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INTER-STATE VARIATION OF FINANCIAL LITERACY IN INDIA

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Abstract:

This paper is discussing inter-state variation in financial literacy in India. The data used for analysis are obtained from FII Survey (6th wave) ,accessible at Kantar's Financial Inclusion Insights(FII) website. Following the OECD's approach, financial literacy is measured as a combination of the three parameters, viz., Financial knowledge, Financial behavior and Financial attitude. Wide variation in proportion of financially literate adult people among the States of India is revealed in analysis of the data. When at all India level 31% of the adult population are found financially literate, the lowest proportion found is 5.70% (Puducherry) and the highest proportion is 57.10% (Arunachal Pradesh) . More over the inter-state variation is also observed among the three parameters of financial literacy. It is also observed that the high rank states in India in overall financial literacy are not necessarily the states with high rank in the three parameters of financial literacy.

Keywords: Financial Literacy, Inter-state variation, India

I. Introduction

Achieving faster economic growth of a country demands its nationals to enhance human capabilities. Financial literacy is one of such capabilities which can contribute towards development and well-being of individuals. In a India based survey of the year 2013-2014 it is revealed that only 20% Indian are financially literate (National Institute of Securities Market, 2014) .Another India based study (Gunther & Ghosh, 2018) had found 26% of the adult population as financially literate. International Studies as well as country level studies unveils regional differences in financial literacy(Atkinson & Messy, 2012; Gunther & Ghosh, 2018; Lusardi & Mitchell, 2011; NISM, 2015). India being a country with diverse socio-cultural and demographic characteristics, inter-state variation in financial literacy is very likely. Financial literacy being a dynamic concept demands that the state of financial literacy is assessed periodically and continuously so that policy measures for improving financial literacy can be appropriately targeted to the segment(s) which demands it most. The changing demographics in India too demands understanding the status of financial literacy among various groups of people. The UNFPA annual report 2022 reveals that the share of population in the working ages is increasing in India. The share of population in 15 to 64 years age group is 68%. It is utmost important that this working age group people are capable and independent enough to handle their personal finances .A concern area in India's population is that aging is increasing in India(UNFPA,2022). The report is projecting that because of increase in population above 60 years (20% by 2050 from 10.1 % in 2021) there will be a greater proportion of women being widowed and facing financial insecurity (UNFPA,2022). Moreover widening financial markets, growing complexities in sophisticated financial products , rise of financial technologies firms, varieties of financial services providers , rising cases of financial frauds, crimes etc. demands individuals to be financially literate . The present paper is an effort to present the state of financial literacy in India and the inter-state variation in financial literacy.

II. Significance of the study

Understanding inter-state differences in financial literacy lead to easy identification of the areas or the states which require more focus while devising financial education strategy. Some state or region may have a significantly lower proportion of financial literates than some other states and so here the efforts for improving financial literacy require to be directed toward those states with poor financial literacy. It also helps to identify in which component(s) of financial literacy majority people are lagging behind than their counterparts and thereby assist in framing the effective targeting strategy for improving financial literacy.

III. Literature Review

Financial literacy is defined as the combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decision and achieve individual financial well-being (OECD INFE, 2011). This is one of the most comprehensive definition on financial literacy.

Researchers have empirically tested that financial literacy is positively linked with financial access and consumption of financial services (Tulasi, Golati, Sethi, & Goel, 2017); financial planning, saving and investment building (Gupta, 2017); (Lusardi & Mitchell, 2006), stock market participation (Almenberg & Dreber, 2015) and financial well-being. Studies found association between financial literacy and indebtedness (Tulasi, Golati, Sethi, & Goel, 2017); (Gathergood, 2012). Huston (Huston, 2012) in a study between financial literacy and cost of borrowing revealed that financially literates are twice as likely to have lower cost of borrowing in credit cards and mortgage loans. Financially literate people are more prepared for future financial security (Alessie, Rooji, & Lusardi, 2011). Financial literacy increases the probability of consulting with bank and financial advisors. (Monticone, 2011). On the other hand Financial illiteracy may pose problem in seeking advice from financial advisors or counselor because of not knowing the personal priorities. (Monticone, 2011); (Fornero & Monticone, 2011). Financial literacy is a form of human capital (Jappelli & Padula, 2015). A Cross-country level study shows link between financial literacy and financial inclusion in countries (Grohmann et al., 2018).

International studies on financial literacy (Atkinson & Messy, 2011, 2012; Lusardi & Mitchell, 2011) revealed widespread financial illiteracy and regional differences. Even in countries where financial market are developed, such as Germany, the Netherlands, US, Japan, Sweden, Italy etc., financial illiteracy is prevailing. OECD INFE pilot study which was undertaken in 14 countries of the world also found variation of financial literacy across the countries and also within countries by socio-demographic groups (Atkinson & Messy, 2012).

Studies in India also revealed significant regional differences in financial literacy (Gunther & Ghosh, 2018); (NISM, 2015). The NISM led baseline survey on financial literacy and financial inclusion in the year 2013-2014 is an initiative to gauge the state of financial literacy in India. The NISM survey reported 20% Indian as financially literate (NISM, 2015). There are many states in India where the rate of financially literate adult population is lower than the country's overall financial literacy rate. Gunther and Ghosh (2018) in their study found that state Bihar is housing the smallest share (11%) of financially literate population across all states in India whereas Himachal Pradesh, the highest share of financially literate population (77%). Overall 26% on adult population in India are financially literate. Similarly, NISM second survey report stated 27% people as financially literate. Alarmingly, there are many states in India where the rate of financially literate adult population is lower than the country's overall financial literacy rate. Low rate of financial literacy is a real concern for a society. Financially illiterate people may be self-deprived from accessing formal financial services and the benefits associated with formal financial services. Financial literacy being a dynamic concept demands that the state of financial literacy is assessed periodically and continuously so that policy measures for improving financial literacy can be appropriately targeted to the segment(s) which demands it most. This paper therefore aims at investigating inter-state differences in financial literacy of people of India.

IV. Objectives of the study

The present study aims at achieving following two objectives:

1. To investigate the inter-state variation in financial literacy in India.
2. To study inter-state variation based on the three components of financial literacy.

V. Research Methodology:

Sources of Data

This paper is using a nationally representative unit level dataset for carrying out the study. The dataset is acquired from Kantar's Financial Inclusion Insights(FII) website .(www.finclusion.org). The FII program is managed by InterMedia. India FII Tracker Survey wave 6 dataset is going to be used in this study. The survey is conducted annually in different wave. This study is using the survey data of 6th wave . Sixth wave survey was conducted from September 11 to December 27, 2018. The sample design adopted in the 6th wave survey is Stratified multistage cluster sample.

Target Population

The dataset contains cross-sectional data of 48027 adults (15 and above years) representing the adult population of India for the year 2018. However, the present study has taken only the 18 years and above age respondents. Respondents below 18 years age are dropped from the data set before proceeding for analysis. Only 28 states and Union Territories are covered under this survey wave. So the results are presented for only those 28 States and UTs. Two states Andhra Pradesh and Telengana states are presented as a single state. Measurement of the construct financial literacy and it's three parameters are detailed in the following section.

Measurement of the concept Financial literacy and its components:

Following the approach of OECD INFE¹, the present study measures Financial literacy as a composite score of the three parameters, Viz., financial knowledge, financial behavior and financial attitude.

Financial knowledge (FK)of the respondents are measured with the help of responses to the 5 test-based question available in the Survey questionnaire . Three questions are on interest calculation and accumulation of interest , one question on time value of money and one question on risk diversification. Responses are either categorized as "correct" or "incorrect". For each correct response 1(one) score is given and 0 (zero) for incorrect response. The total number of correct responses given by an individual respondent is deemed as the financial knowledge score. This is the most simple and often found method of financial knowledge scoring (Sekita, 2011); (Klapper, Lusardi, & Oudheusden, 2014); (National Institute of Securities Market, 2014); (Gupta, 2017); (Gunther & Ghosh, 2018) . The possible minimum score is 0 and the maximum is 5.

The responses to questions which elicit financial behavior (FB) related information are collected in 5 point likert scale . For measuring financial behaviour 1 score is to be allotted for each response which is indicative of healthy practice or behaviour, is ideally scoring 4 or 5 on the 5 point attitude scale, otherwise 0. After individually scoring each indicator of financial behaviour , all are to be summed up and total financial behaviour score is to be obtained for each respondent. The possible minimum score in financial behaviour is zero (0) , and the maximum is six (6).

Five indicators are available for measuring Financial Attitude (FA) of the respondents. The questions that elicit financial attitude related information are also collected in 5 point Likert scale . 1 score is to be allotted for each response showing positive attitude toward financial affairs, otherwise 0. After individually scoring each indicator of financial attitude, all are to be summed up and the financial attitude score is to be obtained. The possible minimum score is zero (0) and the maximum score is (5).

Overall financial literacy (FL) score is found out by summing up the scores on the three components for each respondent. Thus,

$$\text{FL_score} = \text{FK_score} + \text{FB_score} + \text{FA_score}$$

Where, FL_score= Financial Literacy score, FK_score= Financial knowledge score, FB_score=Financial behavior score, FA_score= Financial Attitude score.

Thus the possible minimum score is (0) and the maximum score is 16.

¹ OECD. (2022). *OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion 2022*. accessed at www.oecd.org/financial/education/2022-INFE-Toolkit-Mesuring-Finlit-Financial-Inclusion.pdf

States are compared and ranked based on the proportion of adult people who has passed the threshold level of scores in each of the parameters of financial literacy and overall financial literacy. Inter-state differences are indicated through the differences apparent in the proportion in respect to the measured parameter.

VI. Analysis and Discussion

The Inter-state variation in financial literacy is analysed through cross tabulation of variable “State” and the components of financial literacy. States are ranked based on each of the three parameters and the overall financial literacy .

Inter-state variation in Financial Knowledge found in India: From analysis of data at the all India level, out of a maximum of 5 points, the average level of financial knowledge found is 2.10 (mean value) or 3 (median value) . The value at 25th Percentile is 1 and at 75th percentile it is 3. An adult is considered as being financially knowledgeable if the score on financial knowledge is at or above the 75th percentile. i.e. 3. This is giving a country specific benchmarking of financial knowledge. Overall only 2/5th (41.10 %) of adult population in India is found to exhibit financially knowledgeable. State-wise highest proportion of financially knowledgeable are found in Arunachal Pradesh (83.30%) and the lowest in Chandigarh (11%). (Table 1)

State-wise differences observed in financial behaviour :

The average score (mean) found for the all India data is 2.94 and the median value is 3. At 25th percentile the score is 3 and at 75th percentile it is 5. Thus the adult whose score in financial behavior is equal to 5 or above 5 is considered possessing desirable financial behavior. At country level 1/3rd (30.80%) of the adult population is exhibiting desirable financial behavior. State-wise highest proportion is 68.10% (Chandigarh) and the lowest is 6.70% (Puducherry). (Table 1)

Differences in Financial Attitude is also found among the states: From the analysis, the average score of an Indian adult in financial attitude found is 1.92 (mean) and the median value found is 2. The scores in 25th percentile is 0 and in 75th percentile it is 4. An Indian adult is considered to have positive attitude towards finance if the score is equal to 4 and above 4. Present analysis shows that 1/4th (25.60%) of the adult population have positive attitude towards finance. Statewise the highest share is 56.50% (Chandigarh) and lowest is 8.60% (Puducherry). (Table 1)

Inter-State Variation in Overall Financial Literacy:

The mean financial literacy score found is 6.96 and the median is 7. At 25th percentile the score is 4 and at 75th percentile the score is 10. An adult Indian is considered financially literate if the score achieved is 10 or above. 31% of Indian adult population found to be financially literate from the present analysis. Only one against every three adult individuals is found financially literate in India. State-wise the highest share is 57.10% (Arunachal Pradesh) and the lowest is 5.70% (Puducherry). (Table 1)

Table:1 State-wise proportion of respondents with high scores in financial literacy and its components

1	2	3	4	5	6	7	8	9
States and UTs	High Knowledge score	High Behaviour score	High Attitude score	High financial literacy	Rank in Financial knowledge	Rank in financial Behaviour	Rank in Financial Attitude	Rank in Financial literacy
Andhra Pradesh and Telengana	46.90%	32.70%	25.40%	33.40%	15	13	14	15
Arunachal Pradesh	83.30%	51.10%	48.60%	67.40%	1	3	3	1
Assam	49.50%	17.70%	14.10%	17.80%	11	24	25	23
Bihar	32.90%	41.80%	32.40%	38.90%	24	7	9	10
Chandigarh	11.00%	68.10%	56.50%	57.10%	28	1	1	3
Chhattisgarh	47.40%	22.80%	23.40%	24.40%	14	20	16	19
Dadra & Nagar Haveli	26.50%	20.60%	15.70%	14.70%	27	21	23	26
Daman and Diu	49.00%	19.60%	15.70%	17.60%	12	22	23	24
Delhi	51.40%	36.60%	32.20%	40.40%	7	11	10	9

Goa	50.50%	16.20%	21.00%	19.20%	9	25	19	20
Gujarat	31.90%	18.40%	18.40%	19.20%	25	23	21	20
Haryana	58.90%	46.80%	45.20%	50.50%	4	6	5	5
Himachal Pradesh	59.40%	55.40%	45.80%	59.20%	3	2	4	2
Jharkhand	48.10%	29.40%	27.60%	35.00%	13	15	12	13
Karnataka	49.70%	39.20%	29.00%	36.50%	10	10	11	11
Kerala	54.40%	32.20%	23.90%	35.60%	5	14	15	12
Madhya Pradesh	39.10%	23.50%	20.50%	25.90%	19	19	20	18
Maharashtra	35.20%	26.30%	22.10%	26.50%	21	17	18	17
Manipur	51.70%	33.70%	35.60%	46.80%	6	12	8	7
Odisha	35.40%	10.20%	8.90%	10.20%	20	27	27	27
Puducherry	61.90%	6.70%	8.60%	5.70%	2	28	28	28
Punjab	40.40%	39.30%	26.00%	35.00%	18	9	13	13
Rajasthan	34.40%	50.50%	43.40%	47.90%	22	5	6	6
Tamilnadu	50.60%	40.70%	42.30%	43.20%	8	8	7	8
Tripura	31.40%	25.20%	17.70%	16.20%	26	18	22	25
Uttar Pradesh	33.20%	28.90%	22.70%	27.50%	23	16	17	16
Uttarakhand	46.30%	50.60%	50.00%	52.50%	16	4	2	4
West bengal	46.20%	16.20%	9.20%	17.90%	17	25	26	22
Total	41.10%	30.80%	25.60%	31.00%	-	-	-	-

Source: Author's own calculation from FII 6th Wave survey data.

Note:

- Column 2, 3, 4 and 5 represent the percentage of respondents gaining a high score (≥ 3 in Knowledge, ≥ 5 in behaviour, ≥ 4 in attitude, ≥ 10 in Financial literacy).
- Column 6, 7, 8 and 9 represent the rank of the respective state among the sampled states in the respective criteria mentioned in the column head.
- Row percentages are calculated based on the total respondents of the respective States.

Ranking the states : The ranking of the states are based on proportion of people in the respective States whose score in higher than the threshold scores as set in financial literacy and the three parameters of financial literacy ,viz.,financial knowledge, financial behavior, financial attitude . Ranking of the states gives interesting results. Arunachal Pradesh the eastern most state in India shows the highest proportion (83.30%) of financially knowledgeable people among the states and UTs of India. This state has exhibit fair share of people in other two parameters of financial literacy viz. financial behavior (51.10%) , Financial attitude (48.60%) and rank highest in overall financial literacy with 67.40% . An interesting and contrasting result is evident in cases of Chandigarh and Puducherry. Chandigarh rank last with only 11% of financially knowledgeable adult people, but rank highest in both financial behavior (68.10%) and financial attitude (56.50%). With highest proportion of people in the two parameters of financial literacy Chandigarh secure 3rd rank in overall financial literacy. On the other hand, with a higher proportion of financially knowledgeable people (61.90%), Puducherry have accounted for least proportion in other two components financial behavior (6.70%) and financial attitude (8.60%). Puducherry is securing last rank in overall financial literacy. Dadra and Nagar Haveli , Gujarat , Odisha are showing low proportion in all the components. Himachal Pradesh , Haryana, Tamilnadu , Karnataka securing 2nd , 5th , 8th and 11th rank respectively in overall financial literacy ,showing similar pattern in the three parameters like Arunachal Pradesh . Figure 1 shows the order of the states according to the proportion of financially literate people .

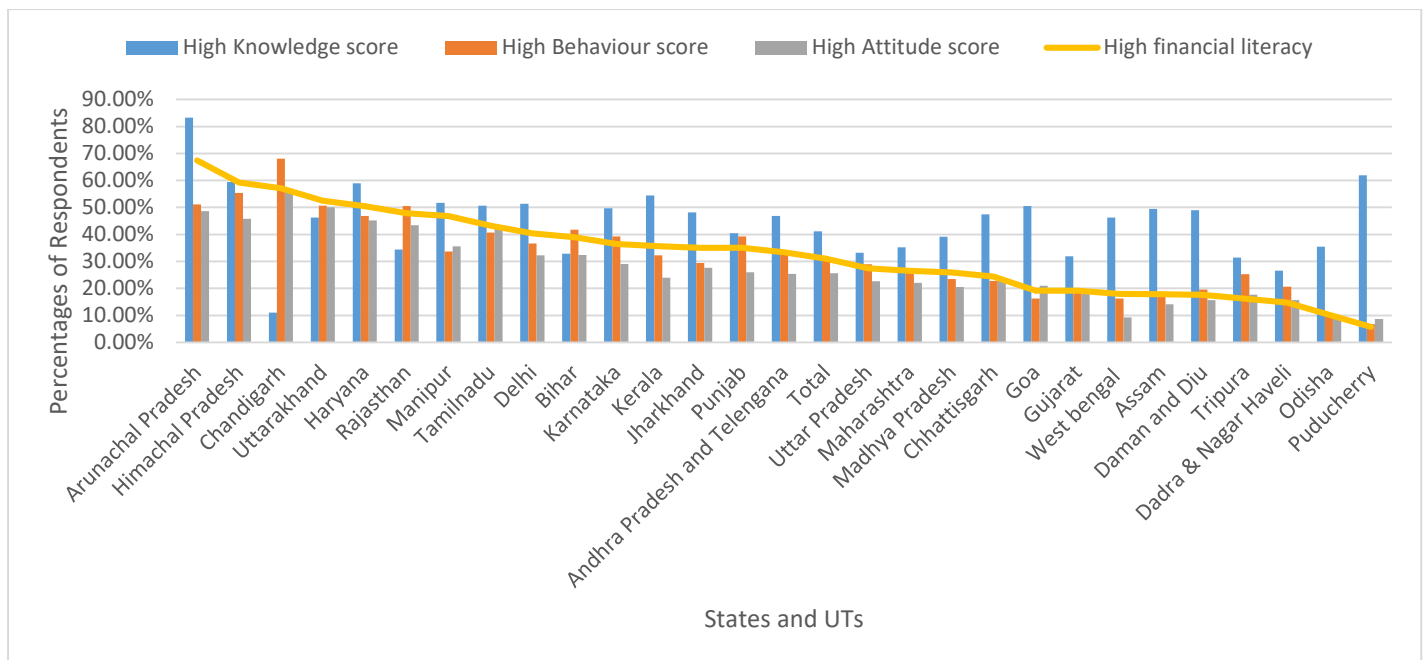


Figure 1: Inter-State variation in Financial Literacy and it’s three parameters

Table 2: States with higher proportion than country’s proportion in Financial literacy and its components

Parameters	States with Higher proportion than country’s total
Financial knowledge	Arunachal Pradesh, Puducherry, Himachal Pradesh, Haryana, Kerala, Manipur, Delhi, Tamilnadu, Goa, Karnataka, Assam, Daman and Diu, Jharkhand, Chhattisgarh, Andhra Pradesh and Telengana, Uttarakhand, West bengal
Financial Behaviour	Chandigarh, Himachal Pradesh, Arunachal Pradesh, Uttarakhand, Rajasthan, Haryana, Bihar, Tamilnadu, Punjab, Karnataka, Delhi, Manipur, Andhra Pradesh and Telengana, Kerala,
Financial Attitude	Chandigarh, Uttarakhand, Arunachal Pradesh, Himachal Pradesh, Haryana, Rajasthan, Tamilnadu, Manipur, Bihar, Delhi, Karnataka, Jharkhand, Punjab
Financial Literacy	Arunachal Pradesh, Himachal Pradesh, Chandigarh, Uttarakhand, Haryana, Rajasthan, Manipur, Tamilnadu, Delhi, Bihar, Karnataka, Kerala, Jharkhand, Punjab, Andhra Pradesh and Telengana

Source: Compiled from Table 1.

VII. Conclusion:

The present study while analyzing inter-state variation in financial literacy reveals that 14 states out of 30 sampled states are with high proportion of financially illiterates. The average figure for the country may be deceiving for a state if a common financial education policy is devised for improving financial literacy of the people. There are some states viz. Puducherry, Rajasthan, Bihar which demands more emphasis on building positive attitude and developing favourable behaviour towards money related matters. In contrast Chandigarh demands increasing financial knowledge instead of behavior and attitude. On the other hand there are states and UTs like Dadra and Nagar Haveli, Daman and Diu, Odisha, Tripura which need attention in all the areas of financial literacy. Through identification of deficient areas for the state or the region, requisite step can be taken by the concerned authority in mitigating financial illiteracy prevailing in the country. For instance, Reserve Bank of India has already devised the Financial education strategy. This study is definitely going to help to identify the priority area(s) of financial education intervention in different states of India. Further research can be carried out to uncover the factors causing low financial literacy in various states of India.

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