Financial Literacy and Demographic Factors in Pakistan (Karachi)

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ABSTRACT

Purpose :
The motivation behind this study is to evaluate the financial proficiency of individual speculators/investors of the Karachi city of Pakistan who put resources into the Pakistan stock exchange, local financial market in Karachi. Likewise, it inspects the connection between financial education and the participation of the socio-economic-demographic components that influence the investment choice.

Methodology:
We articulated a modified questionnaire for our investigation, separated into three sections. The first part of which was dedicated to statistics of demographic factors. The subsequent part highlights factors influencing the speculation choice of the Pakistani speculators. The last section is committed to financial literacy utilizing examination-type, true and false, questions and incorporates 10 questions. A convenient sample of 231 Pakistani national financial specialists/investors is utilized for this purpose.

Findings:
The outcomes show that the financial literacy of Pakistani speculators' is relatively higher than the average expected level. The financial education seen to be influenced by salary, sex, and employment status, and workplace activity. Financial education exists paying little heed to the age of the respondents. We observed a significant difference in the level of financial literacy between groups of respondents as per their sexual orientation. More specifically, females have a lower level of financial education than males. At last, the outcomes show that there is a significant relationship between financial literacy and investment decision.

Conclusion:
Results likewise, show that respondents with higher financial literacy have higher stock holding as compared with those with low financial literacy.

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1. Introduction

Money market crunches and crises have tediously stood out making headlines repeatedly through the entire last era. Because of periodic unwanted results and dynamic fluctuations in the monetary condition and economic conditions, particularly in money markets, an urge is felt to improve speculators' financial proficiency. As indicated in World Bank's 2017 Global Findex database, Pakistan has been ranked the lowest in terms of financial access rate with 100 million unbanked adults. Pakistan has the lowest financial access in the world among the developing countries. About 100 million (50% of population) adults in Pakistan have no access to formal and regulated financial services. Even worse is the inclusion of less than 5% of women in the formal financial sector, as compared to South Asia's average of 37%.

In light of the statistics discussed above it is easy to understand why financial literacy in Pakistan has become a foremost concern of primary groups such as the government, the bankers, the employers, the community interest groups, the money markets along with other public as well as private organizations in the countries. The significance of developing and enhancing financial proficiency evolved rapidly because of the factors like evolution and advancement of new financial tools, the fluctuations and complication of financial markets, changes in the political conditions, changes in the economic conditions and also changes in the demographic factors. As Kefela (2010) reported that, Consumers are more than ever in need of a certain level of financial understanding in order to evaluate and compare the increasingly voluminous and complex information available on different financial products, such as bank accounts, saving products, credit and loan options, investment vehicles, insurance coverage, etc.

Financial world today is highly complex than ever in the past. Therefore, in order to enhance financial proficiency, many developed countries, namely USA, Australia, UK, Japan, and France etc. have started regular financial literacy programs. Financial proficiency has been given utmost importance lately, as they have proven to be crucial factors in improving financial inclusion in numerous studies. Kefela (2010) emphasized that financial literacy is critically important for provision of access to finance by developing incentives along with creating ideal environments which instigate preferred financial behaviors such as utilization of credit wisely, adequate saving and lastly efficient budgeting. Provision of easy access to insurance products or savings products may significantly influence consumers' future financial conditions and stability. Since savings are likely to represent a significant share of one's income therefore, have a substantial influence on the citizen's well-being. This phenomenon has been further discussed by Van Rooij who stressed that Stock market involvement should be considered as a vital economic decision. He explained since equity premium may be a crucial determining element of long-term returns to one's personal savings, therefore none participation in the stock market can be costly. There is extensive disparity in stock market participation amongst participants, especially with female participation being less than male participation (Van Rooij et al. 2011).

In reference to the above context discussed, the fundamental point of the examination is to evaluate level and assorted variation of consumer financial proficiency (literacy) in Karachi city of Pakistan. This examination plans to dissect the financial proficiency of the individual speculators of Karachi who put resources into the local financial markets as per their gender, age, educational level, employment status and their salary/income. Additionally, the examination will likewise look at the connection between financial proficiency and the impact of socio economic factors influencing investment and financial choices.

The present investigation is requested in five areas following the presentation. Segment 2 is restricted to summarizing the modern-day literature regarding to financial proficiency and stockholding. It moreover draws the hypotheses/speculations development. Segment three represents the empirical or observational models, the records portrayal and the variable measures. Area four expounds the results of the "log it" investigation and robustness checks. Section 5 is dedicated to the suggestions and proposals for further examinations.

2. Literature Review

In simplest words financial literacy is referred to:"the possession of the knowledge, skills and abilities on financial matters to confidently take effective and responsible decisions and to make appropriate use of financial resources. Lusardi and Mitchell (2007) describe financial literacy as "knowledge of basic economic terms necessary for taking rational financial and investment decisions about savings, loans, insurance and others". According to OECD, The Organization for Economic Cooperation and Development, (2005) the consumer referred to as a financial literate possesses:

- Knowledge and skills of risk assessment and financial potential assessment;
- Ability to identify possible assistance in financial matters;
- Ability to take quick and effective actions for improvement of financial standing.

Thus, it can be concluded that a consumer having understanding of financial operations financial tools and equipped with financial knowledge is capable of skillfully functioning on the financial services market. Hence can be considered as one being financially literate. Over the last few years, the problem of financial literacy has evolved as a field of scientific research and recognitions which concern various aspects of the phenomenon. Al-Tamimi and Kalli (2009), explained that "financial literacy is demonstrated by managerial skills with respect to personal funds. This concept refers to consumer ability or to consumer capability of independent functioning in the world of finance and money managing". According to Kefela (2010) definition of financial literacy is "the combination of consumers'/investors' understanding of financial products and concepts and their ability and confidence to appreciate financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being". However, if one follows the assumption formulated by Melitz (1970) that money is a set of symbols, financial literacy can be defined as abilities of reading and comprehending this symbol-code. It should be

added that significance of money and finances varies across societies, which shows that the process of evaluating financial literacy should be analyzed with respect to the cultural context. Thus one may safely conclude that, to date, in the subject literature the phenomenon of financial literacy has not been given one unequivocal definition.

2.1 Demographic Factors and Financial Literacy

Previously financial literacy was contemplated in various distinguishing perspectives. Government substances and private associations in developed countries have directed studies to gauge the financial education level of their populace. An examination by the Organization for Economic Cooperation and Development (2005) explored financial proficiency in twelve nations namely; the United States of America, the United Kingdom, European nations, Australia, and Japan. The examination led to the conclusion that those nations presumed the financial proficiencies to be at an extremely low level from majority respondents. Studies by Chen and Volpe (1998) in USA, revealed some relation amongst financial knowledge and age, sexual orientation, race as well as nationality. The results showed that financial literacy is mostly differentiated by the level of acquired education, by an income level and by professional experience. According to the research, women are found to acquire a lower level of financial knowledge as compared to men.

Volpe et al. (2002) inspected investment proficiency of 530 online speculators and the distinction in the proficiency level among different gatherings of members utilizing age, pay, gender, acquired educational level, and past online transaction or dealing experience as variables. The examination showed that the degree of financial proficiency changed with individuals' acquired educational level, experience, age, salary/pay, and gender. Specifically, females had a lot of lower financial education as compared to males and further, more established elderly members performed better in comparison to young/youthful members. Moreover, online participants were found to be well information than others. In addition, speculators with higher salary performed better in investments/speculations than those with lower pay, and financial specialists with higher educational certificates scored higher as compared to ones with low educational certificates.

A.C Nielsen (2005) conducted a national research on financial proficiency of adults in Australia. The primary consequences of this review illustrated reduced degrees of financial proficiency amongst respondents with low level of education, who were jobless or who were incompetent laborers, and respondents earning low income, unmarried and respondents at two extreme boundaries of the age profile. Yet again, in 2005 the results indicated a reasonable generalized improvement in the financial proficiency of adults in Australia.

Lusardi and Mitchell (2006) concluded more aged individuals' demonstrated trouble in addressing even the simplest and easiest word problem concerning interest rate, resulting in higher portion of right answers declining specifically due to higher age. Financially proficient individuals were found to be well prepared their retirement. The similar

investigation on financial literacy by Bernheim et al. (2001) announced that middle aged respondents acquired a personal finance management course in elementary school generally save a higher ratio of their wages as compared to other people who had not even started saving. In such circumstance, the effect of a course about personal money management might be a subject of the financial condition prevailing whilst the course was taken.

While trying to accommodate the discoveries of Bernheim et al. (2001), two new theories were proposed by Mandell (2008). The first stated that certain fractions of what is taught in secondary school regarding money management is stored in the memories of the learners until some stage later in life where they have adequate financial assets to use that knowledge. Under such circumstance, a course regarding (personal) finance management might not immediately affect financial proficiency unless the knowledge is applied. Generally, a consumer's incompetency in making self-benefiting financial choices in key areas identifying with purchaser financing might have unfavorable consequences upon the entire economy.

2.2 Investment Decision and Financial Literacy

Behavioral finance research is developing rapidly and is comparatively new. Within the field of behavioral finance it is presumed that "information structure and the characteristics of market participants systematically influence individuals' investment decisions as well as market outcomes. According to behavioral finance, investor market behavior derives from psychological principles of decision making, to explain why people buy or sell the stocks. Behavioral finance focuses upon how investors interpret and act on information to make investment decisions. In addition, the behavioral finance places an emphasis upon investor behavior leading to various market anomalies .

Behavioral finance is defined by Shefrin (1999) as "a rapidly growing area that deals with the influence of Psychology on the behavior of financial practitioners". Despite the fact that theories on "effective portfolio" encourage investors and individuals to invest fearlessly in financial tool and holding a diversified portfolio of risky stocks and bonds for greater returns. The reality, however, fails to verify this with empirical proofs. investigations show that "more than 50 percent of U.S. household do not invest in stocks, while the participation of European households in the stock market is even lower (Gomes and Michaelides (2005), Bucks, Kennickell, and Moore (2009), Fagereng, Gottlieb, and Guiso (2013)". several examinations have tried to explain the above discussed diminishing stock market participation, but have not been successful in solving this puzzle.

Past investigations have connected participation in the stock market to financial proficiency, intellectual capacity, awareness, and stock market attractiveness (Guiso and Jappelli (2005), Campbell (2006), Christelis, Jappelli, and Padula (2010), Arrondel, Pardo, and Tas (2014). Various ongoing examinations have connected nonparticipation in the stocks exchange market to lower financial literacy level and legitimate speculation knowledge (Hong, Kubik, and Stein (2004), Guiso and Jappelli (2005), Campbell (2006),

Calvet, Campbell, and Sodini (2007), Brown et al. (2008)). Van Rooij, Lusardi, and Alessie (2011) concluded that financial proficiency is emphatically associated with the decision of participation in the stock market and those who were less financially literate were more averse to put resources into the stock market.

The first study on the financial proficiency level of the Singapore populace was done in 2005 by the Money SENSE Financial Education Steering Committee, set up by their government. The review examined whether Singaporeans are learned about normal financial services and financial products and whether they have been settling on efficient choices in dealing with their finances. The investigation revealed that Singaporeans have a sound frame of mind toward fundamental money management, investment decisions and financial planning. Most Singaporeans save, monitor their spending, and have done some basic financial planning.

Authors Astuti and Trinugroho (2016), Amari (2015) individually confirmed that better financially literate individuals had better saving and investment plans and more stock market participation. Hilgert et al., (2003), Lusardi and Mitchell (2007a, 2008, in press; National Council on Economic Education (NCEE), 2005) all these investigations separately arrived at similar conclusion that individuals who were less financially literate allocated lesser portion of accumulated wealth into stocks. Followed by Al-Tamimi (2006) wherein he concludes a noteworthy connection between finance related education and investment choice. Disney and Gathergood (2013), Agnew and Szykman, (2005) and Christelis et al. (2010), supported that improvement in financial proficiency can have a critical effect in financial behavioral conducts.

Referring to the literature discussed above it can be underlined that there is gap in literature regarding description of financial literacy according to gender, age, education, level of income and consumer market experience, level of financial education or other determinants. The literature review recognizes a gap existing in previously conducted work, on the connection between financial proficiency and investment choices. In the present investigation, we endeavored to inspect the connection between financial proficiency level and investment/speculation choices.

3. Methodology

3.1 Questionnaire Design

Since the context of this study is relatively similar to the one conducted by Mouna and Anis (2016) in Tunisia to assess financial literacy levels, we employed the same questionnaire designed by them. This questionnaire is modified from the one designed and employed by Al-Tamimi (2006) and by the, Monetary Authority of Singapore (2005) to gauge the financial literacy and asses theinfluencing factors which define investment decisions. Just as Al-Tamimi (2006) elaborated, the first part of the questionnaire is associated to measuring financial literacy. Followed by the next part which identifies the most influential socio-economic and demographic factors that affect the financial behavior of the investors. For the present study, financial literacy level was

measured through objective measures, whereas the subjective measures were used for measuring the effect of socio-economic demographic factors on the stock market participation/investment decision.

Our modified questionnaire includes six questions (6) collecting required socio-economic demographic information. 10 questions are designed to gauge the respondent's knowledge of investment and finance. The questionnaire is segregated into two parts; the first part is devoted to measuring the socioeconomic and demographic variables namely: "age, gender, marital status, education level and income". Followed by the next part which is dedicated to assessing financial literacy level, and it consists examination-type true and false questions.

3.2 Data Sampling and Data Collection

The population of this study is Pakistani investors participating in Pakistan stock exchange, therefore our sample is the subset of this population. We opted Convenience based sampling technique for data collection and handed the questionnaires to investors who visited the Pakistan stock exchange trading floors. This technique for information assortment was opted by Mouna and Anis (2017) to evaluate financial literacy and its determinants in Tunisia. A similar strategy was additionally trailed by Hussein A. Hassan Al-Tamimi and Al Anood Bin Kalli (2009) for exploring financial proficiency and speculation choices of UAE financial specialists.

3.3 Variable Measurements

3.3.1 Financial Literacy:

Financial literacy is treated as Principal dependent variable. However, it also acts as dependent variable in LR1 model and further acts as a principal independent variablefor other models respectively. Since, it acted as continuous variable, it was being treated as a "Dummy Variable" (Lusardi and Mitchelli, 2007; Huston, 2010). In the present investigation we chose to incorporate 10 examination-type questions to quantify financial literacy. These questions included subjects simple and compound interest rates, the effects of inflation and few basic questions regarding difference between bonds, securities and stocks. Past investigations opted for inconsistent and unreliable measures of financial literacy, including only one to three questions example studies by Stango and Zinman (2008) and Lusardi and Mitchell (2007a).

3.3.2 Stockholding:

Stock holding acts as dependent variable that is the possession of stocks is treated as a dependent variable where respondent's stockholding is gauged through 1 question asking directly about the possession of stocks. Arrondel et al. (2014) stated "since stock holding is endogenous variable, the binary presentation allows us to use logistic regression method". Table 1 demonstrates how the variables are quantified and measured.

3.4 The Model Specification

For running the "log it" test, the following logistic regression models were developed:

LR1:FL = $\beta_0 + \beta_1$ (GEN) + β_2 (AGE) + β_3 (EDUC) + β_4 (INC) + β_5 (EMPT) +β_6 (WPA) +μi……..(1)

LR2: SH = $\beta_0 + \beta_1$(FL) + μi……..(2)

In the regression analysis model LR1, every group is examined based on socio-economic-demographic factors like: age, gender, employment status, income, work place activity and respondent's educational level. For regression specifications variables where examined as a "binary variable".

Table.1. Variables

Class	Phenomena	Measures	Variables
Dependent Variables			
Financial Literacy	Financial literacy level	Number of correct answers	FL
Stockholding	Stockholding	The stockholding is a "dichotomous variable", 1 if the respondent has Stockholding and 0 if otherwise	SH
Principal Independent Variables			
Economic Education	Economic Education level	"A categorical variable that Take 0, 1, 2, 3, respectively if the respondent response is: a lot, some, little and hardly at all"	EE
Daily use of economics	The use of economics in Daily decision-making	"categorical variable that take 0, 1, 2, 3, respectively if the respondent response is: A lot, some, little and hardly at all".	DE

Source: Author's own elaboration

4. Empirical Results

4.1. Respondents' Profile:

The questionnaire requested that every respondent give statistic information that included age, sexual orientation, pay, educational level, employment status, and workplace activity.

Table.2. Description of statistics to the respondents' qualities

Class	Phenomena	Measures	Variables
Auxiliary Independent Variables :			
Age	Age category	"A categorical variable that take: 0, 1, 2, 3, 4, respectively if the age group is (18–30), (30–40), (40–50), (50–60) and (+60)".	AGE
Gender		"GEN = 1 if a respondent is a male, 0 otherwise".	GEN
Education Level	Education Level category	"A categorical variable valued at: 0, 1, 2, 3, respectively if the education level group is: high school education, college education, diploma/higher diploma	EDU

		and Postgraduate degree".	
Employment Status	Employment Status category	"A categorical variable valued at: 0, 1, 2, 3, respectively if the employment status is: full time, part time, own business, and unemployed/retired/student".	EMP
Income	Monthly Income category	"A categorical variable valued at: 0, 1, 2, 3, 4, 5 respectively if the respondent earns: (10,000-30,000), (30,000-50,000), (50,000-70,000), (70,000-90,000), (90,000-110,000) and above 110,000".	INC
Work Place Activity	Work place activity category	"A categorical variable valued at: 0, 1, 2, 3 respectively if the respondent belonged to work place activity: banking, finance, investment or others".	WPA

Source: Author's own elaboration

Table.3. illustrates the characteristics of the respondents. Approximately 27.3% were between ages 18-25 years, 54.5% were between 26-35 years, 13% were between 36-45 years, 4.3% were between 46-55 years and 0.9% were between 56-65 years old. With correspondence to gender, 66.7% were males while33.3% were females. With respect to employment status 72.7%respondents were full time employees, 6.9% were part time employees, 9.5%owned a business while and 12.8% were either unemployed, had retired, or were students. Regarding work activity, 35.1% belonged to banking, 11.7% belonged to investment, 17.7% belonged to finance whereas 35.5% were from other field work. About 14.3%earned a monthly income from 10,000 to 30,000, 12.6% earned 30,000 to 50,000, 15.2% earned 50,000 to 70,000, 20.3% earned 70,000 to 90,000, 14.3% earned 90,000 to 110,000 and 23.4 % earned 110,000 and above monthly. With respect to educational level, 6.1% respondents acquired high school/equivalent degree, 0.9% were diploma holders, and 48.9% had acquired bachelor's degree/equivalent whilst42.2% were postgraduate degrees' holders.

Table.2. Demographics

Characteristics	Frequencies	Percentages (%)
AGE:		
18-25 years	63	27.3
26-35 years	126	54.5
36-45 years	30	13.0
46-55 years	10	4.3
56-65 years	2	0.9
65 and above	-	-
GENDER:		
male	154	66.7
female	77	33.3
EMPLOYMENT STATUS:		
Full time	168	72.7
Part time	16	6.9
Own business	22	9.5

Unemployed/retired/student	25	12.8
MONTHLY INCOME:		
10,000-30,000	33	14.3
30,000-50,000	29	12.6
50,000-70,000	35	15.2
70,000-90,000	47	20.3
90,000-110,000	33	14.3
110,000 and above	54	23.4
WORK PLACE ACTIVITY:		
Banking	81	35.1
Investment	27	11.7
Finance	41	17.7
others	82	35.5
EDUCATION LEVEL:		
High school/equivalent	14	6.1
Diploma holder	2	0.9
Bachelor's degree/equivalent	113	48.9
Post graduate degree	102	44.2

Source: Author's own elaboration

4.2. Financial Literacy Level

The literature review revealed that most commonly used procedures of gauging financial literacy acquired in majority of studies is either self-assessment questions or three to eight, on an average, exam-type questions. For instance, Byrne (2007) relied on inclusion of just four questions for his investigation to measure investment proficiency. Another example is Alexander et al. (1997) who depended on nine mutual funds question for his investigation and Volpe et al. (2002) included ten questions for their investigation. Whereas OECD (2005) used a self-assessment survey for gauging financial literacy. However, one may perceive these repetitions of practices as a limitations and conclude that the validity and reliability of those investigations are questionable. Therefore, to solve this problem, current study modified a more comprehensive examination-type questionnaire survey for measuring financial literacy which insures coverage of essential features of financial decisions.

Table 4 illustrates the scores of respondents' financial literacy test. Financial literacy is scored based on the number of correct answers. Since we included 10 examination-type questions for gauging financial literacy, scoring below half is considered as low literacy level. Whereas, scoring above is considered as high literacy level. This method of scoring respondent, for measure their financial literacy level, was adopted by A. Mouna and J.Anis (2016) in Tunisia and Al-Tamimi (2009) in UAE for similar investigation as ours.

Table.3. Literacy Level

	Frequencies	Percentages (%)
Low financial literacy level	68	29.4
High financial literacy level	163	70.6
Total	231	100

Source: Author's own elaboration

Our tests reveal that out of 231 total responses, 29.4% i.e. 68 respondents demonstrate a low financial literacy level. However, 70.6% i.e. 163 respondents demonstrated a high

financial literacy level. These results reject H_1 of our study, which means that the financial literacy levels of Pakistan stock exchange investors is higher than the average acceptable level.

Table.4. Summary of Logistic Regression Analysis Test

Characteristics	β	Sig.	R^2	-2log likely hood	X^2	Correct classification
AGE						
Age 1	21.68	.582				
Age 2	22.15	.999				
Age 3	22.39	.999				
Age 4	42.40	.999				
Constant	-21.20	.999				
			.088	265.219	14.762	70.6
GENDER	1.026	.001				
Constant	.235	.306				
			.070	268.281	11.700	70.6
EMPLOYMENT STATUS						
EMP 1	2.532	.014				
EMP 2	1.664	.014				
EMP 3	1.520	.014				
Constant	-1.153	.014				
			.186	247.279	32.252	70.6
WORK PLACE ACTIVITY						
WPA 1	.538	.190				
WPA 2	.348	.455				
WPA 3	1.310	.001				
Constant	.345	.124				
			.080	266.755	13.404	70.6
MONTHLY INCOME						
INC 1	-1.176	.018				
INC 2	-1.133	.028				
INC 3	-.701	.165				
INC 4	-.624	.188				
INC 5	-.169	.759				
Constant	1.482	.000				
			-054	271.004	8.978	70.6
EDUCATIONA LEVEL						
EDU 1	-.007	.999				
EDU 2	20.280	.991				
EDU 3	-.122	.684				
Constant	.923	.000	.010	278.408	1.57	70.6

Source: Author's own elaboration

Table 5. shows the summary of logistic regression analysis test. The result reveals that financial literacy level of the respondents differentiates with their socio economic demographic features. Our results also assert that the average overall percentage for "correctly classified cases" found approximately70.6 Percent. This measure is one of the most widely used measures for overall model fitness and our results reflect our models ability to accurately classify the observations. Additionally, we also found that the chi square values of our model have high explanatory power.

The coefficient of demographic factor *AGE* is unexpectedly not found statistically significant on significance level set at 0.05. This outcome is not consistent with previous studies. The coefficient of demographic factor *GENDER,* as expected, is positive and statistically significant at significance level 0.05. This result is consistent with the results of previous studies (Alexander et al., 1997; Chen and Volpe, 1998; Volpe, 1996; Volpe et al., 2002; Al-Tamimi, 2006; Al-Tamimi, 2009; Gathergood, 2013; Mouna and Anis, 2017), confirming *H3*. Our demographic factor *EMPLOYMENT STATUS* is positive and statistically significant in all categories at 1 percent significance level.This result is consistent with previous studies (Al-Tamimi, 2006; Al-Tamimi, 2009; Gathergood, 20013; Mouna and Anis, 2017), confirming *H5*. In case of *WORK PLACE ACTIVITY,* only WPA3 was found to be positive and statistically significant at significance level 1 percent, however, the remaining categories were not found statistically significant. *MONTHLY INCOME* is unexpectedly negatively statistically significant in two categories only, at 5 percent significance level. The remaining categories are not found significant. With respect to *EDUCTAION LEVEL*, unexpectedly the coefficient is not found statistically significant. To put it all in a nut shell, our results reveal that financial literacy is partially positively significantly related to age, gender, educational level, income, employment status and work place activity consequently partially confirming H_2. This finding is also found inconsistent with previous studies (Al-Tamimi, 2006; Al-Tamimi, 2009; Gathergood, 20013; Mouna and Anis, 2017).

4.3. Difference of Financial Literacy based on Demographic Variables

A One Way ANOVA test was conducted to define whether or not there is a difference in financial literacy due to demographic factors: "age, gender, education, income, work place activity and employment status". Table6 illustrates "a significant difference in financial literacy between the groups of respondents is due to their gender, age, employment status income and work place activity".

Table.5. Regression Results

Between Group	Sum of square	*df*	Mean square	F	Sig.	H
Age	2.481	4	.620	3.081	.017	H3
Gender	2.502	1	2.502	12.599	.000	H4
Employment Status	7.235	3	2.412	13.436	.000	H5
Work Place Activity	2.679	3	.893	4.474	.004	H7
Income	1.852	5	.370	1.803	.113	H6
Education	.211	3	.070	.335	.800	H8

Source: Author's own elaboration

For comprehensive review of the relationship between financial literacy and gender, cross tabulation statistics were used. Our results demonstrate that approximately only females56% had higher financial literacy as compared to 78% males possessing high financial literacy. Our findings also suggest that significant difference in the financial literacy level is due to the demographic factors. Our findings are aligned with the results of investigations by (Volpe et al., 2002; Mouna and Anis, 2017)

4.4. Financial Literacy and Stock Holding

For assessing H9 of our study, we employed logistic regression to test relationship between financial literacy and stack market participation. Stockholding was treated as a dependent variable, whereas, financial literacy was treated as an independent variable. Our results show that the coefficient of stockholding is positively statistically significant at 10 percent significance level, confirming H9. Our results are consistent with results of previous studies (Bernheim, 2001, 2003; Al-Tamimi, 2006, 2009; Arrondel et al., 2014; Mouna and Anis, 2017). Results are displayed in Table 7.

Table.6. Cross Tabulation Statistics

Dep. Var. Stock Holding (SH)	β	Sig.	R^2	-2log likely hood	X^2	Correct classification
Financial literacy (FL)	.627	.033				
Constant	.577	.003				
			.028	275.371	4.640	70.6

Source: Author's own elaboration

A cross tabulation statistics was run to reveal whether or not high financial literacy matters for stock market participation or not. Out of total 231 respondents, 117 respondent claimed to be participant of the stock market. 76.9 percent (90 respondents) of which had high financial literacy, whereas 23.1 percent had low financial literacy level. Hence one can safely conclude that those possessing higher financial literacy levels were found prone to investing in stocks (Guiso, 2005; Van Rooj et al., 2011; Arrondel et al., 2011).

5. Conclusion & Recommendation

We assessed the financial literacy level of Pakistani speculators residing in Karachi. We also assessed the demographic variables influence the financial literacy and investment decisions. The results of our investigation are summarized as follows:

The financial literacy level of Pakistani investors is better than the expected level. It was found that financial literacy is influenced by socio economic demographic variables like: income, work place activity, and gender and employment status. Whereas, it was not influenced by age and educational level as such here in Pakistan.

A significant difference in the level of financial literacy was found as well between the respondents according to their gender. Specifically, women were found to have a lower level of financial literacy as compared to men. Financial literacy is statistically significantly affected the investment decisions of the Pakistani individual investors. We observed that individuals with higher financial literacy participated more in the stock market as compared to those with low financial literacy level just as expected.

It merits referencing here that the detailed outcomes were influenced by the social, political, economic and monetary culture of Karachi, Pakistan.

Further research can be led by expanding the extent of the examination to incorporate religion as a statistic factor and furthermore including the Islamic banks as certain individuals have no reasonable understanding regarding the features of Islamic banks or

the difference in the offerings of both conventional banks vs. Islamic banks. Moreover, the investigation can be stretched out to cover financial education in different regions of Pakistan also.

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