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Instiutional Confidence, Sociability and Stock Market Participation

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Abstract

This article investigates the relationship between both confidence in institutions and sociability for stock market participation in India. We measure sociability as a construct which refers to non-market associations or activities, such as customs, traditions, and reciprocity, that have a bearing on the conduct of societies. Using the India Human Development Survey-II (IHDS-II) 2012 household survey data, we construct a measure of sociability as captured by memberships in societies and network groups to estimate their impact on the likelihood of a household's stock market investment. The variables for confidence in institutions are categorical responses from the household level survey on confidence in the following: Politicians, Police, Military, Banks. Findings show that confidence in the Police (law enforcement) and sociability increases the likelihood of stock market investment. Both LPM estimates and Logit model Average Marginal effects indicate "Confidence in Police to enforce the law" increases the likelihood of stock market participation by 0.8-0.9 percent and "Sociability" as measured by a household

having a member in an association increases the likelihood of stock market participation by 0.8-0.9 percent. Policymakers may be able to increase domestic investment via financial market participation by implementing policies to increase confidence in law enforcement and by increasing household involvement in specific social groups that our research finds having a significant positive effect on the likelihood of households' purchase of stocks and bonds.

Keywords: Stock market, Sociability, Institutional Confidence, Financial Literacy, Investment Decisions.

JEL: A13, D12, D71, D83, G11

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1. Introduction

The stock market plays a key role in determining an economy's financial health. The stability of an economy is, in turn, fostered by the soundness of the country's financial health. Financial stability allows the economy to encourage productive activity and stimulate economic growth. Stock market participation of households is one of the key indicators of involvement in financial activity (Cypher, 2014). When the stock market is efficient it promotes financial stability. Stock market efficiency increases with increased participation (Rounaghi & Nassir Zadeh, 2016).

A key determinant of an individual's financial behavior is the level of trust they exhibit towards various institutions in the society. Sirdeshmukh et. al. (2002) define trust between a consumer and a service provider such as a financial institution in terms of the strength of the consumer's expectations that the provider is dependable and will deliver on its promises. Financial decisions involve undertaking risk, the degree of risk to which investors expose themselves depends not only on the risk-return assessment of the financial investments but also on the beliefs regarding the fairness of the financial system, and individual specific differences in levels of trust. These differences in trust might arise due to individual specific factors or due to factors associated with the financial institutions in a society. Guiso et. al. (2008) study the

effect of a general lack of trust among investors arising from their subjective beliefs regarding the likelihood of being cheated on their stock market behavior; they find that less trusting investors are less likely to buy stocks. Investors also form beliefs regarding the soundness and trustworthiness of financial institutions, these beliefs in turn guide their investment behavior. For example, in countries where trust in financial institutions is low, people exhibit distrust in the state's ability to safeguard property rights and to enforce the rule of law, these beliefs are then reflected in their financial decisions. Guiso (2010) studies the unprecedented decline in trust in financial institutions during the aftermath of the 2008 financial crisis in the US and Europe. The collapse in trust was precipitated by the revelation in 2008 of the widespread fraud and opportunistic behavior in the financial industry. Guiso finds that the erosion of trust had important implications for economic activity such as a change in the demand for financial products and investors' portfolio choices. Osili and Paulson (2008) find that immigrants arriving from countries with stable institutions which protect property rights and incentivize investments are more likely to participate in financial markets in U.S. relative to immigrants from countries with institutions which are weak and unstable. Focusing primarily on developed countries, this vast early literature highlighted the link between trust and financial behavior of investors.

By nature, human beings become involved with different groups in society where they express their opinion, meet new people who are different from each other and share knowledge. Such social interactions influence our mind, our thoughts and our way of seeing things (Searle, 2010). Sociability, thus, plays a crucial role in shaping people's decisions through its effect on their perceptions, knowledge and understanding of their society and its social institutions. Banerjee (1992) states that there are many economic situations in which our actions are influenced by the actions of those around us. He describes such behavior as herd behavior where an individual pays heed to the actions of others believing that they have access to superior information which he does not. Such word-of-mouth information sharing which occurs in various social groups is one of two possible pathways through which sociability can influence the stock market participation decision of individuals. In this pathway, word-of-mouth information exchange may lower fixed costs associated with gaining basic knowledge of stock market or learning how to make trades; such exchanges, thus, affect stock market participation by increasing financial literacy among the participants of the social group. Becker (1992) describes a second possible pathway via which sociability may influence stock market participation, it relies on the enjoyment people derive from engaging in social activities such

as discussing stock market investments or the unpredictable swings in the stock market with friends or other social groups. Such shared interest based on mutual enjoyment may foster stock market participation among group participants. Disentangling these two mechanisms is quite challenging, and most studies do not specify the specific pathway through which sociability influences stock market participation. Hong et. al. (2004) build a model with two types of investors: socials and non-socials such that stock market participation is more attractive for social investors due to lower fixed costs. Based on this model they empirically show that individuals with higher levels of sociability, as proxied by church attendance and interactions with neighbors, are more likely to participate in the stock market. Unlike previous studies, Brown et. al. (2008) establish a causal link between the average stock market participation of the investor's community and his personal participation decision, thus, investigating the influence of "community effects". They observe that the greater the fraction of local community members participating in stock market investments the more likely it is that an individual member will participate as well.

Most of the previous literature considered the effect of trust and sociability on stock market participation separately. Trust and sociability, however, influence financial market participation through different mechanisms, each of which is vital in understanding participation decisions of investors: trust lowers the risk associated with an investment, thus increasing the expected return on investment while sociability raises information exchange and thus lowers the fixed costs of participating. Although both these variables of interest might be correlated, there are few studies which have incorporated them in the empirical evaluation of the determinants of stock market participation. Georgarakos and Pasini (2009) study the effect of both trust and sociability on stock market participation by incorporating specific features of the models developed earlier by Guiso et. al. (2008) and Hong et. al. (2004). They show that both trust and sociability exert a distinct influence on stock market participation and both these variables should be considered while studying the determinants of financial market participation. Changwony et. al. (2015) extend the work of Georgarakos and Pasini (2009) by including religiosity and political identity as determinants of stock market participation in addition to trust and sociability. They include religiosity as a determinant because of its association with thrift, personal responsibility, tendency to leave bequests, and attitudes which support free markets; each of which might increase the likelihood of stock market participation. Political party identification is also included as a determinant as those who identify with a party may have access to better information regarding financial markets through their interactions in

various social groups. Changwony et. al. find that each of the three variables, trust, sociability, and political identification exert a distinct influence on an individual's decision to participate in the stock market, but religiosity does not appear to have a significant influence.

We contribute to the literature assessing the joint impact of trust and sociability on stock market participation by being the first to provide evidence of their influence in a developing economy. Georgarakos and Pasini (2009), Guiso et. al. (2004) and Guiso et. al. (2008) document the high degree of regional variability in levels of stock market participation across countries and relate it to varying levels of trust across regions within those countries. They find a stronger influence of regional variation in trust on stock market participation in countries where the average level of trust is lower. In their study Georgarakos and Pasini (2009) incorporate household variation in sociability along with regional variation in trust to assess the distinct effect of both trust and sociability. In regions with low levels of trust, they find sociability can partly balance the dampening effect of lower trust on stock market withholdings. Their findings suggest the relative importance of trust and sociability may vary across countries. Overall, the findings from the above literature point to the need for further evidence from developing economies to better understand the distinct role of trust and sociability on participation in financial markets within the context of economies which vary substantially in their average level of trust as well as the degree and strength of their social networks. This study contributes to the literature by utilizing data from 42,152 households on institutional confidence, social networks, and financial market participation from the India Human Development Survey-II (IHDS-II) conducted in 2012 and empirically examining the relationship between both confidence in institutions and sociability for stock market participation. The data on institutional confidence was not available in the earlier IHDS-I from 2002 and so earlier research using IHDS-I such as (Roy & Sapre, 2016) were unable to address the relationship between institutional trust and financial decisions in India. We use household membership in various social and network organizations to construct a measure of sociability. Confidence in institutions is measured through household responses regarding trust in politicians, police, military, state government, and banks. Our findings suggest that higher levels of confidence in police and membership in peer groups or social networks focused on socio-economic well-being and financial literacy such as, women's groups, Union/Business/Professional groups, Credit/Saving groups, Development/NGO groups, Lions/Rotary & similar Club groups, are positively associated with stock market participation. Our paper highlights the importance of both formal institutional trust and informal social

networks in shaping financial behaviors. To the best our knowledge, our research contributes the aspect of institutional confidence to the literature on India and adds to the research looking at the interaction between financial decisions with both trust, and social networks.

The remainder of the paper is organized as follows; Section II provides a summary of the related literature. Section III explains empirical methodology. Section IV discusses the results. Section V provides conclusions and policy implications of the study.

2. Literature Review

Financial literacy, social connection and financial behaviour each have different definitions. Cheng and Li, (2025) found that if a person forms strong social networks, they can significantly impact financial literacy. They, further, added that intergenerational educational mobility is significantly positively related to relationships between social networks and financial literacy. Research by Allgood and Walstad (2013) used different age groups of people in the US to predict credit card behavior based on their level of financial literacy and self-rating of perceived financial literacy. To gauge the actual financial literacy authors asked a few questions to the respondents along with which their credit card behavior was classified into five different categories. They performed probit analysis. They found that the actual literacy of Americans is a weak predictor of less costly practices in credit card use than perceived financial literacy. A study on Jordanian bank customers by Alalwan et. al. (2017) investigated the factors which create the intention to use mobile banking services. They analyzed various factors but only the social influence on behavioral intention was found to be a significant explanation of the adoption of mobile banking service. In their research, they used an extended unified theory of acceptance and use (UTAUT2) as a basic model which they apply to a field survey of 343 customers of Jordanian banks.

Social networks improve financial literacy which in turn has an impact on financial activity. Using data from China Family Panel Studies (CFPS), Chen et. al. (2024) found that social networks can decrease household financial vulnerability because households tend to take debt from those in their social network such as friends and family and these social networks also enhance their financial literacy. In another research on China, Zhao and Li (2021) used data from 2015 to analyze the relationship between social capital, rural entrepreneurship, and financial literacy. In their research, they found that social capital has an association with rural entrepreneurship through financial literacy. To gauge the role of social capital in their research

they used expenditure data on communication, transportation, entertainment, dining and gifts, on the other hand, for financial literacy they asked a few questions about interest rates, risk awareness and inflation. Bongomin et. al. (2016) investigated the mediating role of social capital on financial literacy and financial inclusion on rural people in Uganda. This paper concluded the presence of a significant association between social capital and financial literacy and financial inclusion of the people of Uganda. They emphasized the importance of social capital in improving people's financial literacy. In the Indian context, research by Roy & Sapre, 2016 explored the relationship between social embedding and banking habits. They captured social embedding by proxy measures such as familiarity with the medical and government community and membership in different associations such as women's associations, trade unions, sports unions, religious and festival groups, caste associations, credit, business, SHGs, development or NGOs and voting behavior. For banking habits measurement, they employed a simple binary response question which asked the respondent about the existence of any bank account in their family. The dataset used in this analysis is based on the Indian Human Development Survey (IHDS) 2005 round and they used the Linear Probability Model to find out the association. They found a meaningful relationship between social embedding on the possibility of having access to a banking channel. Another study by Jha and Kelley (2023) examined the relationship between different aspects of social capital on various measures of household welfare in India using OLS and logistic regression. Researchers employed the measurement of connections in local community organizations and social network connections as a proxy for social capital and household ownership of physical assets, consumption expenditures, and the possibility of living in poverty as measures of household welfare. They found that social capital is crucial to explaining household welfare. Moreover, households tend to have higher per capita consumption depending on their connectivity with the formal community around them. They concluded that social capital plays a key role in enhancing household welfare.

Several researchers have explored the connection between financial literacy and sociability. Allgood and Walstad (2013) argue financial literacy enables better decisions in credit card behavior. Research by Georgarakos and Pasini (2009) studies the effect of two crucial factors: trust and sociability on stock market participation and their difference in stock holding among households in Europe. They use a simple theoretical model and empirical analysis and data from Survey on Health, Ageing and Retirement in Europe (SHARE) and World Values Survey (WVS). Their sample selection was mostly older people aged above 50.

They found a positive association of both trust and sociability. Thus, both trust and sociability play a distinct role in explaining the stock market participation. Their research suggests both **trust and sociability** are important factors in analyzing household decisions to participate in stock markets.

Hong et. al. (2004) find that households that have greater association with different social groups in terms of interacting with their neighbors and attending church are keener to invest in the stock market. They developed a model where there are two types of investors, "socials" and "non-socials", and they find a 4 per cent greater probability of participation in the social group compared to the non-social group. Health and Retirement Study (HRS) administered by the Institute for Social Research at the University of Michigan is used in this research and it has about 7500 households. Changwony et. al (2014) also find that social group involvement has a positive impact on stock market participation which aligns with the Granovetter's theory of social networks which they employed to build two hypotheses where they tried to find out the association of stock market participation with strong ties and weak ties. Strong tie relationships are with family and neighbors and weak tie relationships are the active involvement in social groups. They find that weak tie relationships have a positive impact on stock market participation. It is evident that social interaction has an impact on stock market participation and this research defines such participation as sociability. Moreover, this research incorporates a measure of household confidence in economic institutions to assess their influence on stock market participation. Asgharian et. al. (2024) find that individual levels of trust in institutions have an impact on stock market participation. Inoguchi and Tokuda (2017) suggest that Asian countries have high level of confidence in political and other institutions than Europe countries. Bu et al. (2022) confirmed that households with higher corruption possibility have higher possibility of participating in stock market at both extensive and intensive margins. Ng et al. (2016) find that trust is a crucial determinant of stock market depth and liquidity. Delis and Mylonidis (2015) also examine the relationship between levels of trust and financial decisions by using survey data from Dutch households. They conclude that trust has the power to increase the probability of investing in risky assets. Adil et al.(2023) investigate the significance of trust in financial institutions and financial literacy in the investment decision-making of individual investors by using survey data of 460 individual. They find that both factors have a significant impact on investors' intention to invest in the stock market. Trust in institutions is not much studied as an influential factor of stock market participation. To address this gap our study has taken both trust and sociability as key measures of stock market participation.

By utilizing the survey data from India Human Development Survey-II (IHDS-II), our research investigates the research question "Is there any relation between sociability and trust in different institutions with stock market participation?". In order to address this question, we construct the following two hypotheses:

Hypothesis 1: Households which are a part of social groups (i.e. exhibit sociability) are more likely to participate in the stock market

Hypothesis 2: Households which trust institutions associated with maintaining stability and fairness of financial markets are more likely to participate in the stock market.

3. Methodology

The research models the probability of owning stocks directly as a function of our trust and sociability indicators and household socioeconomic characteristics as described in Table 1.

$$Y_i = \beta_0 + \beta_n Confidence_i + \theta\, Sociability_i + \beta_k X_i + \lambda_s + u_i$$

Where Y is the dependent variable measuring stock market participation as described in Table 1, and *i* represents the household unit. Confidence represents all the variables measuring confidence in the following, Politicians, Police, Military, Banks, Courts and the State Government as described in **Table 1.** The sociability variable is constructed as a categorical variable which =1 if a household member is a member of any of the associations listed in Table 1a. X_i represents all variables measuring the socio-economic characteristics of the households in our data. We also control for within-state time-invariant heterogeneity by including state dummies, λ_s, where *s* represents the 34 Indian States.

Table 2 presents the results from two regression models. In Specification 1, we estimate a linear probability model with an Ordinary Least Squares regression as a reference point to compare with our logistic regression model in Specification 2 same as used by Jha and Kelley (2023)**.**

In the linear probability model (LPM), we interpret β_j as the change in the probability of success when *xj* changes, holding other factors fixed (Woolridge, 2012, p.249):

$$\Delta P(y = 1|x) = \beta_j \Delta x_j$$

Although not directly comparable we then contrast the LPM coefficient estimates to the average marginal effects calculated from the logit model in **Table 3**. The results are discussed in the next section.

The data used for empirical analysis is the household-level data from the Indian Human Development Survey IHDS-II (2012) (Desai & Vanneman, 2015). The India Human Development Survey 2012 (IHDS-II) is a nationally representative, multi-topic survey of 42,152 households in 384 districts, 1420 villages and 1042 urban neighborhoods across India. The data was collected through two one-hour interviews in each household which covered topics concerning health, education, employment, economic status, marriage, fertility, gender relations, and social capital. IHDS-II is the second round of the IHDS (Desai & Vanneman, 2015). The reason for using only IHDS-II cross-section data instead of the IHDS-I and IHDS-II panel is because the IHDS-I survey did not collect data on household investments which is the outcome of interest in this study.

The main predictor variables are the measures of confidence in institutions and social involvement as measured by association memberships. The variables for confidence in institutions are categorical responses from the household-level survey on confidence in the following: Politicians, Police, Military, Banks, Courts and the State Government. The variable for sociability was constructed from variables that identified whether a member of the household was in social groups such as (i) women's association, (ii) sports union, (iii) Self-Help Groups, (iv) religious societies, (v) caste and cooperative societies, (vi) Panchayat (local government) member/official or engaged in (vi) voting in elections and (vii) attending public meetings as described in Table 1a. Other variables of interest are household-level literacy, total household income, whether the household is in an urban or rural location and other general socio-economic characteristics. State dummy variables are included to control for any unobserved heterogeneity across states. These are described in **Table 1** which reports the descriptive statistics for the households in the dataset.

4. Analysis and Findings

Table 1 presents the descriptive analysis of the variables that are being used in this research. Stock market participation is identified by asking whether the respondent household has purchased stock in the mutual fund, unit trust, share market or bonds. The answer is in binary format with a mean of 0.0161 which implies that only 1.6% of the households reported

such investment. It indicates extremely low participation of the households. On the other hand, confidence in different institutions is measured based on the categorical scale from 1 to 3. Where "1" represents a great deal of confidence and "3" represents hardly any confidence at all. For "confidence in politicians", the mean sample response is 2.41, which represents low to moderate trust towards politicians. The mean sample response for "confidence in the military" is second highest with a mean of 1.18. Banks have the highest confidence within the household sample with an average of 1.13. The sample mean value for courts is 1.40 and police and state government have a sample mean of 1.98 and 1.91 out of the scale from 1 to 3 respectively.

Table 1: Descriptive statistics

Variable	Mean	Std Dev	Min	Max
Dependent Variable				
Over the last five years has anyone in your household invested in Mutual Fund/Unit Trust/Share Market/Bonds?	0.016071	0.125749	0	1
Control Variables				
Confidence: Politicians - to fulfil promises	2.40787	0.662716	1	3
Confidence: Military - to defend country	1.182195	0.478569	1	3
Confidence: Police - to enforce the law	1.975212	0.690781	1	3
Confidence: State government - to look after the people	1.91165	0.703585	1	3
Confidence: Courts - to deliver justice	1.404993	0.621637	1	3
Confidence: Banks - to keep money safe	1.127207	0.40878	1	3
Sociability	0.632544	0.482118	0	1
Total Household Income (Indian Rupees)	127759.8	216673.4	-1037040	11360000
Highest male adult education	7.889305	5.015836	0	16
Highest female adult education	5.646436	5.271215	0	16
Age of male head of household	49.15348	13.50874	15	99
Age of female head of household	44.61779	13.06452	7	99
Number of Persons in household	4.853103	2.321895	1	33

Urban residence from census 2011=1 if YES	0.345725	0.47561	0	1
The Unit of Observation is the household.				
All Confidence variables are categorical variables where 1 = "A great deal of confidence"; 2 = "Only some confidence"; 3 = "Hardly any confidence at all"				

the sociability variable is constructed using the variables in **Table 1a**, where "Sociability" is equal to"1" if a household has a member in an association listed in Table 1a. Table 1 shows the "Sociability" variable has a mean of 0.63. This means that 63% of the households in our sample have a household member who is a member of at least one of the associations/social activity listed in Table 1a. The data shows that associations/social activity with the highest membership or involvement among the households in our sample, are "Attending public meetings" and "Panchayat members" with a mean of 29.3.7% and 24.6% respectively. On the other hand, "Membership in Lions/Rotary Club & Other" has the lowest mean of 0.576% indicating less participation in formalized groups.

Table 1a: Variables used to construct the measure for "Sociability" variable

VARIABLES	Obs	mean	Std dev	min	max	Freq percent
Member Mahila mandal	42,095	0.0890	0.285	0	1	8.9
Member Youth/Sports/Read	42,091	0.0283	0.166	0	1	2.83
Member Union/Business/Professional group	42,087	0.0521	0.222	0	1	5.21
Member Self Help Group	42,094	0.187	0.390	0	1	18.7
Member Credit/Savings Group	42,093	0.107	0.308	0	1	10.7
Member Religious Group	42,092	0.116	0.321	0	1	11.6
Member Social Group or festival society	42,088	0.0726	0.259	0	1	7.26
Member Caste Association	42,090	0.0857	0.280	0	1	8.57
Member Development Group or NGO	42,088	0.0127	0.112	0	1	1.27
Member Agricultural, milk, or other co-operative	42,089	0.0295	0.169	0	1	2.95
Member Political Party	42,084	0.0383	0.192	0	1	3.83

Member Lions/Rotary club & Other	42,018	0.00576	0.0757	0	1	0.576
Attend public meeting	42,003	0.293	0.455	0	1	29.3
Panchayat member/official in household	41,950	0.0407	0.198	0	1	4.07
Panchayat member/official close to household	39,793	0.246	0.431	0	1	24.6

The "Sociability" variable = 1 if any of the above variables= 1 (Yes)

The LPM estimated coefficients in Table 2 suggest that "Confidence in Police to enforce the law" and "Sociability" have a positive and significant effect on the likelihood of stock market participation as well as household levels of education, household income, and being in an urban instead of rural location. The LPM estimates indicate that households with "A great deal of confidence" compared to the base category "Hardly any confidence at all" for the variable "Confidence in Police to the law" increase the likelihood of stock market participation by 0.9 percent and "Sociability" as measured by a household having a member in an association listed in Table 1a increases the likelihood of stock market participation by 0.8 percent. Our logit model coefficients also indicate that "Confidence in Police to enforce the law" and "Sociability" have a positive and significant effect on the likelihood of stock market participation as well as household levels of education, household income, and being in an urban instead of rural location.

Table 2: LPM estimation

	(1) LPM	(2) Logistic Regression
VARIABLES	**Bought securities**	**Bought securities**
Confidence: Politicians - to fulfil promises		
A great deal of confidence	0.000	-0.023
	(0.003)	(0.161)
Only some confidence	-0.000	-0.051
	(0.002)	(0.097)
Confidence: Military - to defend the country		
A great deal of confidence	-0.009**	-0.577**
	(0.004)	(0.281)

Only some confidence	-0.010**	-0.724**
	(0.005)	(0.318)
Confidence: Police - to enforce the law		
A great deal of confidence	0.009***	0.477***
	(0.002)	(0.143)
Only some confidence	0.001	0.115
	(0.002)	(0.132)
Confidence: State government - to look after the people		
A great deal of confidence	0.001	0.139
	(0.002)	(0.135)
Only some confidence	-0.002	-0.087
	(0.002)	(0.121)
Confidence: Courts - to deliver justice		
A great deal of confidence	0.001	0.084
	(0.003)	(0.212)
Only some confidence	-0.000	0.002
	(0.003)	(0.221)
Confidence: Banks - to keep money safe		
A great deal of confidence	0.002	0.134
	(0.004)	(0.387)
Only some confidence	0.007	0.481
	(0.005)	(0.414)
Sociability	0.008***	0.559***
	(0.001)	(0.107)
Ln (Total Household Income)	0.010***	0.615***
	(0.001)	(0.065)
Highest male adult education	0.001***	0.070***
	(0.000)	(0.015)
Highest female adult education	0.001***	0.052***

	(0.000)	(0.012)
Urban residence from census 2011=1 if YES	0.009***	0.563***
	(0.002)	(0.099)
Age of male head of household	-0.000	0.001
	(0.000)	(0.013)
Age of female head of household	0.000	-0.004
	(0.000)	(0.013)
Number of Persons in household	-0.002***	-0.091***
	(0.000)	(0.024)
Constant	-0.128***	-13.936***
	(0.012)	(0.941)
Observations	33,274	32,844
R-squared	0.035	

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: All Institutional Confidence variables are categorical variables with "Hardly any confidence at all" as the base category for all estimations

Table 3 represent the average marginal effect. The Logit model Average Marginal effects estimate that households with "A great deal of confidence" compared to the base category "Hardly any confidence at all" for the variable "Confidence in Police to the law" increases the likelihood of stock market participation by 0.8 percent and "Sociability" as measured by a household having a member in an association listed in Table 1a increases the likelihood of stock market participation by 0.9 percent. The Logit model Average Marginal effects estimates are the same magnitude and statistical significance as the LPM coefficients for household levels of education, household income, and being in an urban instead of rural location. Moreover, the result align with those of Georgarakos & Pasini, 2009 ; Hong et al. 2004; Changwony et al. 2014; Asgharian et al. 2024**.**

Table 3: Average Marginal Effects

	(1)	(2)
VARIABLES	LPM	Marginal Effects
Confidence: Politicians - to fulfil promises		
A great deal of confidence	0.000	-0.000
	(0.003)	(0.003)
Only some confidence	-0.000	-0.001
	(0.002)	(0.002)
Confidence: Military - to defend country		
A great deal of confidence	-0.009**	-0.012*
	(0.004)	(0.007)
Only some confidence	-0.010**	-0.014*
	(0.005)	(0.007)
Confidence: Police - to enforce the law		
A great deal of confidence	0.009***	0.008***
	(0.002)	(0.002)
Only some confidence	0.001	0.002
	(0.002)	(0.002)
Confidence: State government - to look after the people		
A great deal of confidence	0.001	0.002
	(0.002)	(0.002)
Only some confidence	-0.002	-0.001
	(0.002)	(0.002)
Confidence: Courts - to deliver justice		
A great deal of confidence	0.001	0.001
	(0.003)	(0.003)
Only some confidence	-0.000	0.000
	(0.003)	(0.003)
Confidence: Banks - to keep money safe		
A great deal of confidence	0.002	0.002

	(0.004)	(0.005)
Only some confidence	0.007	0.008
	(0.005)	(0.006)
Sociability	0.008***	0.009***
	(0.001)	(0.002)
Ln (Total Household Income)	0.010***	0.010***
	(0.001)	(0.001)
Highest male adult education	0.001***	0.001***
	(0.000)	(0.000)
Highest female adult education	0.001***	0.001***
	(0.000)	(0.000)
Urban residence from census 2011=1 if YES	0.009***	0.009***
	(0.002)	(0.002)
Age of male head of household	-0.000	0.000
	(0.000)	(0.000)
Age of female head of household	0.000	-0.000
	(0.000)	(0.000)
Number of Persons in household	-0.002***	-0.001***
	(0.000)	(0.000)
Constant	-0.128***	
	(0.012)	
Observations	33,274	32,844
R-squared	0.035	

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: All Institutional Confidence variables are categorical variables with "Hardly any confidence at all" as the base category for all estimations

We find one interesting anomaly in both our LPM and Logit Model estimations. For both estimates, the variable "Confidence in Military to defend country" decreases the likelihood of stock market participation by approximately 10 percent for both households with "A great deal of confidence" and "Only some confidence" compared to the base category "Hardly any confidence at all". This is an anomaly as national stability is an important component of economic stability that generally promotes investment in an economy. One possibility is that 85.78 percent of households are the "A great deal of confidence" category for the variable "Confidence in Military to defend country" and if there is little variation in the x_i, then it can be hard to pinpoint how E($y|x$) varies with x. This could be an interesting analysis for future research. However, this variable does not appear to affect the other coefficients of interests; Confidence in Police to enforce the law" and "Sociability, household levels of education, household income, and being in an urban instead of rural location remain statistically significant and have approximately the same magnitude for both LPM and Logit estimations without the variable "Confidence in Military to defend country", see Appendix Tables A1-3.

5. Conclusion

We show that stock market participation is associated with institutional confidence and sociability using both a linear probability model estimated with ordinary least squares and a logit model estimated by maximum likelihood. Household stock market participation is positively associated with institutional confidence, especially confidence in the police to enforce the law. Our results support the existing research showing the positive link between social or peer networks and household economic activity while adding evidence that institutional trust or confidence is also an important factor that complements social networks in encouraging economic activity. The policy implication of this research is that, if governments aim to increase investment and economic development by encouraging public saving and channeling public saving into domestic investment via the financial market, then the government should foster confidence in law and order and promote investment through relevant social networks. Our data suggests that the social networks with a statistically and economically significant effect on households' financial market participation are women's groups, Union/Business/Professional groups, Credit/Saving groups, Development/NGO groups, and Lions/Rotary & similar Club groups, see Appendix Table A4. This makes sense as these types

of peer groups or social networks have socio-economic well-being and financial literacy as a part of their purpose and function.

In conclusion, this paper addresses how both trust in the enforcement of property rights and involvement in social groups can increase financial market participation, increasing domestic investment and economic growth in India.

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APPENDIX

Table A1: Linear Probability Model with and without Confidence in Military Variable

VARIABLES	(1)	(2)
Dependent Variable (Bought Securities)	LPM	LPM
	With Military	Without Military
Confidence: Politicians - to fulfil promises		
A great deal of confidence	0.000	0.000
	(0.003)	(0.003)
Only some confidence	-0.000	-0.000
	(0.002)	(0.002)
Confidence: Military - to defend country		
A great deal of confidence	-0.009**	
	(0.004)	
Only some confidence	-0.010**	
	(0.005)	
Confidence: Police - to enforce the law		
A great deal of confidence	0.009***	0.008***
	(0.002)	(0.002)
Only some confidence	0.001	0.001
	(0.002)	(0.002)
Confidence: State government - to look after the people		
A great deal of confidence	0.001	0.001
	(0.002)	(0.002)
Only some confidence	-0.002	-0.002
	(0.002)	(0.002)
Confidence: Courts - to deliver justice		
A great deal of confidence	0.001	0.001
	(0.003)	(0.003)
Only some confidence	-0.000	-0.001
	(0.003)	(0.003)
Confidence: Banks - to keep money safe		

A great deal of confidence	0.002	-0.001
	(0.004)	(0.004)
Only some confidence	0.007	0.004
	(0.005)	(0.005)
Sociability	0.008***	0.008***
	(0.001)	(0.001)
Ln(Total Household Income)	0.010***	0.010***
	(0.001)	(0.001)
Highest male adult education	0.001***	0.001***
	(0.000)	(0.000)
Highest female adult education	0.001***	0.001***
	(0.000)	(0.000)
Urban residence from census 2011=1 if YES	0.009***	0.009***
	(0.002)	(0.002)
Age of male head of household	-0.000	-0.000
	(0.000)	(0.000)
Age of female head of household	0.000	0.000
	(0.000)	(0.000)
Number of Persons in household	-0.002***	-0.002***
	(0.000)	(0.000)
Constant	-0.128***	-0.129***
	(0.012)	(0.012)
Observations	33,274	33,278
R-squared	0.035	0.034

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A2: Logit Model with and without Confidence in Military Variable

VARIABLES	(1)	(2)
Dependent Variable (Bought Securities)	Logit	Logit
	With Military	Without Military
Confidence: Politicians - to fulfil promises		
A great deal of confidence	-0.023	-0.012
	(0.161)	(0.160)
Only some confidence	-0.051	-0.048
	(0.097)	(0.096)
Confidence: Military - to defend country		
A great deal of confidence	-0.577**	
	(0.281)	
Only some confidence	-0.724**	
	(0.318)	
Confidence: Police - to enforce the law		
A great deal of confidence	0.477***	0.458***
	(0.143)	(0.142)
Only some confidence	0.115	0.089
	(0.132)	(0.131)
Confidence: State government - to look after the people		
A great deal of confidence	0.139	0.129
	(0.135)	(0.135)
Only some confidence	-0.087	-0.102
	(0.121)	(0.121)
Confidence: Courts - to deliver justice		
A great deal of confidence	0.084	0.034
	(0.212)	(0.209)
Only some confidence	0.002	-0.056
	(0.221)	(0.219)
Confidence: Banks - to keep money safe		
A great deal of confidence	0.134	-0.074

	(0.387)	(0.341)
Only some confidence	0.481	0.241
	(0.414)	(0.371)
Sociability	0.559***	0.560***
	(0.107)	(0.107)
Ln (Total Household Income)	0.615***	0.615***
	(0.065)	(0.065)
Highest male adult education	0.070***	0.070***
	(0.015)	(0.015)
Highest female adult education	0.052***	0.052***
	(0.012)	(0.012)
Urban residence from census 2011=1 if YES	0.563***	0.563***
	(0.099)	(0.099)
Age of male head of household	0.001	0.001
	(0.013)	(0.013)
Age of female head of household	-0.004	-0.004
	(0.013)	(0.013)
Number of Persons in household	-0.091***	-0.091***
	(0.024)	(0.024)
Constant	-13.936***	-14.053***
	(0.941)	(0.941)
Observations	32,844	32,848

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A3: Linear Probability Model and Average Marginal Effects without Confidence in Military Variable

VARIABLES Dependent Variable (Bought Securities)	(1) LPM Without Military	(2) Marginal effects Without Military
Confidence: Politicians - to fulfil promises		
A great deal of confidence	0.000	-0.000
	(0.003)	(0.003)
Only some confidence	-0.000	-0.001
	(0.002)	(0.002)
Confidence: Police - to enforce the law		
A great deal of confidence	0.008***	0.008***
	(0.002)	(0.002)
Only some confidence	0.001	0.001
	(0.002)	(0.002)
Confidence: State government - to look after the people		
A great deal of confidence	0.001	0.002
	(0.002)	(0.002)
Only some confidence	-0.002	-0.002
	(0.002)	(0.002)
Confidence: Courts - to deliver justice		
A great deal of confidence	0.001	0.001
	(0.003)	(0.003)
Only some confidence	-0.001	-0.001
	(0.003)	(0.003)
Confidence: Banks - to keep money safe		
A great deal of confidence	-0.001	-0.001
	(0.004)	(0.006)
Only some confidence	0.004	0.004
	(0.005)	(0.006)

Sociability	0.008***	0.009***
	(0.001)	(0.002)
Ln(Total Household Income)	0.010***	0.010***
	(0.001)	(0.001)
Highest male adult education	0.001***	0.001***
	(0.000)	(0.000)
Highest female adult education	0.001***	0.001***
	(0.000)	(0.000)
Urban residence from census 2011=1 if YES	0.009***	0.009***
	(0.002)	(0.002)
Age of male head of household	-0.000	0.000
	(0.000)	(0.000)
Age of female head of household	0.000	-0.000
	(0.000)	(0.000)
Number of Persons in household	-0.002***	-0.001***
	(0.000)	(0.000)
Constant	-0.129***	
	(0.012)	
Observations	33,278	32,848
R-squared	0.034	

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A4: Average Marginal Effects with separate dummy variable for each Association

VARIABLES	(1)
Dependent Variable (Bought Securities)	Marginal effects
Confidence: Politicians - to fulfil promises	
A great deal of confidence	0.001
	(0.003)
Only some confidence	-0.000
	(0.002)
Confidence: Police - to enforce the law	
A great deal of confidence	0.008***
	(0.002)
Only some confidence	0.003
	(0.002)
Confidence: State government - to look after the people	
A great deal of confidence	0.001
	(0.002)
Only some confidence	-0.002
	(0.002)
Confidence: Courts - to deliver justice	
A great deal of confidence	0.002
	(0.004)
Only some confidence	0.001
	(0.004)
Confidence: Banks - to keep money safe	
A great deal of confidence	0.004
	(0.007)
Only some confidence	0.008
	(0.007)

Member Mahila mandal[1]	0.004*
	(0.002)
Member Youth/Sports/Read	0.004
	(0.003)
Member Union/Business/Professional group	0.007***
	(0.002)
Member Self Help Group	-0.002
	(0.002)
Member Credit/Savings Group	0.006***
	(0.002)
Member Religious Group	0.001
	(0.002)
Member Social Group or festival society	0.000
	(0.003)
Member Caste Association	0.004
	(0.003)
Member Development Group or NGO	0.012***
	(0.004)
Member Agricultural, milk, or other co-operative	0.003
	(0.004)
Member Political Party	-0.005
	(0.003)
Member Lions/Rotary club & Other	0.020***
	(0.004)
Attend public meeting	0.001
	(0.002)
Panchayat member/official in household = 0, omitted	-
Panchayat member/official close to household	-0.003
	(0.002)

[1] A Mahila Mandal is a traditional Indian women's group or club, often found at the grassroots level, that focuses on social, economic, and sometimes political empowerment of women. They provide a platform for women to address community issues, access resources, and participate in development programs.

Ln(Total Household Income)	0.009***
	(0.001)
Highest male adult education	0.001***
	(0.000)
Highest female adult education	0.001***
	(0.000)
Urban residence from census 2011=1 if YES	0.007***
	(0.002)
Age of male head of household	0.000
	(0.000)
Age of female head of household	-0.000
	(0.000)
Number of Persons in household	-0.002***
	(0.000)
Constant	
Observations	30,967
R-squared	

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1