traits. To our knowledge, this is the first study conducted in the southern region of India with only Generation Z investors as a target respondent, known as first-time investors in the context of Herding behaviour and the specified personality traits such as Compliant, Aggressive and Detached. Also, the study flows in to various literature about investors exhibiting herding behaviour while making investment decisions.

Keywords: Personality Traits, Financial Risk Tolerance, Generation Z, Herding Behaviour.

1. Introduction

Behavioural finance has evolved over many years since the concept emerged from the studies of Tversky and Kahneman (1974) [1]. One of the important behavioural biases from the behavioural finance study that plays an vital role in the market upliftment for investors is herding behaviour. Herding behaviour defines the tendency of investors to follow the investment decisions of others, which leads to similar investment behaviours within the group [2]. One constant factor that acts as a base for making any investment decision is an investor's financial risk tolerance, based on which any individual investor will make their investment decision. Along with financial risk tolerance, a crucial aspect that shapes the investment decision making style of individual investor's is their personality traits. Every individual is different and unique at the same time. Personality traits in an individual come from various aspects, such as the atmosphere in which they have been growing, the beliefs they have inculcated among them, and the literacy and other external factors they have in their life course.

Our research seeks to enquire the influence of personality traits and risk tolerance towards herding behaviour of Generation Z investors. Researchers have addressed the problem of herding biases with respect to risk tolerance and personality traits capacity among various investors. Still, those studies have focused on the dimensions of multiple generations of investors as one cluster. In most studies, the Big Five personality traits have been vitally studied. Here, our study examines two major objectives among Generation Z investors. Firstly we tried to investigate the connection between personality traits (Compliant, Aggressive & Detached) and risk tolerance in respect with the herding behaviour of Generation Z Investors. The next step is to study Generation Z investors' risk tolerance capacity in mediating personality traits and herding behaviour. Generation Z is one of the most privileged and advanced generations as they have witnessed the transformation of technology and have hands-on experience in using such technology in day-to-day life, where they are privileged to have market information readily and in a timely manner.

2. Literature Review

2.1 Herding behaviour

While making an investment decision, if the investors try to imitate or mimic the actions of others in their investment decision, it turns out to be a Herd bias where market bubbles can be possible due to it which is known as herding [3]. The most discriminatory factor for investor groups identified was herding [4]. There is a considerable impact on investors through the factors of herding, information cascades, anchoring, representativeness, and overconfidence, but on the other hand, contagion has a minor effect [5]. The stability in the market determines the investors have complete information and can be seen when there is an absence of herding behaviour in the market [6]. There is a relationship between herding biases and the investor's Investment decisions [7]. It is evident that the more often investors acquire information, the more often they trade in stocks [8]. There is a lack of empirical research on individuals who exhibit herd behaviour [9]. Many studies have been conducted during the past decade based on behavioural biases and investment decisions, but limited research have focused on each bias individually and studied its relevance in the market. One such bias that greatly affects the investment choices of individual investors is herding behaviour. which

is explored in our study. As we are exploring the herding behaviour which is an behavioural bias it is also important to look into how personality traits affects the investors investment decision.

Personality Traits. Personality traits such as neuroticism and extraversion have a significant influence in determining herding behaviour; also, there is a significant moderating effect of a risk-taking attitude on the association between neuroticism and herding behaviour [10]. Investment decisions have been affected by the personality traits as a whole model [11]. There exists a partial negative mediating effect of Herding Bias on Personality Traits and employees' decision to exercise their Employee Stock Options [12]. The relationship between personality traits and investment intention has been exhibited through the dual role of financial self-efficacy [13].

This study represents Horney's personality theory [14], which talks about three important elements in the theory that proposed a better understanding of the neurotic character, such as a person moves towards people (compliant), against people (aggressive) or away from people (detached) [15].

compliant personality. The First personality is compliant personality, where [14] states that people of compliant personality believe that people are nice and have an acceptable attitude. These are people who look for affection and approval, as well as a partner. They are more prone to give importance to others' opinions and listen to them, which is suitable for herding behaviour. Hence, to determine the influence of these personality traits, the below hypothesis is proposed:

H1: compliant personality is positively and significantly related to herding behaviour

Aggressive personality. The next personality is Aggressive personality, where [14] states that people with Aggressive personality believe that other people are not friendly in nature and it's hard to accept them. These types of people try to be good fighters for their opinions and try to be dominant in society. They are not ready to accept that others are wrong. They just accept that they are correct, which is the straight opposite of the compliant trait. Hence, to determine the influence of these personality traits, the following below is proposed:

H2: Aggressive personality is positively and significantly related to herding behaviour

Detached personality. The last personality trait of this group is Detached personality, where [14] states that people with Detached personalities are excellent observers of the things that are going on with them. They are emotionally distant from others, value their own thoughts and understanding, and are more self-reliant on themselves and rational. As we see, this trait stands in between compliant and aggressive and is unexpected to show herding behaviour. Considering these personality traits, the below hypothesis is proposed:

H3: Detached personality is negatively and insignificantly related to herding behaviour

Financial Risk Tolerance. Financial risk tolerance is generally described as the highest volume of risk an investor is prepared to inculcate. Investors reduce their risk tolerance level and invest less when they are in states of sadness and extreme happiness, and investors increase their risk tolerance level and invest in risky shares when they are in states of happiness and extreme sadness [16]. Financial risk tolerance refers to the willingness to accept the negative

changes in the value of investment or an outcome that is adversely different from the expected one of retail investors [17]. Investors' investment plans are based on three vital input factors, namely, investors' goals, time horizon, and risk tolerance [18]. Investors' performance in investing in different investment avenues depends on their risk tolerance level and the return associated with the investment plan [19]. The investor's investment decision is very much dependent on their risk-taking capacity [20]. One of the major factors that affect the investor's investment decision is financial risk tolerance for individuals and institutional investors [21]. it is evident that the relationship between emotional intelligence and financial risk-taking behaviour has been partially mediated by Financial Risk Tolerance [22]. In the modern world, Personal financial literacy has become increasingly important, especially for young people [23]. In order to determine if risk tolerance serves as a mediator between Personality traits and Herding behaviour, the following hypotheses have been formulated:

- H4: Financial Risk Tolerance positively influences a compliant personality towards herding behaviour
- H5: Financial Risk Tolerance positively influences an aggressive personality towards herding behaviour
- H6: Financial Risk Tolerance negatively influences a detached personality towards herding behaviour
- H7: Financial Risk Tolerance is positively and significantly related to herding behaviour

3. Theoretical framework

The Theoretical model is presented below.

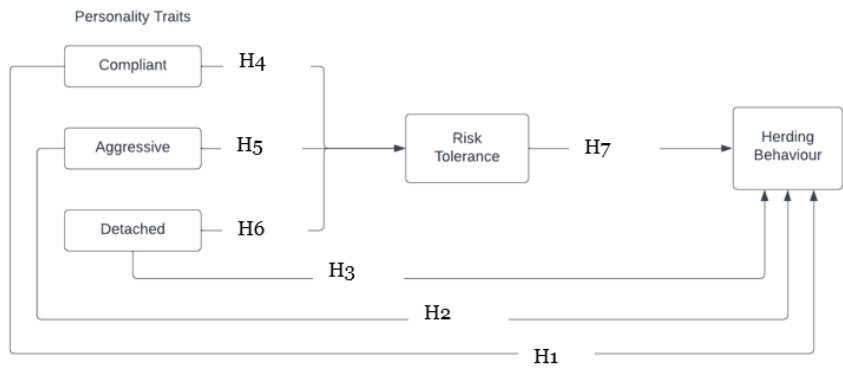


Figure 1. Theoretical model of the study.

The developed hypothesis has been framed in a conceptual framework from the various literature studied, where all 7 hypotheses try to explore the relationship with herding behaviour of Generation Z investors.

The figure describes how the study has been conducted where all the three personality traits (Compliant, Aggressive and Detached) has been individually connected towards the herding behaviour and Financial risk tolerance to study the correlations between these variables and further their is an connection established between Financial risk tolerance and herding behaviour to see if Financial Risk Tolerance influences the personality traits towards herding behaviour.

4. Methodology

4.1 Instrument Model

In order to study personality traits, Cohen's interpersonal orientation [24] CAD inventory was adapted for section two of the measurement scale, which was used in previous studies to measure the relationship between herding behaviour and personality traits [15]. This segment of the scale utilizes 20 items, which has been assessed on a scale estimate from (1 = strongly disagree to 5 = strongly agree). Further, to measure the herding behaviour in section three, a scale was adopted from the previous study [25] This segment of the scale utilizes of 7 items, and each has been assessed using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree) and the last two items were assessed on a Likert scale with (1= "Not important at all, 5=" Extremely Important"). For the fourth section, three scales have been adopted from the studies of [26], [27] and [28] for measuring the financial risk tolerance among Gen Z investors. This assessment of the scale utilizes 11 items, respectively six, two, and three items from respective scales, and it has been estimated using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree).

After several reviews from the experts, the scale was finalised with a total of 38 items to measure their personality traits, herding behaviour, and financial risk tolerance, respectively. These particular scale was majorly selected because they have already been used to test the investment behaviour of various investors in various scenarios, hence combining these scales gives a strength to the paper and makes the study more valid and avoid any further biases in the questionnaire. Also, the questionnaire consists of one section that asks about their demographic variables and income factors. The structured online questionnaire was developed and circulated through social media platforms for the data collection. The data was gathered from individuals who belong to Generation Z in Metropolitan cities from the southern region of India using the survey method of data collection through an online questionnaire. As the questionnaire been circulated online by adapting online survey procedure which was convenient to gather the data but also at the same time we had no control over the participants and their self reflection on the given questions, and also the data is collected only from the Generation Z investors to know their investment decisions it would been a larger scope if we would have included other generation of investors which is a limitation on this study.

Sample and Participants Description. The sample size has been selected based on the [29] suggestion, which has been previously used in the other behavior studied [30] which stated that sample size can be determined from the parameters to estimate. As per the [29] suggestion, at least 20 cases are required for each parameter. In this research, we are measuring six parameters; where we are testing three personality traits (Compliant, Aggressive and Detached) with herding behaviour and Financial risk tolerance.hence, one hundred and twenty responses are enough, but the authors have collected 150 data from Generation Z individual Investors for better outcomes. Even though the sample size is not large the PLS-SEM has an advantage of analysis the limited sample size and gives the adequate outcomes. A convenience sampling technique is employed in the current study to obtain data. The data was collected from Generation Z individuals between the ages of 18 and 27 (See Table 1). The Generation Z population is selected to match the personality traits that have been adopted in the survey and to know how this population reacts to their financial risk tolerance level in this digital era.

Table 1. Demographic characteristics of Generation Z respondents.

Demographic characteristics of GEN Z investors			
Variables	Category	Frequency	Percentage
Age	18 - 27	150	100
Educational level	High school	1	0.67
	Undergraduate	77	51.33
	Postgraduate	64	42.67
	Diploma Degree	6	4.00
	Doctorate	1	0.67
Income level per annum	Others	1	0.67
	Below 2,50,000	57	38
	2,50, 000 - 5,00,000	47	31.33
	5,00,000 - 7.50,000	27	18
	7,50,000 - 10,00,00	8	5.33
Occupation	Above 10,00,00	11	7.33
	Employment	61	40.67
	Professional	23	15.33
	Business	15	10
	Self-employment	7	4.67
	Others	44	29.33

5. Findings and analysis

5.1. Measurement Model

To validate the proposed measurement model, we followed the [31] method using Confirmatory Factor Analysis (CFA) to assess the construct properties before testing the structural equation model. Following this method, we have deleted the reflective indicator statements that affect the measurement model and retained the indicators that are above the threshold limits.

Measurement of validity and reliability of construct. Once the measurement model has been finalised, the validity and reliability test has been done through Cronbach's alpha, which has ranged from 0.700 to 0.847, which achieves the threshold limit of 0.70 [31], which displays great consistency. Additionally, convergent and discriminant validity was checked using three key parameters: composite reliability (CR), factor loading and average variance extracted (AVE). The results indicated that the composite reliability has been above the threshold limit of 0.70 (See Table 2), and the standardised factor loading of all constructs exceeded the threshold value of 0.60 (See Table 2), Which varies from 0.602 to 0.876. The average variance extracted was also above the threshold limit of 0.50 (See Table 2), Which ranged from 0.511 to 0.628 [31]. Hence, the results displayed in Table (See Table 2), indicate that the proposed measurement model possesses adequate convergent and discriminant validity, along with acceptable levels of reliability.

Table 2: Result of CFA (factor loading, reliability and validity)

Constructs	Indicators	Factor Loading	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Aggressive	AG1	0.738	0.802	0.817	0.860	0.552
	AG2	0.712				
	AG3	0.752				
	AG4	0.737				
	AG5	0.773				
Compliant	CM1	0.602	0.769	0.789	0.838	0.511
	CM2	0.702				
	CM3	0.758				
	CM4	0.702				
	CM5	0.796				
Detached	DT1	0.73	0.737	0.753	0.828	0.546
	DT2	0.767				
	DT3	0.744				
	DT4	0.713				
Financial Risk Tolerance	FRT1	0.698	0.847	0.861	0.886	0.565
	FRT2	0.738				
	FRT3	0.703				
	FRT4	0.828				
	FRT5	0.826				
	FRT6	0.706				
Herding Behaviour	HB1	0.849	0.700	0.747	0.833	0.628
	HB2	0.876				
	HB3	0.630				

Further, another test has been performed using the Heterotrait-Monotrait (HTMT) method to evaluate the discriminant validity. As indicated (See Table 3), all the constructs were below the threshold limit of 0.90, which substantiates affirm for the discriminant validity.

Table 3: Discriminant validity using HTMT (Heterotrait-Monotrait).

Constructs	1	2	3	4	5
Aggressive					
Compliant	0.859				
Detached	0.547	0.41			
Financial Risk Tolerance	0.285	0.333	0.448		
Herding Behaviour	0.507	0.561	0.65	0.591	

Multicollinearity test. Further, we have also checked the inner and outer VIF values (See Tables 4 and 5). The results indicated both were less than the threshold limit of 5, which indicated there is no issue with the data in reference to multicollinearity.

Table 4: Outer VIF Values

Indicators	VIF
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AG1	1.519
AG2	1.606
AG3	1.402
AG4	1.666
AG5	1.655
CM1	1.353
CM2	1.778
CM3	1.797
CM4	1.276
CM5	1.559
DT1	1.154
DT2	1.55
DT3	1.75
DT4	1.759
FRT1	1.694
FRT2	1.608
FRT3	1.609
FRT4	2.339
FRT5	2.184
FRT6	1.714
HB1	1.592
HB2	1.762
HB3	1.212

Table 5: Inner VIF Values.

Indicators	1	2	3	4	5
AG				2.101	2.102
CM				1.929	1.978
DT				1.262	1.401
FRT					1.227
HB					

Hypotheses Testing. Once we had completed the discriminant validity, reliability, and multicollinearity tests, we moved on to test the study's hypothesis. The findings are indicated in the below table (See Table 6)

Table 6. Results of hypothesis testing.

Hypothesis	Relationship	β	t	p	Results
H1	CM $\rightarrow$ HB	0.116	1.819	0.069	Unsupported
H2	AG $\rightarrow$ HB	0.106	0.674	0.500	Unsupported
H3	DT $\rightarrow$ HB	0.071	4.047	0.000	Supported
H4	CM $\rightarrow$ FRT	0.113	1.763	0.078	Unsupported
H5	AG $\rightarrow$ FRT	0.126	0.334	0.738	Unsupported
H6	DT $\rightarrow$ FRT	0.077	4.458	0.000	Supported
H7	FRT $\rightarrow$ HB	0.073	4.001	0.000	Supported

The finding states that the regression coefficients of compliant personality ($\beta = 0.116$, $p > 0.05$) and aggressive personality ($\beta = 0.116$, $p > 0.05$) are Insignificant and negatively related to herding behaviour. Detached personality indicates a positive and significant relationship with herding behaviour ($\beta = 0.071$, $p < 0.05$).

Also, compliant personality ($\beta = 0.113$, $p > 0.05$) and aggressive personality ($\beta = 0.126$, $p > 0.05$) are Insignificant and negatively related to Financial Risk Tolerance as well. Whereas, again, a detached personality indicates a positive and significant relationship with Financial Risk Tolerance ($\beta = 0.077$, $p < 0.05$). Further, the results also reveal that Financial Risk Tolerance is significantly and positively related to herding behaviour ($\beta = 0.073$, $p < 0.05$). All these have been shown in the empirical model below (See Figure 2)

The empirical model is presented in Figure 2

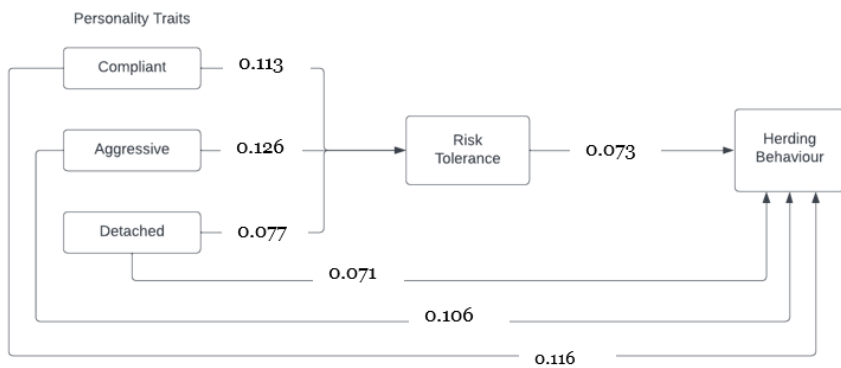


Figure 2. Empirical model of the study.

6. Discussions and Conclusions

This study has been conducted with the intention of studying various personality traits (Compliant, Aggressive and Detached) and financial risk tolerance towards the herding behaviour amidst individual investors. After developing the measurement model and finalising the instrument's reliability, we collected and evaluated the data, and the results are indicated below.

Firstly, the results indicate an Insignificant and negative relationship between compliant personality, Aggressive personality, and herding behaviour. As per Horney's personality model characterization compliant personality are the people who are more connected to people and are inclined with others decision, whereas the results show that Generation Z investors are having low inclination with the herding behaviour on the other hand same results are shown for the aggressive personality where they are also not inclined with the herding behaviour by showing an insignificant and negative relation which aligns with the study [15], but surprisingly detached personality of Generation Z investors are having an positive and significant relationship with the herding behaviour which is not in line with the Horney's personality model characterization as detached personalities are the ones who move away from people where they are

in nature to be self-sufficient and rational thinking and contradict the study by [15], where they have found detached personality owns negative and insignificant relation with herd mentality. Whereas in this study the detached personality is positively correlated with the herding behaviour, this might be due to the generation gap and also the advancement in the technology, as the detached personality are the people who are excellent observers, they have been keen on observing the market trends and had followed the same, hence their had been an difference between the Horney's detached personality and the Generation Z investors. Even though the nature of a detached personality is moving away from the crowd, who are more independent, but still follow the crowd due to the constant exposure to online trends or market updates.

Secondly, the results revealed that financial risk tolerance has no impact on the compliant personality and Aggressive personality towards the herding behaviour of Generation Z investors. In contrast, it is positively associated with a detached personality towards the herd mentality of Generation Z investors. Lastly, it is also evident that financial Risk Tolerance is positively and significantly connected with herding behaviour among Generation Z investors. In this digital era where there is a load of information that is readily available and used to a larger extent by different generations of investors for making various investment decisions, Generation Z investors are also one among the various investors group that makes investment decisions based on various aspects as we explored few aspects in this study such as personality traits and financial risk tolerance are also one amidst them, how much ever the advancement has been taking place in and around the financial and investment markets still there are few factors like personality traits, financial risk tolerance. Income factors, literacy, and other demographic factors are constant when making any investment decision.

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