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Non-participation in Stock Markets: A Road Map for Policy Initiatives in India¹

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Abstract

This paper aims at addressing the issue of non-participation in the stock market (NPS). Logical and deterministic models fail to explain the causes of NPS. However, behavioural aspects can provide a solution to the problem of NPS. This paper incorporates behavioural aspects and address the issue of NPS. The paper uses a two-stage approach. First stage, explores literature to find factors/constructs relevant for NPS. Second stage, runs a structural model to address the problem of NPS and provide a solution to the problem. Study found that KSM (knowledge about the stock market), TSM (trust in the stock market) and AFI (availability of funds for investment) contribute to WIS (willingness to invest in stocks). WIS impacts SIS (satisfaction from investment in stocks), which is mediated by TFI (time for investments). TFI negatively mediates the relationship between WIS and SIS, which is one of the main contributions of the paper.

I. Introduction

FINANCING IS A FUNDAMENTAL requirement for a business to survive and grow (Gatchev, Spindt and Tarhan 2009). The choice of financing options is discretionary to the corporate finance managers, and impacts the valuation of the firm (McConnell and Muscarella 1985). However, in the real world, making a choice between financing options is not necessarily always based upon the criteria of shareholders' wealth

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reduce the satisfaction level if time issue is not taken into consideration. The negative mediation by TFI between WIS and SIS support the argument that investment in stocks is a time consuming process.

VI. Conclusion

This paper was aimed at exploring the behavioural factors relevant for NPS so that the problem of NPS can be resolved. This study brings forth the following determinants/factors to support stock market participation (SMP): 1) knowledge about the stock market (KSM); 2) trust in the stock market (TSM); 3) availability of funds for investments (AFI); 4) willingness to invest in stocks (WIS); 5) time for investment (TFI); and 6) satisfaction from investments in stocks (SIS).

Moreover, the second objective of the paper to build a model for NPS is a good fit model. In this model, SIS is caused by a willingness to invest in stocks (WIS). In turn, WIS is caused by knowledge about the stock market (KSM), trust in the stock market (TSM) and availability of funds for investments (AFI). Moreover, TFI plays the role of a mediating variable between SIS and WIS.

The negative mediation of time for investment (TFI) and the importance of trust on the stock market (TSM) are the most important contribution of the paper. The regulation of stock market investments can incorporate these findings and make changes to the process of SMP accordingly. These alterations can reduce the incidence of non-participation in stocks (NPS). The implications of the findings of the paper serves not only managerial but policy level decision making as well. The issue of lack of participation in the equity can be strengthened using the findings of the paper.

A limitation of this study is that it does not separate investments into mutual funds and direct investments into equity; this is an area requiring further study. Further, the issue of endogeneity between SIS and WIS may be tested. This can also be an area of future study.

Reference

Ajzen, I., (1991), "The theory of planned behavior", Organizational Behavior and Human Decision Processes, Vol. 50, No. 1, pp. 179-211

Ajzen, I., (2011), "The theory of planned behaviour: Reactions and reflections", *Psychology and Health*, Vol. 26, No. 9, pp. 1113-1127

Alleyne, P. and T. Broome, (2011), "Using the theory of planned behaviour and risk propensity to measure investment intentions among future investors", *Journal of Eastern Caribbean Studies*, Vol. 36, No. 1, pp. 1-20

Andersen, S. and K.M. Nielsen, (2011), "Participation constraints in the stock market: Evidence from unexpected inheritance due to sudden death", *Review of Financial Studies*, Vol. 24, No. 5, pp. 1667-1697

Ang, A., G. Bekaert and J. Liu, (2005), "Why stocks may disappoint", *Journal of Financial Economics*, Vol. 76, No. 3, pp. 471-508

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Antonides, G., and N.L. Van Der Sar, (1990), "Individual expectations, risk perception and preferences in relation to investment decision making", *Journal of Economic Psychology*, Vol. 11, No. 2, pp. 227-245

Antoniou, C., R.D. Harris and R. Zhang, (2015), "Ambiguity aversion and stock market participation: An empirical analysis", *Journal of Banking and Finance*, Vol. 58, No., pp. 57-70

Armitage, C.J. and M. Conner, (2001), "Efficacy of the theory of planned behaviour: A meta-analytic review", *British Journal of Social Psychology*, Vol. 40, No. 4, pp. 471-499

Arrindell, W.A. and J. Van der Ende, (1985), "An empirical test of the utility of the observations-to-variables ratio in factor and components analysis", *Applied Psychological Measurement*, Vol. 9, No. 2, pp. 165-178

Arrondel, L., M. Debbich and F. Savignac, (2012), "Stockholding and financial literacy in the French population", *International Journal of Social Sciences and Humanity Studies*, Vol. 4, No 2, pp. 285-294

Bagozzi, R.P. and Y. Yi, (1988), "On the evaluation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 16, No. 1, pp. 74-94

Baker, H.K. and J.A. Haslem, (1973), "Information needs of individual investors", *Journal of Accountancy*, Vol. 136, No. 5, pp. 64-69

Baker, H.K., M. Hargrove and J.A. Haslem, (1977), "An Empirical Analysis of the Risk-Return Preferences of Individual Investors", *Journal of Financial and Quantitative Analysis*, Vol. 12, No. 3, pp. 377-389

Barber, B.M. and T. Odean, (2002), "Online investors: do the slow die first?", Review of Financial Studies, Vol. 15, No. 2, pp. 455-488

Barberis, N., M. Huang and T. Santos, (2001), "Prospect theory and asset prices", *The quarterly journal of economics*, Vol. 116, No. 1, pp. 1-53

Barlett, J.E., J.W. Kotrlik and C.C. Higgins, (2001), "Organizational research: Determining appropriate sample size in survey research", *Information Technology, Learning, and Performance Journal*, Vol. 19, No. 1, pp. 43-50

Barrett, P.T. and P. Kline, (1981), "The observation to variable ratio in factor analysis", *Personality Study and Group Behavior*, Vol. 1, No. 1, pp. 23-33

Behrman, J.R., O.S. Mitchell, C.K. Soo and D. Bravo, (2012), "How financial literacy affects household wealth accumulation", *American Economic Review*, Vol. 102, No. 3, pp. 300-304

Benartzi, S. and R.H. Thaler, (1995), "Myopic loss aversion and the equity premium puzzle", *The Quarterly Journal of Economics*, Vol. 110, No. 1, pp. 73-92

Bentler, P.M. and D.G. Bonett, (1980, "Significance tests and goodness of fit in analysis of covariance structures", *Psychological Bulletin*, Vol. 88, No. 3, pp. 588-606

Bernheim, D., (1995), "Do households appreciate their financial vulnerabilities? An analysis of actions, perceptions, and public policy", *Tax Policy and Economic Growth*, Vol. 3, pp. 1-30

Bernheim, D., (1998), "Financial illiteracy, education and retirement saving, In O. Mitchell, S. Schieber, (Ed.), Living with Defined Contribution Pensions (pp. 38-68), Philadelphia: University of Pennsylvania Press

Blume, M.E. and I. Friend, (1973), "A new look at the capital asset pricing model", *The Journal of Finance*, Vol. 28, No. 1, pp. 19-34

- Bogan, V. (2008), "Stock market participation and the internet", *Journal of Financial and Quantitative Analysis*, Vol. 43 No. 1, pp. 191-211.
- Bondia, R., P.C. Biswal and A. Panda, (2019), "The unspoken facets of buying by individual investors in Indian stock market", *Review of Behavioral Finance*, Vol. 11, No. 3, pp. 324-351
- Brown, J.R., Z. Ivkoviæ, P.A. Smith and S. Weisbenner, (2008), "Neighbors matter: Causal community effects and stock market participation", *The Journal of Finance*, Vol. 63, No. 3, pp. 1509-1531
- Campbell, J.Y., (2006), "Household finance", The Journal of Finance, Vol. 61, No. 4, pp. 1553-1604
- Cao, H.H., T. Wang and H.H. Zhang, (2005), "Model uncertainty, limited market participation, and asset prices", *Review of Financial Studies*, Vol. 18, No. 4, pp. 1219-1251
- Carmines, E.G. and M.J. Iver, (1981), "Analysing models with unobserved variables: Analysis of covariance structures, In G. Bohrnstedt and E. Borgatta (Ed.), Social Management: Current Issues (pp. 65-115), Beverly Hill CA: Sage Publications.
- Chen, E., (2006), "Why do so few hold stocks? Theory and evidence, paper presented at The NTU International Conference on Finance: Corporate Governance and Financial Intermediation, 13 Dec-14 Dec, National Taiwan University, 2006
- Chen, E., (2006), "Why do so few hold stocks?: Theory and Evidence, In Proceedings of the 2006 NTU International Conference on Finance, S. Chen. CD ROM, National Taiwan University, pp. 1-58
- Christiansen, C., J.S. Joensen and J. Rangvid, (2008), "Are economists more likely to hold stocks?", *Review of Finance*, Vol. 12, No. 3, pp. 465-496
- Clark-Murphy, M. and G.N. Soutar, (2004), "What individual investors value: Some Australian evidence?", *Journal of Economic Psychology*, Vol. 25, No. 4, pp. 539-555
- Cochran, W.G., (2007), "Sampling Techniques, Vol. 3, New York, NY: John Wiley and Sons
- Cole, S. and G.K. Shastry, (2009), "Smart Money: The Effect of Education, Cognitive Ability, and Financial Literacy on Financial Market Participation, Boston, MA: Harvard Business School
- Cole, S.A. and G.K. Shastry, (2009), "Smart money: The effect of education, cognitive ability, and financial literacy on financial market participation, pp. 09-071, Boston, MA: Harvard Business School
- Cole, S., A. Paulson and G.K. Shastry, (2014), "Smart money? The effect of education on financial outcomes, *The Review of Financial Studies*, Vol. 27, No. 7, pp. 2022-2051
- Conlin, A., P. Kyröläinen, M. Kaakinen, M.R. Järvelin, J. Perttunen and R. Svento, (2015), "Personality traits and stock market participation", *Journal of Empirical Finance*, Vol. 33, No. pp. 34-50
- Debondt, W., W. Forbes, P. Hamalainen and Y.G. Muradoglu, (2010), "What can behavioural finance teach us about finance?", *Qualitative Research in Financial Markets*, Vol. 2, No. 1, pp. 29-36

Fama, E.F., (1965), "The behavior of stock-market prices", *The Journal of Business*, Vol. 38, No. 1, pp. 34-105

Fernández-López, S., L. Rey-Ares and M. Vivel-Búa, (2018), "The role of internet in stock market participation: just a matter of habit?", *Information Technology & People*, Vol. 31, No. 3, pp. 869-885

Fornell, C. and D.F. Larcker, (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18, No. 1, pp. 39-50

Furnham, A., (1984), "The Protestant work ethic: A review of the psychological literature", European Journal of Social Psychology, Vol. 14, No. 1, pp. 87-104

Gan, L., X. Xia and Y. Chen, (2018), "Investment and financing choices by time-inconsistent managers", *The North American Journal of Economics and Finance*, Vol. 46, No., pp. 29-48

Gao, M., (2019), "No pain, no gain? Household beliefs and stock market participation", *Economics Letters*, Vol. 181, No. 1, pp. 81-84

Gao, M., J. Meng and L. Zhao, (2019), "Income and social communication: The demographics of stock market participation", *The World Economy*, Vol. 42 No. 7, pp. 2244-2277

Gardini, A. and A. Magi, (2007), "Stock Market Participation: New Empirical Evidence From Italian Households' Behavior", *GiornaledegliEconomisti e Annali di Economia*, Vol. 66, No. 1, pp. 93-114

Gatchev, V.A., P.A. Spindt and V. Tarhan, (2009), "How do firms finance their investments?: The relative importance of equity issuance and debt contracting costs", *Journal of Corporate Finance*, Vol. 15, No. 2, pp. 179-195

Geetha, N., and M. Ramesh, (2011), "A study on people's preferences in investment behaviour", *International Journal of Engineering and Management Research*, Vol. 1, No. 6, pp. 1-10

Georgarakos, D., and G. Pasini, (2011), "Trust, sociability, and stock market participation", *Review of Finance*, Vol. 15, No. 4, pp. 693-725

Glaser, M.A. and W.B. Hildreth, (1999), "Service delivery satisfaction and willingness to pay taxes: Citizen recognition of local government performance", *Public Productivity and Management Review*, Vol. 23, No. 1, pp. 48-67

Gomes, F. and A. Michaelides, (2005), "Optimal Life Cycle Asset Allocation: Understanding the Empirical Evidence", *The Journal of Finance*, Vol. 60, No. 2, pp. 869-904

Grinblatt, M., M. Keloharju and J. Linnainmaa, (2011), "IQ and stock market participation", *The Journal of Finance*, Vol. 66, No. 6, pp. 2121-2164

Guiso, L., and P. Sodini, (2013), "Household finance: An emerging field", Handbook of the Economics of Finance, Vol. 2, No., pp. 1397-1532

Guiso, L., M. Haliassos and T. Jappelli, (2003), "Household stockholding in Europe: where do we stand and where do we go?", *Economic Policy*, Vol. 18, No. 36, pp. 123-170

Guiso, L., P. Sapienza and L. Zingales, (2008), "Trusting the stock market", *The Journal of Finance*, Vol. 63, No. 6, pp. 2557-2600

Gul, F., (1996), "A Theory of Disappointment Aversion', *Econometrica*, Vol. 59, No. 3, May, 667-86", *International Library of Critical Writings in Economics*, Vol. 73, No. 1, pp. 463-482

- Gupta, N., and A. Sharma, (2016), "A study on factors effecting the satisfaction level of mutual funds investors in Jaipur City", *Samvad*, Vol. 12, No., pp. 80-84
- Hair, J.F., R.E. Anderson, B.J. Babin and W.C. Black, (2010), "Multivariate Data Analysis: A Global Perspective (7/e), Upper Saddle River, Pearson, New Jersey
- Haliassos, M. and C.C. Bertaut, (1995), "Why do so few hold stocks?", *The Economic Journal*, Vol. 105, No. 432, pp. 1110-1129
- Haliassos, M., and A. Michaelides, (2003), "Portfolio choice and liquidity constraints", *International Economic Review*, Vol. 44, No. 1, pp. 143-177
- Hogarth, J.M. and M.A. Hilgert, (2002), "Financial knowledge, experience and learning preferences: Preliminary results from a new survey on financial literacy", Consumer Interest Annual, Vol. 48, No. 1, pp. 1-7
- Homburg, C., N. Koschate and W.D. Hoyer, (2005), "Do satisfied customers really pay more? A study of the relationship between customer satisfaction and willingness to pay", *Journal of Marketing*, Vol. 69, No. 2, pp. 84-96
- Hong, H., J.D. Kubik and J.C. Stein, (2004), "Social interaction and stock market participation", *The Journal of Finance*, Vol. 59, No. 1, pp. 137-163
- Hsu, J.C., (2012), "What drives equity market non-participation?", *The North American Journal of Economics and Finance*, Vol. 23, No. 1, pp. 86-114
- Hu, L.T. and P.M. Bentler, (1999), "Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives", *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 6, No. 1, pp. 1-55
- Hulland, J., (1999), "Use of partial least squares (PLS) in strategic management research: A review of four recent studies", *Strategic Management Journal*, Vol. 20, No. 299, pp. 195-204
- Jackson, S.B., T.M. Keune and L. Salzsieder, (2013), "Debt, equity, and capital investment", *Journal of Accounting and Economics*, Vol. 56, No. 2-3, pp. 291-310
- Kahneman, D. and A. Tversky, (1979), "Prospect Theory: An Analysis of Decision under Risk", *Econometrica*, Vol. 47, No. 2, pp. 263-292
- Keller, C. and M. Siegrist, (2006), "Investing in stocks: The influence of financial risk attitude and values-related money and stock market attitudes", *Journal of Economic Psychology*, Vol. 27, No. 2, pp. 285-303
- Kline, R.B. and D.A. Santor, (1999), "Principles and practice of structural equation modelling, Canadian Psychology, Vol. 40, No. 4, pp. 381-383
- Kline, R.B., (2005), "Principles and Practice of Structural Equation Modeling, 2nd ed. New York, Guilford Press, New York
- Knack, S. and P. Keefer, (1997), "Does social capital have an economic payoff? A cross-country investigation", *The Quarterly Journal of Economics*, Vol. 112, No. 4, pp. 1251-1288
- Koesrindartoto, D.P., A. Aaron, I. Yusgiantoro, W.A. Dharma and A. Arroisi, (2020), "Who moves the stock market in an emerging country-Institutional or retail investors?", *Research in International Business and Finance*, Vol. 51, No. 1, pp. 1-28

Kristensen, K., A. Martensen and L. Gronholdt, (1999), "Measuring the impact of buying behaviour on customer satisfaction", *Total Quality Management*, Vol. 10, No. 4-5, pp. 602-614

Kumar, A., (2009), "Who gambles in the stock market?", *The Journal of Finance*, Vol. 64, No. 4, pp. 1889-1933

Lewicki, R.J. and B.B. Bunker, (1995), "Trust in relationships: a model of development and decline", *Administrative Science Quarterly*, Vol. 5, No. 1, pp. 583-601

Lim, V.K. and T.S. Teo, (1997), "Sex, money and financial hardship: An empirical study of attitudes towards money among undergraduates in Singapore", *Journal of Economic Psychology*, Vol. 18, No. 4, pp. 369-386

Lim, Y. and K.T. Kim, (2019), "Afraid of the stock market", Review of Quantitative Finance and Accounting, Vol. 53, No. 3, pp. 773-810

Lusardi, A. and O.S. Mitchell, (2007), "Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth", *Journal of Monetary Economics*, Vol. 54, No. 1, pp. 205-224

MacCallum, R.C., K.F. Widaman, S. Zhang and S. Hong, (1999), "Sample size in factor analysis", *Psychological Methods*, Vol. 4, No. 1, pp. 84-99

Mangram, M.E., (2013), "A simplified perspective of the Markowitz portfolio theory", *Global Journal of Business Research*, Vol. 7, No. 1, pp. 59-70

Mankiw, N.G. and S.P. Zeldes, (1991), "The consumption of stockholders and nonstockholders", *Journal of Financial Economics*, Vol. 29, No. 1, pp. 97-112

McClell, and D.C., (1967), "Money as a motivator: Some research insights", *The McKinsey Quarterly*, Vol. 4, No. 2, pp. 10-21

McConnell, J.J. and C.J. Muscarella, (1985), "Corporate capital expenditure decisions and the market value of the firm", *Journal of Financial Economics*, Vol. 14 No. 3, pp. 399-422

Mehra, R. and E.C. Prescott, (1985), "The equity premium: A puzzle", *Journal of Monetary Economics*, Vol. 15, No. 2, pp. 145-161

Mittal, M. and R. Vyas, (2007), "Demographics and investment choice among Indian investors", ICFAI Journal of Behavioural Finance, Vol. 4, No. 2, pp. 12-20

Morgenstern, O. and J. Von Neumann, (1953), "Theory of games and economic behavior, Princeton University Press, New Jersey, USA

Muchiri, M.P., (2015), "The Relationship between Financial Literacy and Stock Market Participation by Retail Investors in Kenya", Unpublished MBA Research Project, University of Nairobi

Mundfrom, D.J., D.G. Shaw and T.L. Ke, (2005), "Minimum sample size recommendations for conducting factor analyses", *International Journal of Testing*, Vol. 5, No. 2, pp. 159-168

Muth, J.F., (1961), "Rational Expectations and the Theory of Price Movements", *Econometrica*, Vol. 29, No. 3, pp. 315-335

Nagy, R.A. and R.W., Obenberger, (1994), "Factors influencing individual investor behavior", *Financial Analysts Journal*, Vol. 50, No. 4, pp. 63-68

Naudon, A., M. Tapia and F. Zurita, (2004), "Ignorance, Fixed Costs, and the Stock-Market Participation Puzzle", *Documentos de Trabajo*, Vol. 262, No., pp. 1-30

Netemeyer, R.G., W.O. Bearden and S. Sharma, (2003), "Scaling Procedures: Issues and Applications, New Delhi: Sage Publications

Newbery, R., J. Sauer, M. Gorton, J. Phillipson and J. Atterton, (2013), "Determinants of the performance of business associations in rural settlements in the United Kingdom: An analysis of members' satisfaction and willingness-to-pay for association survival", *Environment and Planning A: Economy and Space*, Vol. 45, No. 4, pp. 967-985

Niu, G., Q. Wang, H. Li and Y. Zhou, (2020), "Number of brothers, risk sharing, and stock market participation", *Journal of Banking & Finance*, Vol. 113, No. 1, pp. 105-757

Nunnally, J.C., (1994), "Psychometric Theory, 3nd ed. New York NY: McGraw-Hill Publication

Pan, X., W. Wu and X. Zhang, (2020), "Is financial advice a cure-all or the icing on the cake for financial literacy? Evidence from financial market participation in China", *International Review of Financial Analysis*, Vol. 69, No. 5, pp. 101-473

Rashid, M. and M. Nishat, (2009), "Satisfaction of retail investors on the structural efficiency of the market: Evidence from a developing country context", *Asian Academy of Management Journal*, Vol. 14, No. 2, pp. 41-64

Rastogi, S., (2014), "Investors apathy to stock market: A study using discriminant analysis", *Abhigyan*, Vol. 32, No. 2, pp. 1-14

Rastogi, S., (2015), "Differences in Behavioural Biases in Investment Decision Making: Gender and Occupation Perspective", *Journal of International Business and Economy*, Vol. 16, No. 1, pp. 13-35

Remund, D.L., (2010), "Financial literacy explicated: The case for a clearer definition in an increasingly complex economy", *Journal of Consumer Affairs*, Vol. 44, No. 2, pp. 276-295

Ritter, J.R., (2003), "Behavioral finance", *Pacific-Basin Finance Journal*, Vol. 11, No. 4, pp. 429-437

Savage, L.J., (1972), "The foundations of statistics, New York: John Wiley

Schumacker, R.E. and R.G. Lomax, (2012), "A Beginner's Guide to Structural Equation Modeling, Routledge, New York

Scott, S.G. and R.A. Bruce, (1994), "Determinants of innovative behavior: A path model of individual innovation in the workplace", *Academy of Management Journal*, Vol. 37, No. 3, pp. 580-607

Seyal, A.H., M.N.A. Rahman and M.M. Rahim, (2002), "Determinants of academic use of the Internet: A structural equation model", *Behaviour and Information Technology*, Vol. 21 No. 1, pp. 71-86.

Sharpe, W.F., (1964), "Capital asset prices: A theory of market equilibrium under conditions of risk", *The Journal of Finance*, Vol. 19, No. 3, pp. 425-442

Shefrin, H. and M. Statman, (1994), "Behavioral Capital Asset Pricing Theory", *Journal of Financial and Quantitative Analysis*, Vol. 29, No. 3, pp. 323-349

Shinde, C. and P. Zanvar, (2015), "A study of investment pattern on the basis of demographic traits", *International Journal of Research Granthaalayah*, Vol. 3, No. 11, pp. 175-205

Singh, R., (2009), "Does my structural model represent the real phenomenon?: A review of the appropriate use of Structural Equation Modelling (SEM) model fit indices", *The Marketing Review*, Vol. 9, No. 3, pp. 199-212

Sivaramakrishnan, S., M. Srivastava and A. Rastogi, (2017), "Attitudinal factors, financial literacy and stock market participation", *International Journal of Bank Marketing*, Vol. 35, No. 5, pp. 818-841

Strauss, N., (2018), "Role of trust in investor relations: A conceptual framework", Corporate Communications: An International Journal, Vol. 23, No. 1, pp. 2-16

Tang, T.L.P., (1993), "The meaning of money: Extension and exploration of the money ethic scale in a sample of university students in Taiwan", *Journal of Organizational Behavior*, Vol. 14, No. 1, pp. 93-99

Tang, T.L.P. and P.R. Gilbert, (1995), "Attitudes toward money as related to intrinsic and extrinsic job satisfaction, stress and work-related attitudes", *Personality and Individual Differences*, Vol. 19, No 3, pp. 327-332

Thomas, G.O., I. Walker and C. Musselwhite, (2014), "Grounded Theory analysis of commuters discussing a workplace carbon-reduction target: Autonomy, satisfaction, and willingness to change behaviour in drivers, pedestrians, bicyclists, motorcyclists, and bus users, Transportation research part F", Traffic Psychology and Behaviour, Vol. 26, No., pp. 72-81

Tversky, A. and D. Kahneman, (1974), "Judgment under uncertainty: Heuristics and biases", *Science*, Vol. 185, No. 4157, pp. 1124-1131

Tversky, A. and D. Kahneman, (1992), "Advances in prospect theory: Cumulative representation of uncertainty", *Journal of Risk and Uncertainty*, Vol. 5, No. 4, pp. 297-323

Vaarmets, T., K. Liivamägi and T. Talpsepp, (2019), "From academic abilities to occupation: What drives stock market participation?", *Emerging Markets Review*, Vol. 39, No. 1, pp. 83-100

Van Rooij, M.C., A. Lusardi and R.J. Alessie, (2012), "Financial literacy, retirement planning and household wealth", *The Economic Journal*, Vol. 122, No. 560, pp. 449-478

Van Rooij, M., A. Lusardi and R. Alessie, (2007), "Financial literacy and stock market participation", *Discussion Paper Series*, Tjalling C. Koopmans Research Institute, Vol. 7, No. 23, pp. 1-46

Van Rooij, M., A. Lusardi and R. Alessie, (2011), "Financial literacy and stock market participation", *Journal of Financial Economics*, Vol. 101, No. 2, pp. 449-472

Vestman, R., (2019), "Limited stock market participation among renters and homeowners", *The Review of Financial Studies*, Vol. 32, No. 4, pp. 1494-1535

Vissing-Jorgensen, A., (2002), "Towards an explanation of household portfolio choice heterogeneity: Nonfinancial income and participation cost structures", Working Paper 8884, National Bureau of Economic Research

Vohra, T. and M. Kaur, (2016), "Awareness and stock market participation of women: A comparative study of stock investors and non-investors", *IUP Journal of Management Research*, Vol. 15, No. 4, pp. 22-40

Xia, T., Z. Wang and K. Li, (2014), "Financial literacy overconfidence and stock market participation", *Social Indicators Research*, Vol. 119, No. 3, pp. 1233-1245

Zhou, J., (2020), "Household stock market participation during the great financial crisis", *The Quarterly Review of Economics and Finance*, Vol. 75, No. 1, pp. 265-275

Annexure

The discriminant validity of the constructs is explained in Table A1.

Table A1
Reliability and Validity of Constructs

Treating three variation of Constitution										
	CR	AVE	MSV	Cronbach Alpha	TSM	KSM	AFI	WIS	TFI	SIS
TSM	0.814	0.525	0.334	0.8130	0.724					
KSM	0.865	0.762	0.306	0.0864	0.454	0.873				
AFI	0.801	0.669	0.306	0.0789	0.379	0.553	0.818			
WIS	0.867	0.686	0.334	0.8670	-0.578	-0.409	-0.297	0.828		
TFI	0.779	0.541	0.022	0.7580	0.103	0.054	-0.003	-0.089	0.735	
SIS	0.792	0.565	0.219	0.7890	-0.333	-0.332	-0.234	0.468	0.147	0.751

Note: The diagonal values are square roots of AVE for that construct. Off-diagonal values are inter-construct correlation coefficients. Square root of AVEs are greater than all the inter-construct correlation coefficients for that construct.

Source: Self Computed

Questionnaire

Answer following questions on scale of five. 1 (strongly disagree) to 5 (strongly agree).

Knowledge or Awareness about Equity Market:

- I am not comfortable in online transactions.
- Stock market working is beyond my understanding.
- I lack the requisite knowledge about the stock market.

Cash Availability:

- I do not have cash to invest in the stock market.
- I am still meeting my other requirements and do not have excess cash to invest in equity market (directly or indirectly).
- I put my money into something which I rate better investment for me than putting money in the stock market. I am left with no money for investing in the stock market.

Willingness to invest:

- I am confortable in investing in shares (directly or indirectly)
- Shares provide a good alternative to the conventional mode of investments (like FDs, Post Office Deposits etc.)
- If I get extra money, I would like to invest in shares

Time or Interest to invest:

- I am too busy to have the time for investing into the stock market.
- Learning about stock market is very time consuming and onerous which I do want to do.
- I do not find stock markets interesting to invest my hard-earned money.

Trust:

- Stock market is not for simple people.
- I invested money in SM and lost. I have no trust on the stock market.
- Fluctuations in stock markets are so much that I am not confortable in investing there.
- The movement in the stock market is most of time man made, not the actual forces of demand and supply.
- I find stock market too risky to invest my money.
- I find those who invest in stock market are greedy people and want to make some quick bucks.
- I do not trust these businessmen who are money monsters for giving my money

Satisfaction

- Stock Market has the potential for giving better returns than other investment avenues
- In the long run, equity investment gives satisfactory results
- I gain or I lose, but I am content with investment in Stock Market (directly or indirectly).

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