

Information Acquisition and Trading Behavior: Moderating Role of Demographic Factors

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Abstract: Behavior of investor is very important during investment which is the component of behavioral finance. Information acquisitions play an important role in trading behavior of investors. For this reason, present research is going to examine the impact of information acquisition on trading behavior of investors in presence of demographics as moderator. The results show positive and significant relation not only among the information acquisition and trading behavior of investors but also among all the dimensions of information acquisition. Moreover, the outcome also proved that demographic factors moderate the relationship between the information acquisition and trading behavior. Present research is beneficial for investors which continually gather information and then take decision for investment.

Key words: Behavioral finance, information acquisition, trading behavior, investors, demographic factors, dimensions

INTRODUCTION

Background of research: Behavioral finance has emerged as new proceeds during the last decade to understand market anomalies in growing and rising economies. Behavioral finance seeks to combine conventional economics and finance with cognitive and behavioral psychological theory to give explanations for why irrational financial decisions are taken by people. As Shefrin (2008) stated that practitioners studying behavioral finance should learn to identify their mistakes and after understanding those mistakes they should have to take action to keep away from making those mistakes. Information acquisition is one of the significant determinants of speculation that can persuade investor's economic preference. Extra acquired information by investors lead to advanced trading in behavioral and rational models of asset determinants (Tauni *et al.*, 2015; Tauni *et al.*, 2016; Barlevy and Veronesi, 2000; Abreu and Mendes, 2012; Guiso and Jappelli, 2006; Peress, 2003). A believable justification is that either more signals receive from new informed investors or identify those signals accurately. The cost incurred by the investors in acquiring of information is remunerated with investment in risky assets. The investors imagine larger returns. They are expected to more trade when investors have high information and higher threat for investment are predicting toward regulate the portfolio with extra frequently (Peress, 2003). The existing literature provides help to investors to make

decisions about trading. Investors used a variety of information strategies for searching about trading in the stock markets. These data exploration methods are frequently based on those times that spend on searching the information through numeral links by visit or phone. The investors used many sources to gather information about the market. They are using the specialized media and also visit the financial advisors for gathering the useful information about the financial market. It is oblique to the worth of the information sources have effect on the trading activities of investor, since, a bit of information from consistent resource could lead to high trading them those individual who is less truthful (Epstein and Schneider, 2008). Social closeness which is an indicator of demographics also effect on the investors trading behavior during financial decisions.

Social links can rely on geographical, demographic, cultural or linguistic distance and interpret into the difference in values among investors or traders. Grinblatt and Keloharju (2001) find that culture, language and geographical detachment influence portfolio choice of individuals in the sinnish stock market. Present study proposes how the demographics (namely age, gender and experiences) of respondents moderate the connection between acquisition of information and individual trading behavior during monetary decisions in the stock market.

According to the scholar understanding there is a research by Abreu and Mendes (2012) that have examined the relation between acquisition of the information and

the trading rate. This is reliant on investor's personality and on the source of information used by investor in the stock market. They are also measured self-confidence as a mental characteristic of investor that shows the impact of sources for gathering all information for individual on the regularity of trading is reliant on the investor confidence. They originate that arrogant investors trading with low intensity while they collect all the information from the interpersonal sources like compare as they are collecting information from specific sources that important for investors or from the financial guidance like professionals. Alternatively, investors who are not overconfident trading extra consistently when they are obtain monetary advice or they utilize specific sources as compare to while information's are gather from the personal sources. Present research joins Abreu and Mendes (2012) research through adding one more mental (psychological) characteristics of individual investor like personality. Another study by Tauni *et al.* (2015, 2016) in which they show how the traits of personality effect on the acquisition of information and investor behavior in trading and we add a different variable as moderator known as demographics.

The researcher develops a theoretical framework through combining the literature of information exploration and behavioral investment. This study proposes that the information acquisition is impact on the investor behavior during trading may differ depending upon the demographics. In additional, researcher studies the distinctive investor demographics can moderate the relation among the information acquisition and investor behavior for trading. To researcher intellectual capacity there are no prior study have been conducted, so, to make clear variations in the impact of information acquisition on trading behavior of investors by using demographics. This study strives to fill up this gap in Pakistan Stock Exchanges. In the second section, of the research provides a literature review of related finding and issues. The third section, of the research describes the methodology. The fourth section of the research discusses findings and the final section of the research gives conclusion.

Literature review

Information acquisition: Information acquisition means to collect all sources of information about how present things in business process and other financial purposes. The information acquisition literature provide enough confirmation that investor apply different techniques for gathering the information these strategies facilitate them to create trade decision that are usually base on rate criterion the era spend on in order to find the quantity of

links by phone or appointment and the numeral of source use to collect data (Claxton, 1974; Klein and Ford, 2003). It moreover, recommended that the excellence of the data acquisition has a control on investor trading performance. Information acquisition has been single the mainly usually considered issue in investment countryside in current era (Llodra-Riera *et al.*, 2015) particularly as in rank gaining have been postulate as individual of the mainly important factor in the assessment production practice (Dey and Sarma, 2010). Previous study on information seeking behavior has observant on identify the common use information ways (Llodra-Riera *et al.*, 2015).

Barlevy and Veronesi (2007) focused on special set of assumptions and research on the financial markets and information. They present an example and provide some conclusions from the literatures of others. There example is mostly agents are acquire more information and price do not important to becomes informative and all agents have more motives of information's acquiring. They mention in Barlevy and Veronesi (2007) extra predictions of the model which is eliminate in the conventional framework.

Similarly, Barlevy and Veronesi (2007) worked on "Information Acquisition in Financial Markets a Correction" and expand their previous assumptions. They illustrate their results that are price of assets affected due to fundamental changes in the situation. They explain manager's issues more shares at the time when they need and the price of share increase at this time of issuance. They take another example, like some agents are liquidating their some assets in the future rather than today if high income correlates to the basics. The news (positive news) will be opposing the sale pressure about fundamentals. In that's case high number of agents required for acquire the information's and this raise prices or may be down the prices of when fundamental low or high. They also explain the resesarch of Chamley (2007) in there example and show learning is a strategic substitution in the example. Watanabe (2008) examine information asymmetry in a covering era's structure with various risky resources that have typically dispersed adjustments of investors. Various financial market balances acquires in these models as a result of the self-fulfilling predictions of covering eras.

Guiso and Jappelli (2006) stated that arrogant investors are not as much of ready to depending on information gave by the financial counsels, banks and they want to gather the information openly. Thus, they might gather the information on the basis of share trading system specifically from particular sources. Moreover, it can also be struggled that if financial counsel experts investors get then this will quick be easy to self-assessment of their personal aptitudes and they have

normal choice to select (Fischer and Gerhardt, 2007). Hong *et al.* (2004) set that societal association by individual financial specialists may partially encourage securities exchange investment. Hong *et al.* (2005) evaluated that share reserve supervisors will maybe operate in a precise reserve but other store chief trade is presented.

Brown *et al.* (2008) fined points which confirm that causal group impacts with regards to securities exchange involvement. Ivkovic and Weisbenner (2007) located a positive connection between people unit stock buys and those made by neighbors and these outcomes could be recognized as a viable impacts on the trades they show similarity in feelings or normal responses to news. Kaustia and Knupfer (2009) explained that the region return impact on individual financial investors securities exchange support choice is twisted and just optimistic returns increment the interest in the financial exchange. In any case no immediate confirmation of the gossip effect on exchanging by the individual speculators has shown during the trade.

Trading behaviors of individual investors: Epstein and Schneider (2008) recommended that nature of information acquisitions have an impact on speculator trading behavior. Information from reliable sources has encouraged to new exchanging (portfolio rebalancing) than information from the less consistent (unsatisfactory) source. Fischer and Gerhardt (2007) stated that financial counsel from the professional might be rapidly approached to a superior self-evaluation to speculators due to their own abilities. As a result, to more balanced venture choices are obtained with a reasonable positive effect on trading. Researcher Ivkovic and Weisbenner (2007) guaranteed that words have impact is “a wide fact to influences monetary choices complete by the person fiscal guide. As much as, may try to decrease research costs and avoid their absence of information by depending on verbal connection with the people about them. But those forecasting have never tried and the researchers have not force to select this and there is no immediate confirmation of the effect of the information’s acquisition as the establishment of investor’s investment decisions on the rate of trading.

Different researches allow investors to relate trading behavior and the information’s. The distinctions of views take after Miller (1977) argument that speculators may most likely differ in their financial information. Since, they have capacity that is extremely hard to make it is diffidently to accept that all speculators have similar trading behavior to the normal return and same division of return for all securities. According to Miller, particularly

for small size stocks, there is a high volume related with financial specialists. Anything that builds in which financial specialist believe that all the information’s of a safety will be about higher trading volume. Lately, Kandel and Pearson (1995) disputed that this discrepancy between merchants is absolutely related with irregular amounts of trading. Such differences may emerge on the basis that brokers that have distinctive private information or basically they are more understand and known information in an unexpected way, instead of dealer madness. In view of differences of estimate accept normal specialists with various possible capacities to decode information (Kandel and Pearson, 1995). These operators “settle on a truce” on this critical procedures in the budget of the investor and examine their values that they collect from those facts that they watch similar information. Excluding individuals models infrequently helped us to understand the reasons why individuals settle on a truce?

In the literature of behavioral finance, researchers disagree from that inattention which may directly related to higher trading volume. For De Bondt and Thaler (1995) inattention is the important point for variable that expected to realize the trading challenge. Odean (1998) contended that complex state of trading volume is the most essential impact on overconfidence. Statman *et al.* (2006) displayed experimental confirmation for the marketplace of US and argument to the trade capacity is increased following significant yields, as investment successfully expands level of superiority. Barber and Odean (2002) stated that sexual orientation is an excellence substitute for superiority (courage’s among male is higher than among females) evaluates that men conversation is higher than female.

The web (internet) may impact on financial investor’s performance. Glaser and Weber (2004) find that online investors trading are more frequent. Barber and Odean (2002) reported that trading volume increments after speculators go on the web. Choi *et al.* (2002) explored to facilitate trade rate increment after the arrangement of a network base on trade distract in two business 401(k) 1st departure preserve and 2nd money arranges.

Peress (2003) can contend that speculator trading conduct is driven by the size and risk of the portfolio. Actually, estimation of the information of increments is contributed on sum of those and the danger of the portfolio; financial specialists get more information and expanding the accuracy of their standard and activating of more knowledgeable people to hold on more stock. Glaser and Weber (2004) reported that a beneficial connection between portfolio range and the trading by recent investor is more helpful relative.

Demographics: Demographic factors impact on the investor's behavior for trading including the trading knowledge and style of investment of the investors. Actually, one can be dispute that high experienced financial specialists are more complex and consequently mix their portfolios (Dorn and Huberman, 2005) and individuals that embrace the benefits for lesser timeframes are depend upon to increase the trade. Scholar also manages for self-announced risk avoidance. Hazard loving speculators are higher level to get on danger and predictable to deal more (Dorn and Huberman, 2005). Researchers describe their review as knowledge does not effect on trading but rather financial specialists who cleave to capital for long period of time trade less. Investors that are risk lover trading more.

Beneke (2013) studied the impact on key demographics (to be specific age, wage, gender and national grouping) on the relationship between seeing risk and buying expectation of buyers to purchase these brands. The results recommend slight contrasts to the demographic groupings. The two most important types of saw risk practical and risk of time were improved in the 26-45 ages gather and proposing that extra activities should be set to relieve working age buyers of the authority of these brands. Allmon *et al.* (2000) evaluated those elements that effect on business substitute they have proper introduction and components that effect on substitute impression of moral classroom practices. Impressions of classroom practices were study as a substitute for future impression of business practices. Autonomous components included gender, age and religious introduction, nation of beginning, personality and moral introduction. Various elements were identified with moral introduction yet just age and religious introduction showed much contact of moral classroom practices.

Bommer *et al.* (1987) include recommendation which demographic factors might impact behavior. Correspondingly, Stead *et al.* distinguished age and gender role as conceivably critical impacts. This reading, researcher explored the probable impact on following demographical factors, experience and gender. A few analysts have neglected to locate any critical contrasts in ethicality as a component of era. The majority observational information may have demonstrated that period is absolutely identified with people's moral behaviors, attitudes and beliefs. Additionally, little information has demonstrated that more youthful people are more scheming compare to old people by Hunt and Chonko. Researcher estimated that larger young people would be highly able than high experienced people to connect in insider trade.

Researcher additionally investigated the relationship among demographics and the ongoing impacts of large scale financial stuns by breaking down the impact of a onetime statistic or demographic stun to the economy. Researcher fined that the demographic organization of business sectors altogether, impacts on the reaction of total stuns. When a demographics change figures the share trading system the interest of the young's in respect to the old, the dependence of costs on latest profits with respect to past profits also increase. The demographic forecasts are in friendship with confirmation by Cassella and Gulen (2018) who measured how much speculators current experiences of return in respect to more established experiences of return help forecast their potential regarding upcoming returns. They locate a positive connection between this expansive measure of understanding (which they name extrapolation inclination) and the relative interest of youthful versus old speculators in the share trading system.

A number of researchers have investigated the relationship among demographics like gender and ethicality some establish no corroboration of an association (Houston; Kidwell *et al.*), however, the prevailing part found vital gender contrasts. A small number of researches that have indicated gender contrasts recommended that men might be better than women (Gable and Topol), however an in general superior number of study exhibited that women are better than males.

Information acquisition and trading behavior: Individual of the mainly significant components of investment is information acquisition which can effect financial decisions of investor. In past, literature stated that information of acquisition is more completely associated to trade occurrence (Abrue and Mendes, 2012). The hypothetical reason of this universal outcome is that financier who decides to become well informed and also get extra information or raise the accuracy of information they collect. The price of data acquisition is remunerated by invest in dangerous asset and expect larger profits. A risky investment along with high acquiring of information leads to normal adjustment in an investor's selected portfolio which consequences in greater trading (Peress, 2003). It must be prominent that information is collected before and later for chosen a portfolio. Guiso and Jappelli (2006) and Peress (2003) said that investor prefer to do business after they gather information though an empirical approach, investor might be decide to get financial (economic) information after their decision about trading to ensure the performance of their selected portfolio.

Financial guidance for investment from experts positively affects trading as it permits speculators to better investigate their own aptitudes and as a result prompts to more careful decisions in trading. In view of the impact of monetary opinions on collection, Mullainathan *et al.* confirmed that monetary guidance is emphatically identified with significance arrangement. These results were restating who similarly demonstrated that speculators who get monetary advice have a more important level of information collection. Researcher recommended that speculators trade more frequently and again when they get monetary information's from experts or utilize specific sources to get information as a result of their high importance and wide assessment of securities trading. Epstein and Schneider (2008) demonstrated that financial experts are highly regulating their portfolios and therefore increase the trading as possible when they obtained information from a reliable source.

Karabulut (2013) found that the people who are financially less advanced have a tendency to have financial counselors/advisors. These discoveries are in distinguishing Bhattacharya *et al.* (2012) who hypothesized that fiscally modern speculators have a positive vision of monetary counsel and therefore counseled financial investors.

Ivkovic and Weisbenner (2007) guaranteed that word-of-mouth statement is a wide fact that may impact financial choices of individual financial specialists as they lack aptitude for assessing investment choices and have a tendency to diminish information look costs by depending on informal correspondence. Duflo and Saez (2002, 2003) presented that a council choice to take an interest in retirement plan is influenced by the decisions of different workers. In a revise which the impact of social relations on investment choices, Hong *et al.* (2005) found that funds administrators of a similar city are probably going to exchange a particular stock, if other store supervisors are trading the comparable stock.

Li research that, the probability of family financial investors to take an interest in securities exchange in the following 5 years increments significantly, if their parents or youngsters had made their first stock exchange venture during the past 5 years. They proposed that information sharing between relatives altogether influences interest in securities exchange.

Changwony *et al.* set up that active connection in a social gathering surely influences securities trading interest. Abrue and Mendes (2012) stated that information of acquisition is absolutely associated to trade occurrence. An investor who accurately receives the information before trading they are able to become a good trader. Barlevy and Veronesi (2000) also focus on special

set of assumptions and work on the financial information. So, the present research is going to propose this hypothesis:

H₁: information acquisitions have important effect on the investor trading performance

Demographics, information acquisition and trading behavior:

There is fact that behavior of investors with related to information depends upon on the psychological deterrents and socioeconomics characteristics. Behavior of investor may fluctuate as indicated by age the location that which they survive (Goetzmann and Kumar, 2008). Peress (2003) demonstrates that richer investor's worth of information is high and lower level investors trade least even with extremely exact information. Some researcher like Graham *et al.* (2009) being those investors who consider experienced trade extra commonly. Some researchers give substantiation that dynamic rebalancing is highly obvious for modern families. Apparently silly behavior decreases significantly with investor's complexity or with investor's wealth. Briefly, characteristics of investors may effect on the acquisition of information and trading.

According to Bauer and Smeets (2010), socio demographic factor such as masculinity, period, returns, level of instruction have normally be used to identify the performance of individual investors, predominantly the conservative investors (Graham and Kumar, 2006). The similar socio demographic factors were familiar with compare common investors to conservative investors (McLachlan and Gardner, 2004). Rosen *et al.* found that, compared to conventional investors, mostly investors are young and include a superior rank of education. The dispute that conservative investors compared to decent investors in Australia are mostly younger, female, extra educated except investment less diversify and inferior selection. However, these studies absolutely think by social investors as a uniform group, since, they utilize comprehensive information (Bauer and Smeets, 2010a, b).

Verrecchia (1982) demonstrated that risk divergent financial specialists get less information. Ridiculous performance reduces significantly with financial specialist trading information (Nicolosi *et al.*, 2009). Peress (2003) demonstrated exceptionally risk opposed speculators advantage small from information, since, they would put less in stocks regardless of the possibility that they had extremely exact information. Socioeconomic attributes, including age, gender, size of family, place of resident, material status, occupation, social status, income and education. Utilizing the consequences of this model, we

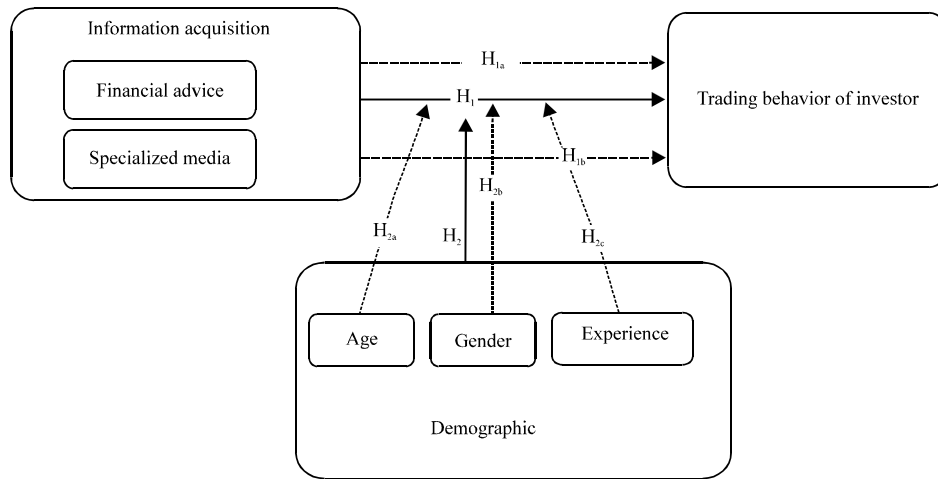


Fig. 1: Hypothetical framework

explain that more young financial investors are extra traded. These outcomes are reliable through the writing which finds that most young financial specialists are more inclined to trade more by taking risk. The non-significance of the variable related with gender is reliable with different analysis (Glaser and Weber, 2004; Grinblatt and Keloharju, 2001).

Past researchers have found that females are not, so, much sure but rather more risk unfavorable in settling on venture choices. Women are also establishing to have less consequence for monetary matters and have a tendency to be quick spenders. Females similarly tend to put more prominent highlighting on trust in their monetary guide. They are additionally more averse to have temporary investments (Fisher, 2010). Then again, men are observed to be deeply particular of the information. Men have a tendency to use more heuristics in basic leadership (Graham *et al.*, 2009). Masculinity did not essentially impact retirement arranging expectation in developed country.

Several studies are conducted to check the effect of demographic factors on investor's investment decision making. Individual investors are having different age, gender and experience for investment that show the different investors attitudes towards financial decision making (Sadiq and Ishaq, 2014). Tauni *et al.* (2015) proposed that some socio economics factors like demographics factors may be used as a moderator during financial choices. So, the present research is going to propose this hypothesis (Fig. 1):

H_2 : demographics will moderate relation among information acquisitions and the investor trading performance

Research frame work

Hypothetical research model

Hypothesis development:

- H_1 : information acquisitions have significant impact on the investor trading behavior
- H_{1a} : financial advices have significant impact on the investor trading behavior
- H_{1b} : specialized media have significant impact on the investor trading behavior
- H_2 : demographics will moderate relationship between information acquisitions and the investor trading behavior
- H_{2a} : age will moderate relationship between information acquisitions and the investor trading behavior
- H_{2b} : gender will moderate relationship between information acquisitions and the investor trading behavior
- H_{2c} : experience will moderate relationship between information acquisitions and the investor trading behavior

MATERIALS AND METHODS

Population and sample: Data was collected from investor of stock exchange market in Pakistan. The respondents are those individual investors who directly invest in the stock markets. The population of our study is all the individual investors who invest for the trading in Pakistan Stock Exchange Market. Data can be collected from different individual investors who purchase and buy share from Pakistan Stock Exchange in Southern Punjab with the help of financial institutes like NIT those help the investor during investment decisions.

Method of data collection: This study has adopted the explanatory technique for research. The primary data was collected from the main cities of Punjab with the help of brokers and financial institutes. Total number of questionnaires was 500 that were distributed personally to the futures investors out of which 301 questionnaires were successfully received from the investors of the Lahore Stock Exchange (LSE).

Measures: The variables were measured through different scales adopted by early researchers.

Information acquisition: Information acquisition construct contain 8 items developed by Tang *et al.* (2012). Likert scale which is ranging from 1-5 have been used to collected data from responses of all items where 5 coded as strongly agree and 1 coded as strongly disagree.

Trading behavior: Trading behavior measured by 16-items scale, developed by Likert scale which is ranging from 1-5 have been used to collected data from responses of all items where 5 coded as strongly agree and 1 coded as strongly disagree.

Demographics: The demographic considered variables such as gender, age, investment experience of investor and also educational status of investor. In this research these are taken as moderator.

Method of data analysis: All the data which obtained through questionnaires for the research was entered in SPSS (Version 22.0). Firstly, data was coded in SPSS for further processes and analyzing. SPSS (Version 22.0) consists of two file variable view and data view for code, number, value and label the data. Different statistical tools such as reliability analysis, correlation analysis and data screening, missing value analysis, demographics frequency analysis, hierarchical multiple regression analysis and finally, moderation test were apply for the analyze of the present research data.

RESULTS AND DISCUSSION

Demographic analysis of respondents: In this part focuses on present an explanatory analysis of the characteristics of the sample. Personal demographic factors of respondents such as gender, age, working experience and educational status are explored in this part. In organize to analysis the proposed research model data was collected from the trading investors through questionnaire. The frequency analysis of gender of respondents can be seen that data is collected from both

male and female respondents. Out of 301 respondents 250 were male and 51 were female. Or researcher can say that 83.1% were male respondents and 16.6% were female respondents. The frequency analysis of respondent's age can be seen that from the 5 groups of age many of the respondents lie in the age group of 31-40 which were 38.5, 31.9% respondents lie in the group of 21-30, 19.6% lie in the group 41-50, 6.3% lie in 51-60 and 3.3% lie in the respondents age 20 and under. Working experience of respondents was measured using 5 intervals ranging from 0-5, 6-10, 11-15, 15-20 and 21 years or above. From the frequency analysis it is seen that most of the respondents were having a working experience of 6-10 years. The 36.5% respondent's have experience of 0-5 years, 11.0% were 11-15 year's, 5% were 15-20 year's experience and only 5.6% respondent's were 21 and above year's experience. The frequency analysis of respondent's educational status can be seen that sample was grouped into four categories. Most of the respondents have a degree of post graduate which were 47.2, 29.9% respondent's have graduate, 22.3% were M.phil and 0.7% respondent's were have a PHD degree.

Data screening: Before applying any statistical methods data screening is an important step. There are number of things that researcher keep in mind. Data screening is used to check any laciness in the data in term of missing entry in the data, record mistakes and double entry of the records and also recognized those values which may affect the process of analysis. Table 1 is shows the Cronbach's alpha values of variables in the research. Cronbach's value of all the variables are 0.70 or higher than 0.70. So, the researcher says that in the present study the measures of the variables are internally reliable and consistent.

Correlation analysis between variables: The results of correlation analysis of the current study are presented in Table 2. It can be seen that all the variables involved in this study are positively correlated with each other the coefficient of correlation varied from 0.074-0.563. The weakest correlation was found between learning and self-determination as the value of their correlation is 0.074. On the other hand with the correlation value of 0.563 the correlation between information acquisition and trading behavior was found to be strongest one.

Table 1: Reliability of variables

Scale	Value of Cronbach's alpha	No. of items
Information acquisition	0.746	8
Trading behavior	0.847	16
Personality traits	0.710	25
Demographics	0.803	4

Table 2: Correlation analysis

Correlations	Comp infor	Comp trade	Comp demo	Comp personality
Comp_infor				
Pearson correlation	1	0.240**	0.259**	0.074
Sig. (2-tailed)		0.000	0.000	0.001
N	300	300	300	300
Comp_trade				
Pearson correlation	0.240**	1	0.214**	0.563**
Sig. (2-tailed)	0.000		0.000	0.000
N	300	300	300	300
Comp_demo				
Pearson correlation	0.259**	0.214**	1	0.147*
Sig. (2-tailed)	0.000	0.000		0.011
N	300	300	300	300
Comp_personality				
Pearson correlation	0.074	0.563**	0.147*	1
Sig. (2-tailed)	0.001	0.000	0.011	
N	300	300	300	300

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed)

Table 3: KMO and Bartlett's test of sphericity

Variables	Values
Kaiser-meyer-olkin measure of sampling adequacy	0.701
Bartlett's test of sphericity	
Approx. Chi-square	8926.485
df	1176
Sig.	0.000

Sample adequacy: The KMO and Bartlett's test is adopted to examine the adequacy of the sample chosen for the study. The KMO values should be >0.5 and significance level should be <0.05. Sometime KMO and Bartlett's test of pphericity lie between 0.5-0.7. In present study the KMO and Bartlett's test of Sphericity is 0.701 which is higher than 0.5. The significance level is 0.000 which is very good for research. So, the result is proving that the sample is statistically significant for the further research (Table 3).

Stepwise multiple regression analysis

Regression analysis of information acquisition and investor trading behavior: Multiple regressions analysis was used for testing the hypothesis which were developed from the research framework. In which measure the interaction effect among the dependent variable, moderator and independent variables of the study. This analysis evaluates that how much variation occur in the dependent variable due to independent variable. Equation for regression model is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where:

- β = Regression coefficients
- Y = Dependent variable
- X = Independent variable

Following models have been describe in this study by using analysis of multiple regression to verify the hypothesis all these models were used in the study.

Model 1: Analysis related to the direct impact of information acquisition and its dimensions on the trading behavior of individual investor.

Model 2: Analysis about the direct influence of information acquisition and its dimensions on the trading behavior of individual investor by using the moderator which are demographics factors with its dimensions.

Model 1; Analysis related to the direct impact of information acquisition and its dimensions on the trading behavior of individual investor. Direct impact of information acquisition on the trading behavior of individual investors: In this model the impact of information acquisition on the trading behavior of individual investors is measured. Direct relationship is shown by this model among independent variable information acquisition and dependent variable trading behavior of individual investor. Regression analysis and relationship between variables is given (Fig. 2).

R² value in this relation is 0.057 which represent that 5.7% variation occurs in trading behavior due to information acquisition. Fitness of the model is examined by using the F-test. F-test value is highly significant with the significant level 0.000 which shows that this model is good for the data. β value in the table shows that 1% change in the independent variable information acquisition bring 23.9% change in dependent variable trading behavior of investor in the market (Sig. level is 0.000) (Table 4) Regression Eq. 1:

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

$$Y = \beta_0 + 0.239 X_1$$

From the above equation a positive relation exist between information acquisition and individual trading behaviors. Similarly, R² value in this relation is 0.158 which

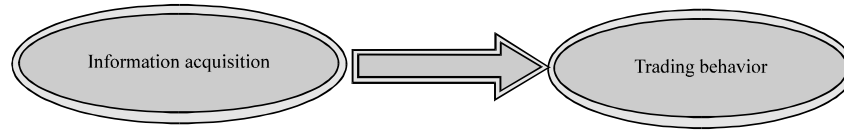


Fig. 2: Information acquisition impact on the trading behavior of investors

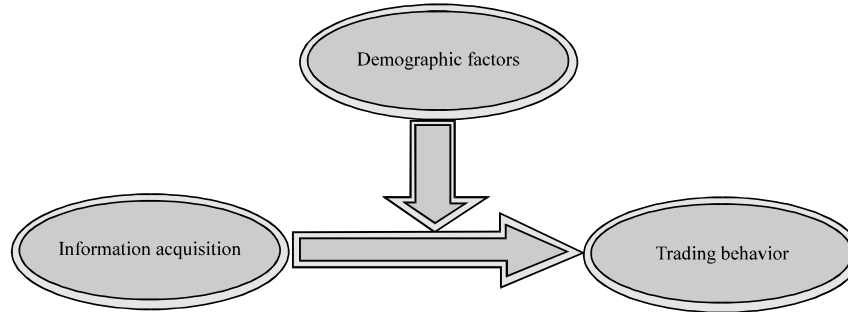


Fig. 3: Demographic factors as moderation between information acquisition and trading behavior

Table 4: Regression analysis of information acquisition and trading behavior of investors

Variables	R ²	F-values	B
Information acquisition	0.057	18.074	0.239
Trading behavior sig.		(0.000)	(0.000)

Table 5: Regression analysis of financial advice impact on the trading behavior of investors

Variables	R ²	F-values	B
Financial advice	0.158	56.114	0.398
Trading behavior sig.		(0.000)	(0.000)

represent that 15.8% variation occurs in trading behavior due to financial advice. Fitness of the model is examined by using the F-test. F-test value is highly significant with the significant level 0.000 which shows that this model is good for the data. B value in Table 5 show that 1% change in the independent variable financial advice bring 39.8% change in dependent variable trading behavior of investor in the market (Sig. level is 0.000) Regression Eq. 1:

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

$$Y = \beta_0 + 0.398 X_1$$

From the above equation a positive relation exist between financial advice and individual trading behaviors. R² value in this relation is 0.210 which represent that 21.0% variation occurs in trading behavior due to specialized media (Table 6). Fitness of the model is examined by using the F-test. F-test value is highly significant with the significant level 0.000 which shows that this model is good for the data. B value in Table 6 show that 1% change in the independent variable specialized media bring 10.1% change in dependent variable trading behavior of investor in the market (Sig. level is 0.000) Regression Eq. 1:

Table 6: Regression analysis of specialized media impact on the trading behavior

Variables	R ²	F-values	B
Specialized media	0.210	13.101	0.201
Trading behavior sig.		(0.000)	(0.000)

Table 7: Criterion: trading behavior

Variables	R ²	F-values	B
Information acquisition	0.057	18.074***	0.239***
Demographics	0.085	13.872***	0.174***
Interaction	0.099	10.904***	0.581***

Table 8: Criterion trading behavior

Variables	R ²	F	B
Information acquisition	0.057	18.074***	0.239***
Gender (demographics)	0.059	9.294***	0.042***
Interaction	0.063	6.607***	0.671***
Information acquisition	0.057	18.074***	0.239***
Age (demographics)	0.074	11.881***	0.136***
Interaction	0.082	8.885***	0.470**
Information acquisition	0.057	18.074***	0.239***
Age (demographics)	0.092	15.124***	0.189***
Interaction	0.110	12.263***	0.660**

***p<0.001; **p<0.01, *p<0.05; °p <0.10

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

$$Y = \beta_0 + 0.201 X_1$$

From the above equation a positive relation exist between specialized media and individual trading behaviors when make a financial decision (Table 7 and 8).

Model 2: effect of information acquisition on trading behavior with the moderation of demographics factors: In this model all sub variables of information acquisition (financial advice and specialized media) are measure on trading behavior while demographics factors with its dimensions are taking as a moderator in this study (Fig. 3).

Table 9: Summary of accepted/rejected hypothesis of the research

Hypothesis No.	Hypothesis	B (Sig. level)	Rejected/Accepted
H ₁	Information acquisitions have significant impact on the investor trading behavior	0.239***	Accepted
H _{1a}	Financial advices have significant impact on the investor trading behavior	0.398***	Accepted
H _{1b}	Specialized media have significant impact on the investor trading behavior	0.201***	Accepted
H ₂	Demographics will moderate relationship between information acquisitions and the investor trading behavior	0.581***	Accepted
H _{2a}	Age will moderate relationship between information acquisitions and the investor trading behavior	0.671***	Accepted
H _{2b}	Gender will moderate relationship between information acquisitions and the investor trading behavior	0.470**	Accepted
H _{2c}	Experience will moderate relationship between information acquisitions and the investor trading behavior	0.660**	Accepted

***p<0.001; **p<0.01; *p<0.05; °p<0.10

Regression equation is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Regression Eq. 2:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

$$Y = \beta_0 + 0.239X_1 + 0.174X_2 + (0.581)$$

According to Table 7 all the three scenarios (F, G and H) are statistically significant relationship due to $t_1 > 0$ and demographics positively relate to the results. All these cases show that demographics act as an enhancer among the information acquisition and trading behavior ($t_2 > 0, t_3 > 0$) (Table 7 and 8) Regression Eq. 2:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

$$Y = \beta_0 + 0.239X_1 + 0.042X_2 + (0.671)$$

Regression equation No. 2G:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

$$Y = \beta_0 + 0.239X_1 + 0.136X_2 + (0.470)$$

Regression equation No. 2H:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

$$Y = \beta_0 + 0.239X_1 + 0.189X_2 + (0.660)$$

This research investigated the how the information acquisition (financial advice and specialized media) affect on the trading behavior of individual investors by taking demographics factors (age, gender and experience) as a moderators. This study also evaluated whether there exist any relationship among the independent variable information acquisition and dependent variable trading behavior and between there respected dimensions. Therefore, this research investigated that if there is any relationship between dependent and independent variables and how demographics affect the relationship and acts as moderator (Table 9).

The intention behind this study was to examine the psychological characteristics affecting on the investor trading behavior. When investors chose to acquired financial market information from different sources. Researcher concludes that information acquisition used by the futures investors have a large impact on trading behavior. Present study determines that financial advice has a positively significant impact on trading behavior of investor. With related to financial advice, present study results go with the Epstein and Schneider (2008) they examine that investors regulate their portfolios in during trading extra frequently when investors acquire more information from the sources which are highly reliable as compare to less trustable sources. Abreu and Mendes (2012) investigation also support to the present research who recommended that investors trade with high frequently when they are consulting financial advisors for getting useful and accurate advice before investment. Investors were deeply analysis the market conditions when they want to be invest. According to Fischer and Gerhardt (2007) who presented that financial advices from the expert might be a positive effect on the trading of investors because in this way investors better used their skills for evaluating the stock. Mangleburg *et al.* (2004) confirmed that investors capable to influence with social media which are less reliable to acquire new financial services due to hesitation for trade. Researcher expose that more acquiring of financial information by investors doesn't means they lead them all the time when trade because it might also state that trading is not a good idea.

But in behavioral and rational models of investment, large information required by investor which leads the investors to increase trading (Guiso and Jappelli, 2006; Peress, 2003). Peress presented that investor acquire the information before choice the portfolio for investment. Similarly, Guiso and Jappelli (2006) confirmed that arrogant investors acquire more information for increase trade. Present study proposes how the demographic factors (namely age, gender and experiences) of respondents moderate the connection between acquisition of information and individual trading behavior during monetary decisions in the stock market. Individual

investors are having different ages, gender and experience for investment that show the different investors attitudes towards financial decision making (Sadiq and Ishaq, 2014). Social factor such as demographics (age, gender and experience) also act as a moderator which and its dimensions also enhance the relationship between information acquisition and individual trading behavior.

Contribution for research: The present research seeks to find the impact of information acquisition on the investor trading behavior in the Southern Punjab Pakistan Stock Market. Some previous researches have been conducted in all over the Pakistan to find this relation between information acquisition and trading behavior during financial choices. Moreover, no previous study has been made in which demographic factors have been recognizing as a moderator between information acquisition and trading behaviour.

CONCLUSION

There are some restrictions in this research which shows that only few psychological factors relate with the financial decision might be consider. Other psychological or social factors relate with the financial trading like portfolio diversification, overconfidence and knowing about financial markets, environmental factors like CSR also under consideration.

LIMITATIONS

The reason for this research was to determine the impact of information acquisition (financial advice and specialized media) on the investor trading behavior. The result of this study will be help out for the individual investors to invest in best stock in the financial market to receiving the maximum return. This research presents benefits to the individual investors who want to invest in the financial market for better return. For this purpose the get advice from consultant and financial agents before investing in the financial portfolio. Scholars expand the literature by allowing the psychological factor of investor/individual social factor which is demographic factors. Individual investors are having different age, gender and experience for investment that show the different investors attitudes towards financial decision making. To improve the efficient use of information, strategy makers must to recognize the capacity of potential individual investors to development information getting from specialized media sources.

RECOMMENDATION

For future studies, some important limitations are as follows: first limitation of the research is the shortage of time to find the investors trading behavior before they are investing in the market. At second number the sample size of present study should be limited to Southern Punjab (Lahore Stock Exchange in Pakistan) only. It should be applied in other stock market. In future research original records of trading might be considered for the valid results of the study. The outcome of the study gives a suggestion of relation among the variables such as the final pressure may be depends on the relations of many other social factors.

REFERENCES

- Abreu, M. and V. Mendes, 2012. Information, overconfidence and trading: Do the sources of information matter?. *J. Econ. Psychol.*, 33: 868-881.
- Barber, B.M. and T. Odean, 2002. Online investors: Do the slow die first?. *Rev. Financial Stud.*, 15: 455-488.
- Barlevy, G. and P. Veronesi, 2000. Information acquisition in financial markets. *Rev. Econ. Stud.*, 67: 79-90.
- Barlevy, G. and P. Veronesi, 2007. Information acquisition in financial markets: A correction. Master Thesis, Federal Reserve Bank of Chicago, Chicago, Illinois, USA.
- Bauer, R. and P. Smeets, 2010a. Social values and mutual fund clienteles. Master Thesis, Maastricht University, Maastricht, Netherlands.
- Bauer, R. and P. Smeets, 2010b. Some men invest like women: The influence of social values on investment decisions and investor loyalty. Master Thesis, Department of Finance (LIFE), Maastricht University, Maastricht, Netherlands.
- Beneke, J., 2013. A closer inspection of the impact of perceived risk on purchase intention of premium private label brands: The effect of age, gender, income and racial group. *J. Bus. Retail Manage. Res.*, 7: 1-14.
- Bhattacharya, U., A. Hackethal, S. Kaesler, B. Loos and S. Meyer, 2012. Is unbiased financial advice to retail investors sufficient? Answers from a large field study. *Rev. Financial Stud.*, 25: 975-1032.
- Bommer, M., C. Gratto, J. Gravander and M. Tuttle, 1987. A behavioral model of ethical and unethical decision making. *J. Bus. Ethics*, 6: 265-280.

- Brown, J.R., Z. Ivkovic, P.A. Smith and S. Weisbenner, 2008. Neighbors matter: Causal community effects and stock market participation. *J. Finance*, 63: 1509-1531.
- Cassella, S. and H. Gulen, 2018. Extrapolation bias and the predictability of stock returns by price-scaled variables. *Rev. Financial Stud.*, 31: 4345-4397.
- Chamley, C., 2007. Complementarities in information acquisition with short-term trades. *Theor. Econ.*, 2: 441-467.
- Choi, J.J., D. Laibson and A. Metrick, 2002. How does the internet affect trading? Evidence from investor behavior in 401 (k) plans. *J. Financial Econ.*, 64: 397-421.
- De Bondt, W.F. and R.H. Thaler, 1995. Financial decision-making in markets and firms: A behavioral perspective. *Handbooks Oper. Res. Manage. Sci.*, 9: 385-410.
- Dey, B. and M.K. Sarma, 2010. Information source usage among motive-based segments of travelers to newly emerging tourist destinations. *Tourism Manage.*, 31: 341-344.
- Dorn, D. and G. Huberman, 2005. Talk and action: What individual investors say and what they do. *Rev. Finance*, 9: 437-481.
- Duflo, E. and E. Saez, 2002. Participation and investment decisions in a retirement plan: The influence of colleagues choices. *J. Publ. Econ.*, 85: 121-148.
- Duflo, E. and E. Saez, 2003. The role of information and social interactions in retirement plan decisions: Evidence from a randomized experiment. *Q. J. Econ.*, 118: 815-842.
- Epstein, L.G. and M. Schneider, 2008. Ambiguity, information quality, and asset pricing. *J. Finance*, 63: 197-228.
- Fischer, R. and R. Gerhardt, 2007. The missing link between investors and portfolios: Introducing financial advice. Master Thesis, E-Finance Lab, Frankfurt, Germany.
- Fisher, P.J., 2010. Gender differences in personal saving behaviors. *J. Financial Counseling Plann.*, 21: 1-11.
- Glaser, M. and M. Weber, 2004. Overconfidence and trading volume. *Geneva Risk Insurance Rev.*, 32: 1-36.
- Goetzmann, W.N. and A. Kumar, 2008. Equity portfolio diversification. *Rev. Finance*, 12: 433-463.
- Graham, J.R. and A. Kumar, 2006. Do dividend clienteles exist? Evidence on dividend preferences of retail investors. *J. Finance*, 61: 1305-1336.
- Graham, J.R., C.R. Harvey and H. Huang, 2009. Investor competence, trading frequency and home bias. *Manage. Sci.*, 55: 1094-1106.
- Grinblatt, M. and M. Keloharju, 2001. What makes investors trade?. *J. Finance*, 56: 589-616.
- Guiso, L. and T. Jappelli, 2006. Information acquisition and portfolio performance. Master Thesis, Centre for Studies in Economics and Finance (CSEF), University of Naples, Italy, Naples, Italy.
- Hong, H., J.D. Kubik and J.C. Stein, 2004. Social interaction and stock-market participation. *J. Finance*, 59: 137-163.
- Hong, H., J.D. Kubik and J.C. Stein, 2005. Thy neighbors portfolio: Word-of-mouth effects in the holdings and trades of money managers. *J. Finance*, 60: 2801-2824.
- Ivkovic, Z. and S. Weisbenner, 2007. Information diffusion effects in individual investors common stock purchases: Covet thy neighbors investment choices. *Rev. Financial Stud.*, 20: 1327-1357.
- Kandel, E. and N.D. Pearson, 1995. Differential interpretation of public signals and trade in speculative markets. *J. Political Econ.*, 103: 831-872.
- Karabulut, Y., 2013. Financial advice: An improvement for worse?. *SSRN. Electron. J.*, 1: 1-42.
- Kaustia, M. and S. Knupfer, 2009. Learning from the outcomes of others: Stock market experiences of local peers and new investors market entry. Master Thesis, Aalto University School of Business, Helsinki, Finland.
- Klein, L.R. and G.T. Ford, 2003. Consumer search for information in the digital age: An empirical study of prepurchase search for automobiles. *J. Interact. Marketing*, 17: 29-49.
- Llodra-Riera, I., M.P. Martinez-Ruiz, A.I. Jimenez-Zarco and A. Izquierdo-Yusta, 2015. A multidimensional analysis of the information sources construct and its relevance for destination image formation. *Tourism Manage.*, 48: 319-328.
- McLachlan, J. and J. Gardner, 2004. A comparison of socially responsible and conventional investors. *J. Bus. Ethics*, 52: 11-25.
- Miller, E.M., 1977. Risk, uncertainty and divergence of opinion. *J. Finance*, 32: 1151-1168.
- Nicolosi, G., L. Peng and N. Zhu, 2009. Do individual investors learn from their trading experience?. *J. Financial Markets*, 12: 317-336.
- Odean, T., 1998. Volume, volatility, price and profit when all traders are above average. *J. Finance*, 53: 1887-1934.
- Peress, J., 2003. Wealth, information acquisition and portfolio choice. *Rev. Financial Stud.*, 17: 879-914.

- Shefrin, H., 2008. *A Behavioral Approach to Asset Pricing*. 2nd Edn., Elsevier, New York, USA., ISBN:978-0-12-374356-5, Pages: 587.
- Statman, M., S. Thorley and K. Vorkink, 2006. Investor overconfidence and trading volume. *Rev. Financial Stud.*, 19: 1531-1565.
- Tauni, M.Z., H.X. Fang and A. Iqbal, 2016. Information sources and trading behavior: Does investor personality matter?. *Qual. Res. Financial Markets*, 8: 94-117.
- Tauni, M.Z., H.X. Fang and S. Yousaf, 2015. The influence of investor personality traits on information acquisition and trading behavior: Evidence from Chinese futures exchange. *Personality Individual Differences*, 87: 248-255.
- Verrecchia, R.E., 1982. Information acquisition in a noisy rational expectations economy. *Econometrica J. Econom. Soc.*, 50: 1415-1430.
- Watanabe, M., 2008. Price volatility and investor behavior in an overlapping generations model with information asymmetry. *J. Finance*, 63: 229-272.