

# A Survey on Demographics, Non-financial and Financial Personality Traits

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**Abstract:** This study has been undertaken to survey the Demographic factors, Big Five Dimensions (Non-financial) and Financial Personality traits of proprietary equity investors operating in North and South of Tamil Nadu, a state in India. Survey instruments offered by Berkeley Personality Lab and Michael Pompian's simplified version of Behavioral Investor Types (BIT) were adopted to study the samples Personality (Non-financial) and Financial personality traits. Analysis revealed that Age, Annual Income and Investing Experience (Investor Sophistication Factor) have a significant role in determining the extraversion nature of the respondent. Further, it was found that North TN sample respondents are predominantly 'Passive' investors whereas South TN is 'Active'.

**Index Terms – Demographics, Big Five, Financial and Non-financial Personality Traits, Investor Sophistication.**

## I. INTRODUCTION

Earlier it was thought that investors are risk-averse; and valued both present consumption and future. But recent studies on individual investor's behaviour are relentlessly claiming that people do not act rationally. Discounting future consumption and Risk-seeking is becoming the core of investing clan's behavioural pattern. Understanding their Demographics and Financial & Non-financial Personality types may permit one to know the directional movement of the market. Many researchers have indicated its importance (Yousefi et al. 2009). It is in this context this paper attempts to explore them.

## II. OPERATIONAL DEFINITIONS

### Demographics:

Demographics are the quantifiable statistics of a given population. Demographics are also used to identify the study of quantifiable subsets within a given population which characterize that population at a specific point in time. Commonly examined demographics include gender, age, ethnicity, knowledge of languages, home ownership, employment status, and location. Demographic trends describe the historical changes in demographics in a population over time. Both its distribution and trends of values within a demographic variable can provide a deeper insight.

### Personality:

Personality is the impression created by an individual on others. A person's personality is the key determinant of behaviour and performance. Dunham Randall (1984) found that personality traits of an individual can change over a period of time, but in a slow and stable manner. Table 2.1 captures the personality factor definitions by Costa and McCrae (1992).

**Table 2.1 Illustrative Scales of Big Five Traits**

Personality Traits	Characteristics of the High scorer	Characteristics of the Low scorer
Extraversion (E)	Sociable, Active, Talkative, Person-oriented, Optimistic, Fun-Loving, Affectionate	Reserved, Sober, Unexuberant, Aloof, Task-Oriented, Retiring, Quiet
Agreeableness (A)	Soft-Hearted, Good-Natured, Trusting, Helpful, Forgiving, Gullible, Straightforward	Cynical, Rude, Suspicious, Uncooperative, Vengeful, Ruthless, Irritable, Manipulative
Conscientiousness (C)	Organized, Reliable, Punctual, Hard-working, Self-Disciplined, Neat, Ambitious, Persevering	Aimless, Unreliable, Lazy, Careless, Lax, Negligent, Weak-Willed, Hedonistic
Neuroticism (N)	Worrying, Nervous, Emotional, Insecure, Inadequate	Calm, Relaxed, Unemotional, Hardy, Secure, Self-satisfied
Openness (O)	Curious, Broad Interests, Creative, Original, Imaginative, Untraditional	Conventional, Down-To-Earth, Narrow Interests, Unartistic, Unanalytical

### Big Five Dimensions:

A variety of measures are available to assess the Big Five dimensions of personality about adults and adolescents (Costa & McCrae 1992; Goldberg 1992; John et al. 1994; John et al. 1991; Saucier 1994; Trapnell & Wiggins 1990). Slovic (2012) opined that if investors know themselves better creation of a systematic investment plan could be easier. Hence, profiling an investor's personality was felt necessary in order to predict their financial behavior.

### Financial Personality: Active and Passive

Psychographic models are used to classify investors according to certain characteristics or behaviours. Barnewall (1987) distinguished investors based on their passivity and activity in creating wealth. Accordingly, passive investors are those who have become wealthy passively by risking others capital (Can access limited amount only) with lower tolerance of risk. On the other hand, active investors are those who earned their wealth during their lifetime by risking own capital with a higher tolerance of risk. Simultaneously active investors seek to have a full control over their investments, with an intention of reducing the risk. In line with this the present study attempts to infer the financial personality type in addition to Big Five dimensions of personality traits measured by Berkeley Personality Lab.

### Sophisticated Investor:

An investor who got adequate knowledge and sufficient experience to weigh the merits and risks of an investment is called as 'Sophisticated Investor'. They are capable of holding such an investment opportunity for an indefinite period of time (without any need of liquidation) and assumption of loss of invested principal sum without causing much damage to overall net worth as indicated by Investopedia.com, 2016. Sample respondents trading/investing experience, frequency of trading and trading strategies are the proxies used for measuring investor's sophistication in the present study.

## III. RESEARCH DESIGN

A research design is a framework or blueprint for conducting research (Naresh & David F Birks 2006). Single Cross-sectional descriptive research under Conclusive design is adopted to carry out this survey. Survey techniques are based on the use of structured questionnaire. A cross section of investors across North Tamil Nadu and South Tamil Nadu are considered to ascertain, and examine their demographic profile and to map financial and non-financial personality traits.

### Objectives of the Study:

The main objective of this study is to identify the personality traits of a proprietary equity investor discernible from their behaviour.

- To profile and portray the equity investors based on demographic factors & personality traits.
- To assess the financial personality type of the respondents.
- To survey the relationship between investors' demographics and personality traits of non-financial and financial nature.

### Scope of the Study:

Scope of the present study is to survey the demographic variables, and to assess personality traits of non-financial and financial nature. The research is confined to individual investors, who undertake equity transactions on a proprietary basis (Harris 2003).

### Nature of the Data:

This study makes use of both primary and secondary data. Data originated by the researcher specifically to address the research problem in hand is termed as 'Primary' data. It was accomplished through the development of a questionnaire. Academic Journals, Magazines, Business Dailies, Industry Reports, Books, Web sites and etc constituted the sources of secondary information.

### Survey Instrument:

The researcher preferred to collect the required primary data with the help of a questionnaire based method as it seems to be the apt and convenient method.

**Table 3.1 Structure of the Survey Questionnaire**

Part	Factors	Variables
I	Demographics	Gender, Age, Marital Status, Education, Occupation, Annual Income
II	Investor Sophistication	Years of Experience, No of Accounts held, Frequency of Trade, Investing Strategy
III	Financial Personality Type (Active or Passive)	Earned majority of Wealth, Risking of own Capital, Inclination towards Wealth, Preference to control investment, Belief on Borrowing
IV	Personality Traits*	Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness to Experience

\* Questionnaire adapted from Berkeley Personality Lab

Michael M Pompian (2012) in his book 'Behavioral Finance and Investor Types' has highlighted the necessity of identifying an investor's active and passive traits. This categorization of an investor is different from the mainstream

categorization of personality traits. He identified and introduced personality trait groupings purely based on financial issues known as 'Financial Personality Types' or Behavioral Investor Types (BIT). This study has adapted the simplified version. The structured questionnaire was scrutinized for content validity by three experts. Sample respondents are selected on voluntary basis and no incentives/stimuli were offered to elicit their responses.

#### Sampling Technique:

Two-stage cluster sampling, under probability sampling is followed for selecting the sample respondents of this study. Researcher felt to survey the respondents by categorizing them who are from North Tamil Nadu and South Tamil Nadu. According to the Sampling Frame, adopted Schwarze (1993) way of determining sample size requires 342 respondents ( $p=0.5$ ,  $q=0.5$ , Precision =0.05, Alpha=1.96) for North Tamil Nadu population and 336 for South Tamil Nadu.

#### Research Hypothesis:

1.  $H_0$  : There is no relationship between personality traits and demographic factors.
2.  $H_0$  : There is no relationship between personality traits and investor sophistication factors.

### IV. REVIEW OF LITERATURE

#### Demographic Factors:

Rational investors always aim to maximize the returns for the given risk or minimize their risk for a given level of return. In regard to this, apart from risk appetite demographic factors are also having a role in shaping the investment choice decisions. For example, male investors tend to be more risk tolerant than female investors (Barber & Odean 2001). Investors under the age of 30 years tend to take more risk than others. (Evans & Jeffrey 2004). Lease et al. (1974); Lewellen et al. (1977); Riley & Chow (1992) and Schooley & Worden (1999) exhibited a positive correlation between risk tolerance and demographic factors like age, education, income, marital status, wealth and the nature of profession.

Mathuraswamy & Rajendran (2015) identified the prevalence of research gaps in terms of demographic factors and the extent to which individual investor decision are influenced. Succinctly, the impact of family composition and biological make-up, emotion and intuition's role and life-style were studied over the rational of equity investment. Inferential statistical techniques revealed that family composition, biological make-up, psychological variables and socioeconomic variables are influencing the investment decisions. Santos William et al. (2010) investigated the degree of overconfidence in 100 undergraduate students of Management, Economics and Accounting of the Universidade Catolica de Brasilia. Results suggest that in general men have a larger degree of overconfidence.

#### Personality Traits:

Gokul Chittaranjan et al. (2014) investigated the relationship between behavioral characteristics and the traits of personality. TIPI questionnaire was adapted to measure personality. Mail application was more likely to be used by neurotic and conscientious people. Emotionally stable people are more likely to have more messages in their in box. Personality of a user may be better predicted using the composed SMS.

Taqadus Bashir et al. (2013a) analyzed the influence of demographics and personality traits on the financial behavioral bias and risk-taking through 225 samples in Pakistan by way of Structural Equation Modeling. Finally, the chosen samples justified that personality traits influenced two investment biases especially overconfidence and herding behavior. Daiva Jureviciene et al. (2013) in their empirical study used Pompian methodology to analyze 384 investors in order to determine deviations of financial behaviour. Analysis of results revealed that most of the respondents are from Pragmatist Framer Realist and Pragmatist Framer/Integrator Realist type. Of the total eight, two types of investors as observed by Michael Pompian were not seen in Lithuania.

#### Financial Behaviour:

Anonymous (2016a) in Coimbatore Chronicle briefed that people are more likely to take risk after observing risky behaviour in others known as 'Behavioral Contagion'. It affects people even who are not willing to take risk. It clearly points out that a person's risk preference can be directly influenced if they consistently observe the risky behaviour of other person. A study conducted by Lisa Wan, Robert Wyer Jr appeared in the Journal of Consumer Research found that female customers were less likely to buy personal hygiene items from attractive male cashiers.

Venkatesh (2013b) in an article assessed how the anger related stress affects the financial decisions. During the discussion he underscored the role of neurological reasons such as dopamine, serotonin and adrenaline in determining the reaction to anger. High level of dopamine and serotonin keeps one positive and provides emotional stability respectively. Low levels of both neuro transmitters make one unhappy, negative and upset. Yet another chemical adrenaline also plays an indomitable role of pushing one to 'fight or flight' mode. Heightened angry triggers amygdala, another neuro chemical which permits one to think 'emotionally' and not with 'rational brain'. This could be a great reason why anger cause people to make bad financial decisions, the author added. Daiva Jureviciene & Olga Ivanova (2012b) attempted to identify the behavioural types of financially savvy households located at Lithuania. Based on biases investing respondents to this research were categorized in to Cautious Investor, Methodical Investor, Individualistic Investor and Spontaneous Investor. Most of the chosen sample belongs to the Individualistic Investor category and very less towards Spontaneous Investor category. Guven Sevil et al. (2007) took a sample of 201 samples from Turkey to study the decision making process of small investors in terms of expectation theory, regret aversion, overconfidence and cognitive dissonance. It was proved that sampled investors are not rational as assumed by traditional finance theories.

## V. ANALYSIS AND DISCUSSIONS

Table 5.1 Breakup of the Total Samples

Place of the Respondents	Percent (%)	Gender	
		Male	Female
North Tamil Nadu	50.4	251	91
South Tamil Nadu	49.6	258	78

Table 5.2 Age of the Samples

Age Category	North Tamil Nadu (In %)	South Tamil Nadu (In %)
< 30	59.94	31.25
31 – 40	24.27	31.55
41 – 50	9.36	20.83
51 and Above	6.43	16.37

Table 5.3 Marital Status of the Samples

Marital Status	North Tamil Nadu (In %)	South Tamil Nadu (In %)
Single	43.86	28.87
Married	56.14	71.13

Table 5.4 Educational background of the Samples

Educational Background	North Tamil Nadu (In %)	South Tamil Nadu (In %)
Less than High School	0.58	1.79
HSS/Diploma	7.31	11.01
Under-graduate	50.88	50.60
Post-graduate	41.23	36.61

Table 5.5 Trading/Investing Experience of the Samples

Investing/Trading Experience in Equity	North Tamil Nadu (In %)	South Tamil Nadu (In %)
Less than a year	42.1	32.1
1 – 5 years	45.9	47.9
More than 5 years	12.0	19.9

## Descriptive Statistics for Personality Traits: Mean Scores

Table 5.6 'Extraversion' of Respondents

<b>Name of the Personality Factor: Extraversion</b>		
<b>Personality Constructs</b>	<b>North TN</b>	<b>South TN</b>
Is talkative. (E1)	3.55	3.57
Is reserved. (E2)	3.15	2.82
Is full of energy. (E3)	3.46	3.42
Generates a lot of enthusiasm. (E4)	3.51	3.55
Tends to be quiet. (E5)	2.99	2.80
Has an assertive personality. (E6)	3.31	3.32
Is sometimes shy, inhibited. (E7)	2.76	2.67
Is outgoing, sociable. (E8)	3.71	3.48

**Table 5.7 'Agreeableness' of Respondents**

<b>Name of the Personality Factor: Agreeableness</b>		
<b>Personality Constructs</b>	<b>North TN</b>	<b>South TN</b>
Tends to find fault with others. (A1)	3.01	3.16
Is helpful and unselfish with others. (A2)	3.88	3.98
Starts quarrels with others. (A3)	3.77	4.01
Has a forgiving nature. (A4)	3.71	3.90
Is generally trusting. (A5)	4.06	3.82
Can be cold and aloof. (A6)	3.64	3.36
Is considerate and kind to almost everyone. (A7)	3.92	4.11
Is sometimes rude to others. (A8)	3.47	3.47
Likes to cooperate with others. (A9)	3.85	3.86

**Table 5.8 'Conscientiousness' of Respondents**

<b>Name of the Personality Factor: Conscientiousness</b>		
<b>Personality Constructs</b>	<b>North TN</b>	<b>South TN</b>
Does a thorough job. (C1)	4.14	4.22
Can be somewhat careless. (C2)	3.36	3.31
Is a reliable worker. (C3)	4.23	4.33
Tends to be disorganized. (C4)	3.45	3.29
Tends to be lazy. (C5)	3.34	3.42
Perseveres until the task is finished. (C6)	3.72	3.98
Does things efficiently. (C7)	4.01	4.05
Makes plans and follows through with them. (C8)	3.58	3.82
Is easily distracted. (C9)	2.98	2.98

**Table 5.9 'Neuroticism' of Respondents**

<b>Name of the Personality Factor: Neuroticism</b>		
<b>Personality Constructs</b>	<b>North TN</b>	<b>South TN</b>

Is depressed, blue. (N1)	2.51	2.59
Is relaxed, handles stress well. (N2)	2.99	2.85
Can be tense. (N3)	3.50	3.44
Worries a lot. (N4)	3.42	3.35
Is emotionally stable, not easily upset. (N5)	2.92	2.73
Can be moody. (N6)	3.53	3.44
Remains calm in tense situations. (N7)	2.64	2.43
Gets nervous easily. (N8)	3.11	3.07

**Table 5.10 'Openness' of Respondents**

Name of the Personality Factor: Openness to Experience		
Personality Constructs	North TN	South TN
Is original, comes up with new ideas. (O1)	3.46	3.80
Is curious about many different things. (O2)	3.95	4.18
Is ingenious, a deep thinker. (O3)	3.52	3.79
Has an active imagination. (O4)	3.76	3.98
Is inventive. (O5)	3.37	3.57
Values artistic, aesthetic experiences. (O6)	3.69	3.85
Prefers work that is routine. (O7)	2.91	2.88
Likes to reflect, play with ideas. (O8)	3.58	3.84
Has few artistic interests. (O9)	3.46	3.46
Is sophisticated in art, music, or literature. (O10)	3.35	3.37

### Relationship between Demographic Factors, Investor Sophistication and Personality Traits

Two categorical variables – One independent variable (Demographic factors and Investor Sophistication) and one dependent variable (Personality) – are used to perform a chi-square test of independence to explore the relationship between them. Given below is the intended research hypothesis to be examined.

1.  $H_0$  : There is no relationship between personality traits and demographic factors.
2.  $H_0$  : There is no relationship between personality traits and investor sophistication factors.

**Table 5.11 Relationship between Demographic Factors, Investor Sophistication and Personality Traits of North Tamil Nadu Respondents**

Demographic Variables and Investor	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
	Sig.	Sig.	Sig.	Sig.	Sig.
Gender	.464	.487	.837	.148	.967
Age	.010*	.009*	.134	.440	.322
Marital Status	.360	.828	.512	.398	.540
Education	.515	.615	.596	.813	.823
Occupation	.563	.427	.216	.204	.750
Annual Income	.030*	.052*	.022*	.001*	.264
Investing Experience	.053*	.041*	.142	.234	.393
Frequency of Trade	.798	.018*	.682	.206	.759
Trading Strategy	.321	.813	.053*	.846	.613

\* Significant at 5% level.

(N=342)

From the above table, as the significance value of Age, Annual Income and Investing Experience is less than 5% level of significance for Extraversion, alternative hypothesis is accepted. Hence, Age, Annual Income and Investing Experience have a significant role in determining the extraversion nature of the respondent. In the same manner, a significant association was found between Agreeableness with Age ( $\chi^2 = 17.049$ ,  $p < .001$ ), Annual Income ( $\chi^2 = 14.007$ ,  $p < .001$ ), Investing Experience ( $\chi^2 = 9.938$ ,  $p < .001$ ) and Frequency of Trade ( $\chi^2 = 11.854$ ,  $p < .001$ ). Therefore, alternative hypothesis is accepted.

Conscientiousness, one of the personality traits of sample respondents had a significant relationship with Annual Income ( $\chi^2 = 17.854$ ,  $p < .001$ ) and Trading Strategy ( $\chi^2 = 9.366$ ,  $p < .001$ ). Hence, alternative hypothesis is accepted. No relationship is found between Conscientiousness and other demographic factors. A significant relationship between Neuroticism and Annual Income is proved ( $\chi^2 = 25.340$ ,  $p < .001$ ). Hence, alternative hypothesis is accepted.

No statistically significant associative results were found between Openness and any of the listed demographic factors. Therefore, alternative hypothesis is rejected. Openness is the only trait having no relationship with any of the demographic and investor sophistication factors.

**Table 5.12 Relationship between Demographic Factors, Investor Sophistication and Personality Traits of South Tamil Nadu Respondents**

Demographic Variables and Investor	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
	Sig.	Sig.	Sig.	Sig.	Sig.
Gender	.201	.729	.292	.335	.315
Age	.765	.177	.039*	.006*	.196
Marital Status	.169	.968	.226	.773	.879
Education	.487	.899	.232	.317	.859
Occupation	.928	.873	.417	.123	.383
Annual Income	.452	.038*	.029*	.009*	.052*
Investing Experience	.370	.499	.053*	.163	.920
Frequency of Trade	.282	.908	.306	.824	.168
Trading Strategy	.946	.857	.854	.007*	.344

\* Significant at 5% level.

(N=336)

The above table clearly interprets that no statistically significant associative results between Extraversion and any of the demographic factors and investor sophistication factors. Therefore, alternative hypothesis is rejected. Whereas Agreeableness trait held a significant relationship with Annual Income of the respondent ( $\chi^2 = 16.285$ ,  $p < .001$ ).

Conscientiousness, one of the personality traits of sample respondents had a significant relationship with Age ( $\chi^2 = 13.258$ ,  $p < .001$ ), Annual Income ( $\chi^2 = 17.092$ ,  $p < .001$ ) and Investing Experience ( $\chi^2 = 8.902$ ,  $p < .001$ ). Hence, alternative hypothesis is accepted.

Neuroticism, the other personality trait of sample respondents had a significant relationship with Age ( $\chi^2 = 18.117$ ,  $p < .001$ ), Annual Income ( $\chi^2 = 20.304$ ,  $p < .001$ ) and Trading Strategy ( $\chi^2 = 14.260$ ,  $p < .001$ ). Hence, alternative hypothesis is accepted. A significant relationship between Openness and Annual Income is proved ( $\chi^2 = 14.392$ ,  $p < .001$ ). Hence, alternative hypothesis is accepted. No other demographic factor had relationship. Openness is the only trait having no relationship with any of the investor sophistication factors.

### Financial Personality Type of Respondents

**Table 5.13 Respondent's Financial Personality Type**

Active/Passive Traits	North TN		South TN	
	Active	Passive	Active	Passive
Earned majority of Wealth	44%	56%	39%	61%
Risking of own Capital	54%	46%	57%	43%
Inclination towards Wealth	40%	60%	46%	54%
Preference to maintain control over investment	61%	39%	57%	43%
Belief on Borrowing	47%	53%	56%	44%

## VI. FINDINGS

- 318 respondents (46.90%) of this research study used to invest in equity between 1 and 5 years.
- 41.15 per cent respondents are transacting in stock market only with short-term intentions.
- Age, Annual Income and Investing Experience of North TN respondents got a significant role in determining the extraversion nature. No statistically significant associative results were found between Openness and any of the listed demographic factors.
- A significant relationship between Agreeableness and Annual Income, Conscientiousness and Age, Annual Income and Investing Experience were found in case of South TN respondents.
- North TN respondents are predominantly 'Passive' investors whereas South TN is 'Active'.

## VII. CONCLUSION

Present study carefully attempted to infer the relationship between demographic factors, non-financial and financial traits of proprietary equity investor of the chosen area. Persuasive findings of this study indicate that Age, Annual Income and Investing Experience of North TN respondents got a significant role in determining their extraversion nature. No statistically significant associative results were found between 'Openness' and any of the listed demographic factors. A thorough understanding of investor's financial and non-financial personality traits along with demographic factors certainly will help the market intermediaries to devise appropriate marketing strategies and offering of financial product/service, and etc. to their clients.

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