

Sociability and stock market participation: a sociological study of investors from Bangalore

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ABSTRACT: *The purpose of this study is to shed more light to limited stock market participation which has been found to have many implications on both household level and public at large. To reach this goal, I analyze a comprehensive list of stock market participation drivers and compare their explanatory power. Even though limited stock market participation is widely studied in the field of economics and finance, there is a dearth of studies from the sociological perspective which takes social interaction into account for explaining stock market participation, controlling for all relevant demographic variables. abstract should summarize the content of the paper.*

Keywords - *gender, market participation, risk aptitude, Sociability, stock holding*

I. INTRODUCTION

Stock market participation puzzle stems from the fact that most households do not invest in stocks despite the significant risk premium and gains from diversification involved. Traditional finance theory posits that investors' willingness to take financial risks depends simply on investment opportunities and risk aversion (Markowitz, 1995; Sharpe, 1964), whereas more advanced dynamic portfolio choice models allow for changing investment opportunities, wealth, and transaction and information costs to affect household financial decisions (e.g. Samuelson, 1969; Merton, 1969, 1971; Brennan, Schwartz and Lagnado, 1997; Xia, 2001).

As a result of the significant equity premium, individuals participating in the stock market are able to accumulate more wealth compared to those who choose not to, controlling for the level of active saving (Mehra and Prescott, 1985). In addition to asset accumulation, stock market participation facilitates consumption smoothing which can have a significant effect on household welfare.

As household behavior does not seem to comply with the existing models, studies in the field of behavioral finance have introduced several new factors that affect household financial decisions, and the search of variables able to explain the patterns of portfolio choice in microeconomic data continues in the empirical front. However, most of the prior research on stock market participation focuses on only one determinant or one area at a time in analyzing influential individual characteristics. Recent studies have provided insight into the effect of, for example, social activity (Hong, Kubik and Stein, 2004; Georgarakos and Pasini, 2009), trust, (Guiso, Sapienza and Zingales, 2004, 2008), cognitive skills (Christelis, Jappelli and Padula, 2010; Grinblatt, Keloharju and Linnainmaa, 2010) and health (Rosen and Wu, 2004) on stock market participation.

Risk aversion stands out as the single most significant driver of stock market participation. The results also show that all other characteristics included in this study, that is, sociability, trust, political orientation, cognitive skills, life satisfaction and religion, strongly explain the level of individual risk aversion. Therefore, risk aversion seems to be an important channel through which also other drivers of stock market participation operate. After risk aversion, sociability and political orientation are the most significant single variables to explain stock market participation. The results show that social activity and rightwing orientated personal values increase the likelihood of holding stocks supporting the findings of prior studies (e.g. Hong et al., 2004; Brown, 2008; Kaustia and Knüpfer, 2010; Kaustia and Torstila, 2010). Surprisingly, the effect of interpersonal trust remains minor throughout the analyses, which contradicts various studies in prior literature (e.g. Guiso et al., 2004, 2008; Georgarakos and Pasini, 2009).

This study focuses both on the established drivers of stock market participation, that is, wealth, risk aversion and education, and further focuses on social interaction and trust as factors which have an impact on market participation. Looking into the reasons why people shy away from stock market participation is important both on aggregate and on individual level. Previous studies suggest that on aggregate level stock market participation is associated with equity premium as introduced by Mehra and Prescott (1985).

II. EXPLANATIONS OF LIMITED STOCK MARKET PARTICIPATION IN RECENT LITERATURE

Studies by Grinblatt and Keloharju (2001) and Stulz and Williamson (2003) first emphasized the impact of culture on stockholding and brought the cultural aspect into the attention of the finance community. Grinblatt and Keloharju (2001) find in an intra-country analysis of Finnish stockholders that households are apt to the influence of distance, language and culture, whereas Stulz and Williamson (2003) find that cultural aspects explain cross-country variation in individual stockholder rights even controlling for the legal origin of a country. Moreover, the integration of cultural aspect and financial questions has led to the development of the concept “cultural bias” (Shiller, 1999), studies on its implications for financial markets (e.g. Statman, 2006, 2008) and even to the proposition of separating “cultural finance” to its own autonomous discipline (Breuer and Quinten, 2009).

III. DATA

The prime units of analysis of this study are the secondary market investors in Bangalore. Bangalore is a metropolitan city located in southern India with a population of 8474970.1 the exact number of market investors is not available. This is due to the lack of transparency in the system. Though exchanges and other market infrastructure institutions (MIIs), such as depositories, and regulators have a repository of data, it is not available to the public. No information on geographical spread of investor base or demat account coverage is disclosed to the public. Even though, an estimate of the number of investors in India is available, it not clear as these 18 million demat accounts are held, disclosure of which would give an idea of extent of penetration. Due to these structural hurdles, the exact size of the population is not available. Based on the Indian average of 12% of the population, the sample size was computed on the Magnani (1997) model. A computer aided, self administered questionnaire was distributed to the respondents. The questions were constructed with due consideration to face validity and content validity and were designed to elicit information about market participation behaviour and the social factors that impact this behaviour.

IV. DATA DESCRIPTION

Univariate analysis:

Education and Income are important determinants of stock market participation. This section provides a brief look at the educational qualification and annual income levels of the respondents.

1. Educational Qualification

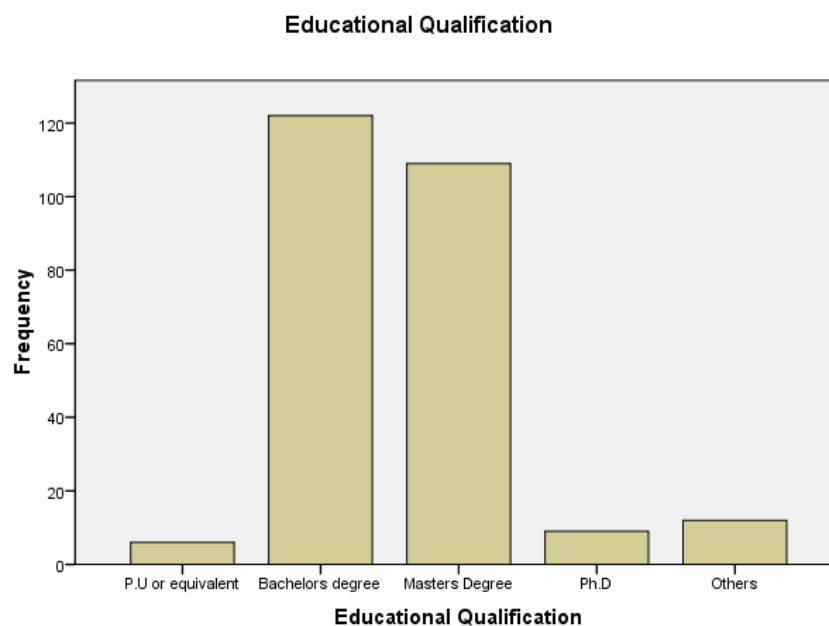


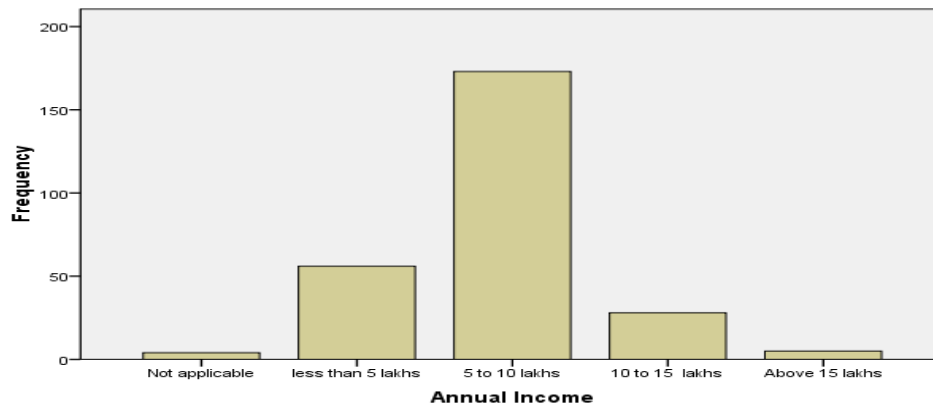
Table 1

		Gender	
		Male	Female
		Count	Count
Educational Qualification	No formal education	0	0
	Less than 10th Std	0	0
	P.U or equivalent	5	1
	Bachelors degree	89	33
	Masters Degree	65	44
	Ph.D	6	3
	Others	8	4

The educational qualification of the respondents reflects the general scenario in the markets with most of the participants (95.3%) being educated. An overwhelming 47.3% of the respondents hold a Bachelors degree with those holding 41% being the second major category

Annual Income:

Income is a major influence in the stock market participation equation. 43% of the respondents had an annual income of Rupees 5 to 10 lakhs.



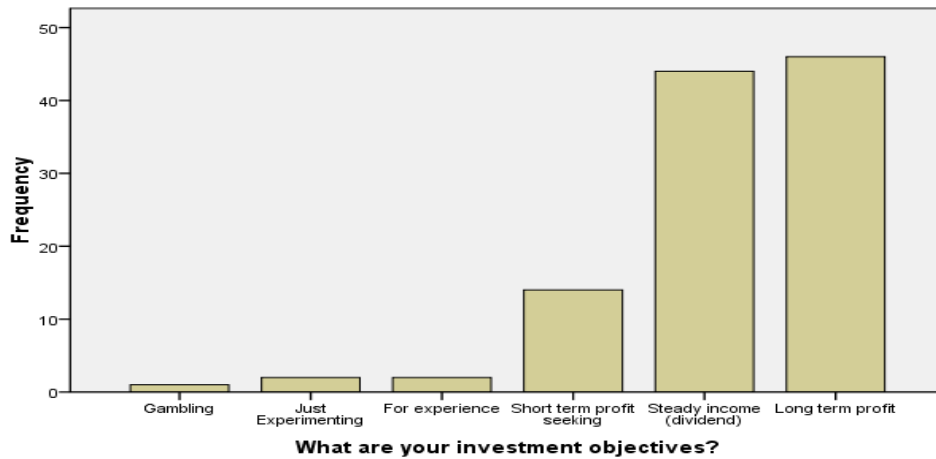
Stock market participation by gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	179	67.3	67.3	67.3
	Female	87	32.7	32.7	100.0
	Total	266	100.0	100.0	

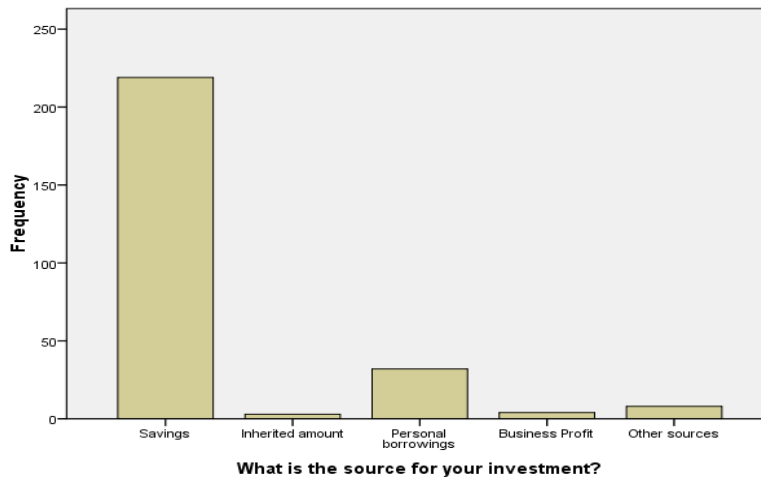
Table 1

		Gender	
		Male	Female
		Count	Count
What category of investor would you consider yourself to be?	Long term trader	89	38
	Short term trader	79	39
	Day trader	11	10



Crosstabulation of Gender and investment objectives

		What are your investment objectives?						Total
		Gambling	Just Experimenting	For experience	Short term profit seeking	Steady income (dividend)	Long term profit	
Gender	Male	1	0	2	12	4	13	32
	Female	0	2	0	2	40	33	77
Total		1	2	2	14	44	46	109



Social interaction

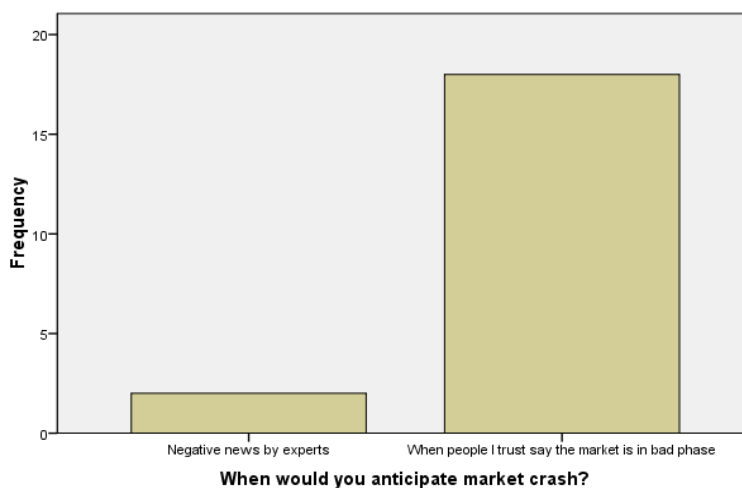
Sociability has been one of the main focuses in recent behavioral finance research. Stock market participation can be influenced by social interaction in several different ways and through different networks. Earlier studies focus on the importance of peer-group effects on individual financial decision making, for example, it has been shown that decisions over participating in employer-sponsored retirement plans are influenced by the choices of coworkers (Madrian and Shea, 2001; Duflo and Saez, 2002). Later on more precise channels of social interaction have been introduced to research in behavioral finance. Hong et al. (2004) describe two mechanisms through which social interaction can stimulate stock market participation. First, information can be exchanged by means of word-of-mouth communication or observational learning (Bikhchandani, Hirshleifer and Welch, 1992; Banerjee, 1992; Ellison and Fudenberg, 1993, 1995).

This basically means that individuals will rather learn about investing by talking to their friends than by contacting financial professionals, which lowers the fixed psychological costs of stock market participation discussed above. Second, individuals may also enjoy discussing investments with their peers and, therefore, be more likely to invest in stocks if the participation rate is high among one’s friend or other social network. Hong et al. (2004) find that households interacting with their neighbors or attending church are more likely to participate in the stock market than non-social households. In addition, they demonstrate that sociability has

stronger effect on participation in states where the overall stock market participation rate is high, and that the participation differences between social and non-social households have widened with the increase in overall stock market participation rates. Furthermore, Brown (2008) establishes a causal relation between individual and community stock market participation and shows that on average a 10% increase in community stock ownership increases the probability of individual stock market participation by 4%. Kaustia and Knüpfner (2010) find that individuals' stock market entry decisions are affected by the stock market performance of their local peers in the previous month. Interestingly, the authors find that the peer performance effect is limited only to peers' positive financial outcomes. Social interaction influencing stock market participation may also reflect a "keeping up with the Joneses" effect. It could be that after becoming aware of financial decisions made within one's social group, individuals follow the example and try to maintain the same level of consumption. Behavior like this is based on individuals' worry about standing out in a group, especially in a negative light. Bernheim (1994) introduces a model of conformity, where individuals conform to a homogenous standard of behavior and believe that even small departures of the common norm will impair their status. Habit formation models may also have similar effects on stock market participation (Campbell and Cochrane, 1999), as well as individuals' concerns about their relative wealth in a community (DeMarzo, Kaniel and Kremer, 2004).

Despite the results of recent research, concerns linger about the potential for unobserved characteristics that drive both stock market participation decisions and the measures of social interaction. Measures used to reflect sociability, such as education, activity in organizations and clubs, religious participation and marital status, correlate with each other in addition to correlating with stock market participation. For example, Feng and Seasholes' (2004) findings suggest that common reaction to public information, rather than word-of-mouth effects, seems to be a primary determinant of investors' trading behavior in China. Thus, the influence of social interaction on stock market participation remains partly unclear. Social interaction and social learning function also as an additional channel for financial awareness if information distribution otherwise is scarce. Widespread financial unawareness and illiteracy raises concerns as households are facing ever more complex options in household finance and retirement planning. Guiso and Jappelli (2005) analyze the role of deficient financial awareness as an information barrier to financial market participation. The authors conclude that financial awareness is partly determined by the distributors of financial assets since dissemination of information depends on the probability of the information Receiver financial market development is making stockholding ever easier for the public, simultaneously bringing down the fixed costs of stock market participation. For example, online stock trading has made stock investments faster and cheaper for investors. From theoretical point of view, the democratization of stock market access has reduced the effect of wealth and income on stockholding. Therefore, the new barriers explaining limited stock market participation are likely to rise from psychological and behavioral origins. Psychological and behavioral barriers of entry are hard to identify, address and overcome as removing these barriers requires changes in personal beliefs and behavior.

In addition to costs of investing, stock market participation is dependent on information barriers. Access to information on how to start investing and on portfolio management through familiar networks instead of contacting any formal parties most likely reduces the information gathering costs of investing, bringing the fixed costs ϕ down. Socially active households have more social interactions through which to accumulate information, and social households are therefore more likely to participate in the stock market (Hong et al., 2004). Furthermore, interpersonal trust and trust in institutions enhances financial development and motivates households to contact and seek for assistance from financial intermediaries increasing stockholding in a community (e.g. Guiso et al., 2004, 2008; Georgarakos and Pasini, 2009).



When would you anticipate market crash?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Negative news by experts	2	.8	10.0	10.0
	When people I trust say the market is in bad phase	18	6.8	90.0	100.0
	Total	20	7.5	100.0	
Missing	System	246	92.5		
Total		266	100.0		

V. CONCLUSION

Limited stock market participation has many implications on public at large and it has been in the interest of household finance for decades. The role of limited stock market participation has been recognized in wealth accumulation, consumption smoothing and unequal distribution of wealth. During recent years, many new factors affecting individual stock investment decisions have been introduced in the field. Despite this, an overall view incorporating comprehensively the established factors as well as the newly discovered factors behind stock market participation has been lacking. This study attempts to provide insight into the relation between well-known individual characteristics in household finance and to present a few new drivers of stock market participation. The strongest single driver of stock market participation, or the decision to forego investing in stocks, is risk aversion. In addition to this, risk aversion is affected by all other variables included in this study, and it seems that risk aversion is an additional channel through which these individual characteristics operate. The most economically significant variables reflecting social stance and personal values are sociability and political orientation. More socially active individuals and right-wing orientated individuals are more likely to hold stocks. Surprisingly, the effect of interpersonal trust remains minor throughout the analyses, which contradicts various findings of prior literature.

As one can conclude from the description above, the drivers and barriers of stock market participation are complex, interrelated and can also stem from unexpected aspects of life. Naturally, much more research is needed to drill more deeply into the reasons behind individual stock investment decisions. In the previous chapter, I presented suggestions for further research related to this study, along with the weaknesses this study suffers from. New information on the different aspects affecting stock market participation has potentially some regulatory and public policy implications, but most of all it will assist finance professionals in their work and provide valuable information into training and educating individuals in their financial decision making. If we understand the underlying characteristics affecting stock market participation, we stand in a better position to address and prevent the problems caused by limited stock market participation.

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