

# **CAPITAL MARKET AWARENESS**

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**SECURITIES AND EXCHANGE COMMISSION  
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## ABSTRACT

The study is designed to investigate the level of general awareness and acceptability of the capital market as an investment tool. The analysis is performed using the data which is collected from University of Peradeniya, University of Rajarata, University of Sabaragamuwa, University of Ruhuna, University of Jayawardanapura and University of Jaffna.

In the preliminary analysis the graphical methods and numerical techniques are used to identify the distributions of each variable. The analysis is done separately for the whole data set, investors, non investors in the share market and for the data set from Jaffna. It is identified that there are 73.73% investors of the share market who are investing monthly and the percentage of the rest of the options of period of savings namely quaterly, annually and others are considerably lower when comparing to that of the monthly investments. The situation is same for non investors of the share market. Further, most of the respondents do not know whether they get a return better than the inflation. Presently, savings accounts are the most popular investment type among the respondents.

However, there is a significant amount of people, interested on investing in the share market but still they have not started and they willing to participate CSE/SCE programs in weekends. But 90.71% of respondents from Jaffna are not willing to attend the CSE/SEC programs. When considering the awareness about the share market, even though almost all the participants are aware about the share market, only 42.04% of the respondents know about the benefits of the share market. Moreover, most of the respondents do not know how to invest in the share market. In that case if it is possible to organize investment promotion programs to general public, it would be helpful to increase the investor base in CSE. Apart from the return on the investment and the consistent income, another predominant factor when selecting a particular investment is security.

In confirmatory analysis it is identified that the proportion is higher for the respondents who are willing to invest in the share market than those who do not. And the same conclusion can be drawn for the respondents from Jaffna. Moreover by the test used to check the dependencies, it is identified that present investments, knowledge of share market, knowledge about the benefits of investing in share market, and the knowledge about how to invest in share market are depended on their profession. Further by checking the dependencies among the factors in each variable, it is identified that the most of the housewives have not heard about the stock market, do not have enough knowledge about the benefit of the share market and do not have knowledge to invest in the share market.

According to the strength of association it is identified that there is a weak negative association between period of saving and percentages of saving. Association among levels of variables leads to a conclusion that the knowledge of stock market is high in the people who willing to invest than the people who not willing to invest in the share market. Moreover a logistic regression model is fitted for the dependent variable 'Willingness of attending CSE/SEC programs' is indicated that there is a high probability of attending to CSE/SEC programs, the people who do not know about share market.

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## CHAPTER 1

### INTRODUCTION

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#### 1.1 Background

Share trading in Sri Lanka dates back to 1896 when the Colombo Brokers Association commenced the share trading in limited liability companies which were involved in opening plantations in Sri Lanka.

The establishment of a formal stock exchange took place in 1985 with the incorporation of the Colombo Stock Exchange (CSE), which took over the Stock Market from the Colombo Share Brokers Association. It currently has a membership of 15 institutions, all of which are licensed to operate as stockbrokers.

The **Colombo Stock Exchange (CSE)** is the main stock exchange in Sri Lanka. It is one of the most modern exchanges in South Asia, providing a fully automated trading platform. The vision of the CSE is to contribute to the wealth of the nation by creating value through securities.

The headquarters of the CSE have been located at the World Trade Center Towers in Colombo since 1995 and it also has branches across the country in Kandy, Matara, Kurunegala, Negambo and Jaffna.

The Colombo Stock Exchange is the only stock exchange licensed by the **Securities and Exchange Commission of Sri Lanka (SEC)**. It was nearly 107 years ago that, formalized share trading commenced in Sri Lanka under the auspices of the Colombo Share Brokers Association and trading was conducted under the rules and by laws formulated by the Association. In 1904, the Colombo Share Brokers Association (CSBA) changed its name to the Colombo Brokers Association (CBA). The share market at that time was small, elitist, and of marginal significance to the overall economy.

It was only as recent as in 1984, that share trading in Sri Lanka took a new turn with the establishment of a public trading floor and the introduction of the "open outcry" system of trading. In the year following, the Colombo Securities Exchange Limited was established.

In 1988, the Colombo Securities Exchange Limited, adopted new rules for listed companies thus replacing the bylaws of the Colombo Brokers Association.

In 1990, the Colombo Securities Exchange changed its name to the Colombo Stock Exchange (CSE). During the same year, the 100% transfer tax on share transactions of foreign nationals was abolished. This gave a tremendous boost to the market and instilled greater dynamism among the capital market practitioners. The number of listed companies, market capitalization, turnover and the number of investors increased rapidly thereafter.

The clearing and settlement procedures of the Colombo Stock Exchange were automated in 1991 with the establishment of the Central Share Depository. This development permitted

scrip-less trading environment. The depository is known as the Central Depository System (CDS). The CDS is a wholly owned subsidiary of the CSE. This was followed by the introduction of a new set of trading floor rules in 1993.

In 1995 the CDS was upgraded and the Stock Exchange moved to a more modern location at the World Trade Center.

An Over the Counter market for trading of unlisted shares was introduced in 1996.

In June 1997, the Colombo Stock Exchange commissioned a state of the art computer based automated order matching system. The CDS was linked real time with the automated trading system. These developments placed the Colombo Stock Exchange alongside the most technologically advanced exchanges in the world. In late 1997 a two tier system consisting of the Main Board and a Second Board for listing of companies was introduced.

In 1998, CSE became the first South Asian member of the World Federation of Stock Exchanges. The Central Depository System (CDS) also gained the membership in the Asia-Pacific Central Securities Group (ACG) during the same year.

The CSE introduced the Milanka Price Index (MPI) in January 1999 replacing the Sensitive Price Index (SPI). The MPI is revised annually and is conducive to the introduction of index-based instruments. It mirrors the changes in the ASPI and the issue of liquidity has also been addressed in the construction.

The CSE opened its second branch in Kandy in the year 2003 in keeping with its strategy to broad base and strengthen the local investor base and take the capital market to the people. The CSE's branch in Matara was opened in 1999.

In January 2004 the CSE launched a Total Return Index (TRI) series in addition to the Price Indices. The price indices reflect price movements of the underlying shares, whereas the TRI reflects returns due to both price changes and dividend income. The TRI is hence a better measure of returns from an investor's perspective.

The CSE officially launched its Debt Trading System (DEX) in March 2004. DEX enables the trading of corporate debt instruments and the beneficial interest of government bonds and treasury bills through the exchange. DEX has advanced features such as scrip less trading, real time exposure management, multiple settlement cycles and compatibility with web based technologies.

The Colombo Stock Exchange (CSE) has 232 companies representing 20 business sectors such as Banks Finance and Insurance ,Beverage Food and Tobacco, Chemicals and Pharmaceuticals, Construction and Engineering, Diversified Holdings, Footwear And Textiles, Health care Hotels and Travels, Information Technology, Investment Trusts Land and Property, Manufacturing Motors Oil, Palms Plantations, Power and Energy ,Services, Stores and Supplies, Telecommunication and Trading were listed on the Colombo Stock Exchange (CSE) as at 31st March 2010. The Market Capitalization of the

CSE stood at Rs. 1,210.8 Bn as at 31st March 2010. The CSE recorded its highest daily turnover of Rs. 33.4 billion on the 01st of April 2008.

Listing is open to a duly incorporated public company or statutory body. Public Companies incorporated under the Companies Act No.7 of 2007 or any other statutory corporation, incorporated or established under the laws of Sri Lanka or established under the laws of any other state (subject to Exchange Control approval) are eligible to seek a listing on the Colombo Stock Exchange to raise Debt or Equity through Public offerings or Introductions. Companies desiring to be admitted to the official list of the Exchange and to secure a listing of their securities will be required to comply with the relevant provisions of the above act and the Securities & Exchange Commission Act No.36 of 1987 (as amended) and the Listing Rules of the Exchange.

There are 15 member firms and 7 trading members at the CSE to act as an intermediary for stock market transactions, offering investors a variety of services in addition to investment advice and executing buy or sell orders of investors. They are governed by the regulations set out by the CSE and licensed by the SEC.

## **1.2 Importance of study**

Part of the core activity of the Securities and Exchange Commission of Sri Lanka is investor education and awareness. As such the SEC has a division to facilities this, namely the “External Relations and Market development” divisions. Over the years they have been active in conducting various programs in diverse locations. In 2009 the SEC conducted over 210 events, in all nine provinces of Sri Lanka, reaching over 32,800 participants. Due to the efforts of the SEC, capital markets were introduced into the syllabus of A ‘level students in the mid 1990’s. In 2001, it was included in the O ‘level syllabus and in 2009 in the year 8 and 9 students syllabus.

In addition the Colombo Stock Exchange (CSE), each year, conducts over a hundred seminars, workshops, and forums. They have conducted these in a number of provinces, in all three languages and have used number of media, such as electronic and print.

Despite this the penetration of Capital markets to the general population of Sri Lanka has been relatively low. If the number of CDS accounts can be taken as an indicator, we have only 384,704 CDS accounts opened. Of which only 37,923 trade regularly (monthly basis) and can be termed active investors. A mere 1.8% of the population for all CDS accounts and a 0.18% for active CDS account.

The survey was conducted to get an idea about the level of general awareness and acceptability of the capital market as investment tool. In this the survey will try to discover the awareness of the capital market as an alternative avenue and the potential returns, the acceptability of the capital market as a safe and stable investment opportunity. Based on the findings of the survey the SEC can better formulate a plan to increase capital market participation by Sri Lankans, based on the identified hindrances to market participation.

## **1.3 Objectives**

The main objective of the survey is to;

- Determine the level of general awareness and acceptability of the capital market as an investment tool.
- Discover the awareness of the capital market as an alternative avenue and the potential returns.
- Discover the acceptability of the capital market as a safe and stable investment opportunity.
- Formulate a plan to increase capital market participation by Sri Lankans, based on the identified hindrances to market participation.

#### **1.4 Limitations of the Survey**

The survey was conducted selecting the sample covering different areas within the area of residence or studies of the students of University of Peradeniya, University of Rajarata, University of Sabaragamuwa, University of Ruhuna, University of Jayawardanapura and University of Jaffna. Even though it is important to have a wide spread as possible, due to time constraints it was not possible. When collecting the data, most of the time a face to face interview was conducted. But in some cases the questionnaire was filled by the respondents due to some reasons. Even though the survey has to be conducted including respondents representing different professions like doctors, lawyers, school teachers, housewives, private sector employees, self employed, etc, it was hard to cover all professional levels. When conducting the survey it was difficult to get the permission from the private and government sector institutes in order to conduct the face to face interviews inside those institutes. The sample may not be a proper representation of the population due to time and geographical area constraints of the interviewers and the respondents in the sample may be drawn by the personal contacts.

## **CHAPTER 2**

### **LITERATURE SURVEY**

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This section reviews findings obtained by the prior researches that have examined the level of general awareness and acceptability of the capital market.

The survey conducted by Kofi A.Osei, University of Ghana (1998) was an analysis of factors affecting the development of the emerging Ghana stock market. The main objective of this study was to analyze the institutional (including regulatory and legal) factors that affect the development of the Ghana Stock Exchange. Other objectives were to assess the efficiency of the Ghana Stock Exchange by testing for the law of one price using the Ashanti Goldfields Corporation (AGC), test the random-walk hypothesis, analyze the impact of the listing of AGC on the development of the Ghana Stock Exchange and make policy recommendations for development. The results obtained in this survey can be summarized as transparency of pricing of shares on the GSE was satisfactory, disclosure of information complied with the guidelines, lack of national awareness, lack of knowledge about stock markets and low incomes of the bulk of the people affect the development and the random walk test for weak form efficiency also showed that the GSE is inefficient.

“Analysis of the hindrances to capital markets access among private sector firms in Uganda” was another survey conducted under the general oversight of Ms. Anne Mpendo (Director Research and Market Development, Capital Market Authority). The objectives of this survey were to establish the levels of awareness among private companies in Uganda, to establish the hindrances to private sector access to Uganda’s capital markets as an avenue for long-term financing and to make recommendations. The methodology used here were past literature surveys, review of the current legal and regulatory framework and collection of primary data from a sample of unlisted/unquoted private sector firms using structured questionnaires. According to the study findings, over 80% of the respondents in the private sector firms surveyed were aware of the concept of the stock exchange and the opportunity of issuing of shares and bonds to the public. However over 50% of the respondents were not aware of the different market segments at the Uganda Securities Exchange (USE) and only 32% were aware of the USE listing requirements. In regard to the hindrances to capital markets access by private sector firms, the heavy reliance on internal funds/retained earnings to meet business financing needs and a majority of the private firms not adhering to international best practices in corporate governance were identified. Unable to capture the actual quantitative data on business financing and lack of interest of private firms to provide detailed financial information were the major limitations of this survey.

Another Survey by Luigi Guiso and Tullio Jappelli on “Awareness and Stock Market Participation” was conducted in 1995 and 1998. The objective of this study is to analyze the lack of awareness of financial assets in the 1995 and 1998 Bank of Italy Surveys of Household Income and Wealth. Also it explores the determinants of awareness, and finds that the probability that survey respondents are aware of stocks, mutual funds and investment accounts is positively correlated with education, household resources, long-term bank relations and proxies for social interaction. Lack of financial awareness has important implications for understanding the stockholding puzzle and for estimating stock market participation costs.

## CHAPTER 3

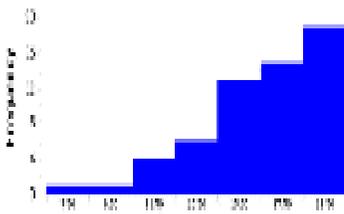
### THEORY AND METHODOLOGY

#### 3.1 Introduction

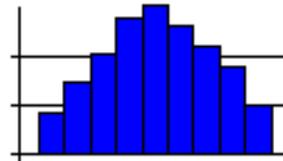
The theories related to the tests and methodologies that were used to analyze the data are discussed in this section.

##### 3.1.1 Histograms

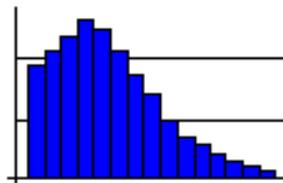
Histogram is a graphical representation of the frequency distribution. According to the histogram, it can be obtained an approximate idea about distribution which it's positive or negative skewed or symmetric distribution.



Negative skewed



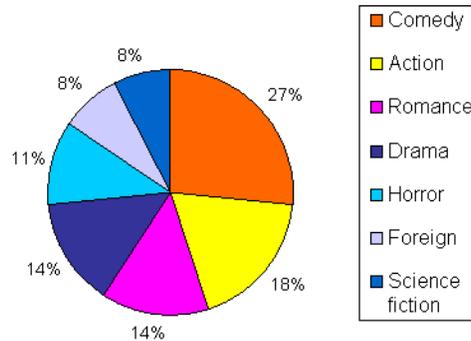
Symmetric



Positive skewed

### 3.1.2 Pie charts

Pie charts can be used to give a pictorial representation of collected data. A pie chart (or a circle graph) is a circular chart divided into sectors, illustrating proportion. In a pie chart, the arc length of each sector (and consequently its central angle and area), is proportional to the quantity it represent.



### 3.1.3 One sample proportion test

This test is also known as the binomial distribution test. The test is used to consider the proportion of a sample for which a particular qualitative observation has been made. The test examines how far from the expected proportion is the observed proportion, given an assumed probability for the observation.

Then the interested two sided hypothesis is,

$$H_0: p = p_0 \quad \text{Vs.} \quad H_1: p \neq p_0$$

The interested one sided hypotheses are,

$$H_0: p \geq p_0 \quad \text{Vs.} \quad H_1: p < p_0$$

$$H_0: p \leq p_0 \quad \text{Vs.} \quad H_1: p > p_0$$

Test statistic,

$$Z = \frac{n\hat{p} - np}{\sqrt{n\hat{p}(1-\hat{p})}} = \frac{\hat{p} - p}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}} \sim N(0,1)$$

Where,

$p$  – Population proportion

$\hat{p}$  – Sample proportion

$n$  – Sample size

In two sided test,  $H_0$  is rejected at  $\alpha\%$  significance level if the calculated test statistics  $Z > Z(\alpha/2)$ . But for one sided test,  $H_0$  is rejected at  $\alpha\%$  significance level if the calculated test statistics  $Z > Z(\alpha)$ .

### 3.1.4 Measure of association

Here odds ratio is used to measure the associations among two variables. Consider a variable with I number of categories and two levels which can be represented by I×2 contingency table. The odds ratio for 2 rows h and i is define as the ratio of odds of ‘Yes’ for that two rows. It is denoted as,

$$\theta_{hi} = \frac{\Omega_h}{\Omega_i} = \frac{\pi_{h1}\pi_{i2}}{\pi_{i1}\pi_{h2}}$$

Where,

$\Omega_i$  - The odds of ‘yes’ for row i

$$\Omega_i = \frac{\text{probability of "yes" for row } i}{\text{probability of "no" for row } i}$$

$\Omega_h$  - The odds of ‘yes’ for row h

$$\Omega_h = \frac{\text{probability of "yes" for row } h}{\text{probability of "no" for row } h}$$

$\pi_{hj}$  - The joint probability of respondents falling into the set (X<sub>h</sub>, Y<sub>j</sub>)

If the odds ratio,  $\theta_{hi} = 1$  then the variables are independent.

### 3.1.5 Pearson’s chi squared test

This test is used to identify whether there is a dependency between two categorical variables.

The interested hypothesis is,

H<sub>0</sub>: Two variables are independent.

Vs.

H<sub>1</sub>: Two variables are dependent.

Test statistic, 
$$X^2 = \sum_{i=1}^I \sum_{j=1}^J \frac{(n_{ij} - \hat{\mu}_{ij})^2}{\hat{\mu}_{ij}}$$

Under H<sub>0</sub>, 
$$X^2 \sim \chi^2_{(I-1)(J-1)}$$

Where,

$n_{ij}$  – The observed frequency of respondents falling into the set (X<sub>i</sub>, Y<sub>j</sub>)

$\hat{\mu}_{ij}$  – The expected cell frequency for i<sup>th</sup> cell

H<sub>0</sub> is rejected at α% significance level if the calculated test statistics

$$X^2 > \chi^2(\alpha)$$

### 3.1.5 Multiple comparisons

If the Pearson's chi squared test is indicated the two variables are dependent then the multiple comparison test is used to discover which factors differ from the other factors. Although there are many multiple comparison procedures here standardized residual analysis method was used since the interested variables are categorical.

### 3.1.6 Logistic regression model

Logistic regression is used to explain the variability of the binary variables, either continuous or categorical, such as age, sex, marriage status, etc. Here a statistical model is defined to relate the probability of the response event to the explanatory variables. Since there were only categorical data, the logistic regression model is fitted with more categorical variables.

Suppose there are one binary response and two categorical predictors A and B where A has I levels and B has J levels. Then the logistic regression model can be written as,

$$\text{logit}(\pi_{ij}) = \alpha + \beta_i^A + \beta_j^B + \beta_{ij}^{AB}$$

Where,

$\pi_{ij}$  - The probability of success of Y when factor A within  $i^{\text{th}}$  level and factor B is in  $j^{\text{th}}$  level.

$\beta_i^A$  - Effect on the  $\text{logit}(\pi_{ij})$  for  $i^{\text{th}}$  level of A.

$\beta_j^B$  - Effect on the  $\text{logit}(\pi_{ij})$  for  $j^{\text{th}}$  level of B.

$\beta_{ij}^{AB}$  - Effect on the  $\text{logit}(\pi_{ij})$  in  $i^{\text{th}}$  level of A and  $j^{\text{th}}$  level of B.

$\alpha$  - Constant

By considering the above model as the full model, the best model can be identified by using the model selection procedure.

Consider an example of fitting a logistic regression model for the variable "willingness of attending to CSE/SEC programs". Here the variable "willingness of attending to CSE/SEC programs" is a binary response and along that number of categorical predictor variables can be used such as heard about share market, knowledge about benefits of the share market, knowledge about investing in the share market, willingness of investing in share market and knowledge about stock brokers. According to the above response and corresponding predictors the following logistic regression model can be obtained.

Logit (Willingness of attending to CSE/SEC programs)

$$= -1.83825 + 1.47895(\text{Heard about share market}) - 0.32469 (\text{Knowledge about benefits of the share market}) + 0.29549 (\text{Knowledge about investing in the share market}) + 2.02502 (\text{Willingness to invest in share market}) + 0.45146 (\text{Knowledge about stock brokers})$$

### **3.3 Data collection procedure**

The purposes of this study were, to recognize about the level of general awareness and acceptability of the capital market as an investment tool, discover the acceptability of the capital market as a safe and stable investment opportunity, discover the awareness of the capital market as an alternative avenue and the potential returns and to increase the capital market participation of Sri Lankans. In order to fulfill above objectives, Securities and Exchange Commission was designed a questionnaire with twenty questions and it was developed to enhance the accuracy and efficiency by the undergraduates of University of Peradeniya who are reading Bachelor of Science special degree in statistics. The questions for the questionnaire were added in order to reach the objectives of the survey and the corresponding questions were focused to gather information about the investing procedure of the sample respondents, which types of professionals interested to invest in the share market and which types of professionals are not interested, reasons for engaging and not engaging share market investments, factors that governs the investing behavior of an investor, the level of awareness about the share market and its procedures among the sample respondents...etc. And that was used to collect information. The questionnaire was consisted with only categorical variables. The variables such as purpose of savings, period of saving, profession, percentage of savings, awareness about inflation, present investments, future investments, time horizon of the investment, preferred investment, predominant factors effecting to the investments, awareness of share market, the knowledge on the benefits of investing in the stock market, the knowledge about outstation branches and the knowledge about stock brokers were examined in order to fulfill the objectives of the survey. For each and every variable, there were several options. Students from University of Peradeniya, University of Rajarata, University of Jaffna, University of Jayawardanapura, University of Ruhuna and University of Sabaragamuwa were contributed in data collection procedure. Data was collected from a sample of 7950 from different districts such as Kandy, Matale, Kurunegala, Colombo, Kaluthara, Jaffna etc. Also the sample was consisted of the respondents representing different professions and income levels. When collecting the data, in most of the cases face to face interview was conducted. But sometimes the questionnaire was filled by the respondents due to time constraint.

### **3.4 Data analysis procedure**

Since in some cases the questionnaire was filled by the respondents, there were several unreliable observations such as questions without any response, ranking errors, marking several options for the question where only one option is needed and questionnaires with contradictory responses. Hence those kind of unreliable questionnaires were rejected when preparing the dataset. Then each and every variable was examined separately in order to identify their behaviors. After that, the results obtained by performing preliminary analysis were arranged in a tabular manner to identify the percentages and total number of counts for each category. And also two data sets were obtained from the whole data set based on the investing behavior in the share market and named them as investors data set and the non investors data set. For the above mentioned three data sets, the results obtained from the preliminary analysis which was carried out for some selected variables were summarized and tabulated and graphically represented in order to compare them by column percentages and row percentages.

The confirmatory analysis was performed in order to test comparisons between pair of variables. For this purpose statistical techniques such as Proportion test, Pearson's chi squared test, Measure of association techniques and Odds ratios are used. The proportion test is conducted in order to identify which level of considered variable is more favorable in the population than the other. Next the combinations of factors in variables were analyzed using chi-squared test to identify the relationship of each other. Then the multiple comparison tests were used to test whether the dependencies between the levels of dependent variables by comparing the expected and observed counts of the corresponding levels of variables. The odds ratio method was applied to measure the relation between the levels of variables and the strength among variables was also measured by Kendall's tau-b and Cramer's V.

A logistic regression model was fitted for the whole data set. The model was fitted for the dependent variable 'Willingness of attending CSE/SEC programs'. After that, the best models were selected using the backward elimination method.

Except fitting the model, the above analyzing procedure was performed for the data set from Jaffna separately.

## **CHAPTER 4**

### **PRELIMINARY ANALYSIS**

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#### **4.1 Introduction**

The preliminary analysis for the collected data for the variables such as purpose of savings, period of investments, profession, percentage of savings, awareness about inflation, present investments, future investments, time horizon, predominant factors effecting to the investments, awareness of share market, knowledge about benefits of investing in the share market, knowledge of investing in the share market, preferable media, willingness to attend in CSE/SEC programs, convenient time, willingness to invest in the share market, knowledge about the outstation branches, knowledge about stock brokers, gender, residential area and district was carried out in this section. Pie charts, Histograms and tables were used to identify the distribution of the relevant variables.

#### **4.2 Composition of the sample**

The composition of the sample was described using suitable graphical and numerical techniques. For some selected variables such as period of investments, profession, awareness about inflation, knowledge of investing in the share market and purpose of savings were classified using whole data set, the data set for investors as well as the data set for the non investors.

For the variables such as gender, residential area and district were categorized according to the knowledge of investing in the share market for the whole data set, the data set for investors and for the data set for non investors.

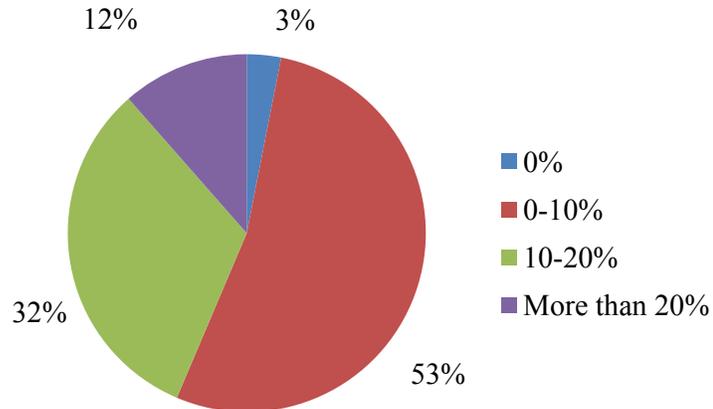
The variables like percentage of savings, present investments, future investments were explained using tables and pie charts.

##### **4.2.1 Distribution of respondents by percentage of saving**

The distribution of the sample was classified according to the percentage of their savings and it was described using pie charts and tables. The percentage of savings is divided in to four categories and they are 0%, 0%-10%, 10%-20% and more than 20%. A clear identification of percentage of savings of the sample can be drawn by using tables and pie charts.

**Table 4.2.1.1: Frequencies of respondents by percentage of saving for all respondents**

Range	Count	Percentage
0%	246	3.09
0-10%	4237	53.30
10-20%	2554	32.12
More than 20%	913	11.48

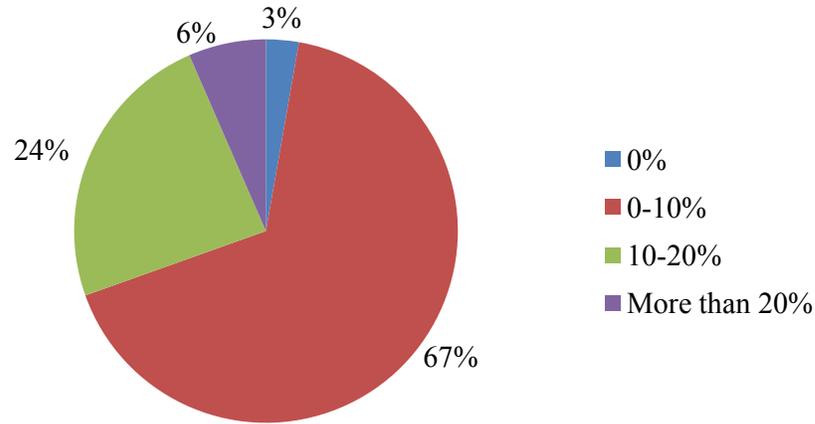


**Figure 4.2.1.1: Pie chart for the percentage of saving for all respondents**

Approximately more than 50% of the respondents are saving in between 0% to 10% from their earnings. Even though most of the respondents are having even a small amount of savings there are about 3% of respondents who do not save any amount from their earnings.

**Table 4.2.1.2: Frequencies of respondents by percentage of saving for respondents from Jaffna**

Range	Count	Percentage
0%	16	2.75
0-10%	388	66.78
10-20%	139	23.92
More than 20%	38	6.54



**Figure 4.2.1.2: Pie chart for the percentage of saving for respondents from Jaffna**

Approximately 67% of the respondents are saving in between 0% to 10% from their earnings. Even though most of the respondents are having even a small amount of savings there are about 3% of respondents who do not save any amount from their earnings.

#### **4.2.2 Distribution of respondents by their present investments and future investments**

The investments of the sample are used to identify the areas where the people have currently invested and their future investments. The present and future investments are classified as

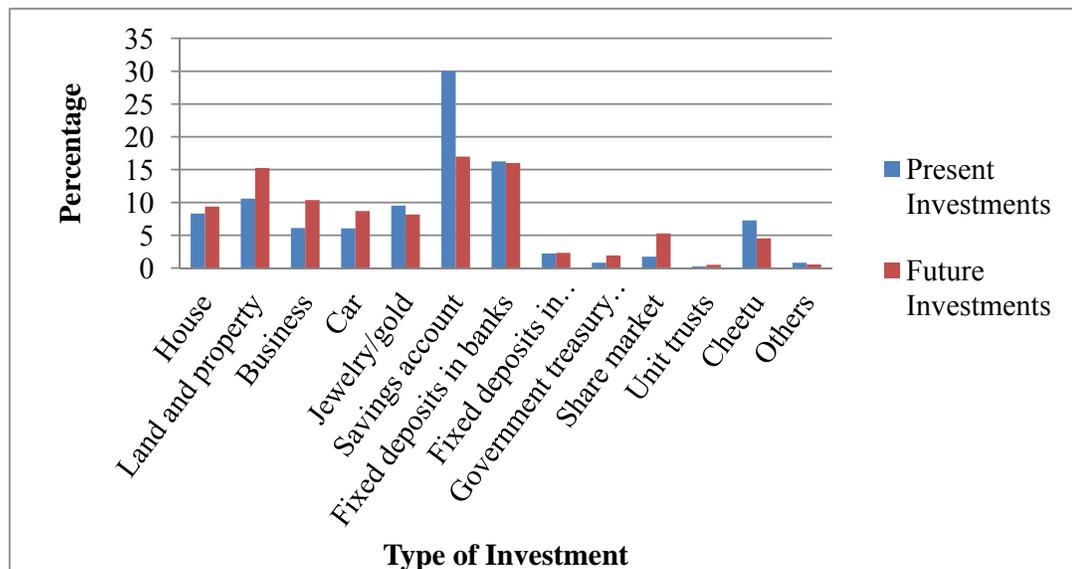
- |                              |  |
|------------------------------|--|
| 1. House                     | 2. Land and property                   |
| 3. Business                  | 4. Car                                 |
| 5. Jewelry/gold              | 6. Savings accounts                    |
| 7. Fixed deposits in banks   | 8. Fixed deposits in finance companies |
| 9. Government treasury bills | 10. Share market                       |
| 11. Unit trust               | 12. Cheetu                             |
| 13. Others.                  |  |

Here, the main objective is to get a clear idea about the number of investors in the share market within the sample as well as about the future investors of the share market. The variations in the number of present and future investors can be clearly identified using the table and the multiple bar charts.

Two way classifications of the present investments and future investments was also considered in order to find out the changes in the investment areas of the community in future compared with the present.

**Table 4.2.2.1.1: Frequencies of respondents by types of present investment and future investments for all respondents**

Type of investment	Present Investments		Future Investments	
	Count	Percentage	Count	Percentage
House	1625	8.31	1920	9.38
Land and property	2069	10.58	3121	15.24
Business	1195	6.11	2126	10.38
Car	1186	6.06	1779	8.69
Jewelry/gold	1863	9.53	1673	8.17
Savings account	5863	29.98	3481	17.00
Fixed deposits in banks	3181	16.27	3277	16.01
Fixed deposits in finance companies	436	2.23	477	2.33
Government treasury bills	161	0.82	395	1.93
Share market	338	1.73	1078	5.26
Unit trusts	54	0.28	105	0.51
Cheetu	1424	7.28	929	4.54
Others	158	0.81	112	0.55



**Figure 4.2.2.1: Composite bar chart of percentage of respondents by types of investment in present and future for all respondents**

According to the above table and the figure it can be clearly seen that the savings accounts are the investment that most of the respondents are presently interested in. Even though the percentage of savings accounts in future investment is relatively high, when comparing the percentage of present and future investments, it has decreased by a considerable amount. About 1.73% of the respondents of the sample have their present investments in the share market. The investing percentage in future in the share market is about 5%. This is a significant increment when comparing to the other types of investments. And especially the most of the respondents focused their investments in fixed deposits in banks in present as well as in future. And a significant amount of percentage for the investments in land and property as future investment also can be seen. The investing percentage in unit trusts, government treasury bills are extremely small. The reason for this could be the less awareness about those areas within the respondents of the sample. Percentage of respondents who are presently investing their money in house, land and property, jewelry/gold and cheetu are approximately equal. Here a significant percentage of respondents invest their money in cheetu as both present and future investment. Except in investments such as jewelry/gold, savings accounts and cheetu, the percentage of future investments has increased in all options than that of present investments.

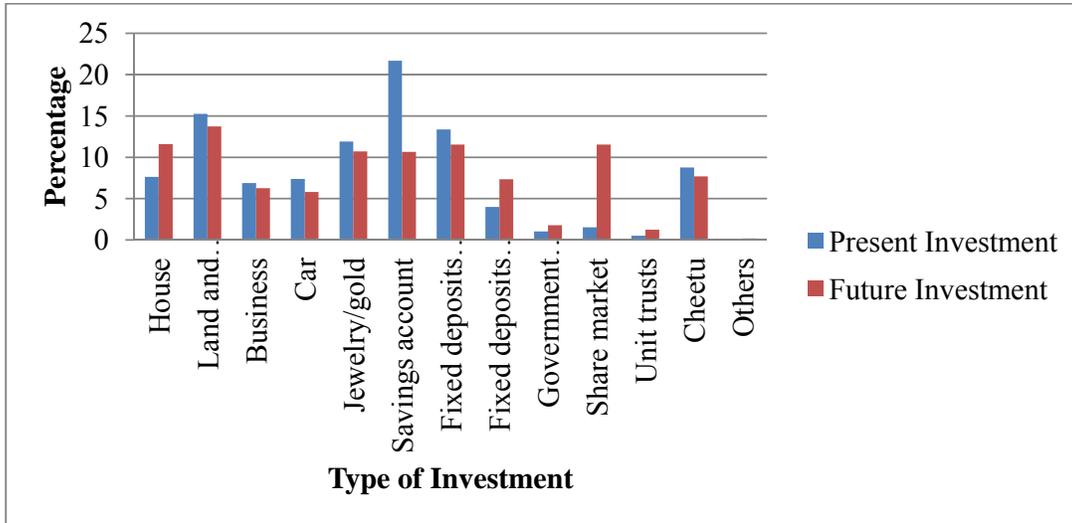
**Table 4.2.2.1.2: Two way classification of respondents by types of present investment and future investments for all respondents**

		Future investments												
		1	2	3	4	5	6	7	8	9	10	11	12	13
Present investment	1	633	452	171	88	37	146	57	60	3	11	0	5	6
	2	398	141	242	148	84	110	107	11	14	15	2	7	3
	3	109	227	511	73	49	48	46	17	4	36	0	8	3
	4	87	159	134	241	101	133	102	9	14	26	1	8	3
	5	160	292	158	190	358	184	130	25	30	50	4	34	2
	6	474	736	498	464	496	1505	556	56	52	178	24	34	2
	7	30	251	138	165	192	485	826	59	45	105	6	53	12
	8	6	17	26	20	33	44	88	91	20	8	3	4	3
	9	0	1	2	0	8	17	14	14	33	14	7	4	0
	10	1	8	15	21	8	24	33	5	17	84	6	11	0
	11	0	0	0	2	0	3	3	1	6	7	10	2	0
	12	9	27	58	67	75	124	199	16	7	54	6	220	4
	13	12	7	15	8	16	13	12	1	1	7	0	7	23

According to the above two way classification it can be clearly identified that the trend exists in between present investment and future investment. Here by considering the figures of the above table, can describe the behavior of a certain investment in present as well as in future. When considering the diagonal elements of the above table, the figures are extremely higher than the off-diagonal elements. This implies that the most of the investors are prefer to continue their present investment in the future also. And the figures corresponding to savings accounts as present investment as well as savings accounts as future investments are relatively high, since most of the respondents are very much prefer to invest their money in savings accounts. And especially when considering the respondents who are currently engaged in house investment and willing to invest their money in land and property and also the respondents who are currently engaged in land and property investment and willing to invest their money in house investment, the corresponding counts are considerably high. The investment behavior of the share market investors in present and future with savings accounts and fixed deposits in banks is also significant. And most of the investors who are engaged in other investments in present also prefer to invest in the share market in the future. Most of the share market investors prefer to invest their money in savings accounts as well as in fixed deposits in banks. Here also low frequencies can be seen for the investing types such as fixed deposits in finance companies, government treasury bills and unit trusts. And a considerable amount of investors prefer to do cheetu as their investment.

**Table 4.2.2.2.1: Frequencies of respondents by types of present investment and future investments for respondents from Jaffna**

Type of investment	Present Investments		Future Investments	
	Count	Percentage	Count	Percentage
House	134	7.62	196	11.59
Land and property	268	15.24	232	13.72
Business	121	6.88	106	6.27
Car	130	7.39	98	5.80
Jewelry/gold	209	11.89	181	10.70
Savings account	381	21.67	180	10.64
Fixed deposits in banks	235	13.37	195	11.53
Fixed deposits in finance companies	70	3.98	124	7.33
Government treasury bills	18	1.02	30	1.77
Share market	27	1.54	195	11.53
Unit trusts	9	0.51	21	1.24
Cheetu	154	8.76	130	7.69
Others	2	0.11	3	0.18



**Figure 4.2.2.2: Composite bar chart of percentage of respondents by types of investment in present and future**

According to the above table and the figure it can be clearly seen that the savings accounts are the investment that most of the respondents are presently interested in. When we consider the future investment land and property has the highest percentage. About 1.5% of the respondents of the sample have their present investments in the share market. The investing percentage in future in the share market is about 11.5%. This is a significant increment when comparing to the other types of investments. Especially most of the respondents focused their investments in land and property in present as well as in future. And a significant amount of percentage for the investments in fixed deposit in banks as future investment also can be seen. The investing percentage in unit trusts, government treasury bills are extremely small. The reason for this could be the less awareness about those areas within the respondents of the sample. Here a significant percentage of respondents invest their money in cheetu as both present and future investment. Except in investments such as house, fixed deposits, government treasury bills, share market and unit trust the percentage of future investments has decreased in all options than that of present investments.

**Table 4.2.2.2.2: Two way classification of respondents by types of present investment and future investments**

		Future investments												
		1	2	3	4	5	6	7	8	9	10	11	12	13
Present investment	1	50	37	14	3	2	9	10	3	1	4	0	0	1
	2	115	57	18	9	17	15	17	9	2	4	0	2	0
	3	7	5	28	16	13	2	6	11	2	18	0	2	1
	4	5	11	17	18	22	7	12	4	1	9	0	0	0
	5	10	10	16	17	35	19	16	16	6	24	3	10	0
	6	6	84	4	18	33	57	34	19	3	34	3	19	0
	7	2	26	1	8	25	44	34	14	2	20	2	9	0
	8	1	0	1	2	4	5	14	25	3	2	2	1	1
	9	0	0	1	0	3	1	2	2	1	3	0	2	0
	10	0	0	0	1	0	4	2	1	2	5	1	2	0
	11	0	0	0	0	0	1	1	1	1	1	0	2	0
	12	0	1	1	2	14	9	29	5	1	18	3	17	0
	13	0	0	0	0	0	0	1	0	0	0	0	0	0

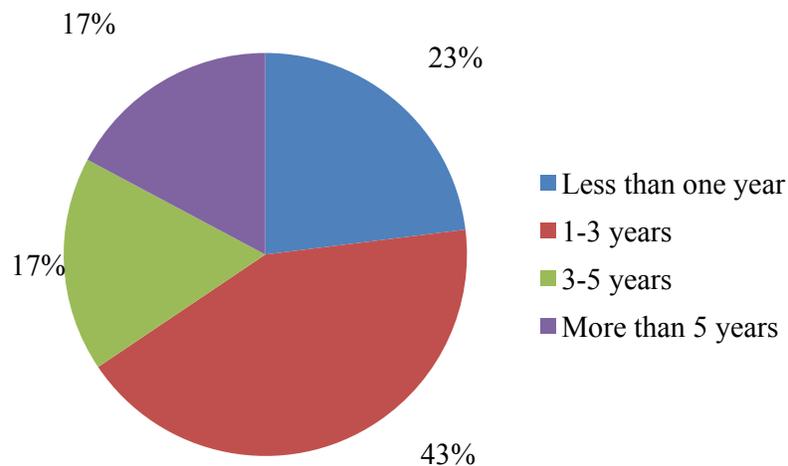
According to the above two way classification it can be clearly identified that the trend exists in between present investment and future investment. Here by considering the figures of the above table, can describe the behavior of a certain investment in present as well as in future. Savings account and land/property is the most preferable investing type among the sample respondents not only as their present investment but also future investment. The counts for the respondents who are currently engaged in land and property investment and willing to invest their money in house investment are considerably high. The investment behavior of the respondents who are currently investing in savings account with future investment in land and property is also significant. Those who have savings account as their present investment are the most who prefer to invest in the share market in future. Here also low frequencies can be seen for the investing types such as fixed deposits in finance companies, government treasury bills and unit trusts.

### 4.2.3 Distribution of respondents by time horizon of the investment

The variable time horizon implies that how often an investor doing an investment in a certain investment type. When doing an investment the time horizon of that investment could be a most important factor for an investor. The time horizon is divided in to four options such as less than one year, 1-3 years, 3-5 years and more than 5 years in order to find out the sample composition in those time horizons clearly. The objective is to find out the investment structure of the investor that is, whether the investments are long term investments or the short term investments.

**Table 4.2.3.1: Frequencies of respondents by time horizon of the investment for all respondents**

Time horizon	Count	Percentage
Less than one year	1831	23.03
1-3 years	3381	42.53
3-5 years	1370	17.23
More than 5 years	1368	17.21

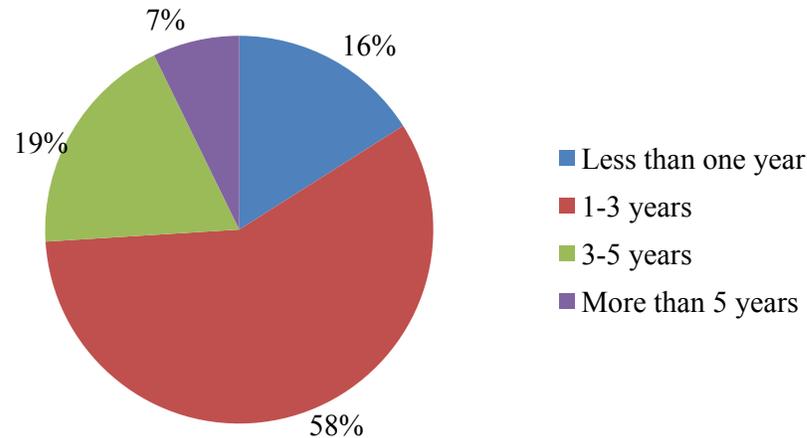


**Figure 4.2.3.1 Pie chart for the time horizon of the investment for all respondents**

Most of the investors in the sample are doing their investment for a time period of 1 year to 3 years. The percentage of investors who like to do short term investments that is, less than one year is nearly 20%. The percentage of long term investors is 17% and when considering the collective percentage of two time horizons 3-5 years and more than 5 years, that is about 34% which cover up 1/3 of the sample respondents.

**Table 4.2.3.2: Frequencies of respondents by time horizon of the investment for respondents from Jaffna**

Time horizon	Count	Percentage
Less than one year	93	16.01
1-3 years	337	58.00
3-5 years	109	18.76
More than 5 years	42	7.23



**Figure 4.2.3.2 Pie chart for the time horizon of the investment for respondents from Jaffna**

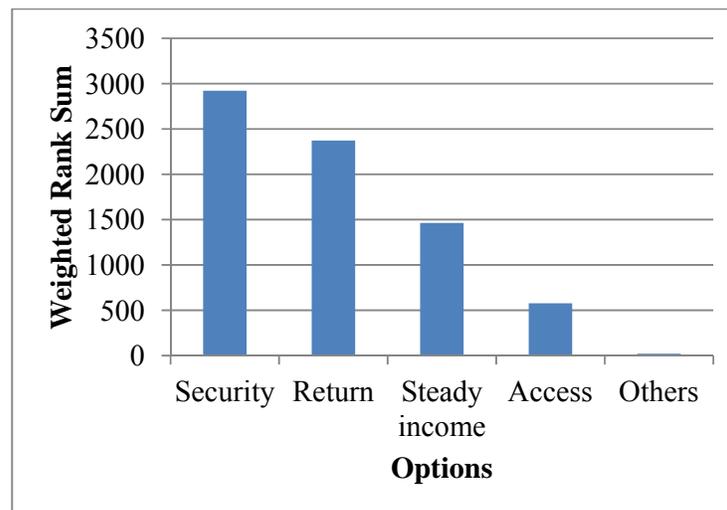
Most of the investors in the sample are doing their investment for a time period of 1 year to 3 years. The percentage of investors who like to do short term investments that is, less than one year is 16%. The percentage of long term investors is 7% and when considering the collective percentage of two time horizons 3-5 years and more than 5 years, that is about 26% which cover up 1/4 of the sample respondents.

#### **4.2.4 Distribution of respondents by predominant factors effecting to the investments**

The predominant factors effecting to investments have categorized to five categories in order to find out the most effecting factor when choosing an investment. The factors have categorized as security, return, steady income, access and other. And the weighted rank sum of those options has taken to facilitate the objective. The weighted rank sum was obtained by giving weights for 3ranks.

**Table 4.2.4: Weighted rank sums of predominant factors effecting to an investments for all respondents**

<b>Options</b>	<b>Rank1</b>	<b>Rank2</b>	<b>Rank3</b>	<b>Weighted Rank Sum</b>
Security	4424	1815	832	2922.9
Return	2328	2985	1566	2372.7
Steady income	837	1871	2421	1464.0
Access	338	628	1104	578.2
Others	23	16	23	20.9



**Figure 4.2.4: Bar chart of weighted rank sums of predominant factors for all respondents**

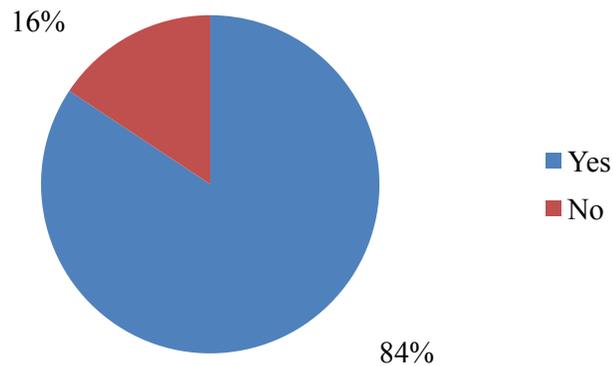
Security can be considered as the most important factor for an investor when selecting an investment since the weighted rank sum is highest as well as the first preference of the most of the investors is also security. Considerable amount of investors are interested about the returns of their investments, and it is clear as the second preference for the returns is higher. Other than the given categories of predominant factors effecting to investments, significantly very small amount of investors seek for some other factors.

#### **4.2.5 Distribution of respondents by awareness of share market**

The respondents in the sample have categorized according to their awareness about the share market. In order to find out the percentage of the respondents in the sample who have and do not have any idea about the share market is obtained using a table and a pie chart.

**Table 4.2.5.1: Frequencies of respondents by the awareness of share market for all respondents**

Response	Count	Percentage
Yes	6703	84.31
No	1247	15.68

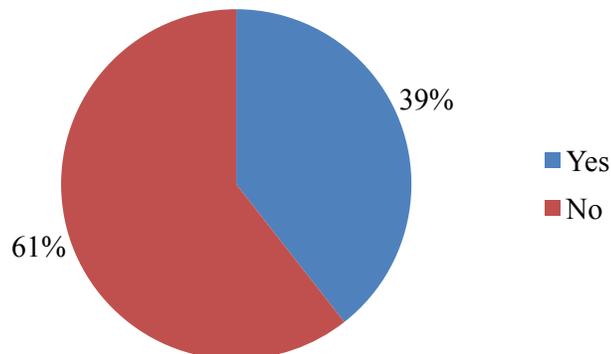


**Figure 4.2.5.1: Pie chart for the awareness about the share market for all respondents**

Most of the respondents in the sample have heard about the share market and they are aware about the share market, and the corresponding percentage is about 84%. The percentage of respondents who do not have any understanding about the share market is relatively small as the percentage is about 16%.

**Table 4.2.5.2: Frequencies of respondents by the awareness of share market for respondents from Jaffna**

Response	Count	Percentage
Yes	229	39.41
No	352	60.59



**Figure 4.2.5.2: Pie chart for the awareness about the share market for respondents from Jaffna**

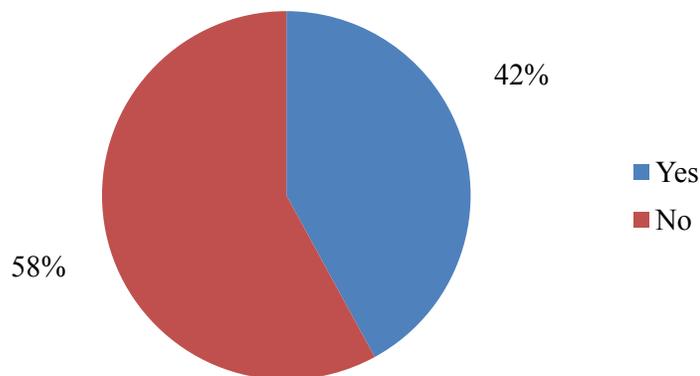
More than 1/3 of the respondents in the sample are aware about the share market and the corresponding percentage is 39%.The percentage of respondents who do not have any understanding about the share market is relatively large as the percentage is about 61%.

#### 4.2.6 Distribution of respondents by the knowledge on the benefits of investing in the share market

Even though the respondents aware about the share market, it is important to have an idea about whether the respondents have an idea about the benefits of investing in the share market. So that, the classification of the sample respondents have considered according to the knowledge of investing in the share market.

**Table 4.2.6.1: Frequencies of respondents by the knowledge on the benefits of investing in the share market for all respondents**

Response	Count	Percentage
Yes	3342	42.04
No	4608	57.96

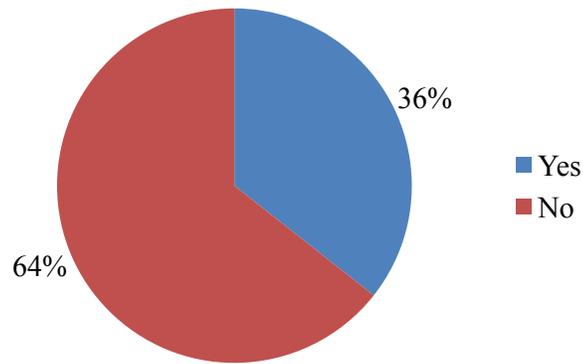


**Figure 4.2.6.1: Pie chart for the knowledge on benefits of investing in share market for all respondents**

More than half of the respondents in the sample do not have any knowledge about the benefits of investing in the share market and the corresponding percentage is about 58%. And 42% of respondents know about the benefits of investing in the share market. This could be a reason for the less present investments in the share market.

**Table 4.2.6.2: Frequencies of respondents by the knowledge on the benefits of investing in the share market for respondents from Jaffna**

Response	Count	Percentage
Yes	207	35.63
No	374	64.37



**Figure 4.2.6.2: Pie chart for the knowledge on benefits of investing in share market for respondents from Jaffna**

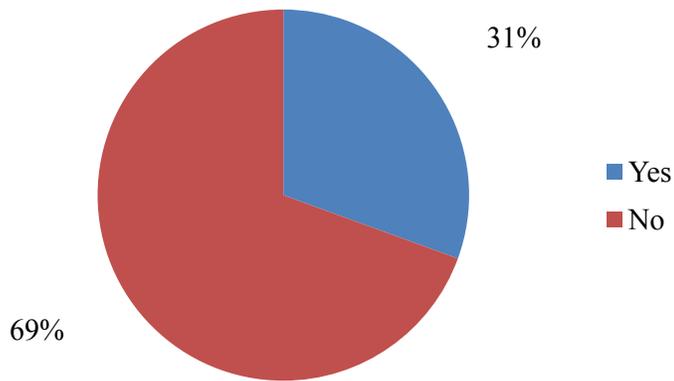
Nearly 2/3 of the respondents in the sample do not have any knowledge about the benefits of investing in the share market and the corresponding percentage is about 64%. And 36% of respondents know about the benefits of investing in the share market.

#### **4.2.7 Distribution of respondents by the knowledge about outstation branches for all respondents**

The Colombo Stock exchange has outstation branches around Sri Lanka. And if an investor has knowledge about those outstation branches, then it would be added advantage when selecting share market as their investment. The classification was done to check whether there is enough knowledge about those branches within the community.

**Table 4.2.7: Frequencies of respondents by the knowledge about outstation branches for all respondents**

<b>Response</b>	<b>Count</b>	<b>Percentage</b>
Yes	2429	30.55
No	5521	69.45



**Figure 4.2.7: Pie chart for the respondents about their knowledge about outstation branches for all respondents**

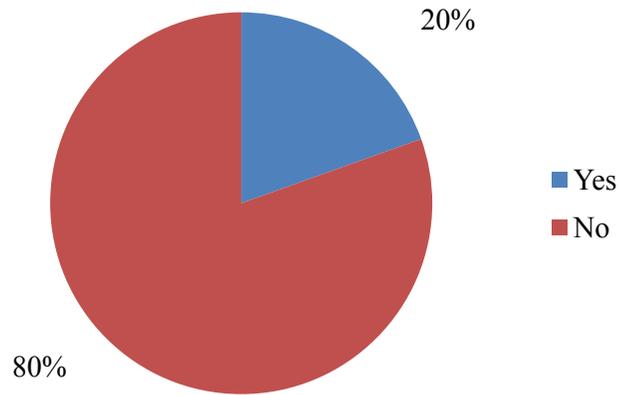
According to the figures in the table and the pie chart it is clear that most of the respondents in the sample do not have any knowledge about the out station branches of the share market. Only 30.55% of the respondents in the sample know about the out station branches. Higher percentage of respondents in the sample, which is 69.45% do not have any idea about the out station branches. This could also be a reason for the less number of present investments in the share market.

#### **4.2.8 Distribution of respondents by the knowledge about stock brokers for all respondents**

To observe whether the community has knowledge about the stock brokers the classification was done.

**Table 4.2.8: Frequencies of respondents by the knowledge about stock brokers for all respondents**

<b>Response</b>	<b>Count</b>	<b>Percentage</b>
Yes	1553	19.53
No	6397	80.46



**Figure 4.2.8: Pie chart for the respondents about their knowledge about stock brokers for all respondents**

80.46% of the respondents in the sample do not have any knowledge about the stock brokers and only 19.54% know about the stock brokers. And when considering the above two cases, around 40% of the sample respondents aware about the benefits of the share market and know about the outstation branches. But here only about 20% of the sample respondents know about stock brokers.

#### **4.3 Comparisons for the sample respondents with the investors and non investors**

The sample respondents are classified for variables, period of investment, profession, awareness about inflation, knowledge about investing in the share market and purpose of savings for the whole data set, data sets for investors and non investors.

The data sets for the investors and the non investors were taken as follows. The investors data set is based on the sample respondents who are presently invested in the share market and the non investors data set is based on the rest of the sample respondents.

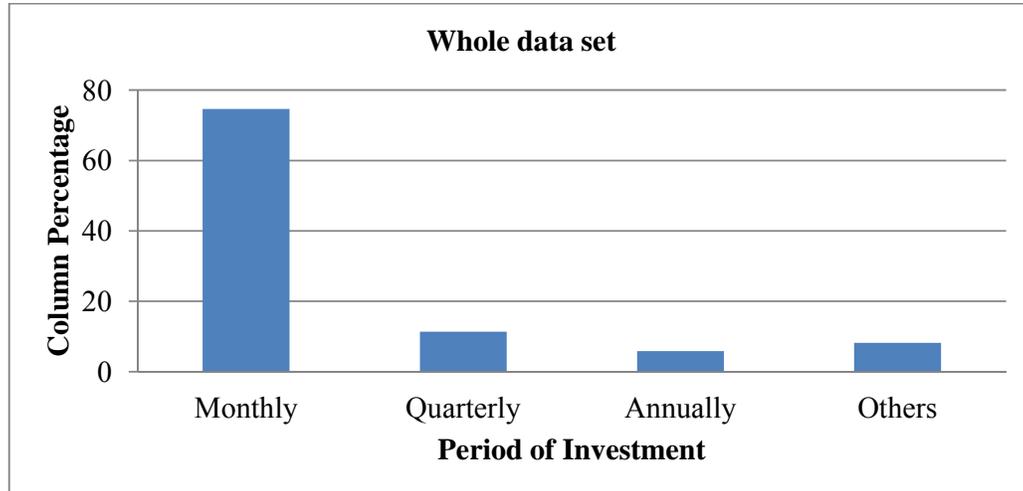
When comparing the above variables for the all three data sets, the column percentages have considered, and for the places where the row percentages are required, they are indicated within brackets. When considering the row percentages, most of the sample respondents are non investors and a less number of people are investors. So the corresponding row percentages for investors are very much lower than that of non investors. So that fact is not mentioned in the interpretation. And by considering the figures in investors or non investors column for the row percentages, it can be clearly identified that the amount of percentage which belongs to investors or non investors from a certain option of a particular variable.

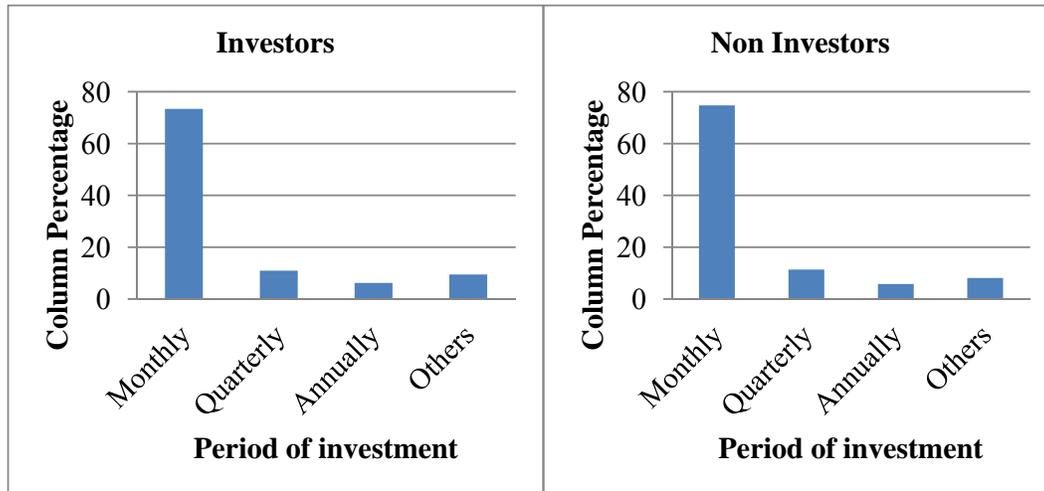
**4.3.1 Classification of respondents by the period of investment for the whole data set, investors data set and non investors data set for all respondents**

The variable period of investment was categorized into four categories which are monthly, annually, quarterly and others. The classification of the variable was done for the three data sets separately in order to obtain a clear idea about the investing period of the community throughout the year. Here it can be easily compared the investors and non investors investing behaviors in terms of short term and long term investments.

**Table 4.3.1: Classification of period of investment for the whole data set, investors data set and non investors data set for all respondents**

		Whole data set		Investors		Non investors	
		Count	Percentage	Count	Percentage	Count	Percentage
Period of investment	Monthly	5934	74.64	248	73.37 (4.18)	5686	74.70 (95.82)
	Quarterly	901	11.33	37	10.95 (4.11)	864	11.35 (95.89)
	Annually	464	5.84	21	6.21 (4.53)	443	5.82 (95.47)
	Others	651	8.19	32	9.47 (4.92)	619	8.13 (95.08)





**Figure 4.3.1: Bar charts for the column percentages for the period of investment for the whole data set, investors data set and non investors data set for all respondents**

When considering the bar chart for the whole data set majority prefer to invest monthly. The corresponding percentages for the rest of the options are considerably lower when comparing to that of the monthly investments. And the least percentage is for annual investments. According to the bar charts for the column percentages, the corresponding percentages for the monthly investments are the highest for both investors as well as non investors. In those graphs also, the least percentages are for the annual investments. And in all three charts there is a significant amount of respondents who chooses option others. Here in most of the cases, this refers daily investments.

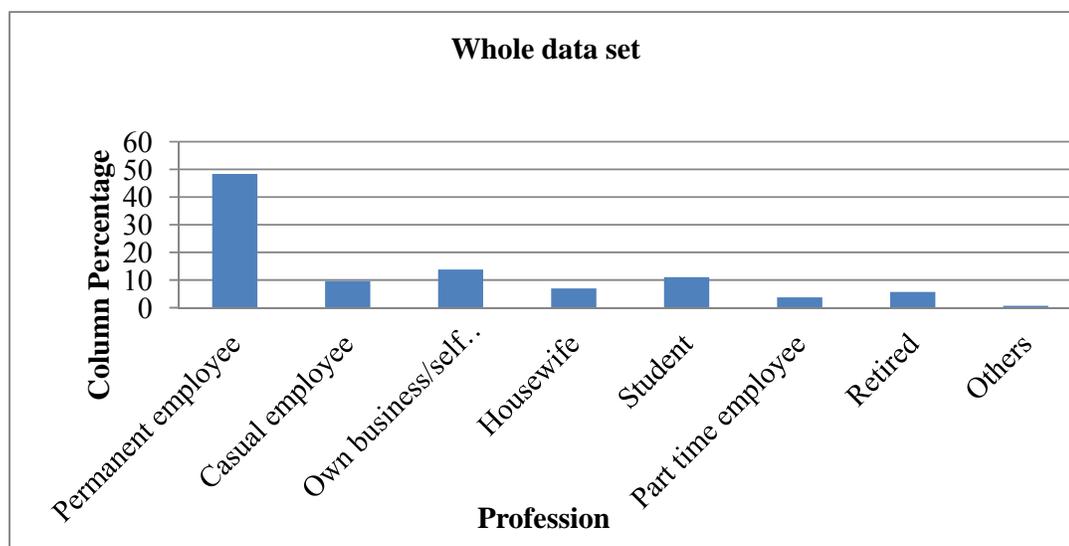
#### **4.3.2 Classification of respondents by the profession for the whole data set, investors data set and non investors data set**

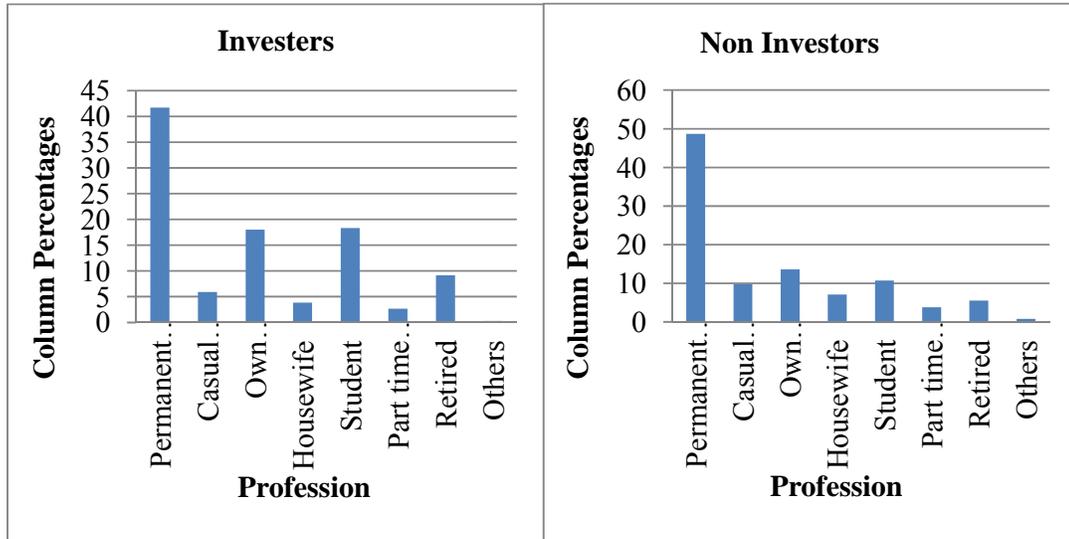
The variable profession is classified as seven categories such as permanent employee, casual employee, own business/self employee, housewife, student, part time employee, retired and other and the distribution of the variable is considered for whole data set, investors and the non investors data sets.

Here by considering the percentage values, it can be clearly seen that what kind of professionals prefer to invest in the share market and what kind of professionals do not like to invest in the share market.

**Table 4.3.2.1: Classification of profession for the whole data set, investors data set and non investors data set for all respondents**

		Whole data set		Investors		Non-investors	
		Count	Percentage (%)	Count	Percentage (%)	Count	Percentage (%)
Profession	Permanent employee	3844	48.35	141	41.72 (3.67)	3703	48.65 (96.33)
	Casual employee	764	9.61	20	5.92 (2.62)	744	9.77 (97.38)
	Own business/ Selfemployed	1096	13.79	61	18.05 (5.57)	1035	13.60 (94.43)
	Housewife	554	6.97	13	3.85 (2.35)	541	7.11 (97.65)
	Student	880	11.07	62	18.34 (7.05)	818	10.75 (92.95)
	Part time employee	299	3.76	9	2.66 (3.01)	290	3.81 (96.99)
	Retired	453	5.70	31	9.17 (6.84)	422	5.54 (93.16)
	Others	60	0.75	1	0.30 (1.64)	59	0.78 (98.36)



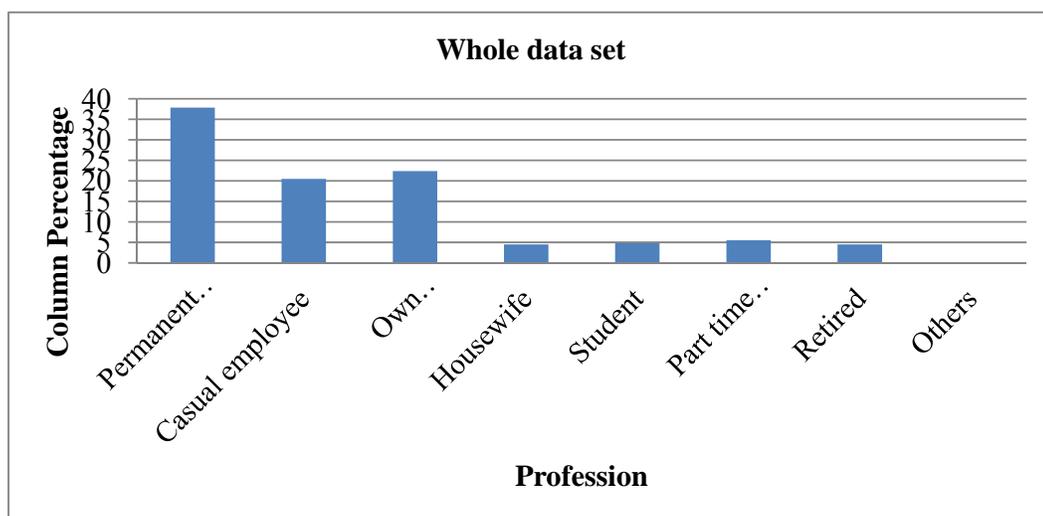


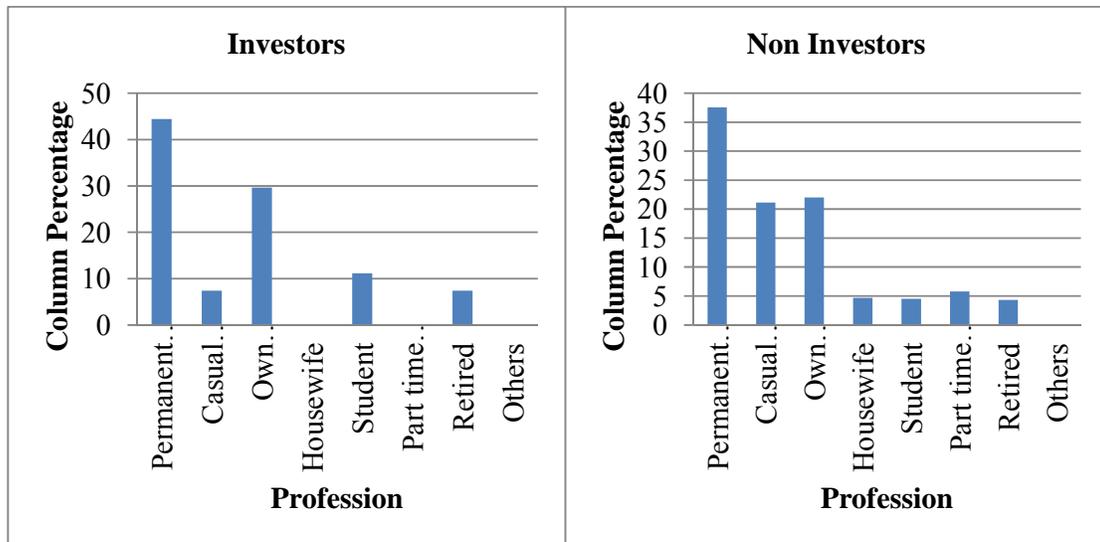
**Figure 4.3.2.1: Bar charts for the column percentages for the profession for the whole data set, investors data set and non investors data set for all respondents**

When considering the whole sample respondents, there is significantly large percentage of permanent employees. The percentage of part time employees in the whole sample is relatively small whereas, the student percentage and the percentage of the respondents who are casual employee are approximately equal. According to the bar charts for the investors and non investors of the share market, in both cases the majority are the permanent employees. There is a considerable percentage of investors of self employees/own business as well as students. That implies that those professionals are interested in investing in the share market than other professionals.

**Table 4.3.2.2: Classification of profession for the whole data set, investors data set and non investors data set for respondents from Jaffna**

		Whole data set		Investors		Non-investors	
		Count	Percentage (%)	Count	Percentage (%)	Count	Percentage (%)
Profession	Permanent employee	220	37.87	12	44.44 (5.45)	208	37.56 (94.55)
	Casual employee	119	20.48	2	7.41 (1.68)	117	21.12 (98.32)
	Own business/self employed	130	22.38	8	29.63 (6.15)	122	22.02 (93.85)
	Housewife	26	4.48	0	0.00 (0.00)	26	4.69 (100.00)
	Student	28	4.82	3	11.11 (10.71)	25	4.51 (89.29)
	Part time employee	32	5.51	0	0.00 (0.00)	32	5.78 (100.00)
	Retired	26	4.48	2	7.41 (7.69)	24	4.33 (92.31)
	Others	0	0.00	0	0.00 (0.00)	0	0.00 (0.00)





**Figure 4.3.2.2: Bar charts for the column percentages for the profession for the whole data set, investors data set and non investors data set**

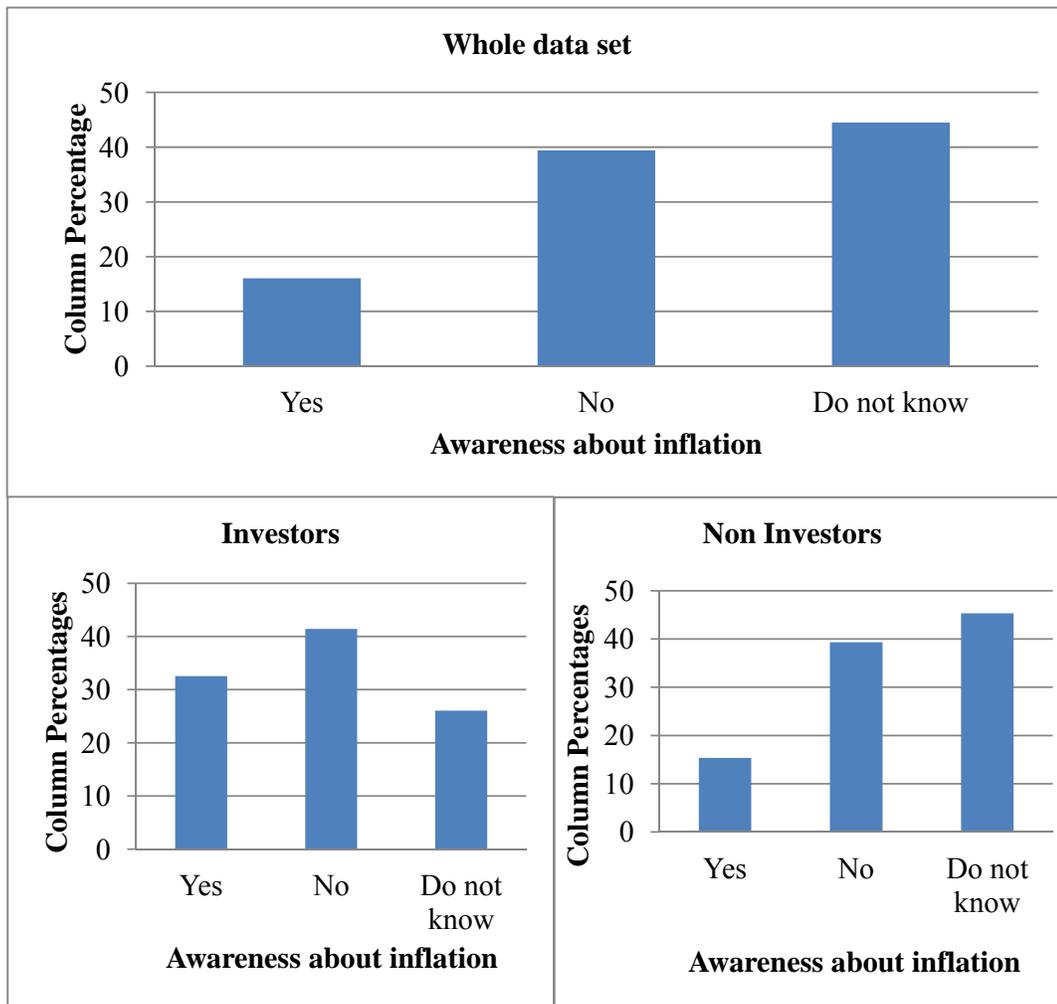
When considering the whole sample respondents, there is significantly large percentage of permanent employees. The percentages of housewives, students, part time employees and the retired respondents are approximately equal. According to the bar charts for the investors and non investors of the share market, in both cases the majority are the permanent employees. There is a considerable percentage of investors of self employees/own business as well.

**4.3.3 Classification of respondents by the awareness about inflation for the whole data set, investors data set and non investors data set**

Most of the people in the society consider about several factors before doing an investment. Some consider about the inflation. The objective was to find out whether the savings or investments give better return than inflation. The classification was done in order to investigate the opinion about the respondents in the whole sample, respondents who are share market investors and the respondents who are non investors of the share market. A comparison between the investors and non investors of the share market was also made about the awareness about the inflation using row percentages of those two groups.

**Table 4.3.3.1: Classification of awareness about inflation for the whole data set, investors data set and non investors data set for all respondents**

		Whole data set		Investors		Non investors	
		Count	Percentage	Count	Percentage	Count	Percentage
Awareness about inflation	Yes	1277	16.06	110	32.54 (8.61)	1167	15.33 (91.39)
	No	3134	39.42	140	41.42 (4.47)	2994	39.33 (95.53)
	Do not know	3539	44.52	88	26.04 (2.49)	3451	45.34 (97.51)

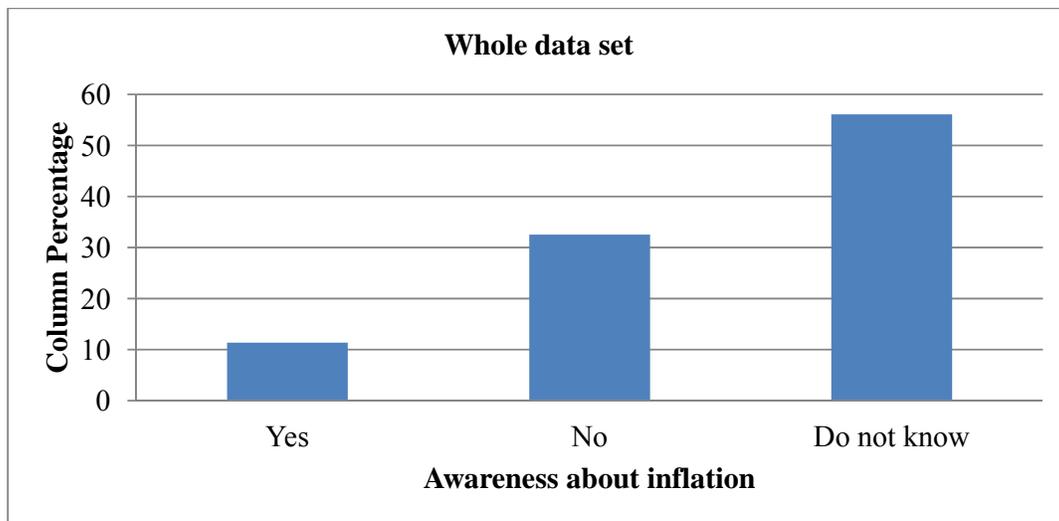


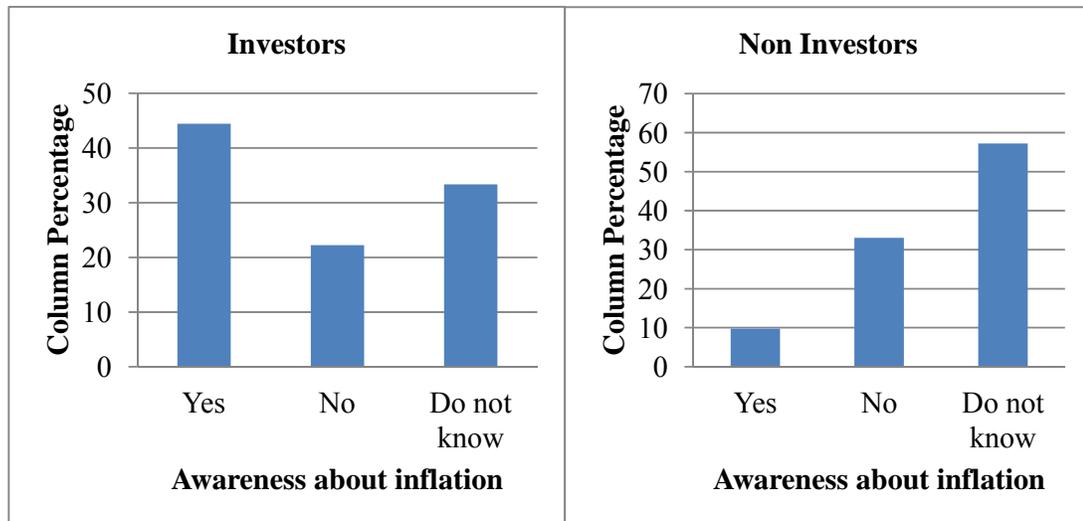
**Figure 4.3.3.1: Bar charts for the column percentages for the awareness about inflation for the whole data set, investors data set and non investors data set for all respondents**

According to the above table and bar charts, most percentage of the sample respondents in the whole data set do not have any idea about their returns compared to the inflation. The percentage of respondents who are having a return better than inflation is relatively small. The situation is same for the non investors of the share market. But with the investors of the share market, the percentage of respondents who are having a return better than inflation is somewhat higher than the other two cases. Less percentage of share market investors do not know anything about the inflation.

**Table 4.3.3.2: Classification of awareness about inflation for the whole data set, investors data set and non investors data set for respondents from Jaffna**

		Whole data set		Investors		Non investors	
		Count	Percentage	Count	Percentage	Count	Percentage
Awareness about inflation	Yes	66	11.36	12	44.44 (18.18)	54	9.75 (81.82)
	No	189	32.53	6	22.22 (3.17)	183	33.03 (96.83)
	Do not know	326	56.11	9	33.34 (2.76)	317	57.22 (97.24)





**Figure 4.3.3.2: Bar charts for the column percentages for the awareness about inflation for the whole data set, investors data set and non investors data set for respondents from Jaffna**

According to the above table and bar charts, most percentage of the sample respondents in the whole data set do not have any idea about their returns compared to the inflation. A lesser percentage of respondents say that their investments do not give returns better than the inflation. The percentage of respondents who are having a return better than inflation is relatively small. The situation is same for the non investors of the share market. But with the investors of the share market, the majority have the idea that their investments give returns better than the inflation. Whereas a lesser percentage of sample respondents believe that their investments do not give return better than inflation. A significant percentage of share market investors do not know anything about the inflation.

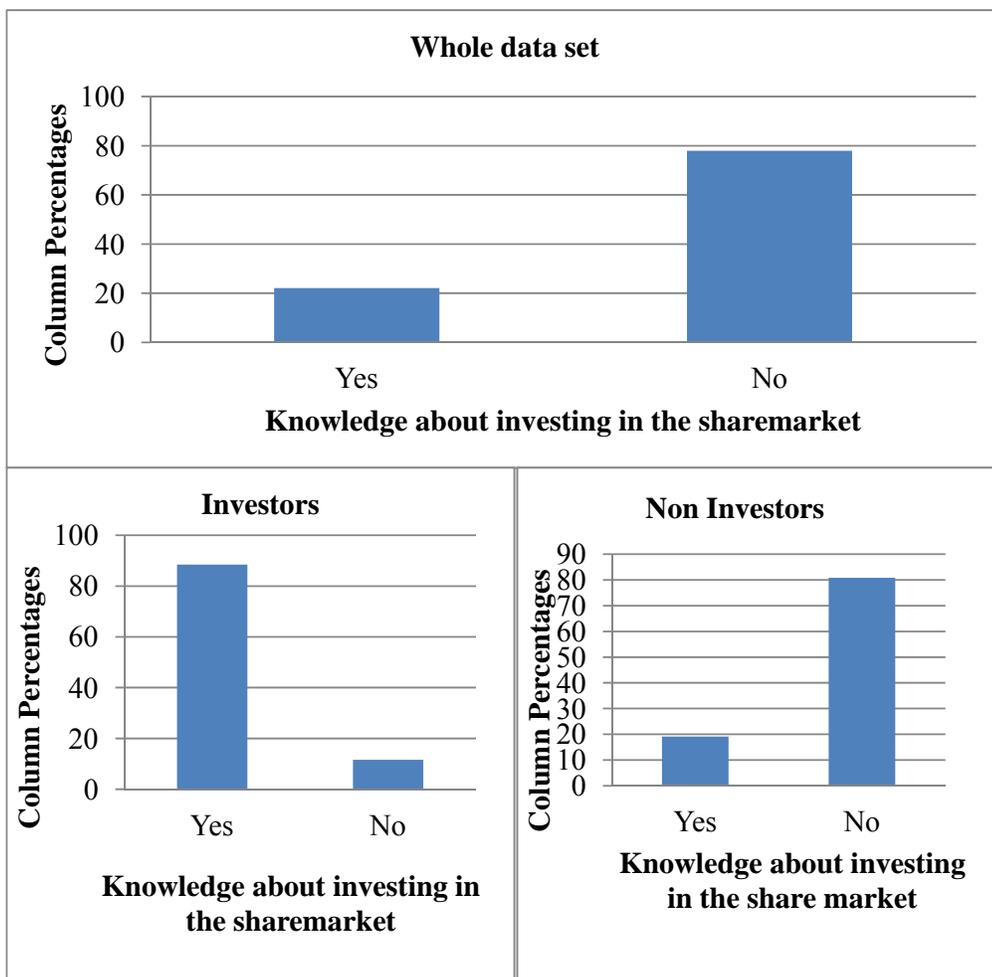
**4.3.4 Classification of respondents by knowledge about investing in the share market for the whole data set, investors data set and non investors data set**

In order to invest in the share market the investor should have a clear picture about the share market as well as investing procedure. But in some cases there are people who do not have any idea about investing in the share market. This classification was carried out for the whole data set, investors and as well as for the non investors data set in order to find out the knowledge about investing in the share market in the sample respondents.

Even though some people investing in the share market, they do not know anything about share market or investing procedure. Similarly there may be non investors in the share market with a good knowledge about investing in the share market. In order to identify those characteristics the classification between investors and non investors was performed using row percentages.

**Table 4.3.4: Classification of knowledge about investing in the share market for the whole data set, investors data set and non investors data set for all respondents**

		Whole data set		Investors		Non investors	
		Count	Percentage	Count	Percentage	Count	Percentage
Knowledge about investing in the share market	Yes	1755	22.08	299	88.46 (17.04)	1456	19.13 (82.96)
	No	6194	77.92	39	11.54 (0.63)	6155	80.87 (99.37)



**Figure 4.3.4: Bar charts for the column percentages for the knowledge about investing in the share market for the whole data set, investors data set and non investors data set for all respondents**

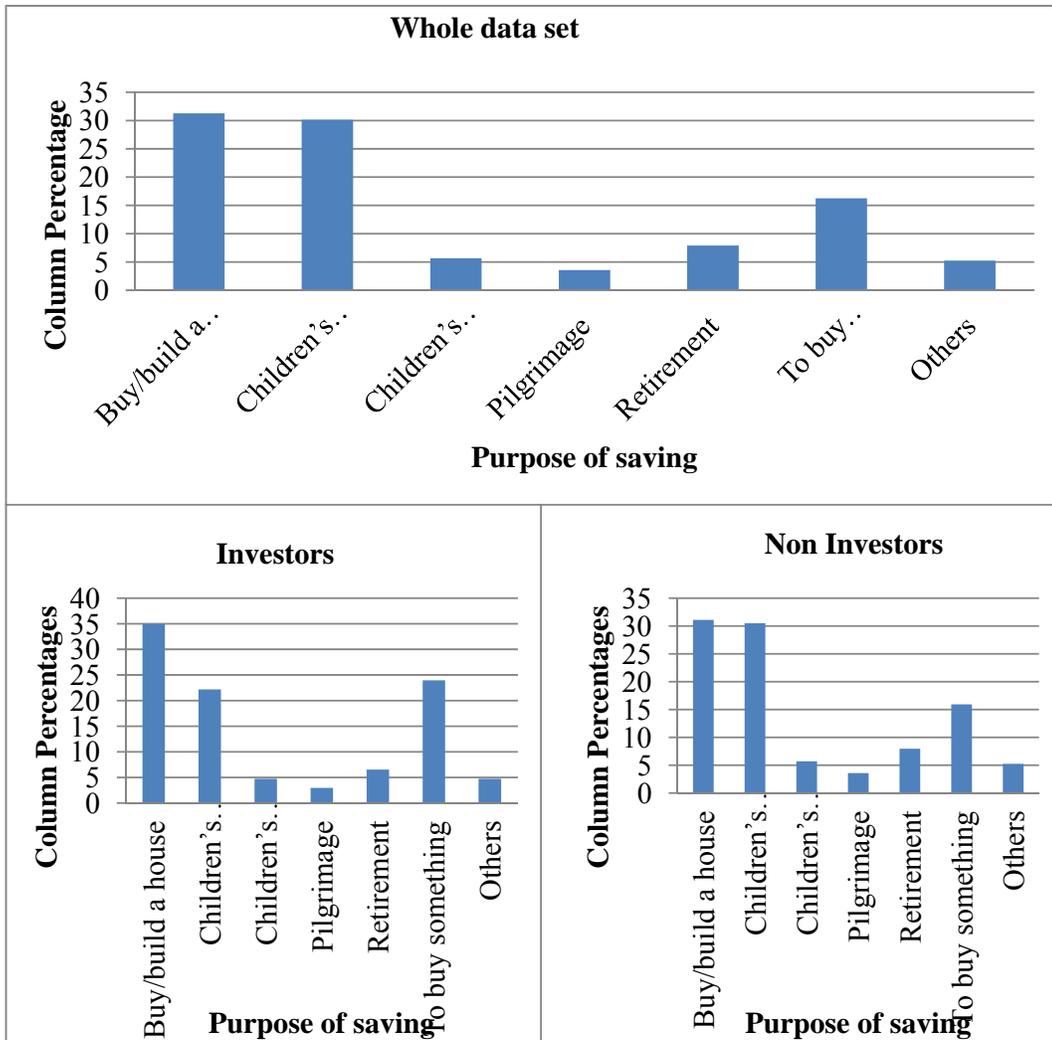
When comparing the percentage of sample respondents in the whole data set and the non investors of the share market, most of them do not have any knowledge about investing in the share market. But even though the respondents of non investors of the share market, 19.13% has knowledge about investing in the share market. When considering the investors data set, majority of the investors in the share market have the knowledge about investing in the share market, while a very small percentage of investors who are doing their investments in the share market without any knowledge about investing.

**4.3.5 Classification of respondents by the purpose of saving for the whole data set, investors data set and non investors data set**

All most all investors save their money in order to fulfill their requirements. To find out the purpose of saving of the sample respondents, the purpose is classified into seven options such as buy/build a house, children’s education, children’s marriage, pilgrimage, retirement, to buy something and other, and the distribution of the whole data set, investors data set and the non investors data set is studied using column percentages.

**Table 4.3.5.1: Classification of the purpose of saving for the whole data set, investors data set and non investors data set for all respondents**

		Whole data set		Investors		Non-investors	
		Count	Percentage (%)	Count	Percentage (%)	Count	Percentage (%)
Purpose of saving	Buy/build a house	2486	31.27	118	34.91 (4.75)	2368	31.11 (95.25)
	Children’s education	2395	30.13	75	22.19 (3.13)	2320	30.48 (96.87)
	Children’s marriage	450	5.66	16	4.73 (3.56)	434	5.70 (96.44)
	Pilgrimage	283	3.56	10	2.96 (3.53)	273	3.59 (96.47)
	Retirement	628	7.90	22	6.51 (3.50)	606	7.96 (96.50)
	To buy something	1292	16.25	81	23.96 (6.27)	1211	15.91 (93.73)
	Others	416	5.23	16	4.73 (3.85)	400	5.25 (96.15)

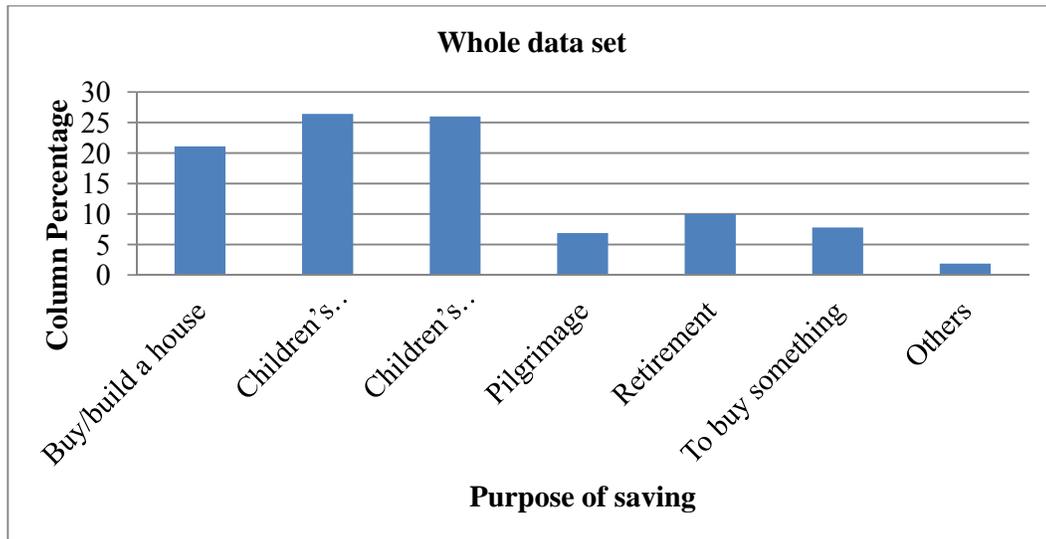


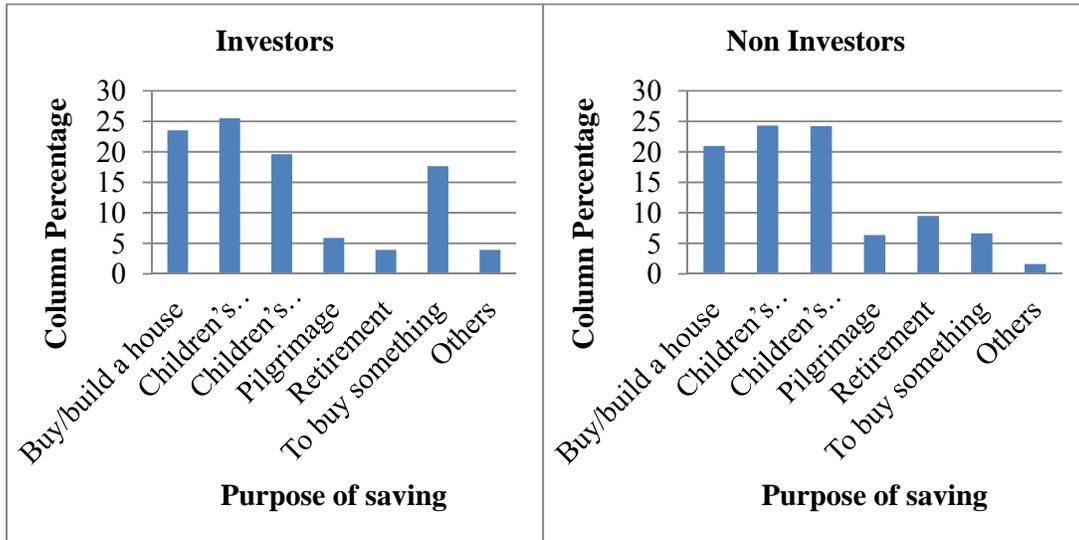
**Figure 4.3.5.1: Bar charts for the column percentages for the purpose of saving for the whole data set, investors data set and non investors data set for all respondents**

For all three data sets the majority of the respondents do their saving to buy/build a house. Greater percentage of sample respondents in the whole data set and the non investors consider about children's education as a important purpose to save their money. Smaller percentage does their savings for pilgrimage in all three data sets. Approximately equal percentage of respondents in the whole data set and the non investors data set who save their money to buy something.

**Table 4.3.5.2: Classification of the purpose of saving for the whole data set, investors data set and non investors data set for respondents from Jaffna**

		Whole data set		Investors		Non-investors	
		Count	Percentage (%)	Count	Percentage (%)	Count	Percentage (%)
Purpose of saving	Buy/build a house	203	21.10	12	23.53 (5.91)	191	20.97 (94.09)
	Children's education	254	26.40	13	25.49 (5.12)	241	24.32 (94.88)
	Children's marriage	250	25.99	10	19.61 (4.00)	240	24.22 (96.00)
	Pilgrimage	66	6.86	3	5.88 (4.55)	63	6.36 (95.55)
	Retirement	96	9.98	2	3.92 (2.08)	94	9.49 (97.92)
	To buy something	75	7.80	9	17.63 (12.00)	66	6.66 (88.00)
	Others	18	1.87	2	3.92 (11.11)	16	1.61 (88.89)





**Figure 4.3.5.2: Bar charts for the column percentages for the purpose of saving for the whole data set, investors data set and non investors data set for the respondents from Jaffna**

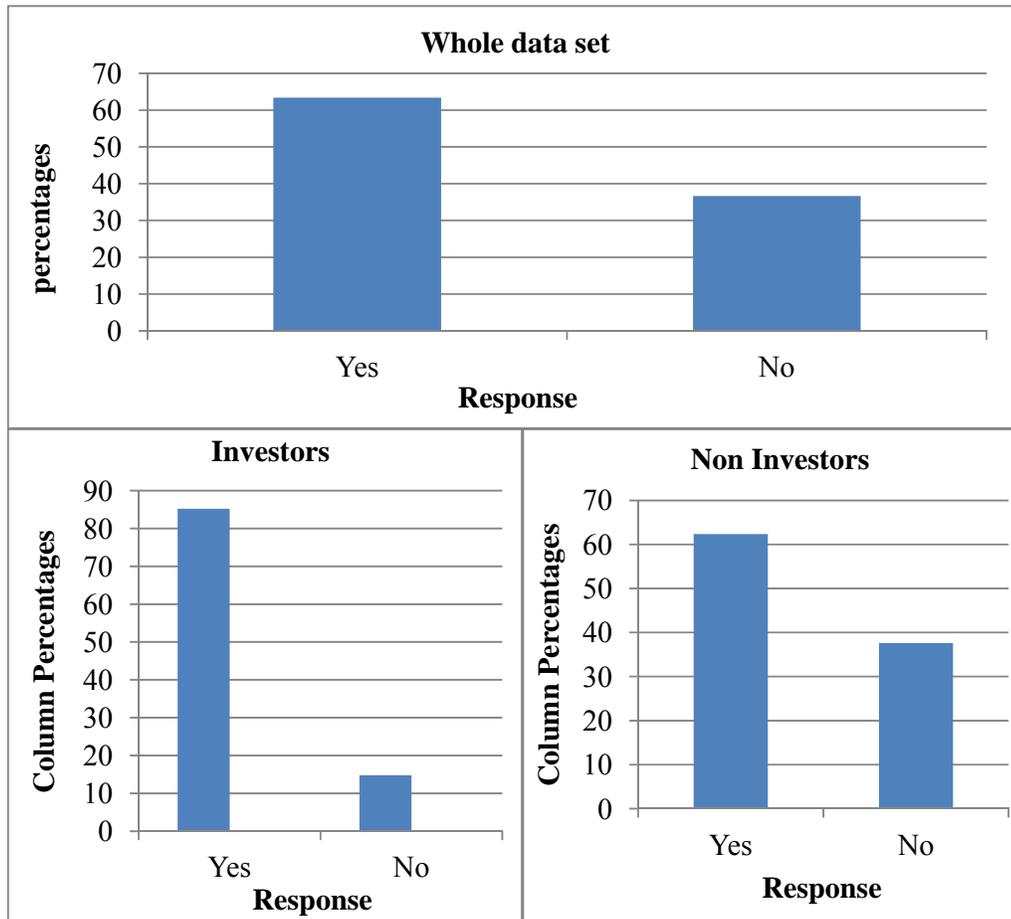
For all three data sets the majority of the respondents do their saving for their children’s education. Greater percentage of sample respondents in the whole data set and the non investors consider about children’s marriage as an important purpose to save their money. Smaller percentage does their savings for other purposes in all three data sets. Approximately equal percentage of respondents in the whole data set, investors data set and the non investors data set who save their money for buy/build a house.

**4.3.6 Classification of respondents by the willingness to attend a CSE /SEC programs for the whole data set, investors data set and non investors data set**

The Colombo Stock Exchange and the Securities Exchange Commission organize programs with the purpose of providing knowledge about the share market. The classification was done for the whole data set, for the investors and non investors data sets in order to find the respondents in the samples that are willing to attend the CSE/SEC programs.

**Table 4.3.6.1: Classification of the willingness to attend a CSE /SEC programs for the whole data set, investors data set and non investors data set for all respondents**

Response	Whole data set		Investors		Non investors	
	Count	Percentage	Count	Percentage	Count	Percentage
Yes	5036	63.35	288	85.21 (5.72)	4748	62.38 (94.28)
No	2914	36.65	50	14.79 (1.72)	2864	37.62 (98.28)

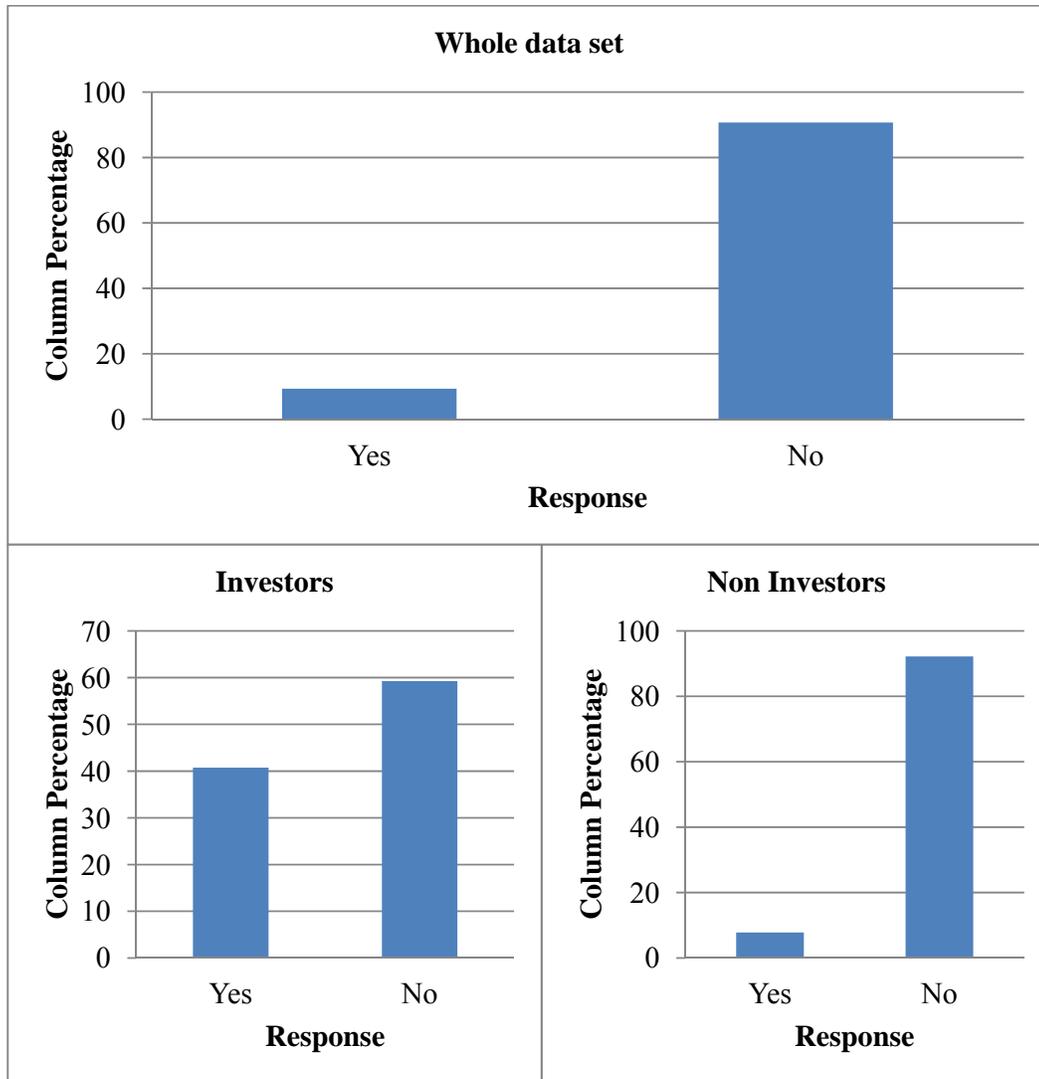


**Figure 4.3.6.1: Bar charts for the column percentages for the willingness to attend a CSE /SEC programs for the whole data set, investors data set and non investors data set for all respondents**

According to the above bar charts majority of the sample respondents in the all the data sets, whole data set, investors data set and the non investors data set, willing to attend the CSE/SEC programs. Less percentage of investors do not like to attend the CSE/SEC programs. Considerable percentages of respondents are in the whole data set as well as in the non investors data set who do not like to participate for the programs conducted by CSE/SEC.

**Table 4.3.6.2: Classification of the willingness to attend a CSE /SEC programs for the whole data set, investors data set and non investors data set for respondents from Jaffna**

		Whole data set		Investors		Non investors	
		Count	Percentage	Count	Percentage	Count	Percentage
Response	Yes	54	9.29	11	40.74 (20.37)	43	7.76 (79.63)
	No	527	90.71	16	59.26 (3.04)	511	92.24 (96.96)



**Figure 4.3.6.2: Bar charts for the column percentages for the willingness to attend a CSE /SEC programs for the whole data set, investors data set and non investors data set for respondents from Jaffna**

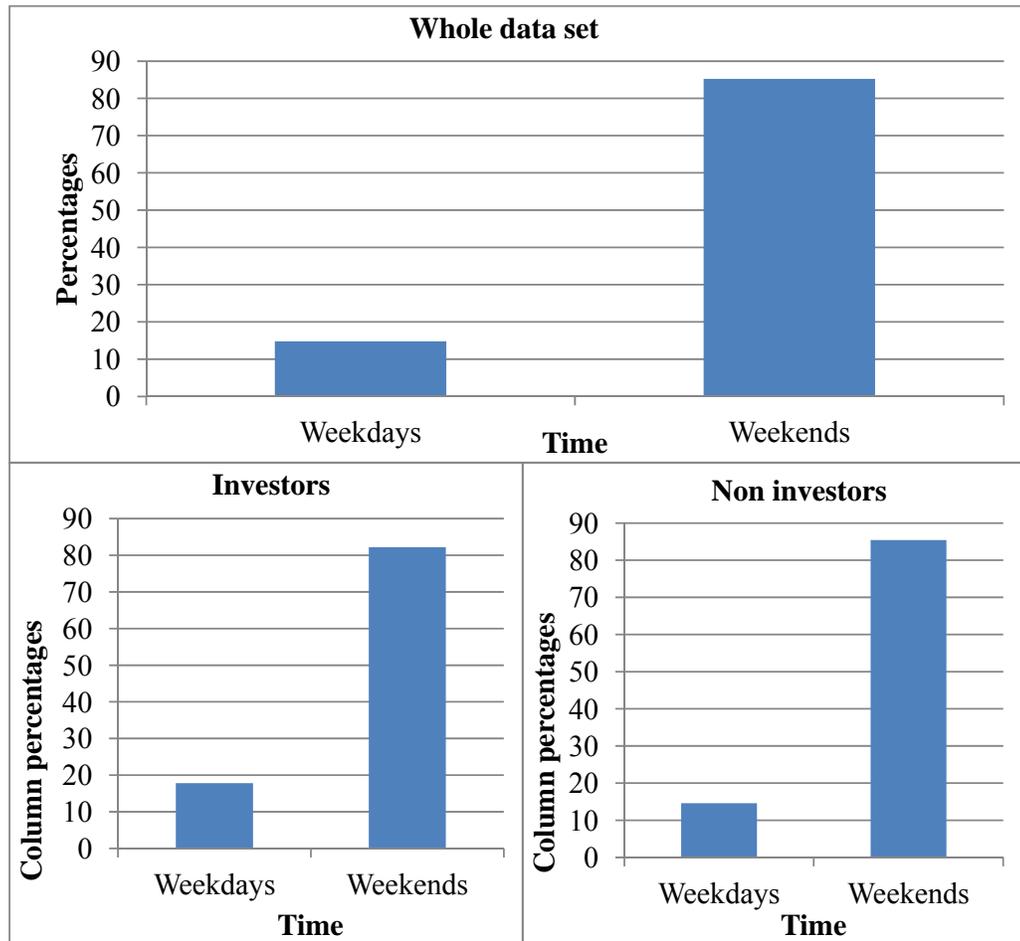
According to the above bar charts majority of the sample respondents in the all the data sets, whole data set, investors data set and the non investors data set are not willing to attend the CSE/SEC programs. Only a less percentage of investors like to attend the CSE/SEC programs.

**4.3.7 Classification of respondents by the convenient time for the whole data set, investors data set and non-investors data set**

The convenient time the respondents in the data sets, whole data set, investors data set and the non-investors data set could participate for the CSE/SEC programs is discovered as whether it is weekdays or weekends. It may be useful to organize those programs more effectively and also higher number of participants would gather by considering those convenient times when arranging the programs

**Table 4.3.7: Classification of the convenient time for the whole data set, investors data set and non investors data set for all respondents**

		Whole data set		Investors		Non investors	
		Count	Percentage	Count	Percentage	Count	Percentage
Time	Weekdays	752	14.76	52	17.81(6.91)	700	14.57(93.09)
	Weekends	4344	85.24	240	82.19(5.52)	4104	85.43(94.48)



**Figure 4.3.7: Bar charts for the column percentages for the convenient time for the whole data set, investors data set and non investors data set for all respondents**

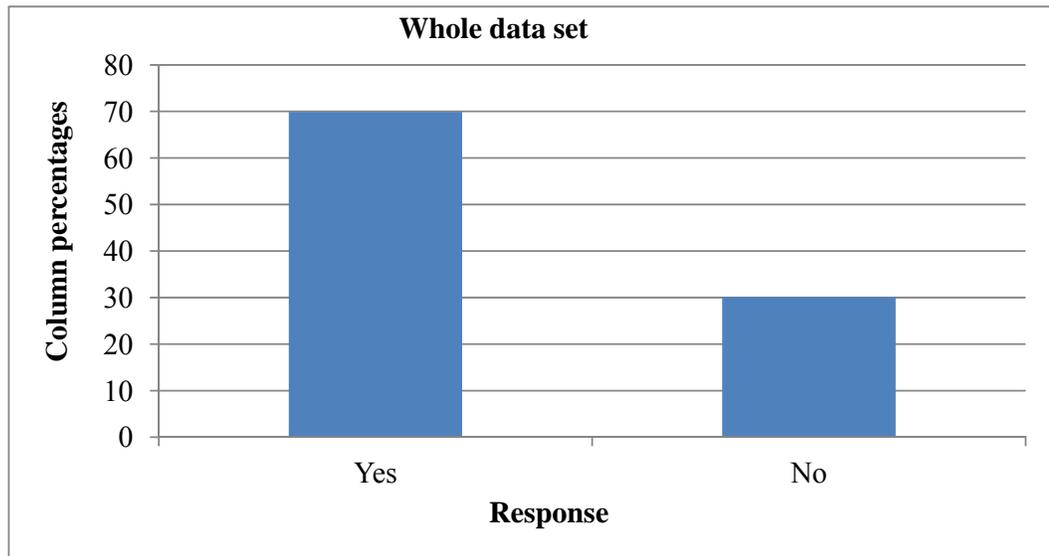
A clear conclusion can be drawn by using the above bar charts that the sample respondents in the whole data set, investors data set and in the non investors data set prefer to attend for the programs conducted by CSE/SEC in the weekends.

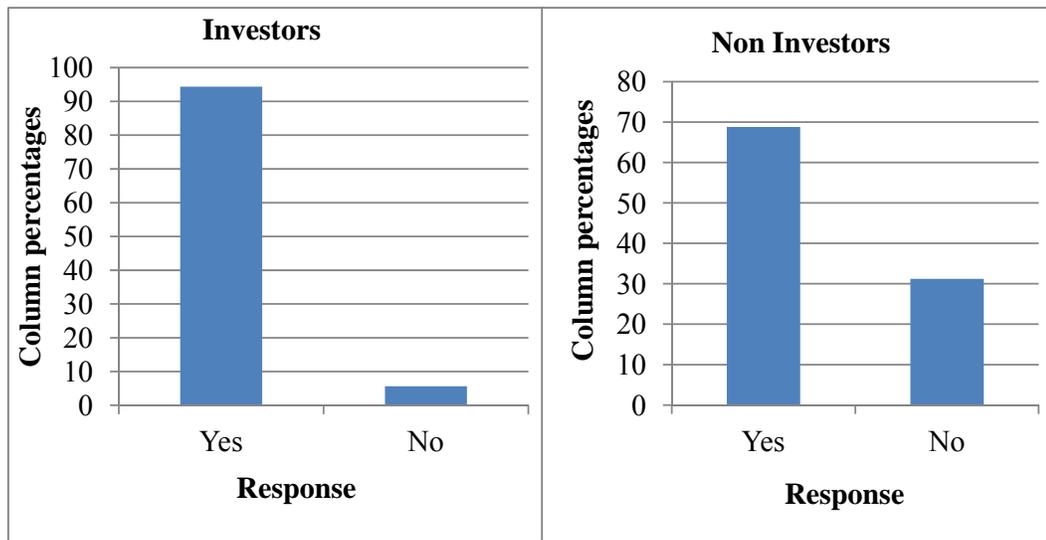
**4.3.8 Classification of respondents by the willingness to invest in the share market for the whole data set, investors data set and non investors data set**

The classification was done in order to find out the percentage of respondents in the whole data set, investors data set and non investors data set who are willing to invest in the share market and who do not like to invest in the share market.

**Table 4.3.8: Classification of the willingness to invest in the share market for the whole data set, investors data set and non investors data set for all respondents**

		Whole data set		Investors		Non investors	
		Count	Percentage	Count	Percentage	Count	Percentage
Response	Yes	5557	69.90	319	94.38 (5.74)	5238	68.81 (94.26)
	No	2393	30.10	19	5.62 (0.79)	2374	31.19 (99.21)





**Figure 4.3.8: Bar charts for the column percentages for the willingness to invest in the share market for the whole data set, investors data set and non investors data set for all respondents**

The majority percentages of respondents in the all three data sets are willing to invest in the share market. But 5.62 % of investors in the share market have the opinion that they do not like to invest in the share market.

## CHAPTER 5

### CONFIRMATORY ANALYSIS AND INTERPRETATION

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#### 5.1 Introduction

For the confirmatory analysis, the following tests can be performed for some selected variables.

- Proportion tests to check and confirm the equality of proportions of the levels of variables
- Logistic regression models to forecast values for a given variable
- Pearson's chi-square tests to confirm the dependencies among variables
- Odds ratio and Kendal's tau-b tests for confirm association between variables

The proportion tests can be used to check whether the levels of a particular variable have equal proportion or not. When performing proportion tests, the following terms are used to describe the sample statistics.

- P-value
- Significance level- $\alpha$
- Confidence interval

A p-value is a measure of how much evidence available against the null hypothesis. The null hypothesis, traditionally represented by the symbol  $H_0$ , represents the hypothesis of no change or no effect. Smaller the p-value, more evidence are available against  $H_0$ . It is also a measure of how likely to get a certain sample result or a result "more extreme," assuming  $H_0$  is true. The type of hypothesis (right tailed, left tailed or two tailed) will determine what "more extreme" means. And if the p-value is less than the corresponding significance level ( $\alpha$ ),  $H_0$  is rejected.

Significance level explains the probable percentage of having a statistical error which is known as type I error. When performing a hypothesis testing, the relevant interpretations can be made by using  $\alpha$  value and if the corresponding p-value for the test is less than  $\alpha$  value, then  $H_0$  is rejected. If not, the case is vice versa.

A confidence interval gives an estimated range of values which is likely to include an unknown population parameter, the estimated range being calculated from a given set of sample data. The width of the confidence interval gives some idea about how uncertain about the unknown parameter. A very wide interval may indicate that more data should be collected before anything very definite can be said about the parameter. The confidence level is the probability value  $(1-\alpha)$  associated with a confidence interval. It is often expressed as a percentage. For example, say  $\alpha=0.05=5\%$  then the confidence level is equal to  $(1-0.05) = 0.95$ , that is a 95% confidence level.

The odds ratio is a way of comparing whether the probability of a certain event is the same for two groups. An odds ratio of 1 implies that the event is equally likely in both groups. An odds ratio greater than one imply that the event is more likely in the first group. An odds ratio less than one imply that the event is less likely in the first group.

Kendall's tau-b is a measure of correlation. Kendall's tau-b measures the strength of the relationship between the two variables. Kendall's tau-b is carried out on the ranks of the data. In other words, Kendall's tau-b is carried out on the variables that are separately put in order and are numbered. Like other measures of correlation, Kendall's tau-b takes the values between minus one and plus one. In Kendall's tau-b, the positive correlation signifies that the ranks of both the variables are increasing. On the other hand, the negative correlation in Kendall's tau-b signifies that as the rank of one variable is increased, the rank of the other variable is decreased.

Cramer's V is a statistic measuring the strength of association or dependency between two (nominal) categorical variables in a contingency table  $0 \leq V \leq 1$ . The closer V is to 0, the smaller the association between the categorical variables X and Y. On the other hand, V being close to 1 is an indication of a strong association between X and Y. If  $X=Y$ , then  $V(X,Y) = 1$

In order to find out the forecasting values for a variable which is known as response variable, logistic regression method can be used. In this logistic regression model, some of the available variables can be considered as regressor variable which is also known as independent variable and a one particular variable can be considered as response variable which is known as dependent variable. From these models, the forecasting values can be obtained for the response variable according to a set of regressor variables.

The logit function is an important part of discrete choice and logistic regression. That is act as the link function of logistic regression. The logit of a number  $p$  between 0 and 1 is given by the formula:

$$\text{Logit}(p) = \log\left(\frac{p}{1-p}\right) = \log(p) - \log(1-p)$$

When performing logistic regression model, it is very much necessary to come across following terms,

- AIC value
- Deviance
  - Null deviance
  - Residual deviance
- Estimated coefficients
- Observed values
- Expected values
- Measures of association
  - Kendall's tau-b value
  - Cramer's V value

In the process of fitting a logistic regression model, they are may be several possible models which suits for the required purpose. Out of those several models, it is possible to obtain the best model among the available models by considering the AIC value and the corresponding best model should have the minimum AIC value.

When fitting a logistic regression model, estimated coefficients are also can be obtained. From that it is possible to obtain an estimated coefficient for each regressor variable and a constant coefficient which refers to the intercept of the regression line. If a particular

estimate is negative, it implies that it has a negative correlation with the response variable. If the estimate is positive, the case is vice versa.

Two deviance values are obtained when a logistic regression model is fitted. One is null deviance and that refers to the deviance value which is obtained from the logistic regression model only with intercept parameter. And the other deviance, residual deviance is referred to the fitted logistic regression model. The difference between null and residual deviances is used to check the adequacy of the obtained model and that should be done as follows. Here the deviance difference should be checked with the corresponding chi-square value of degrees of freedom “n” and this “n” refers to the difference of the degrees of freedom values of null deviance and residual deviance. If the corresponding deviance difference is greater than the chi-square value with degrees of freedom “n”, then the fitted model can be used for explanation purpose.

When the existence of dependencies are found from the chi-square test, one should check whether which levels of a certain variable is dependent with the levels of another variable. That is known as multiple comparison. In that case, one should check all the levels of a certain variable with all the levels of another variable. Two values can be obtained when multiple comparison is performed for a pair of variables. One is expected count and that refers to the value which is expected according to available data. And the other one is observed count and that refers to the corresponding available count for the pair of variables. A statistic “standardized residuals” is obtained by using these two counts and that can be used to identify whether the expected counts are more deviated from observed counts. If the standardized residual value lies in between  $-z_{\alpha/2}$  and  $+z_{\alpha/2}$ , it can be considered as expected count is approximately equal to observed count. If that is negative value which is less than  $-z_{\alpha/2}$ , the expected count is greater than observed count. If that is positive value greater than  $+z_{\alpha/2}$ , the case is vice versa.

## **5.2 Comparison among levels of variables**

Under this section comparisons between pair of variables are tested. For this purpose statistical techniques such as Proportion test, Pearson’s chi squared test, Measure of association techniques and Odds ratios are used.

### **5.2.1 Proportion test for the levels of variables based on the respondents from investors and non investors**

Under this section the proportions of levels of selected variables are tested for the investors and non investors of the share market. The proportion test is conducted in order to identify which level of considered variable is more favorable in the population than the other. Following statements are hypothesized and relevant levels of statements are indicated within brackets.

$H_0$ : The proportion of level 1 is equal to the proportion of the level 2

Vs

$H_1$ : The proportion of level 1 is greater/less than to the proportion of the level 2

## Statements

1. The proportion of respondents who had heard about the share market is less than or equal to the proportion of respondents who had not heard about the share market. ( Level 1: Heard , Level 2:Not heard )
2. The proportion of respondents who had the willingness to participate in the CSE/SEC programs is less than or equal to the proportion of respondents who did not have the willingness to participate in the CSE/SEC programs.(Level 1: Have the willingness , Level 2: Don't have the willingness)
3. The proportion of respondents who had the willingness to invest in the share market is greater than or equal to the proportion of respondents who did not have the willingness to invest in the share market. (Level 1: Have the willingness , Level 2: Don't have the willingness)
4. The proportion of respondents who had heard about the benefits of the share market is greater than or equal to the proportion of respondents who had not heard about the benefits of the share market. (Level 1: Know about benefits , Level 2: Don't know about the benefits)
5. The proportion of respondents who had the knowledge to invest in the share market is greater than or equal to the proportion of respondents who did not had the knowledge to invest in the share market. (Level 1: Have the knowledge to invest , Level 2: Don't have the knowledge to invest)
6. The proportion of respondents who had the knowledge about the outstation branches of the share market is greater than or equal to the proportion of respondents who did not have the knowledge about the outstation branches of the share market. (Level 1: Have the knowledge , Level 2: Don't have the knowledge )
7. The proportion of respondents who had the knowledge about the stock brokers of the share market is greater than or equal to the proportion of respondents who did not have the knowledge about the stock brokers of the share market. (Level 1: Have the knowledge , Level 2: Don't have the knowledge )

The proposed null hypotheses ( $H_0$ ) for the levels of above statements are indicated in the following tables. Null hypotheses are rejected if the p-value is **less** than 0.05. The p-values of the statements whose null hypotheses are rejected are bolded.

**Table 5.2.1.1: Table of results of proportion tests for non investors for all respondents**

Null hypotheses (H <sub>0</sub> )	Statement no	$\chi^2$	df	95% confidence interval		p-value	Sample estimate
				Lower limit	Upper limit		
Level 1 is <b>less</b> than level 2	1	3464.5	1	0.8302628	1.0000000	< <b>2.2e-16</b>	0.8373407
	2	466.3	1	0.6145764	1.0000000	< <b>2.2e-16</b>	0.623752
	3	1077.6	1	0.6793247	1.0000000	< <b>2.2e-16</b>	0.688124
Level 1 is <b>greater</b> than level 2	4	317.3	1	0.0000000	0.4071869	< <b>2.2e-16</b>	0.3979243
	5	2901.1	1	0.0000000	0.1988271	< <b>2.2e-16</b>	0.1913021
	6	3395.6	1	0.0000000	0.1731877	< <b>2.2e-16</b>	0.1660536
	7	1397.9	1	0.0000000	0.2943250	< <b>2.2e-16</b>	0.2857331

Since all the p-values are less than 0.05, the entire null hypotheses are rejected at 5% significance level. Therefore following results can be drawn for non investors and investors as well.

- The proportion of male respondents is greater than the proportion of female respondents.
- A similar conclusion can be drawn for all statements from 1 to 3.
- Additionally lower limit of 95% confident interval for this four statements are not less than 0.5. It's also an indication of the reliability of the results.
- The proportion of respondents from rural areas is less than the proportion of respondents from urban areas.
- A similar conclusion can be drawn for all statements from 4 to 7.
- Additionally upper limit of 95% confident interval for this five statements are not greater than 0.5. It's also an indication of the reliability of the results.

**Table 5.2.1.2: Table of results of proportion tests for whole data set for respondents from Jaffna**

Null hypothesis (H <sub>0</sub> )	Statement no	$\chi^2$	df	95% confidence interval		p-value	Sample estimate
				Lower limit	Upper limit		
Level 1 is less than level 2	1	328.69	1	0.8518324	1.0000000	< <b>2.2e-16</b>	0.851832
Level 1 is greater than level 2	2	26.04	1	0.0000000	0.4279115	<b>1.672e-07</b>	0.394148
	3	385.08	1	0.0000000	0.1146875	< <b>2.2e-16</b>	0.092943
	4	48.00	1	0.0000000	0.3895595	<b>2.129e-12</b>	0.356282
	5	319.73	1	0.0000000	0.1536992	< <b>2.2e-16</b>	0.129088
	6	170.78	1	0.0000000	0.2588032	< <b>2.2e-16</b>	0.228916
	7	236.90	1	0.0000000	0.2084416	< <b>2.2e-16</b>	0.180722

Since all the p-values are less than 0.05, the entire null hypotheses are rejected at 5% significance level. Therefore following results can be drawn.

- The proportion of respondents who are willing to invest in the share market is greater than the proportion of respondents who are not willing to invest in the share market.
- Additionally lower limit of 95% confident interval for this statement is not less than 0.5. It's also an indication of the reliability of the results.
- The proportion of respondents who are aware about the share market is less than the proportion of respondents who are not aware about the share market.
- A similar conclusion can be drawn for all statements from 3 to 7.
- Additionally upper limit of 95% confident interval for this six statements are not greater than 0.5. It's also an indication of the reliability of the results.

### 5.3 Testing the dependencies among variables

In this section the dependencies among variables were tested using Chi-square tests.

#### 5.3.1 Testing association among profession and the other variables

Under this section the association between profession and the other variables is tested by using chi-square test.

$H_0$ : There are no relationships between profession and considering variables.

Vs

$H_1$ : There are relationships between profession and considering variables

**Table 5.3.1.1: Table of the results for Pearson's Chi-squared test for all respondents**

Variables	$\chi^2$	Degrees of freedom	P-value
profession vs time interval of saving	608.8085	21	<2.2e-16
profession vs type of present investments	2729.791	84	<2.2e-16
profession vs knowledge of share market	232.5094	7	<2.2e-16
profession vs knowledge about the benefits of investing in share market	317.3049	7	<2.2e-16
profession vs knowledge about how to invest in share market	186.8334	7	<2.2e-16
profession vs willingness to attend a SEC/CSC program	124.9136	7	<2.2e-16
profession vs willingness to invest in the share market	378.0319	7	<2.2e-16
profession vs knowledge about the outstation branches of the CSE	169.8121	7	<2.2e-16
profession vs knowledge about the stock brokers	149.6544	7	<2.2e-16
profession vs their return of saving according to the inflation	185.7206	14	<2.2e-16

According to the above tests, the p-values are less than 0.05. So it can be concluded that there is enough evidence to reject the null hypothesis at 5% significance level and can confirm that there are association between profession and time interval of saving, present investments, knowledge of share market, knowledge about the benefits of investing in share market, knowledge about how to invest in share market, willingness to attend a SEC/CSE program, willingness to invest in the share market, knowledge about the outstation branches of the CSE, knowledge about the stock brokers, their return of saving according to the inflation.

**Table 5.3.1.2: Table of the results for Pearson's Chi-squared test for respondents from Jaffna**

Variables	$\chi^2$	Degrees of freedom	P-value
profession vs type of present investments	178.580	72	<2.2e-16
profession vs knowledge of share market	46.3276	6	2.548e-08
profession vs knowledge about the benefits of investing in share market	29.4055	6	5.098e-05
profession vs knowledge about how to invest in share market	23.5037	6	0.0006442
profession vs willingness to attend a SEC/CSC program	21.4738	6	0.001507
profession vs willingness to invest in the share market	45.9197	6	3.071e-08
profession vs knowledge about the outstation branches of the CSE	56.5432	6	2.260e-10
profession vs knowledge about the stock brokers	67.6424	6	1.244e-12

According to the above tests, the p-values are less than 0.05. So it can be concluded that there is enough evidence to reject the null hypothesis at 5% significance level and can confirm that there are association between profession and present investments, knowledge of share market, knowledge about the benefits of investing in share market, knowledge about how to invest in share market, willingness to attend a SEC/CSE program, willingness to invest in the share market, knowledge about the outstation branches of the CSE, knowledge about the stock brokers.

### **5.3.2 Testing dependencies among other variables.**

The chi-square analysis was performed in order to find dependencies for some selected set of variables pair wisely.

#### **Hypothesis to be tested is:**

Ho: There are no relationships between considering variables.

Vs

H<sub>1</sub>: There are relationships between considering variables.

**Table 5.3.2.1: Table of the results for Pearson's Chi-squared test for all respondents**

<b>Variables</b>	<b><math>\chi^2</math></b>	<b>Degrees of freedom</b>	<b>P-value</b>
Present investments vs. the future investments	18773.611	144	<2.2e-16
Awareness about share market vs. the knowledge about the benefits of investing in share market	918.9826	1	<2.2e-16
Awareness about share market vs. the knowledge about how to invest in the share market.	308.9616	1	<2.2e-16
Awareness about share market vs. the knowledge about the outstation branches of the CSE.	453.2932	1	<2.2e-16
Awareness about share market vs. the knowledge about the stock brokers.	212.9446	1	1.802e-10
The knowledge about the benefits of investing in share market vs. the knowledge about how to invest in the share market.	2587.899	1	<2.2e-16
The knowledge about the outstation branches of the CSE vs. the knowledge about the stock brokers.	2023.621	1	<2.2e-16
Awareness about share market vs. willingness to attend a SEC/CSC program	622.801	1	<2.2e-16
Knowledge about the benefits of investing in share market vs. willingness to attend a SEC/CSC program	204.0958	1	<2.2e-16

All the p-values of the above tests are less than 0.05. So there are enough evidences to state that all the variables have dependencies with all the corresponding variables. So, future investing methods are depended upon present investing methods. Also the awareness about share market is highly related with the knowledge about the benefits of investing in share market, the knowledge about how to invest in the share market, the knowledge about the outstation branches of the CSE, the knowledge about the stock brokers and the willingness to attend a SEC/CSC program. Further, the Knowledge about the benefits of investing in share market is also important for the willingness to attend a SEC/CSC programs.

**Table 5.3.2.2: Table of the results for Pearson's Chi-squared test for respondents from Jaffna**

<b>Variables</b>	$\chi^2$	<b>Degrees of freedom</b>	<b>P-value</b>
Present investments vs. the future investments	1051.647	144	<2.2e-16
Awareness about share market vs. the knowledge about the benefits of investing in share market	352.5278	1	<2.2e-16
Awareness about share market vs. the knowledge about how to invest in the share market.	46.5263	1	9.04e-12
Awareness about share market vs. the knowledge about the outstation branches of the CSE.	167.6651	1	<2.2e-16
Awareness about share market vs. the knowledge about the stock brokers.	94.7362	1	< 2.2e-16

All the p-values of the above tests are less than 0.05. So there are enough evidences to state that all the variables have dependencies with all the corresponding variables.

#### **5.4 Multiple comparisons for the variables**

Multiple comparison test can be used to test whether the dependencies between the levels of variables which were identified as dependent variables in the previous section by comparing the expected and observed counts of the corresponding levels of variables.

##### **5.4.1 Dependency between Profession and time interval of saving**

In this section the dependencies between Profession variable and time interval of saving were tested.

**Table 5.4.1: Table of results for the multiple comparisons among levels of profession and intervals of saving for all respondents**

Dependencies		Observed count	Expected count	Standardized residual
Level of profession	Interval of saving			
Permanent employees	Monthly	3222	2868.3	6.6
	Quarterly	317	435.7	-5.7
	Annually	167	224.4	-3.8
	Others	136	314.8	-10.1
Casual employees	Quarterly	149	86.6	6.7
	Annually	24	44.6	-3.1
	Others	46	62.6	-2.1
Own business / self employed	Monthly	754	817.8	-2.2
	Others	129	89.7	4.1
Housewife	Monthly	364	413.4	-2.4
	Annually	49	32.3	2.9
	Others	69	45.4	3.5
Student	Monthly	489	656.6	-6.5
	Annually	87	51.4	5.0
	Others	187	72.1	13.5
Part time employee	Monthly	190	223.1	-2.2
Others	Others	13	4.9	3.6

According to the above table observed count of the permanent employees who save monthly is greater than the expected count. It is indicated by the positive sign of the standardized residual value. But the other observed counts are less than corresponding expected counts. It is indicated by the negative sign of the standardized residual value.

So it can be concluded that the most of the permanent employees save monthly. In similar manner the following results can be concluded.

- The most of the casual employees save quarterly.
- The most of the housewives and students save annually as well as other time horizons.
- The most of the own business men or self employees save in the other time horizons.

#### **5.4.2 Dependency between Profession and Heard about the share market**

In this section the dependencies between permanent employees from profession with “No” response in awareness about the share market and housewives from profession with “Yes” response in awareness about the share market were tested.

**Table 5.4.2.1 Table of results for the multiple comparisons among levels of profession and heard about share market for all respondents**

Dependencies		Observed count	Expected count	Standardized residual
Levels of profession	Have heard about share market			
Permanent employee	Yes	3391	3240.6	2.6
Casual employee	Yes	571	644.1	-2.9
Own business / self employed	No	224	171.9	4.0
Housewife	Yes	392	467.0	-3.5
Student	Yes	806	741.9	2.4

Although the most of the permanent employees and students have heard about the share market, the most of casual employees, self employees and house wives have not heard about the share market.

**Table 5.4.2.2: Table of results for the multiple comparisons among levels of profession and heard about share market for respondents from Jaffna**

Dependencies		Observed count	Expected count	Standardized residual
Level of profession	Have heard about share market			
Permanent employees	No	111	133.3	-1.9
Housewife	Yes	1	10.2	-2.9

The observed value of the permanent employees who have not heard about the share market is less than the corresponding expected value. It was indicated by the negative sign of the standardized residual. So it can be concluded that most of the permanent employees have heard about the share market. Also the sign of standardized residual of housewives who have heard about share market is negative. Therefore most of the housewives have not heard about the share market.

#### **5.4.3 Dependency between Profession and knowledge about the benefits of investing in share market**

The dependencies between having knowledge about the benefits of the share market and the level of professions as casual employees, house wives and students were tested.

**Table 5.4.3.1: Table of results for the multiple comparisons among levels of profession and knowledge about the benefits of investing in share market for all respondents**

Dependencies		Observed count	Expected count	Standardized residual
Levels of profession	Have knowledge about benefits			
Casual employee	Yes	285	321.2	-2.0
Housewife	Yes	94	232.9	-9.1
Student	Yes	547	369.9	9.2

In this table the observed count of the students who have knowledge about the benefits of the share market is greater than the expected count. Therefore the most of the students have knowledge about the benefits of the share market. But the casual employees and housewives do not have enough knowledge about the benefits of the share market.

**Table 5.4.3.2: Table of results for the multiple comparisons among levels of profession and Knowledge about benefits of investing in the share market for respondents from Jaffna**

Dependencies		Observed count	Expected count	Standardized residual
Levels of profession	Have knowledge about benefits			
Housewife	Yes	2	9.3	-2.4
Student	Yes	20	10.0	3.2

According to the above table expected count of housewives who have knowledge about benefits of investing in the share market is greater than the observed count, indicating that the most of housewives do not have enough knowledge about the benefits of investing in the share market. But students have enough knowledge about the benefits of investing in the share market.

#### 5.4.4 Dependency between Profession and knowledge about invest in share market

The dependencies between levels of profession and the knowledge about how to invest in the share market were tested in this section.

**Table 5.4.4.1: Table of results for the multiple comparisons among levels of profession and knowledge about invest in share market for all respondents**

Dependencies		Observed count	Expected count	Standardized residual
Levels of profession	Have knowledge about invest in share market			
Casual employee	Yes	141	168.7	-2.1
Housewife	Yes	46	122.3	-6.9
Student	Yes	328	194.3	9.6

According to this table it can be concluded that the most of the students have enough knowledge to invest in the share market. But the observed counts of both casual employees and housewives who have knowledge to invest in the share market is less than the corresponding expected values, indicating the most of casual employees and housewives do not have knowledge to invest in the share market.

**Table 5.4.4.2: Table of results for the multiple comparisons among levels of profession and knowledge about benefits of investing in the share market for respondents from Jaffna**

Dependencies		Observed count	Expected count	Standardized residual
Levels of profession	Have knowledge about benefits			
Housewife	Yes	2	9.3	-2.4
Student	Yes	20	10.0	3.2

According to the above table expected count of housewives who have knowledge about benefits of investing in the share market is greater than the observed count, indicating that the most of housewives do not have enough knowledge about the benefits of investing in the share market. But students have enough knowledge about the benefits of investing in the share market.

### 5.4.5 Dependency between Profession and Willingness to attend a SEC/CSC program

The dependencies between the levels of profession such as housewife, student and retired, and levels of willingness to attend a SEC/CSC program are checked.

**Table 5.4.5: Table of results for the multiple comparisons among levels of profession and willingness to attend a SEC/CSC program**

Dependencies		Observed count	Expected count	Standardized residual
Levels of profession	Willingness to attend a SEC/CSC program			
Housewife	Yes	281	350.9	-3.7
Student	Yes	648	557.4	3.8
Retired	Yes	227	287.0	-3.5

The most of the students have a willingness to attend a SEC/CSC programs but the housewives and retired employees do not have a willingness to attend the programs.

### 5.4.6 Dependency between Profession and Willingness to invest in the share market

In this section the levels of profession and the levels of willingness to invest in the share market were tested.

**Table 5.4.6 Table of results for the multiple comparisons among levels of profession and willingness to invest in the share market**

Dependencies		Observed count	Expected count	Standardized residual
Levels of profession	Willingness to invest in the share market			
Casual employee	No	200	230.0	-2.0
Own business / self employed	No	285	329.9	-2.5
Housewife	Yes	252	387.2	-6.9
Student	Yes	758	615.1	5.8
Part time employee	No	71	90.0	-2.0
Retired	Yes	224	316.6	-5.2

All the professions, mention in the table, have a willingness to invest in the share market except housewives.

**5.4.7 Dependency between Profession and Knowledge about the outstation branches of the CSE**

The dependencies between permanent employees, casual employees, housewife and student, and having knowledge about the outstation branches were tested.

**Table 5.4.7 Table of results for the multiple comparisons among levels of profession and knowledge about the outstation branches**

Dependencies		Observed count	Expected count	Standardized residual
Levels of profession	Knowledge about the outstation branches			
Permanent employee	Yes	1242	1174.5	2.0
Casual employee	Yes	186	233.4	-3.1
Housewife	Yes	73	169.3	-7.4
Student	Yes	377	268.9	6.6

Most of the permanent employees and students have knowledge about the outstation branches of the share market.

**5.4.8 Dependency between Profession and Knowledge about the stock brokers**

In this section the dependencies between permanent employees, housewife and student from profession variable and having knowledge about the stock brokers were tested.

**Table 5.4.8 Table of results for the multiple comparisons among levels of profession and knowledge about the stock brokers**

Dependencies		Observed count	Expected count	Standardized residual
Levels of profession	Knowledge about the stock brokers			
Permanent employee	Yes	697	750.9	-2.0
Housewife	Yes	41	108.2	-6.5
Student	Yes	282	171.9	8.4

Most of the students have enough knowledge about the stock brokers but the permanent employees and housewives do not.

### 5.4.9 Dependency between Profession and Return of saving according to the inflation

The dependencies between levels of profession and return of saving according to the inflation were tested.

**Table 5.4.9 Table of results for the multiple comparisons among levels of profession and return of saving according to the inflation**

Dependencies		Observed count	Expected count	Standardized residual
Levels of profession	Return of saving according to the inflation			
Permanent employee	No	1726	1515.4	5.4
Casual employee	Yes	87	122.7	-3.2
Own business / self employed	Do not know	544	487.9	2.5
Housewife	Do not know	301	246.6	3.5
Part time employees	Do not know	164	133.1	2.7

The savings of the permanent and casual employees do not give the better return than the inflation and the most of own business men or self employees, housewives and part time employees do not know about their savings give the better return than the inflation.

### 5.5 Measuring the association among variables

In this section the relation between the levels of variables were tested using odds ratio and the strength among variables were also measured by Kendall's tau-b and Cramer's V.

#### 5.5.1 Measuring the strength among variables

Under this section the strength among the nominal variables were measured by using Cramer's V while ordinal variables were measured by Kendall's tau-b.

**Table 5.5.1.1: Table of measure of association among nominal and ordinal variables for all respondents**

<b>Association</b>	<b>Value of measure of association</b>
Association among profession and knowledge of share market	0.121
Association among profession and knowledge about the benefits of investing in share market	0.200
Association among profession and knowledge about how to invest in share market	0.109
Association among profession and the willingness to attend a SEC/CSE program	0.125
Association among profession and the willingness to invest in the share market	0.218
Association among profession and the knowledge about the outstation branches of the share market	0.146
Association among profession and the knowledge about the stock brokers	0.137
Association among period of saving and percentages of saving	-0.088
Association among knowledge about share market and knowledge of benefits of investing in share market	0.340
Association among knowledge about share market and knowledge of how to invest in share market	0.589
Association among knowledge about share market and knowledge about outstation branches of share market	0.239
Association among knowledge about share market and knowledge about stock brokers	0.165

According to the ordinal measure of association of Kendall's tau-b value it can be concluded that there is a weak negative association between period of saving and percentages of saving. Also the other nominal measure of association of Cramer's v values it can be concluded that there are weak positive associations among other variables mentioned above.

**Table 5.5.1.2: Table of measure of association among nominal and ordinal variables for respondents from Jaffna**

<b>Association</b>	<b>Value of measure of association</b>
Association among profession and knowledge of share market	0.282
Association among profession and knowledge about the benefits of investing in share market	0.225
Association among profession and knowledge about how to invest in share market	0.201
Association among profession and the willingness to attend a SEC/CSE program	0.192
Association among profession and the willingness to invest in the share market	0.281
Association among profession and the knowledge about the outstation branches of the share market	0.312
Association among profession and the knowledge about the stock brokers	0.341
Association among period of saving and percentages of saving	0.075
Association among knowledge about share market and knowledge of benefits of investing in share market	0.221
Association among knowledge about share market and knowledge of how to invest in share market	0.288
Association among knowledge about share market and knowledge about outstation branches of share market	0.541
Association among knowledge about share market and knowledge about stock brokers	0.408

According to the ordinal measure of association of Kendall's tau-b value it can be concluded that there is a weak positive association between period of saving and percentages of saving. According to Cramer's V nominal measure of association there is a moderate positive association among the knowledge about share market with the knowledge about outstation branches and knowledge about stock brokers. Also the other nominal measure of association of Cramer's v values it can be concluded that there are weak positive associations among other variables mentioned above.

### 5.5.2 Measuring the association among levels of variables using odds ratio

Under this section association among levels of variables are to be measured using odds ratio. The measure odds ratio usually measured as a ratio between odds of success in second variable for the first level of first variable and odds of success in second variable for the second level of first variable.

Any value **greater** than **1** for odds ratio indicates that the number of people in first level with success is **higher** than the number of people in second level with success in the population, and also any value **less** than **1** for odds ratio indicates that the number of people in first level with success is **less** than the number of people in second level with success in the population. In the tests the “Yes” response have been considered as the success of variable 2 and corresponding levels for variable 1 is indicated in the table given below.

#### Hypothesis to be tested is:

H<sub>0</sub>: There is no association between the levels of the considering variables.

Vs

H<sub>1</sub>: There is an association between the levels of the considering variables.

**Table 5.5.2.1: Table of results of odds ratio for non investors for all respondents**

Variable		Levels of variable 1		Odds ratio	95% confidence interval	
1	2	level 1	level 2		Lower limit	Upper limit
Willingness of investing	Knowledge of share market	Yes	No	2.15	1.90	2.43
	Knowledge of benefits in investing	Yes	No	2.71	2.44	3.02
	Knowledge of way of investing	Yes	No	2.31	2.02	2.64
	Willingness of attending CSE/SEC programs	Yes	No	7.75	6.96	8.62
	Knowledge of outstation branches	Yes	No	2.15	1.88	2.47
	Knowledge of stock brokers	Yes	No	2.15	1.92	2.41

Since odds ratio of all variables are greater than 1 for willingness of investing we can draw following results.

- Knowledge of share market is high in the people who willing to invest than the people who not willing to invest in the share market.
- Similar conclusions for other variables can also be drawn from above results in the table.
- Since 95% confidence limits for all the variables ranges greater than 1, we could ensure the conclusions which we drawn.

**Table 5.5.2.2: Table of results of odds ratio for non investors for respondents from Jaffna**

Variable		Levels of variable 1		Odds ratio	95% confidence interval	
1	2	level 1	level 2		Lower limit	Upper limit
Willingness of investing	Knowledge of share market	Yes	No	0.36	0.22	0.60
	Knowledge of benefits in investing	Yes	No	0.47	0.29	0.78
	Knowledge of way of investing	Yes	No	0.71	<b>0.36</b>	<b>1.39</b>
	Willingness of attending CSE/SEC programs	Yes	No	0.14	0.07	0.26
	Knowledge of outstation branches	Yes	No	0.33	0.20	0.55
	Knowledge of stock brokers	Yes	No	0.82	<b>0.44</b>	<b>1.51</b>

Since odds ratio of all variables are less than 1 for willingness of investing we can draw following results.

- Knowledge of share market is high in the people who are not willing to invest than the people who are willing to invest in the share market.
- Similar conclusions for other variables can also be drawn from above results in the table.

From the above table we could see that odds ratio of Knowledge of way of investing & Knowledge of stock brokers for willingness of investing is closer to 1 and confidence limit ranges from a less value than 1 to a greater value than 1. It's an indication that at 95% confidence interval we may have equal or higher number of people who are willing to invest with knowledge of way of investing and knowledge of stock brokers.

Further since all the other confidence limits range less than 1, we could completely rely on our above results.

### 5.6 Logistic Regression model for Willingness of attending to CSE/SEC programs of the share market

The response variable willingness of attending to CSE/SEC programs is used to fit the logistic regression model. This model was fitted to identify the factors that can be affected to their participation of the CSE/SEC programs.

The following table contains the summary of the best fitted logistic regression model for the willingness of attending to CSE/SEC programs. Here the regressor variables are heard about share market, knowledge about benefits of the share market, knowledge about investing in the share market, willingness of investing in share market and knowledge about stock brokers.

**Table 5.6 Estimation of coefficient and their significance for regression**

	Estimate	Std. Error	Z value	P-value	Odds ratio	95% confidence interval	
						Lower limit	Upper limit
<b>Constant (Intercept)</b>	-1.83825	0.06867	-26.771	<b>&lt;2e-16</b>			
<b>Heard about share market(No)</b>	1.47895	0.07834	18.879	<b>&lt; 2e-16</b>	4.39	3.76	5.12
<b>Knowledge about benefits of the share market(No)</b>	-0.32469	0.07155	-4.538	<b>5.68e-06</b>	0.72	0.63	0.83
<b>Knowledge about investing in the share market(No)</b>	0.29549	0.08324	3.550	<b>0.000386</b>	1.34	1.14	1.58
<b>Willingness to invest in share market (No)</b>	2.02502	0.05816	34.819	<b>&lt; 2e-16</b>	7.58	6.76	8.49
<b>Knowledge about stock brokers(No)</b>	0.45146	0.06826	6.614	<b>3.74e-11</b>	1.57	1.37	1.80
<b>Null deviance</b> : 10444.8 on 7947 degrees of freedom							
<b>Residual deviance</b> : 8355.7 on 7942 degrees of freedom							
<b>AIC</b> : 8367.7							
<b>Model:</b>							
Logit(Willingness of attending to CSE/SEC programs) = -1.83825 + 1.47895( Heard about share market ) -0.32469 ( Knowledge about benefits of the share market) +0.29549 ( Knowledge about investing in the share market ) +2.02502 ( Willingness to invest in share market ) +0.45146 ( Knowledge about stock brokers)							

The AIC methodology attempts to find the model that the best explain the data with the minimum of free parameters. Therefore the preferred model is the one with the lowest AIC value.

When considering the difference between null and residual deviances it can be concluded that, as a whole, the above model is useful for explaining the willingness of attending to CSE/SEC programs of the respondents because the difference value is greater than the corresponding chi-square table value with degree of freedom 5.

The bolded p-values are less than the  $\alpha$ -value, indicating that the coefficients of the corresponding variables are not equal to zero using  $\alpha$ -level of 0.05. That is those variables are statistically significant. The logistic regression coefficients give the change in the log odds of the outcome for a one unit increase in the predictor variable. For every one unit change in the variable lack of knowledge about benefits, the log odds of willingness of attending to CSE/SEC programs decreases by 0.32469. Also for every one unit change in the variable lack of knowledge about stock brokers, the log odds of willingness of attending to CSE/SEC programs increases by 0.45146. Like wise according to the availability of the particular regressor variable the log odds of willingness of attending to CSE/SEC programs increases when sign of the coefficient is positive. Otherwise it decreases.

The odds ratio between the knowledge about benefits and knowledge about way of investing is,

$$= \frac{1.34}{0.72} = 1.861$$

Therefore it can be concluded that the willingness of attending to CSE/SEC program for a person who do not have the knowledge about investing in the share market is 1.86 times greater than for a person who do not have knowledge about the benefits of investing in share market.

From this model the probability of willingness of attending to CSE/SEC program can be found. To predict the probability of a person who do not have the knowledge about the share market and do not have the knowledge about of investing in share market and do not like to invest in the share market, the following model formula can be used.

Logit (Willingness of attending to CSE/SEC program)

$$= -1.83825 + 1.47895(1) - 0.32469(0) + 0.29549(1) + 2.02502(1) + 0.45146(0) \\ = 1.9612$$

In order to find out the probability of Willingness of attending to CSE/SEC program, the following equation can be used.

$$\text{Prob(Willingness of attending to CSE/SEC program)} = \frac{e^{1.9612}}{1+e^{1.9612}}$$
$$= 0.877$$

Therefore there is an enough evidence to conclude that there is a high probability of attending to CSE/SEC programs, the people who do not know about share market and way of investing about share market and does not like to invest in share market though necessary facilities are provided.

## **CHAPTER 6**

### **CONCLUSION AND DISCUSSION**

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According to the preliminary analysis for all the sample respondents, the following conclusions can be drawn for each and every variable.

According to the views of sample respondents, most of them invest their money for the purposes such as “buy or build a house” and “children’s education”. Few respondents invest their money for “pilgrimage” and it is experienced that most of them are senior citizens. Especially a considerable number of respondents save their money for their marriage, own educational purposes, medical purposes such as insurance policies and security purposes.

Monthly is the most preferable period of investment for most of the sample respondents. The situation similar for both investors and non investors of the share market too. It means almost all respondents basically focusing on short term investments. And especially most of the respondents prefer to invest their money in a period of 1 to 3 years. Since the percentage of respondents who would do their investments for more than 5 years is only 7%, the conclusion which was drawn that the short term investments are familiar with all the respondents had proven.

Percentage of permanent employee is significantly higher in all three data sets. And also considerably larger percentages can be seen for own business/self employee and student. The most the student respondents are university students and there can be seen a clear trend among them on investing in the share market which leads to observe higher percentage for student. Majority of housewives are non investors in the share market.

More than 50% of the sample respondents prefer to save in between 0%- 10% of their earnings. But a somewhat considerable amount of respondents do not save any portion of their earnings and that is may be due to prevailing economic situation of the country.

The term inflation is not much familiar among most of the sample respondents. So that obtained results cannot be much guaranteed. And this fact results to observe a larger percentage of respondents do not having any idea about their returns and inflation in the whole data set and also in the non investors data set. According to investors view, the result is different. The opinion of the investors in the share market was that they do not obtain a return better than inflation.

Savings account is the most preferable investing type among the sample respondents not only as their present investment but also future investment. And in general most of the respondents do not choose government treasury bills and unit trusts as their investing type. The percentage of share market investors in future is greater than that of in present. A clear trend can be identified and that is to continue their present investments in future also. Especially the investors who engaged in share market prefer to invest their money in savings accounts and fixed deposits in banks also.

Most of the respondents are look forward on the security of their investments when choosing a particular investment and secondly they are concerning about the returns of that investment.

Most of the sample respondents heard about the share market and its investing procedure. But more than half of the sample respondents do not have any knowledge about the benefits of investing in the share market while about 75% of the sample respondents do not aware about the investing procedure of the share market. Majority of the sample respondents are not aware about outstation branches of the share market as well as about the stock brokers. And also more than half of the sample respondents willing to attend for the CSE/SCE programs and willing to invest in the share market if necessary facilities are provided. Also they prefer to attend for the CSE/SEC programs on weekends.

For the preliminary analysis done for the respondents from Jaffna, the following conclusions can be drawn.

According to the views of sample respondents, most of them invest their money for their “children’s education”. Especially a considerable number of respondents save their money for children’s marriage and to buy/build a house. Monthly is the most preferable period of investment for most of the sample respondents, investors and as well as non investors of the share market. Moreover, non investors prefer to invest quarterly too.

For the respondents from Jaffna also the percentage of permanent employee is significantly higher in all three data sets. And also considerably larger percentages can be seen for own business/self employee and casual employees. The percentage of students and retired people in investors are considerably low and there are no housewives or part time employees. More than 50% of the sample respondents prefer to save in between 0%- 10% of their earnings. But a somewhat considerable amount of respondents do not save any portion of their earnings and that is may be due to prevailing economic situation of the country.

Since the term inflation is not much familiar among most of the sample respondents, obtained results cannot be much guaranteed also for the Jaffna respondents. And this fact results to observe a larger percentage not having any idea about their returns and inflation. According to investors view, the result is vice versa. They obtain a return better than inflation and that is may be due to the higher return rate of the share market.

Savings account and land and property are the most preferable investing type among the sample respondents not only as their present investment but also future investment. The percentage of share market investors in future is greater than that of in present. The share market investors in Jaffna prefer to have savings accounts in future. Most of the respondents are look forward on the security of their investments when choosing a particular investment and secondly they are concerning about the returns of that investment.

More than half of the sample respondents from Jaffna have not heard about the share market, its benefits and the investing procedure. Though the quarter of the sample respondents is aware about outstation branches of the share market, only less than a quarter of the sample respondents are aware about stock brokers. And also nearly 10% of the sample respondents are willing to attend the CSE/SCE programs and willing to invest in the share market if necessary facilities are provided. Especially most of the respondents who are currently not invested in the share market prefer to attend CSE/SCE programs on weekends.

According to the confirmatory analysis of the obtained results for the all respondents, the following conclusions are obtained. According to the proportion test, the proportion of the male respondents is greater than the proportion of the female respondents. Following statements are also true according to the proportion test.

- The proportion of respondents who had the willingness to participate in the CSE/SEC programs is greater than or equal to the proportion of respondents who did not have the willingness to participate in the CSE/SEC programs
- The proportion of respondents who had the willingness to invest in the share market is greater than or equal to the proportion of respondents who did not have the willingness to invest in the share market
- The proportion of respondents who had heard about the benefits of the stock market is less than or equal to the proportion of respondents who had not heard about the benefits of the stock market
- The proportion of respondents who had the knowledge to invest in the stock market is less than or equal to the proportion of respondents who did not had the knowledge to invest in the stock market
- The proportion of respondents who had the knowledge about the outstation branches of the share market is less than or equal to the proportion of respondents who did not have the knowledge about the outstation branches of the share market
- The proportion of respondents who had the knowledge about the stock brokers of the share market is less than or equal to the proportion of respondents who did not have the knowledge about the stock brokers of the share market

By the above results, most of the male investors are prefer to invest in the share market while most of the respondents do not have a clear idea about share market. But most of them are willing to invest in the share market.

According to the test for checking association among variables, the variable profession is associated with time interval of saving, present investments, knowledge of share market, knowledge about the benefits of investing in share market, knowledge about how to invest in share market, willingness to attend a SEC/CSE program, willingness to invest in the share market, knowledge about the outstation branches of the CSE, knowledge about the stock brokers, their return of saving according to the inflation.

So this implies that the profession plays a major role when selecting an investment in the share market.

Dependencies exist among following pair of variables.

- Present investments and the future investments
- Awareness about stock market and the knowledge about the benefits of investing in share market
- Awareness about stock market and the knowledge about how to invest in the share market
- Awareness about stock market and the knowledge about the outstation branches of the CSE
- Awareness about stock market and the knowledge about the stock brokers
- The knowledge about the benefits of investing in share market and the knowledge about how to invest in the share market.
- The knowledge about the outstation branches of the CSE and the knowledge about the stock brokers.
- Awareness about stock market and willingness to attend a SEC/CSC program
- Knowledge about the benefits of investing in share market and willingness to attend a SEC/CSC program

By above results it is very much clear that the present investment of an investor determines the future investments. And also awareness about the share market is a major factor among share market investors. Further knowledge about the share market, the knowledge about the benefits of investing in share market, the knowledge about the outstation branches of the CSE, the knowledge about the stock brokers are also determine the investing ability in the share market.

According to the expected counts and observed counts the following conclusions can be made.

- Most of the permanent employees save monthly
- Most of the casual employees save quarterly
- Most of the housewives and students save annually as well as other time horizons
- Most of the own business men or self employees save in the other time horizons
- Most of the permanent employees and students heard about the stock market
- Most of casual employees, self employees and house wives have not heard about the stock market
- Most of the students have knowledge about the benefits of the share market
- Most of the casual employees and housewives do not have enough knowledge about the benefits of the share market
- Most of the students have enough knowledge to invest in the share market
- Most of the casual employees and housewives do not have enough knowledge to invest in the share market
- Most of the students have a willingness to attend a SEC/CSC programs
- Most of the housewives and retired employees do not have a willingness to attend the programs

- Most of the casual employees, Own business / self employed personals, students, part time employees, retired persons have a willingness to invest in the share market
- Most of the housewives do not have a willingness to invest in the share market
- Most of the permanent employees and students have knowledge about the outstation branches of the share market
- Most of the students have enough knowledge about the stock brokers
- Most of the permanent employees and housewives do not have enough knowledge about the stock brokers
- Most of the permanent and casual employees do not have the better return than the inflation
- Most of own business men or self employees, housewives and part time employees do not know about their savings give the better return than the inflation

According to the tests performed to find out the association of variables, there was no enough evidence to conclude that any of the considered pairs significantly associated. And the followings can be concluded according to odds ratios.

- Knowledge of stock market is high in the people who willing to invest than the people who not willing to invest in the share market
- Knowledge of benefits in investing is high in the people who willing to invest than the people who not willing to invest in the share market
- Knowledge of way of investing is high in the people who willing to invest than the people who not willing to invest in the share market
- Willingness of attending CSE/SEC programs is high in the people who willing to invest than the people who not willing to invest in the share market
- Knowledge of outstation branches is high in the people who willing to invest than the people who not willing to invest in the share market
- Knowledge of stock brokers is high in the people who willing to invest than the people who not willing to invest in the share market

Finally, according to logistic regression model, to predict the probability of Willingness of attending to CSE/SEC programs the following variables and variable levels such as heard about share market, Knowledge about benefits of the share market, Knowledge about investing in the share market, Willingness to invest in share market, Knowledge about stock brokers can be used. And the willingness of attending to CSE/SEC program for a person who does not have the knowledge about investing in the share market is 1.86 times greater than for a person who does not have knowledge about the benefits of investing in share market.

According to the confirmatory analysis of the obtained results for the respondents from Jaffna, the following conclusions are obtained.

- The proportion of respondents who are willing to invest in the share market is greater than the proportion of respondents who are not willing to invest in the share market.

- The proportion of respondents who are aware about the stock market is less than the proportion of respondents who are not aware about the stock market.
- The proportion of respondents who had the willingness to participate in the CSE/SEC programs is less than the proportion of respondents who did not have the willingness to participate in the CSE/SEC programs.
- The proportion of respondents who had heard about the benefits of the stock market is less than the proportion of respondents who had not heard about the benefits of the stock market.
- The proportion of respondents who had the knowledge to invest in the stock market is less than the proportion of respondents who did not had the knowledge to invest in the stock market
- The proportion of respondents who had the knowledge about the outstation branches of the share market is less than the proportion of respondents who did not have the knowledge about the outstation branches of the share market.
- The proportion of respondents who had the knowledge about the stock brokers of the share market is less than the proportion of respondents who did not have the knowledge about the stock brokers of the share market.

According to the test for checking association among variables, the variable profession is associated with present investments, knowledge of share market, knowledge about the benefits of investing in share market, knowledge about how to invest in share market, willingness to attend a SEC/CSC program, willingness to invest in the share market, knowledge about the outstation branches of the CSE and knowledge about the stock brokers.

Dependencies exist among following pair of variables.

- Present investments vs. the future investments
- Awareness about stock market vs. the knowledge about the benefits of investing in share market
- Awareness about stock market vs. the knowledge about how to invest in the share market
- Awareness about stock market vs. the knowledge about the outstation branches of the CSE
- Awareness about stock market vs. the knowledge about the stock brokers

The expected counts are greater than the observed counts for the following sets of variables when performing multiple comparisons.

- Permanent employee and do not have heard about stock market
- Housewife and have heard about stock market
- Housewife and have knowledge about benefits
- Housewife and have knowledge about invest in share market

The expected counts are less than the observed counts for the following sets of variables.

- Student and have knowledge about benefits
- Student and have knowledge about invest in share market

According to the tests performed to find out the association of variables, there was no enough evidence to conclude that any of the considered pairs significantly associated. And the followings can be concluded according to odds ratios.

- Knowledge of stock market, its benefits, willingness to attend CSE programs, Knowledge of out station branches are high in the people who are not willing to invest than the people who willing to invest in the share market.

The following suggestions can be made in order to enhance the reliability of the obtained results. When considering the data collection procedure rather than the face to face interviewing method, it could be more efficient to allow the respondents to fill the questionnaire by themselves. Because for the question which was there to obtain responses for the preferred investments, the number of options for each question was about 13 and it was hard to keep all the responses in mind in order to rank them. As the term inflation is not familiar among the respondents, the responses obtained may not be reliable. In Most of the cases the responses obtained for the variable percentage of savings was not reliable, since the respondents thought that it would be a tool to measure their income level. Also for the variable time horizon, the respondents cannot limit their investing period for a specific time horizon, as for each and every investment the investment period is different. The level of the variable “access” of the variable predominant factors effecting on investments cannot be clearly defined as the meaning of the term access will vary with situations. And also meanings of some of the questions in the Tamil questionnaire are completely different with the Sinhala and English versions of the questionnaire.

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## APPENDIX: Questionnaire

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- |   |  |
|---|--|
| 1. What do you save for?                                | Buy/ build a house<br>Children's Education<br>Children's marriage<br>Pilgrimage<br>Retirement<br>To buy something<br>Others (explain)              |
| 2. How often do you save?                               | Monthly<br>Quarterly<br>Annually<br>Others (explain)   |
| 3. Are you?   | Permanent employee<br>Casual employee<br>Own business / self employed<br>Housewife<br>Student<br>Part time employee<br>Retired<br>Others (explain) |
| 4. What percentage of your earnings do you save?        | 0%<br>0-10%<br>10-20%<br>>20%  |
| 5. Do your savings give a return better than inflation? | Yes<br>No<br>Do not know   |

6. In what are your investments?

House  
Land & Property  
Business  
Car  
Jewelry / gold  
Savings accounts  
Fixed deposits in banks  
Fixed deposits in finance companies  
Government treasury bills  
Share market  
Unit trusts  
Cheetu  
Others (explain)

7. Where do you plan to invest in the future?

House  
Land & Property  
Business  
Car  
Jewelry / gold  
Savings accounts  
Fixed deposits in banks  
Fixed deposits in finance companies  
Government treasury bills  
Share market  
Unit trusts  
Cheetu  
Others (explain)

8. When you make an investment what is the time horizon?

Less than one year  
1-3 years  
3-5 years  
More than 5 years

9. What do you look for Most in an investment? (Rank)
- Security
  - Returns
  - Steady income
  - Access
  - Others (explain)
10. What is your preferred investment? (Rank)
- House
  - Land & Property
  - Business
  - Car
  - Jewelry / gold
  - Savings accounts
  - Fixed deposits in banks
  - Fixed deposits in finance companies
  - Government treasury bills
  - Share market
  - Unit trusts
  - Cheetu
  - Others (explain)
11. Have you heard about Stock market or the Colombo Stock Exchange?
- Yes
- No
12. Do you know the benefits of investing in share market?
- Yes
- No
13. Do you know how to invest in the share market?
- Yes
- No

14. What is the best way for you to learn about the Stock Exchange? (Rank)

Books  
Newspapers  
Radio  
Seminar  
Television  
Web

15. Are you or anyone in your family willing to attend a SEC/CSE program?

Yes  
No

16. If yes, what is the convenient time?

Weekdays  
Weekends

17. If necessary facilities are provided are you willing to invest in the share market?

Yes  
No

18. If no, why not?

lack of time  
Access  
Returns  
Risk  
Others(explain)

19. Do you have any knowledge about the outstation branches of the share market?

Yes  
No

20. Do you have enough knowledge about the stock brokers?  
Yes  
No
- 21 Area of residence  
Rural  
Urban
- 22 District
- 23 Gender  
Male  
Female