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# Analysing the Influence of Social Media on Investment Decisions Across Age and Occupation of Investors in Delhi NCR

**[1]Dr. Monika Gupta, [2]Dr. Seema Srivastava & [3]Dr. Shivani Abrol**

[1]Associate Professor, Department of Commerce, Motilal Nehru College
monikagupta@mln.du.ac.in , Mobile No.: 9818068318
[2]Associate Professor, Department of Commerce, (Corresponding Author)
Motilal Nehru College, seemasri@mln.du.ac.in , Mobile No.: 9899618337
[3]Associate Professor, Department of Commerce , Zakir Husain Delhi College
shivani.abrol@zh.du.ac.in , Mobile No.: 9910162139

## ABSTRACT

Social networking is becoming an increasingly important element of everyone's life. Individuals across different age groups and occupations use social media platforms for varied purposes. Social media sites are commonly used by people to learn about investing. Many websites, including Facebook, Instagram, Twitter and others, disseminate content on investments and set up forums for exchanging and debating such information. The primary objective of this study to analyse investment decisions among investors in the Delhi NCR,with particular attention given to the impact of various social media platforms. The hypotheses are tested using data obtained through questionnaire issued to selected investors in Delhi NCR. The data are analysed by using Statistical Package for the Social Sciences (SPSS) Software Version 29. The findings of this research will provide valuable insights for investors who utilize social media websites to stay informed about investments.

**KEYWORDS:** Social networking, Investment decisions, Behavioural Finance.

**JEL Classification** : G4, E22, L82, L86

## 1. INTRODUCTION

The term "social media" is used to describe various forms of online interaction in which users create, share, and/or trade content and ideas within online communities. Entrepreneurial businesses are using the platforms provided by online social media to keep an eye on consumer conversations and ascertain the needs and desires of consumers. Social media makes it easier to share information, ideas, and thoughts.The most well-known social media sites include Facebook, Instagram, Twitter, Whatsapp, Youtube, etc. These platforms are so popular because it is simple to disseminate information on them. In fact, the advent of social networking sites has made it easier for consumers to choose items as they rely more on fellow cosumers than on professional advice (Zhu & Chen, 2015).

Now a days there is plenty of information on social media in variuos fields including finance and investment. Investors use information provided by social media for investment decisions. It helps in the decision-making process by assisting investors in selecting the most profitable investment option from a variety of alternatives. Traditional methods of stock analysis include a variety of techniques. While technical analysis aids the forecasting of future market behaviour whereas fundamental analysis examines both quantitative and qualitative information about the company. However, the information for all these analysis came from trade publications, traditional media, and personal connections. That might take a long time. Emergence of social media has made it possible to gather information more quickly and effectively in order to influence investors' perceptions. Social networking is a quick and convenient way to share vital information, ideas, and thoughts. Large number of individuals utilise social media as a means of accessing news on a regular basis claiming it as their primary source of news. Furthermore, social media sites have observed a substantial proportion of content pertaining to the stock market (Jiao et al.,2020) .

## 2. REVIEW OF LITERATURE

Khan et al., (2022) in their study employed algorithms to analyse social media and financial news data to determine how these variables affect the accuracy of stock market forecasts. Investigations are undertaken to ascertain which stock markets are the most challenging to forecast and which are most susceptible to the inflence of online platforms and financial news. To locate a reliable classifier, they compare the results of various algorithms. Eventually, the researchers arrived at the conclusion that online social sites and financial news exhibit significant levels of predictive accuracy,80.53% and 75.16%, respectively. Their research also showed that social media had a greater impact on New York and IBM stocks while the London and Microsoft stocks are influenced by financial news.

The sudy by Rani S & Prerana.M, (2021) focuses on the precise informational content found on social media sites that may impact an individual's financial investment decisions. The main goal of their study is to ascertain the influence of the information available on existing social media sites pertaining to financial investments, and to evaluate its advantages and disadvantages. The study demonstrates that several independent variables, such as the availability of information and material on internet, the behaviour of active social media users, and the actions they are persuaded to take, have significant consequences on the dependent variable i.e. the investment decisions.

Nilsson et al., (2021) analysed the influence of social networking sites on investment choice in the Swedish stock market using primary research. The study employs a quantitative methodology to explore the three aspects of social media

viz. information, online community actions, and business image. The results of research indicate that social media and investment choices are related, and that the relationship between these three independent variables and investment decision as the dependent variable is positive. The findings of the study indicate that social media significantly influence individuals' financial decision-making.

Rudin, (2019) in his paper on "Understanding how social media influences investor biases" came to the conclusion that internet sites will continue to be popular and social media platforms' information and communication channels are crucial to investors' decision-making.

Kaushik et al., (2017) analysed how top Indian publicly traded companies utilise social media and how it impacts prices of their stock. This study aims to determine if there is any relation between social media usage and the company's share price. It uses statistical methods such as correlation, regression, and ANOVA to establish a connection between the stock price patterns of NSE-listed companies and their usage and popularity on social media websites. The study evaluates the question of how much emphasis a company should place on spending money on social media adoption tactics, marketing strategies, customer care methods, and so on.

According to Lee et al., (2015) , investors who participate in online communities run a higher chance of losing their money. Congenial investors joined online to share knowledge and opinions on stock selection in an environment where less rational investment groups are more probale to act emotionally.

## 3. RESEARCH METHODOLOGY

### 3.1 Research Objectives

The primary aim of the present research is to examine the influence of social media sites on the investment decision-making of a selected group of investors from Delhi NCR, with respect to their age and occupation.

### 3.2 Hypotheses

To achieve the objective the following null hypotheses are formulated and tested.

$H_1$: There is no significant association between age and investment experience among the respondents.

$H_2$: There is no significant association between age and how much time individuals spend on social media sites while making financial decisions.

$H_3$: There is no significant association between the occupation and investment experience among the respondents.

$H_4$: There is no statistically significant association between the occupation and how much time individuals spend on social media sites while making financial decisions.

### 3.3 Sample and data collection

The present study uses primary data collected through a well-structured questionnaire. The questionnaire has been administered through google form using snowball sampling. Snowball sampling is the type of convenient sampling to get a sample of something quickly. This method is used when it is difficult to discover individuals with the desired characteristics. In this procedure, existing participants recruit new participants from their social circles. Sampling is maintained until data saturation is reached (Naderifar et al., 2017) . The primary data of 150 respondents in Delhi NCR were collected through google form. The data collected is then cleaned to remove irrelevant information and ensure accurate results. Finally, 132 responses were considered for the analysis.

### 3.4 Research tools

The data obtained from the respondents has been organised into categories, tabulated, and examined making use of the appropriate statistical and mathematical methods. Statistical Package for the Social Sciences (SPSS) is employed to compile the frequency tables, charts, and statistical results. Further Chi-Square test has been used to test the hypotheses developed under the study.

## 4. DATA ANALYSIS AND FINDINGS

### 4.1 Age and Investment Experience

Table 1 examines the correlation between the age and investment experience of the participants.

**Table 1: Age and investment experience of respondent**

| Age * Experience Crosstabulation | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Investment Experience | | | | Total |
| | | | Less than one year | 1 to 3 Years | 3 to 5 Years | More than 5 Years | |
| Age | 18-25 | Number | 16 | 10 | 4 | 0 | 30 |
| | | % within Age | 53% | 33% | 13% | 0% | 100% |
| | 26-35 | Number | 9 | 14 | 23 | 6 | 52 |
| | | % within Age | 17% | 27% | 44% | 12% | 100% |
| | 36-45 | Number | 2 | 8 | 4 | 17 | 31 |
| | | % within Age | 7% | 26% | 13% | 55% | 100% |
| | more than 45 | Number | 2 | 4 | 7 | 6 | 19 |
| | | % within Age | 11% | 21% | 37% | 32% | 100% |
| Total | | Number | 29 | 36 | 34 | 33 | 132 |
| | | % within Age | 22% | 27% | 26% | 25% | 100% |

Table 1 indicates that 86% of the respondents aged 18-25 have less than 3 years of investment experience. One potential cause for this phenomenon could be that the respondents within this age group have just finished their studies and have commenced their search for investing prospects.The maximum number of the respondents belong to the age category between 26-35. Among 52 participants aged 26-35 years, 56% have more than 3 years of investment experience. Therefore it can be inferred that the investment experience depends upon the age of the respondent.

To examine whether the correlation between age and investment experience of the respondents is significant or not, Chi-Square statstics have been calculated and presented in Table 2.

**Table 2: Chi-Square Test between Age and Investment Experience**

| Test | Statistics | df | P value |
|---|---|---|---|
| Chi-Square | 53.461 | 9 | 0.0000 |
| Likelihood Ratio Test | 56.497 | 9 | 0.0000 |
| Linear by Linear Association | 21.648 | 1 | 0.0000 |
| No. of Valid Cases | 132 | | |

Sources: Author's own compilation based on SPSS output

From Table 2 it is evident that Pearson Chi-Square statistic is 53.461 with p- value =0.00. Likelihood ratio statastics is 53.461 with p-value= 0.00. The null hypothesis is rejected on the grounds that the p-values fall below the significance level of 0.05. It may be inferred that there is relation between the age of the participants and their level of investment experience.

This implies that when an investor's age increases, their level of experience in investing also tends to increase. As individuals progress in age and take on increased responsibilities, they acquire knowledge regarding various investment options that may provide greater potential for returns.

### 4.2 Time spent by the participants of different age groups

Table 3 investigates the association between the age of the participant and the duration of the use of social media in making investment choices.

**Table 3: Age and Duration of Time Spent on Social Media for making Investment**

| Age * Time _Spent Crosstabulation | | | | | | |
|---|---|---|---|---|---|---|
| | | | Time Duration | | | Total |
| | | | Less than 1 hour | 1 to 2 hours | 2 to 5 hours | |
| Age | 18-25 | Number | 19 | 2 | 9 | 30 |
| | | % within Age | 63% | 7% | 30% | 100% |
| | 26-35 | Number | 21 | 11 | 20 | 52 |
| | | % within Age | 40% | 21% | 39% | 100% |
| | 36-45 | Number | 9 | 8 | 14 | 31 |
| | | % within Age | 29% | 26% | 45% | 100% |
| | more than 45 | Number | 7 | 5 | 7 | 19 |
| | | % within Age | 37% | 26% | 37% | 100% |
| Total | | Number | 56 | 26 | 50 | 132 |
| | | % within Age | 42% | 20% | 38% | 100% |

Sources: Author's own compilation based on SPSS output

It can be determined from Table 3 that 63% of the participants between the age group of 18-25 spend less than 1 hour on social media to gain investment knowledge. One possible explanation for this trend could be that today's youth are not interested in discussing investments on social media, preferring instead to use these platforms for things like entertainment, communication, news, etc. Out of 52 respondents between the age group of 26-35 years, 40% spend less than an hour on social networking sites, while 60% spend more than one hour. It follows that the age and the/ amount of time devoted to social media do not influence investment decision-making in a/ similar pattern.

To ascertain the significance of association between age and investment experience of the respondents, Chi-Square statistics have been calculated and presented in Table 4.

**Table 4: Chi-Square Test between Age and Duration of Time Spent on Social Media for making Investment Decisions**

| Test | Statistics | df | P value |
|---|---|---|---|
| Chi-Square | 9.180 | 6 | 0.164 |
| Likelihood Ratio Test | 9.759 | 6 | 0.135 |
| Linear by Linear Association | 2.778 | 1 | 0.096 |
| No. of Valid Cases | 132 | | |

Sources: Author's own compilation based on SPSS output

From the above Table 4 it can be ascertained that Pearson $\div^2$ statistic is 9.180 with p- value =0.164. Likelihood ratio statistics is 9.759 with p-value= 0.135. Both of these p-values exceed the predetermined significance level of 0.05, thus supporting the acceptance of the null hypothesis. As a result, there is no significant relation between the duration of time they spent on/ social media platforms to make investment decisions and their age. This indicates that when an investor's age increases, there is no relation with the time devoted on social websites for making investment decisions.

### 4.3 Occupation and Investment Experience

The association between the occupation and investment experience of the participants is examined in Table 5.

**Table 5: Occupation and Investment Experience**

| Occupation * Experience Cross-tabulation | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | Investment Experience | | | | Total |
| | | | Less than one year | 1 to 3 Years | 3 to 5 Years | More than 5 Years | |
| Occupation | Service | Number | 7 | 12 | 6 | 8 | 33 |
| | | % within Occupation | 21% | 36% | 18% | 24% | 100% |
| | Business | Number | 14 | 9 | 11 | 6 | 40 |
| | | % within Occupation | 35% | 23% | 28% | 15% | 100% |
| | Self-Employed | Number | 5 | 11 | 13 | 16 | 45 |
| | | % within Occupation | 11% | 24% | 29% | 36% | 100% |
| | Professionals (CA/CS/CMA/Lawyers etc) | Number | 3 | 4 | 4 | 3 | 14 |
| | | % within Occupation | 21% | 29% | 29% | 21% | 100% |
| Total | | Number | 29 | 36 | 34 | 33 | 132 |
| | | % within Occupation | 22% | 27% | 26% | 25% | 100% |

Sources: Author's own compilation based on SPSS output

The data presented in Table 5 indicates that 57% of the service-occupation respondents have investment experience of less than three years. Out of 45 respondents in self-employed occupation, 65% have more than 3 years of investment experience. One possible explanation for this phenomenon could be that the self-employed are able to manage finances efficiently due to their work environment; this helps them to gain more investment experience. Out of 40 respondents in business occupations, 35% have less than 1 year of investment experience, while 28% have 3- 5 years of investment experience.

To determine whether or not the association between respondents' age and investment experience is significant, Chi-Square statistics have been calculated and reported in Table 6.

**Table 6: Chi-Square Test between Occupation and Investment Experience**

| Test | Statistics | df | P value |
|---|---|---|---|
| Chi-Square | 11.673 | 9 | 0.232 |
| Likelihood Ratio Test | 11.783 | 9 | 0.226 |
| Linear by Linear Association | 2.096 | 1 | 0.148 |
| No. of Valid Cases | 132 | | |

Sources: Author's own compilation based on SPSS output

Table 6 shows that $\div^2$ statistic is 11.673 with p- value of 0.232. The likelihood ratio statistic is 11.783 having p-value of 0.226. The null hypothesis must be accepted because both p-values are greater than the 0.05 significance level. Thus, it may be inferred that the occupation of the respondent does not exhibit any correlation with their investment experience.

### 4.4 Occupation and duration of time spent on social websites for making investment decisions

The relation between the respondents' occupation and the duration of time devoted on social websites for investment decision-making is examined in Table 7.

**Table 7: Occupation and Time Spent on Social Websites for making Investment Decisions**

| Occupation * Time _Spent Crosstabulation | | | | | | |
|---|---|---|---|---|---|---|
| | | | Time Duration | | | Total |
| | | | Less than 1 hour | 1 to 2 hours | 2 to 5 hours | |
| Occupation | Service | Number | 22 | 6 | 5 | 33 |
| | | % within Occupation | 67% | 18% | 15% | 100% |
| | Business | Number | 18 | 7 | 15 | 40 |
| | | % within Occupation | 45% | 18% | 38% | 100% |
| | Self-Employed | Number | 8 | 9 | 28 | 45 |
| | | % within Occupation | 18% | 20% | 62% | 100% |
| | Professionals (CA/CS/CMA/Lawyers etc) | Number | 8 | 4 | 2 | 14 |
| | | % within Occupation | 57% | 29% | 14% | 100% |
| Total | | Number | 56 | 26 | 50 | 132 |
| | | % within Occupation | 42% | 20% | 38% | 100% |

Sources: Author's own compilation based on SPSS output

Table 7 demonstrates that 62% of the self-employed respondents spend 2-5 hours per day to get knowledge about investments from social media networks. Several factors may be contributing to this behaviour, one of which is that self-employed persons/ have a more flexible work environment and less pressure at work. 67% of respondents in service occupations, 45% in business and 57% in professional spend less than an hour per day on social websites. Thus it might be inferred that the respondent's occupation plays a substantial role in determining the amount of time devoted to accessing investment information on social media platforms.

To ascertain the significance of the correlation between the respondents' occupation and the duration of time spent on social media searching investment information, $\div^2$ statistics have been computed and are displayed in Table 8.

**Table 8: Chi-Square Test between Occupation and Time spent on Social Websites for making Investment Decisions**

| Test | Statistics | df | P value |
|---|---|---|---|
| Chi-Square | 26.089 | 6 | 0 |
| Likelihood Ratio Test | 27.921 | 6 | 0 |
| Linear by Linear Association | 7.312 | 1 | 0.007 |
| No. of Valid Cases | 132 | | |

Sources: Author's own compilation based on SPSS output

The above-mentioned Chi-Square table indicates that ÷2 = 26.089 and the corresponding p-value is less than 0.05. With p-values falling below significance level of 0.05, it is reasonable to reject the null hypothesis. Thus, it can be concluded that the participants' occupations/ and the quantity of time they devote to acquiring investment information using social media are significantly correlated. This implies that people with self-employed occupation spends greater amount of time on social media for investment information as compare to other occupations.

## 5. CONCLUSION

The study employs the Chi-square test of independence to ascertain the correlation between different investment qualities and various demographic parameters. The study finds a statistically significant association between the age of the respondents and their level of expertise in investing. This suggests that an investor's level of investment experience tends to increase proportionally with their age. Additionally, the survey reveals that self-employed individuals are more inclined to engage in social media platforms for discussing and investing in the stock market unlike individuals employed in the service sector or any other profession. While the study successfully accomplishes its main objectives, it encountered certain inherent limitations during the research process. The primary constraint has been the small size of the samples. The sample used may not have accurately reflected the total population of Delhi NCR in terms of their investment experiences and the amount of time they dedicated to investigating potential investments on social media. In order to acquire a larger sample size, it is recommended that future researchers enlarge their sample size in Delhi NCR and may include participants beyond this region. Furthermore, the inclusion of closed-ended questions in the questionnaire has restricted the possibilities for the types of responses that might be provided. To facilitate a more comprehensive grasp of other relevant investment questions,/ future/ research may incorporate open-ended questions into the questionnaire.

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