

DO AWARENESS, RISK PERCEPTION, AND PAST EXPERIENCE INFLUENCE EQUITY INVESTMENTS? A CASE STUDY ON INDIA

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ABSTRACT

The purpose of this paper is to examine whether investor's awareness, risk perception, and prior investment experience have any effect on the equity investment. The study is based on primary data collected using multistage random sampling method. We apply binomial logistic regression for analysis and observe that both awareness and past experience influence equity investments. We, however, also observe that risk perception plays no role in equity investments. We propose that appropriate policy measures can enhance the awareness level and experience of the investors regarding equity investment. To increase the individual investors' participation in the equity market, in the context of India, we propose that regulators and policy makers focus on making people experienced in this field. Government should nudge individuals by incentivizing equity market investment to increase market participation. Employers can also impart investment education to the employees to make them aware about equity investment and consequently increase equity investment.

Keywords: *Awareness, Risk Perception, Equity Share, Investment, Experience, Individual Investor*

INTRODUCTION

Investor's awareness of the investment atmosphere, namely, financial products, their risk-return profile, market environment and its transparency, and market liquidity and monitoring authority, plays an instrumental role in the investment behavior of market participants (Acquah-Sam & Salami, 2013; Noctor et al., 1992; Das, 2011; Talluru, 1997; Rajeswari, 2014; Bhattacharjee & Singh, 2017; Geetha & Ramesh, 2011; Clancy, *et.al.* 2001, Bernheim, 2001; Singh & Bhowal, 2011; and Bernheim & Garrett, 2003). Bhatt and Bhatt (2012) found that occupation and education can influence investment behavior. Existing literature reveals that people with lower financial awareness do not plan effectively for their retirement (Lusardi & Mitchell, 2007; De Bondt, 1998; Devorak & Hanley, 2010; Almenberg & Soderbergh, 2011; and Klapper & Georgios, 2011). Srinivasan & Balachandran (2015) stated that a retail investor can be conveniently defined as one who does not know what he actually needs to know. Indian retail investors will go for trading in the market, not realizing what challenges are awaiting them. When this challenge does appear, it is also unclear how they will react to the large losses of their wealth. Pandit (2019) found that most of the Indian investors invest in the stock market lured by

its several success stories without having much knowledge about it. There is evidence in the existing literature that financial education can have a significant impact on the individual's savings critical for investing in the stock market (Lusardi & Mitchell, 2007, and Xia, et al. 2014). It is also observed that financial knowledge reduces stress, depression, mental illness, financial disputes, abuse of children, and conflict among the families (Fox, et al. 2005, Cleek & Pearson, 1991; Kinnunen & Pulkkinen, 1998; Yeung & Hofferth, 1998; and Wolcott & Hughes, 1999). In addition to awareness, 'risk perception' of the investors is another aspect that influence investments in financial markets (Yang & Qiu, 2005; Sitkin & Pablo, 1992; Weingart & Sitkin, 1995; Veeramani & Karthikeyan, 2014; and Riaz, et. al. 2012). An investor with a low risk perception shows a higher likelihood to diversify their portfolio. In addition, there is an inverse relationship between risk perception and equity investment (Prabhakaran & Karthika, 2011; Singh & Bhowal, 2009a; and Deb & Singh, 2016, 2018). Panda (2001), Singh & Bhowal (2009b) and Singh, (2011) have shown that there is an inverse relationship between the level of risk perception and entrepreneurial success. Weber (2003) found that due to the risk perception, people fail to allocate the attentional resources to retirement planning. Deb & Singh (2017) found that besides other variables, past investment in equity share is a significant factor in influencing the risk perception and awareness of equity shares that ultimately affect the investment decision. Literature reveals that past investment in equity shares influence the present decision to invest in equity shares (Singh & Bhattacharjee, 2010a; Singh & Bhattacharjee, 2010b; Deb & Singh, 2017). Literature also reveals that experience shows a positive impact on the investment decision-making process (Rakow & Newell, 2010; Brown & Ryan, 2003; Hau et al., 2010; Weber et al., 2004; and Mumtaz et al., 2018). We observe that although there have been substantial studies that independently investigate the impact of awareness, risk perception, and experience of investors on equity investment respectively, we are yet to find any study that investigates the combined effect of all three factors together on equity investments of individual investors. In this study, we intend to fill that gap in the literature in the context of the emerging market of India. In India, having a demat account is compulsory for making direct investment in equity shares. A person without demat account cannot directly invest in equity shares. Furthermore, a retail equity investor is also specifically defined in the context of the Indian equity market. According to the Securities and Exchange Board of India (SEBI), retail investors are considered those, whose total investment in the equity market is not exceeding Rs. 2 lakhs in a year. This account can be opened with either of the Depositories, NSDL (National Securities Depository Limited) and CDSL (Central Depository Services (India) Limited).

Demat or dematerialization is basically the process of converting the physical share certificates into electronic form. The account which helps the investors to hold shares in electronic format is known as demat account or dematerialized account. In India, after the introduction of the depository system by the Depository Act of 1996, the process for sales, purchases, and transfers of shares became significantly easier; most of the risks associated with paper certificates were mitigated. It also helps to minimize the time of transfer of shares.

We combine the effect of awareness about equity share investment, risk perception of equity shares, and past investment experience in equity shares on individual investor's equity investment decisions. The study is helpful in framing policy matters to facilitate awareness and provide financial education among savers in every part of India and to boost diversity in investors' choice of investments. It should also shed light on further investigation of other emerging markets in the world. The main objective of our research is to investigate the impact of investors' awareness about equity investment, risk perception in respect of equity shares, and

past investment on equity share investments of individual investors in the case of India. Key measurable questions that address these objectives are as follows:

- a. Does the awareness of investors about equity investment affect their decision to invest in equity shares? If yes, to what extent?
- b. Does the risk perception about equity investment affect the decision of the investors to invest in equity shares? If yes, to what extent?
- c. Does the experience of investing in equity shares in the past have any impact on the equity investments of the investor? If yes, to what extent?

The rest of the paper is organized as follows: Section 2 provides the theoretical background, literature review, and hypotheses development, section 3 presents data and methodology, section 4 highlights the analysis and findings, section 5 presents the conclusion and policy implications of the study and section 6 shows the scope of future research.

THEORETICAL BACKGROUND, LITERATURE REVIEW, AND HYPOTHESES DEVELOPMENT

There are several seminal theoretical works on awareness, risk perception, and experiential learning. A brief review of these works would be appropriate for our study.

Awareness about equity investment and equity investments of the investor

Various theories of awareness have been evolved over time. Some of the developments in respect of awareness are given below:

Types of awareness: There are seven levels of awareness resulting in different layers of awareness (Kanary, 2015). The first level is 'Animal' where, the individual is not aware about investment (Morin, 2006). Second level is 'Mass' level, which leads to follow of herds by individual (Christensen et al, 2019). Aspiration by the investors to earn more than the normal return is 'Aspiration' stage (Kosec, & Khan, 2017). The next level is 'Individual' where, individuals have discovered their own uniqueness through experiences (Oehmichen *et. al.* 2021). The 5th stage is 'Discipline' where, investors showcase discipline in their style of investment following rules and procedures to attain desired investment goals (Berger & Turk-Ariss, 2015). At the sixth level, the investors invest in the stock market directly and gain experience to decide the right avenues for investments and are called 'experienced investors' (Awais *et. al.* 2016). The ultimate level of awareness is 'Mastery'. Here, investors have extensive knowledge about the stock market and its knowledge (Greenwald *et. al.* 2020).

Level of awareness: Sigmund Freud has identified three levels of awareness (Smith, 1999). These are consciousness, precociousness and unconsciousness. The consciousness includes the person's instant thinking and reasoning. Nilsson (2008) found that conscious investors were more likely to invest in Socially Responsible Investment Portfolio. The preconscious contains information that is just below the surface of awareness. It can be retrieved with relative ease and usually can be thought of as memory or recollection. Albert *et al.* (2009) found that preconscious mind plays an important role in accessing trust than previously believed. The unconsciousness contains thoughts, memories, and desires that are buried deep within us. Even though all investors are not aware of financial decision-making stages (preparation,

decision making, execution, feedback), they exert great influence on their behavior (Lan *et. al.* 2018). Thus, the level of awareness about the stock market among the individual equity investors must be assessed where it is believed that the investor has all the information. It also must be designed considering the consciousness, precociousness, and unconsciousness level of mind.

The current literature demonstrates that the awareness about equity investment enables an investor (i) to make better financial decisions, (ii) to appreciate their rights and responsibilities, and (iii) to understand and manage the risk as an investor (Bhattacharjee & Singh, 2017). Kadariya *et. al.* (2012) found that aware equity investors have more chances of holding a high volume of equity investment. Ivkovic *et. al.* (2008) suggest that informed investors have good knowledge on managing their stocks than uninformed investors. Linnainmaa (2010) suggests that informed investors trade better than uninformed investors. Financial literacy seems to affect behavior (Sivaramakrishnan, *et. al.* 2017). Financial awareness strengthens the link between education and investment decisions (Fachrudin & Fachrudin, 2016; Bordoloi *et. al.* 2020; and Singh & Kar, 2011). Kaur (2018) finds that investor's awareness is an important factor in solving their financial problems. Lusardi & Mitchell (2014) reveal that the existence of a large number of financially “unaware” investors opens the door for financial fraud. These unaware investors are attracted by unrealistically high returns who don't understand the underlying high risks and the possibility of financial fraud (Gui et al, 2020). Graham *et. al.* (2009) found that investors with higher competence are more likely to invest in international assets. Bhushan & Medury, (2013); Bhushan, (2014); Bonte & Filipiak, (2010); Seth, *et. al.* (2010); and Thilakam (2012) describe the low level of awareness about modern investment avenues among the Indian masses. Nash (2012) finds that about 98% of the Indians do not have a Demat account which testifies their lack of awareness about equity share investment. Thus, from the above discussion, it is clear that awareness plays a significant role in the equity investment decision-making process, and this has given the impetus to frame our first hypothesis as follows:

H₀₁: There is no significant association between investors' awareness about equity investment and investment in equity.

Risk perception about equity investment and equity investments of the investor

There are various theories of risk perception which have been evolved over time. Some of the theories are briefly mentioned here:

- a. Protection Motivation Theory: Developed by Rogers (1975), this theory describes that individual is motivated to react in a self-protective way when they foresee negative consequences. In the context of equity investment, the practices of putting ‘stop-loss’ by the equity traders/investors can be explained by this theory.
- b. Risk Compensation/Risk Homeostasis Theory: Lave & Weber (1970) and Peltzman (1977) originally proposed the idea of risk compensation in response to the "technological approach" to traffic safety. In the context of investment, this theory implies that people tend to take more risks when they feel a greater sense of security (Wilde 1994). It is observed in the stock market that financial advisors advise young people, who have a secure family background, to have more equity exposure.
- c. Situated Rationality Theory: Developed by Lawson (1997), situated rationality theory argues that it is incorrect to imagine that low-risk behavior is essentially rational and

high-risk behavior is essentially irrational. Finucane et al. (2000) note that the greater the perceived benefit of activity is, the lower the perceived risk is.

- d. Habituated Action Theory: Developed by Sokolov (1963), this theory claims that involvement with high-risk behavior without a negative outcome often decreases the perceived risk connected with this behavior. Those who frequently perform a high-risk activity without an opposing consequence eventually they become anaesthetized to the risk (Kasperson et. al., 1988; Weyman & Kelly, 1999).
- e. Social Action Theory: Social Action theory was introduced by Weber (1922). It states that human behaviors relate to cause and effect in the social realm. Individuals conform to group norms to avoid teasing/ bullying and start to identify themselves with the group (Cooper, 2003). For example, Islamic community follows Shariah law for investment. Certain actions confirm the social action theory of becoming a victim of fraud committed by others; De-motivation among investors to invest due to the pattern of price changes in equity shares (Deb & Singh, 2016; Singh and Bhowal, 2011).
- f. Social Control Theory: Social Action Theory was first introduced by Hirschi (1969) and states that connectivity to organizations promotes behavior conformity, which can reduce the probability of high-risk behavior. For example, it is often viewed that people prefer to buy stocks of the companies where they work.
- g. Bounded Rational Theory: Bounded rational theory was coined by Simon (1955). It tells that, in decision making, the rationality of individuals is limited by the information they have, the cognitive boundaries of their minds, and the limited amount of time they have to make a decision. For example, if an investor needs to sell off his/her stocks immediately due to immediate financial requirements, it might not be possible for him/her to wait for the stock price to be conducive enough to yield optimum results due to time constraints.

Risk perception of a person is the function of his/her internal as well as external environment such as the person's attitude, heredity, environment, upbringings, etc. Therefore, all theories have collectively mixed influences on the risk perception of the individuals who act collectively (Singh & Bhattacharjee, 2019). In this study, the scale to measure risk perception is constructed by extracting the variables from each of the theories and a few studies conducted in this area.

Ishfaq et. al. (2017), in the context of India, observe that risk perception plays a mediating effect between cognitive biases and equity investment decisions. Singh & Bhowal (2011); Singh & Bhowal (2012) develop a scale to measure risk perception using elements of marketing strategy. They find that product and price-driven measure of risk perception do not influence the overall risk perception in the case of equity shares of employees' own companies, whereas all the four elements of marketing influence the overall risk perception in the case of other companies in India. Singh (2012) measures the risk perception of investors in the case of IPOs in India using the same scale and methodology and finds that product features of IPO influence the risk perception of investors' significantly. Tripathi & Chattopadhyay (2013) find a significant difference in the risk perceptions of experts and laymen regarding equity shares in India. Singh & Bhattacharjee (2019) find that the overall risk perception level of equity investors in economically backward region in India is moderate and that the main factors affecting their risk perception are information screening, investment education, fear psychosis, fundamental expertise, technical expertise, familiarity bias, information asymmetry, understanding of the

market, etc. Wang *et. al.* (2011) conclude that the respondents perceive those easier-to-understand products as less risky. Tep *et. al.* (2017) identify semantics and presentation sequence linked with risk perception. Thus, theories and studies, mentioned above, show that risk perception is a significant factor in influencing the equity investment decision of the equity investors giving the impetus to frame the second hypothesis as follows:

H₀₂: There is no significant association between investors' risk perception and investment in equity.

Experience and equity share investments of the investor

If individuals put themselves in play, it modifies them profoundly in a way that, after having crossed, endured, and traversed it, they will never be the same again (Romano, 1998). Based on the groundwork of Dewey (1938), Kolb & Fry (1975) has coined the concept of experimental learning, which stressed the importance of learning by doing. The central tenet is that “learning is the process whereby knowledge is created through the transformation of experience. Knowledge develops from a combination of grasping and transforming experience” (Kolb, 1984). Kolb & Kolb (2005) suggests that previous experiences, hereditary characteristics, and current environment together drive the development of a preferred way of grasping and processing experiences. Experience is one of the personal factors that enhances investor’s awareness of risk and influences investment decisions (Rakow & Newell, 2010). Literature reveals that individuals’ experience of investing in equity shares has a significant role in determining their success (Camerer & Hogarth, 1999; List, 2003; Agarwal *et al.*, 2007; Kaustia & Knüpfer, 2008; and Malmendier & Nagel, 2011). Roszkowski & Davey (2010) found that experienced investors have a better ability to identify the risk associated with the equity investment. An experienced investor is confident about the skills and past experience that make him/her familiar with the condition. Several securities companies that provide online stock trading game facilities for beginner investors provide an opportunity for novice investors to get an education as well as effective experience (Frijns *et al.*, 2014). Duval & Wicklund (1972) find that most investors consider their last experience as a sign of their next move. Grinblatt & Keloharju (2000) find that investors with lesser experience earn poor returns. Levišauskaitė & Kartašova (2012) conclude that the experiences gained are important factors, affecting the behavior and decisions in the capital market. As it is evident from the literature that previous experiences of investing in equity shares have a significant role in affecting the equity investment decision, this has given the impetus to frame the third hypothesis as follows:

H₀₃: There is no significant association between investors' experience in equity investment and investment in equity

Literature shows that these three variables independently cannot decide on equity investment decision. However, this remains unexplored whether the combined effects of awareness about equity investment, risk perception in respect of equity shares, and past experience in equity shares have on their investments in equity shares in the context of India. Awareness, risk perception, and experience of a person is the function of his/her internal as well as external environment such as the person’s attitude, heredity, environment, upbringings, etc., and therefore, all the related theories work collectively in influencing the person’s awareness, risk perception and experience in a mixed way. They are acting collectively and not in isolation; therefore, the scale to measure awareness, risk perception, and experience is constructed by

extracting the variables from each of the theories. So, it is important to know if these three variables have any impact on the equity investment decision of investors. So, it is important to know if these three variables have any impact on the equity investment decision of investors. In this context, we make an attempt to examine the influence of awareness, risk perception, and past experience of subjects towards equity investments to gain meaningful insights on their equity investment decisions in an emerging market setting such as India.

DATA AND METHODOLOGY

Our data consists of all those individuals with Demat accounts with depository institutions in India. These institutions are National Securities Depository Limited (NSDL) and Central Depository Securities Limited (CDSL) of India. There are 5,31,73,699 Demat account holders with spread over 99.23% of all pin codes in the country (NSDL, 2020). It is believed that Demat account holders have some uniform characteristic irrespective of their location. A multistage sampling process is adopted for this study. Individual investors from the Cachar district in the state of Assam in India are chosen randomly. There are 19,869 numbers of Demat account holders in the district as of 31st March 2019. Therefore, at a 5% level of significance, a sample of 358 investors was obtained. The primary data for the study is collected through a structured questionnaire that consists of three parts. The first part of the questionnaire is meant to measure the awareness level of the investors towards equity investment. This part of the questionnaire is adopted from the work of Bordoloi et. al. (2020). The second part of the questionnaire is meant to measure the risk perception of the investors towards equity shares which are adopted from the work of Singh & Bhattacharjee (2019). Finally, the third part of the questionnaire is meant to assess the experience of equity investment by the individual investors. To assess the experience of the investors in equity investment, the question asked is about their past investment in equity shares if it is of more than two years. Investors, who are having more than two years of investment history in the equity market, are considered experienced investors (Grinblatt & Keloharju, 2000). The questionnaire used in the study is provided in appendix A.

All the identified investors' mobile numbers and addresses are collected from respective depository participants' offices on the assurance that the data collected would be used exclusively for academic research. It is also assure that the confidentiality of the respondents' information would be maintained. Confirming their convenient time and place over phone, the questionnaire was distributed among them. After a period of 15 days, the first reminder call was made, followed by the second, third reminder with a gap of 15 days to complete and collect the data.

For accessing the impact of awareness, risk perception, experience towards equity share investment, a binary logistic regression is used considering present investment as a dependent variable. Singh & Bhattacharjee (2010a) and Singh & Bhattacharjee (2010b) have used this tool in a similar analysis. Binary logistic regression estimates the probability that a characteristic is present, given the values of a single categorical variable. The binary logistic model is as follows:

$$\pi = P_r(Y_i = 1 | X_i = x_i) = \frac{\exp(\beta_0 + \beta_1 x_i)}{1 + \exp(\beta_0 + \beta_1 x_i)} \quad (1)$$

or

$$\begin{aligned} \text{logit}(\pi_i) &= \log\left(\frac{\pi_i}{1-\pi_i}\right) = \beta_0 + \beta_1 x_i \\ &= \beta_0 + \beta_1 x_{i1} + \dots + \beta_k x_{ik} \end{aligned} \quad (2)$$

Here, β_0 is constant, β_i are coefficients of independent variables, and x_{ik} are independent variables.

ANALYSIS AND FINDINGS

First, we measure the level of awareness and risk perception of individual equity investors towards equity share investment. There are 25 questions in the questionnaire where, each question carries a score of one. A total score is found by adding the scores of all the questions. Since there are 25 questions, the maximum possible score is 25 (25×1). The minimum possible score is zero (25×0). The difference between the maximum and minimum possible score is 25. In order to ascertain the information level at five levels, this range is divided by 5. Bordoloi *et. al.* (2020) and Singh & Kar (2011) have framed a similar interpretation table using the similar upper limit exclusive scale. In Table 1, the interpretation of the awareness score is given.

Table 1
Interpretation of Awareness Score

Score value	Interpretation of score value
0-5	Very low level of awareness
5-10	Low level of awareness
10-15	Moderate level of awareness
15-20	High level of awareness
20-25	Very high level of awareness

Source: Compiled by authors

The overall findings on investors' awareness level of equity shares are presented in table 2. The mean score of the respondents is 10.78. It falls within the range of moderate level of awareness as per table 1. It means individual equity investors pose a moderate level of awareness towards equity share investment in the case of India. It is similar to the findings of Bordoloi *et. al.* (2020).

Table 2
Overall Awareness Level

Level of awareness	Frequency	Percent
Very High level of awareness	3	0.8%
High level of awareness	43	12%
Moderate level of awareness	149	41.6%
Low level of awareness	117	32.7%
Very low level of awareness	46	12.8%
Total	358	100.0
Mean		10.7821
Std. Deviation		4.27323

Source: Compiled by authors using questionnaire presented at the appendix

The second part of the questionnaire is designed to measure the level of risk perception of investors towards equity share investment. The scale considered to measure equity-related risk perception contains 30 items. Since a score of 5,4,3,2 and 1 is given to the respondents for their

response of strongly agree, agree, moderately agree, disagree, and strongly disagree, the maximum one respondent can score in each of the items is 5. Therefore, the maximum possible score is 150 (30X5). Similarly, the minimum one respondent can score in each of the items is 1, therefore, the minimum possible score is 30 (30X1). The difference between the maximum and minimum possible score is 120 (150-30). In order to ascertain the risk perception at five levels, this range (120) is divided by 5, which comes out to be 24. Adding 24 with 30 (lowest possible score), the very low level of risk perception range (30-54) is obtained. Similarly, by adding 24 with subsequent values, the next higher range is obtained. In table 3, the risk perception score is interpreted.

Table 3
Interpretation of Risk Perception Level

30-54	Very low level of risk perception
54-78	Low level of risk perception
78-102	Moderate level of risk perception
102-126	High level of risk perception
126-150	Very high level of risk perception

Source: Compiled by authors'

Overall risk perceptions of the respondents are calculated by adding their score on the Likert scale. Then its value is interpreted using table 3. The overall level of risk perception is then presented in Table 4.

Table 4
Overall Risk Perception Level

Level of risk perception	Frequency	Percentage
Very low	5	1.40%
Low	155	43.30%
Moderate	186	52.00%
High	12	3.40%
Very high	0	0.00%
Mean		90.9050
Std. Deviation		15.21745

Source: Compiled by authors using questionnaire presented in the appendix

Table 5 shows that the mean value of the scale statistics is 90.90, which lies in the interval of 78-102, representing a moderate level of risk perception. Our findings are similar to the findings of Singh & Bhowal (2011, 2012); Singh (2012); Singh & Bhattacharjee (2019).

The depiction of individual equity investors' awareness level and their investment in equity shares are presented in table 5.

Table 5
Investment in Equity Shares and Its Awareness Level

			Awareness level towards equity shares					Total
			Very Low Level of Awareness	Low Level of Awareness	Moderate Level of Awareness	High Level of Awareness	Very High Level of Awareness	
Investment in equity shares	No	Count	26	42	17	5	0	90
		% of Total	7.3%	11.7%	4.7%	1.4%	0.0%	25.1%
	Yes	Count	20	75	132	38	3	268
		% of Total	5.6%	20.9%	36.9%	10.6%	0.8%	74.9%
Total		Count	46	117	149	43	3	358
		% of Total	12.8%	32.7%	41.6%	12.0%	0.8%	100.0%

Source: Compiled by authors using questionnaire that is presented in the appendix

The depiction of individual equity investors' risk perception level and their investment in equity shares are presented in table 6.

Table 6
Investment in Equity Shares and Its Risk Perception

			Risk perception level				Total
			Very Low Level of Risk Perception	Low Level of Risk Perception	Moderate Level of Risk Perception	High Level of Risk Perception	
Present investment in equity shares	No	Count	0	46	43	1	90
		% of Total	0.0%	12.8%	12.0%	0.3%	25.1%
	Yes	Count	5	109	143	11	268
		% of Total	1.4%	30.4%	39.9%	3.1%	74.9%
Total		Count	5	155	186	12	358
		% of Total	1.4%	43.3%	52.0%	3.4%	100.0%

Source: Compiled by authors using questionnaire presented in the appendix

Now, to measure the impact of awareness, risk perception, and experience of investing in equity shares on actual investment in equity shares at present, binary logistic regression is performed. We consider current investment in equity shares as dependent variable and awareness score, risk perception score, and past investment in equity share as independent variables. Total seven regression models are run by considering each of the given three independent variables in different combinations.

Table 7
Model Summary

tep	Independent Variables	-2 Log likelihood	Co x & Snell R Square	Nag elkerke R Square
	Awareness Score	35 4.884 ^a	.12 8	.189
	Risk Perception Score	40 2.309 ^a	.00 4	.006
	Past Investment	38 9.700 ^a	.03 8	.057
	Awareness Score and Risk Perception Score	35 2.944 ^a	.13 2	.195
	Awareness Score and Past Investment	33 7.714 ^a	.16 8	.249
	Risk Perception Score and Past Investment	38 8.433 ^a	.04 2	.062
	Awareness Score, Risk Perception Score and Past Investment	33 8.510 ^a	.16 7	.246

Source: Compiled by authors using questionnaire that is shown in appendix

The overall fit of the model is assessed using the log-likelihood method. Here the value is multiplied by -2 to make it possible to compare values against those that might be expected to get by chance alone. Large values of the log-likelihood statistic indicate poorly fitting statistical models. Cox & Snell R Square and Nagelkerke R Square are also known as *pseudo R²*, which are methods of calculating the explained variation.

Results of binary logistic regression are presented in table 7 where it is evident that awareness score and past investment as independent variable explain variation in the dependent variable slightly more than awareness score, risk perception score, and past investment together as an independent variable.

Table 8
Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Awareness score	.231	.036	41.480	1	.000	1.260
Past investment in equity shares (1)	-1.279	.310	17.010	1	.000	.278
Constant	-.875	.357	6.010	1	.014	.417

a. Variable(s) entered on step 1: Awareness Score, and Past Investment (1)

In table 8, past investment in equity shares (1) denotes those who have a past investment in equity shares as a reference category. B denotes the coefficient of variables, where S.E. is the standard error around the coefficient for the constant. The Wald test is used to determine the statistical significance of the independent variables and reflected in the 6th column. The 7th column (df) lists the degrees of freedom for each variable entered in the model. The 8th column

(Exp (B)) is an indicator of the change in odds resulting from a unit change in the predictor. This is the exponentiation of the B coefficient. It is clear from the Significance column that awareness about equity share investment ($p= 0.000$) and past investment in equity shares ($p= 0.000$) are significant in determining the equity investment of the investor. Thus, the null hypothesis H_{01} (*There is no significant association between investors' awareness about equity investment and investment in equity*) and H_{03} (*There is no significant association between investors' experience in equity investment and investment in equity*) cannot be accepted. It means that the awareness about equity investment of the investors (Bhattacharjee & Singh, 2017) and his/her experience of investing in equity shares (Singh & Bhattacharjee, 2010a and 2010b) have an influence on his/her investment in equity shares.

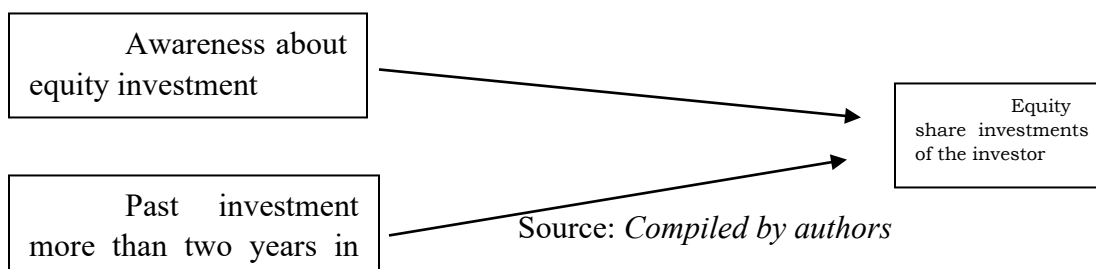
We apply our results of table 8 in equation 3 in order to show the logistic equation model as follows:

$$\begin{aligned} \text{logit}(\pi_i) &= \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} \\ &= -.875 + .231(\text{Awareness Score}) - 1.279(\text{Past Investment}) \dots \end{aligned} \quad (3)$$

From Exp(B) we observe an indicator that shows how an increase in one unit of awareness score affect the chances of making investment decision. More specifically, if awareness is expected to increase by 26%, there is less than 72.2% chance that those who do not have an investment in past will make the investment. Our findings confirm that risk perception is not affecting investment in equity shares which is consistent with the findings of Gang & Li (2014) that risk perception does not have an impact on the equity investment and thus, the null hypothesis H_{02} (*There is no significant association between investors' risk perception and investment in equity*) is accepted.

Hence, the ultimate model can be given as follow:

Figure 2: Model showing the relationship between awareness and past investment inequity investments of the investors



CONCLUSION AND POLICY IMPLICATIONS

The purpose of this paper is to examine whether individual investor's awareness, risk perception about equity investment, and past experience have any impact on the equity investment of the investor. Taking a primary sample of investors from India, we apply multistage random sampling method for data collection and binomial logistic regression for analysis to

investigate our research objective. Like Al Tamimi & Kali (2009) and Kavitha (2015), we find that the awareness level of equity investors is significant. However, the risk perception level of the equity investor does not have any impact on investors' equity investments which is consistent with the findings of Gang & Li (2014); Kusumaningrum, *et. al.* (2019) and contrasts findings of Singh & Bhowal (2009a); Singh, (2010); Deb & Singh, (2016) and Ainia & Lutfi (2018). We anticipate that the lack of influence of risk perception on actual investment in equity share might be due to the reason that these respondents are actual investors and they have the ability to recognize whether an investment is at risk than the ability of investors who have no experience (Roszkowski & Davey, 2010). Experience is one of the personal factors that can enhance responsiveness of an investor and minimizes risk perception to make investment decisions (Rakow & Newell, 2010). Christanti & Mahastanti (2011) suggest that there is a relationship between past experiences in stock investment and investment in the stock market. Richards & Biaett (2017) conclude that experience increases the overconfidence of investors. An experienced investor feels confident about the skills and past experience that make him/her familiar with the condition and lead to believe in them that they have control over the situation. When people feel they have control over the situation, they underestimate the risk (Schneier, 2011).

Moreover, cultures also have an impact on equity investment, and it also affects risk perception (Yamin & Golesorkhi, 2010). Besides, the level of knowledge measured in terms of awareness about equity investing has an impact on risk perception (Olsen, 1997). Thus, the idea of risk and human reaction to this has great relevance to the realm of investing. Kumar (2019) reports that individuals investing in equity shares suffer from the illusion of control. They underestimate risk because they believe that they know enough to be in control of the situation. This is an evidence of the presence of the theory of rationality bias.

To increase the individual investors' participation in the equity market, in the context of India, we propose that regulators and policymakers should focus on making people experienced in this field. The opening of the Learning Investors' Club can be one such initiative (Singh & Barman, 2011) that can promote the culture of equity investing. Learning investors association/club comprises a group of people who pool their money together to make the investment with the purpose of learning the art and science of equity investing.

Government should also nudge individuals by incentivizing equity market investment (Thaler, 2018) to increase market participation. Imparting investment education to the employees can also be one method to make the employees aware of equity investment and consequently increase equity investment (Singh & Bhowal, 2010a). Offering own equity shares to the employees can motivate the employees to start investing in equity shares because employees perceive the equity shares of their own company as less risky than the other shares (Singh & Bhowal, 2010b).

Risk perception turns out to be irrelevant in the case of India. This, though similar in findings with existing literature, requires further investigation in various market participants in other emerging countries, cultures, and investors' groups. Besides, to have a generalized finding, this study needs to be replicated at cross-cultural and at cross country levels to provide more insights into this important issue.

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**APPENDIX
QUESTIONNAIRE**

(Kindly put \surd (tick mark) in the appropriate (box))

PART - 1

(Kindly put \surd (tick mark) in the appropriate) for the following questions)

1. Generally, a company can issue shares :
 - a. Once in one year
 - b. Once in five year
 - c. Once in ten year
 - d. Generally company raises capital once or twice in its lifetime as it is very critical activity
 - e. Not aware of
2. To buy shares of a company, I need to go to:
 - a. Stock exchange
 - b. Share trading terminal
 - c. Any Bank
 - d. None of these
 - e. Not aware of
3. Continuous market session timing.....
 - a. 9 -3.30,
 - b. 9.15 – 3.30
 - c. 9 – 4
 - d. 9.15 – 4
 - e. Not aware of.
4. Upward market movement is named after which animal...
 - a. Bull
 - b. Ship
 - c. Bear
 - d. Rat
 - e. Not aware
5. Presently market settlement in practice for cash segment of Stock Market.....
 - a. T+1
 - b. T+2
 - c. T+3
 - d. T+5
 - e. Not aware of

6. When a company raises first time capital from market, it is known as...
- FPO
 - IPO
 - NFO
 - OFS
 - Not aware of.
7. In Cash market
- One can make transaction in cash
 - One can own the shares if took delivery
 - One can get immediate delivery of shares
 - Both (b) & (c)
 - Not aware of
8. At the time of buying shares, each time I need to:
- Issue cheque equivalent to the amount of shares bought
 - Transfer adequate fund to the broker
 - Both (a) & (b)
 - None of these
 - Not aware of
9. As per BSE/NSE Bye Laws what is the maximum brokerage a broker can charge?
- 3%
 - 2.5%
 - 2%
 - 1.5%
 - Not Aware of.
10. For What kind of transaction Demat a/c is necessary?
- For making first time market investment.
 - For making transaction in secondary market
 - For Non – Resident a/c
 - Both (a) & (b)
 - Not Aware of.
11. One of the compulsory document reqd for demat a/c opening is....
- Cancel cheq
 - Adhar card
 - Voter ID
 - PRAN no.
 - Not aware of.
12. Nifty comprises of...
- 30 shares

- b. 50 shares
- c. 100 shares
- d. 500 shares
- e. Not aware of.

13. Which of the following is not a sectoral index?

- a. Bankex
- b. BSE-Tech index
- c. BSE-Pharma index
- d. BSE-Midcap index
- e. Not aware of.

14. Financial assets are also called as

- a. Tangible asset
- b. Physical asset
- c. Real asset
- d. Securities
- e. Not aware of.

15. Which of the following technical indicator is used to determine if an asset is over bought or oversold?

- a. Price rate of change (ROC)
- b. Coincident indicator
- c. Relative strength index (RSI)
- d. Money flow index
- e. Not aware of.

16. Transaction in securities is regulated by...

- a. Depositories Act
- b. SCRA
- c. Companies Act
- d. RBI
- e. Not aware of.

17. The power under the SEBI act and Depositories Act is mostly administered by....

- a. SEBI
- b. NSDL
- c. CDSL
- d. RBI
- e. Not aware of

18. Tax levied on long term capital gain on equity shares

- a. 10%
- b. 20%
- c. Taxable

- d. Not taxable
- e. Not aware of.
19. Equity investment can be used as a tax saving tool...
- a. Yes
- b. Yes, only if the person is a first time investor in the market
- c. Both(a) & (b)
- d. No
- e. Not aware of.
20. Dividend declared 10%, means...
- a. 10% on FV
- b. 10% on MV
- c. 10% on BV
- d. 10% on income earned by the company
- e. Not aware of
21. Dividend income is taxable in the hands of shareholders...
- a. Yes
- b. 10% of the dividend income is taxable
- c. 20% of the dividend income is taxable
- d. No
- e. Not aware of.
22. The gain/loss of increase/decrease in the value of shares in the market is borne by:
- a. Exclusively by the company whose shares is raising/falling in value
- b. Shared by the company and the investor in certain ratio
- c. Exclusively by the investors in the secondary market and not at all by the company
- d. None of these
- e. Not aware of
23. STT stands for...
- a. Standard Transaction Tax
- b. Securities Transfer Tax
- c. Securities Transaction Tax
- d. Standard Transfer Tax
- e. Not aware of.
24. STT levied on delivery based equity share is...
- a. 0.25% of total transaction
- b. 0.01% of total transaction
- c. 0.017% of total transaction
- d. NIL
- e. Not aware of

25. Long term capital loss arising from sell of securities on which STT has been paid can be set off against

- a. Long term capital gain
- b. Short term capital gain
- c. Both (a) & (b)
- d. Cannot set off
- e. Not aware of.

PART - 2

(Kindly put \surd (tick mark) in the appropriate (box) according to you.)

Sr No.	Items	Responses				
		Strongly Agree	Agree	Un decided	Dis agree	Strongly Disagree
1	I have very little idea about the Investment in equity shares.					
2	There is no certainty of income from equity					
3	It is difficult to calculate income from Investment from equity shares.					
4	I am less aware of the complex rules and regulations of equity.					
5	I do not understand the complex rules and regulations of equity shares investments.					
6	There is no guarantee of the return of the invested sum.					
7	It requires daily monitoring of the share market and I do not have time to track and monitor.					
8	I do not know how to utilize share market information for equity investment related decision making.					
9	Investment in share market is very complex.					
10	It is very much likely to become a victim of fraud committed by others in equity market.					
11	It is very difficult to monitor macro-economy for making equity market investment.					
12	It is very difficult to select a company for the investment.					
13	It is difficult to select type of equity shares for investment.					
14	It is very difficult to monitor the financial performance of the company.					
15	It is very difficult to monitor the non-financial performance of the company.					

16	It is difficult to understand the buying and selling price fixation mechanism related to equity shares.					
17	I feel less confident regarding time at which equity shares are to be bought and sold for a best bargain.					
18	I feel less confident regarding the price at which equity shares are to be bought and sold for a best bargain.					
19	Pattern of change in the price of equity shares de-motivates me in regard to the investment in shares.					
20	It is very difficult to track the daily price movement of equity shares of the companies.					
21	I do not have sufficient education required for investment in equity shares					
22	Others told me that investment in equity shares is risky.					
23	There is no coaching/counseling /share investors' forum locally.					
24	There is little availability of the information /article/papers in vernacular medium regarding the equity share investment.					
25	Information /article/papers in vernacular medium regarding the equity share investment in vernacular medium are irregular.					
26	An information/article/paper in vernacular medium regarding the equity share investment in papers of vernacular medium carries little information					
27	Very often Equity Shares scandals are reported in papers and I am afraid of investing in shares.					
28	I have seen others to suffer loss in share investment rather than amassing huge money.					
29	There is no office of the company locally.					
30	In case of grievances I am not sure where I should register my protest and get my grievances redressed.					

PART - 3

Do you have investment in equity share for more than two years?

a. Yes

b. No