Analysing Trends in Indian Households' Potential to Save

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Summary:

Saving is an essential component of financial planning for households. It can help them cope with risks and emergencies, plan for life-cycle goals, and capture opportunities through investments in business and human capital. In this research brief, we use the income and expenditure data from the Centre for Monitoring Indian Economy (CMIE) to study the formal savings potential of the households over a period of six years, from January 2014 to December 2019. We define the formal savings potential as the surplus that is left with households after meeting all their monthly expenditure.[2] We find that 75-80% of the households manage a surplus rate[3] of almost 38.2% in India, which has been, on an average, increasing over time, unlike the household savings rate[4] of the country. We argue that to increase the savings rate of the country, it is important to channelise this formal savings potential into formal savings instruments. We also map the differences in the formal savings potential of households across regions (urban/rural), income quintiles, and states.

About Household Finance Research Initiative:

Dvara Research's Household Finance Research initiative aims to rigorously understand the financial choices and decisions of low-income or excluded individuals and households, and their relation to achieving households' objectives. It has been our consistent endeavour to study financial inclusion as a gateway to a suite of appropriate financial services eventually enabling well-rounded household balance sheets and consumer financial well-being.

We believe that careful research and a comprehensive body of evidence can powerfully inform market practices and the design of financial sector policy to deliver comprehensive financial services for all individuals, households, and enterprises, and eventually serve to create a safe environment in which formerly excluded populations may fully experience the benefits of financial inclusion. This research initiative seeks to significantly expand the scope of India-specific and policy-focused household finance research that is timely and relevant to current financial sector development.

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[2]Monthly expenditure includes loan repayment and premium paid on any insurance
[3]Surplus rate is the share of surplus—after all expenses are incurred—in the household income, i.e. the share of income that can be potentially parked in one or more formal savings instruments. We use surplus rate interchangeably with formal savings potential in this paper
[4]Household savings is a component of a country's gross savings; it is a sum of investment by households in both financial and physical assets

Introduction

The overall savings rate (as a percentage of GDP) of India has been falling over time. It fell to a 15-year low of 30.1% of the GDP in 2019 from 34.6% in 2012[5]. To study the reasons behind this decline, it is important to understand both the components of domestic savings and its determinants.

Domestic savings comprise both Public and Private savings. Private savings can be further classified into household savings and corporate savings.[6,7] Households contribute to more than 60% of the national savings,[8] and the decline in the savings rate can be largely attributed to this sector. This is because household savings have been declining over time, whereas corporate savings have increased, and public savings have remained more or less the same (Patnaik and Pandey 2019). According to Patnaik & Pandey (2019), household savings had declined from 25.18% in 2010 to 17.2% in 2017. The falling savings rate can pose a risk to the economic growth of the country. Therefore, it becomes important to examine the trends in the savings rate and the formal savings potential of the household sector, given the policy implications it holds for the country.

Household savings are affected by macroeconomic factors such as interest rates, inflation, level of Gross Domestic Product (GDP), microeconomic factors such as the demand, willingness, and potential to save by households, and institutional factors such as households' access to financial services. Samantaraya and Patra (2014) find that household savings are impacted negatively by high inflation as high inflation depresses the real value of wealth held by households through wealth effects, and also by real interest rates as real interest rates tend to increase the permanent income of net lenders, thereby increasing consumption and declining savings through an income effect. This contrasts with Athukorala and Sen (2004), who find that the substitution effect is stronger than the income effect in the case of real interest rate on bank deposits and that it has a significant positive impact as present consumption becomes more costly than future consumption, thereby increasing savings. Similarly, they also find that even the inflation rate has a positive impact on private savings and that the savings are directly proportional to the level of GDP and the rate of growth of GDP.

Willingness and potential to save, on the other hand, are influential factors that determine the level of savings by households at the micro-level. Most households manage to maintain a surplus after all their consumption and debt commitments (Banerjee and Duflo, 2007), which should ideally translate into the demand for and the usage of formal savings products. However, most studies find that this is not always the case due to several barriers to save such as high transaction cost, trust deficit, regulatory barriers, information and knowledge gaps, social norms, and behavioural biases (Collins et al., 2009; Karlan, Ratan and Zinman, 2014). Therefore, we call this surplus, the formal savings potential of the households, as it is the amount of money that the households can potentially save in formal savings instruments – both physical and financial, after meeting their monthly expenses.

This brief is divided into five sections. Section 1 describes the data and methodology that is used for this analysis. Section 2 lays out the overall surplus rate of the country along with urban and rural surplus rates. Section 3 maps the surplus rate of households over time based on income quintiles. Section 4 gives an overview of how the surplus rate of households have fared over time in different Indian states, and we conclude in Section 5

[5]https://www.ceicdata.com/en/indicator/india/gross-savings-rate ; https://economictimes.indiatimes.com/markets/stocks/news/indias-savings-rate-plunges-to-15-year-low/articleshow/74200784.cms
[6]http://mospi.nic.in/sites/default/files/reports_and_publication/cso_national_accounts/chptwenty_nad003.pdf
[7]https://www.rbi.org.in/scripts/bs_viewcontent.aspx?Id=2486#:~:text=Domestic%20saving%20(Investment)%20of%20India,and%20Corporate%20Saving%20 (Investment).
[8]https://economictimes.indiatimes.com/markets/stocks/news/indias-savings-rate-plunges-to-15-year-low/articleshow/74200784.cms

1. Data & Methodology

For this analysis, we use the Centre for Monitoring Indian Economy's (CMIE-CPHS) data, one of the largest nation-wide panel databases at the household level. It collects information of over two lakh households spread across 29 states and union territories of the country. It consists of the Income Pyramids, Aspirational India, People of India, and Consumption Pyramids modules, which contain details of both the demographic characteristics and financial behaviour of households and individuals. The survey is conducted thrice in a year, and each four months of the survey is called a wave. We extract information from the income pyramids and consumption pyramids modules from January 2014 to December 2019 (amounting to a total of 72 months), as they provide the details on the monthly income and expenditure of households.

We begin by creating a refined version of the dataset for the analysis by dropping households for which the survey could not be administered as well as households that reported zero income in different months to avoid missing values in our calculation of the surplus rate. We then apply weights that have been provided by CMIE to account for such households to make the sample representative of the Indian population.[9] To calculate the monthly household surplus, we subtracted the total expenditure of the household from the total income of the household.

Household Surplus = Household Income-Household Expenditure

Once we have computed the household surplus, we measure surplus as a share of income. This enables us to compare it across different periods, notwithstanding the changes in income level.

$$\text{Surplus Rate} = \frac{\text{Household Surplus}}{\text{Household Income}} \times 100$$

Since the motivation for this exercise was to assess trends in formal savings potential among Indian households, we consider only those households that manage a positive surplus[10] and average the household surplus rates at the national and state levels. To put these numbers in perspective, we also calculate and report the percentage of households that manage a positive surplus. On average, we find that 20-25% of the households have shown a negative surplus over the years.

An important limitation of this dataset is that it allows us to comment only on the expenditure incurred by households under the different category heads as recorded by the CMIE-CPHS, and not on the amount of money saved by households through various savings instruments. While the CMIE-CPHS has details of households' participation (uptake of products) in various financial assets such as Bank Accounts, Fixed Deposits, Life Insurance, Health Insurance, etc., there is no information on households' allocation (amount of savings or investments in each product as a fraction of total savings/wealth) in these instruments. Therefore, we call our metric, the surplus rate, instead of the savings rate, as this surplus might include savings in both formal and informal[11] institutions as opposed to the savings rate of the country, which only accounts for the formal savings of households.

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[9]After adding weights to the CMIE data, we found the data represents 25.92 crore households on average in 2014, 26.11 crore in 2015, 27.14 crore in 2016, 28.24 crore in 2017, 29.14 crore in 2018, and 30.22 crore in 2019.

[10]Positive surplus households are those households for which monthly income was greater than monthly expenditure. Similarly, negative surplus households are those whose monthly income was less than monthly expenditure.

[11]Examples of informal savings are savings in the form of cash, money lent out informally, informal savings schemes with moneylenders, jewellery store owners, etc.

2. Overall Savings

We start this analysis by mapping the surplus rate of households for each month from 2014 to 2019 (Figure 1). We find that the formal savings potential of the households with respect to their income has, on average, increased over time and has stayed close to 38.2% (Figure 1).[12] The formal savings potential of the country has grown slightly by 3% over the years.[13] This is in contrast with the household savings of the country, as a percentage of GDP, which is not only less than the surplus rate but has also been declining over time. There could be three reasons for this. One, we have only looked at the formal savings potential of the households that report a surplus each month. Figure 1 shows that the percentage of households that reported a positive surplus remained between 75-80% from 2014-2019,[14] forming a simple average of 76% over the years. If we were to consider the surplus rate of households that reported a negative surplus, the country's overall surplus rate would drop below the average of 38.2%.

Two, household savings, as a per cent of GDP,[15] comprises of actual savings by households in both financial and physical assets. It excludes informal savings by households such as cash in hand or informal saving schemes with local moneylenders or family members. Whereas the surplus rate that we calculate accounts for only surplus as a part of the income that is left with households after incurring the overall monthly expenditure. This means that our surplus rate captures the amount of money that the households can save in any form and not the actual amount that they save in formal sources[16]. Moreover, the savings in formal financial sources might actually be much lower. The Report on Household Finance Committee (2017) found that Indian households hold a mere 5% of their wealth in the form of financial assets (which includes deposit and saving accounts, publicly traded shares, mutual funds, life insurance, and retirement accounts). Additionally, Kumar and Sharma (2020) find that almost 22% of the households in India remain unbanked, excluding them further from accessing formal financial services. Therefore, it is possible for households to have a higher potential to save formally, as compared to the actual household savings of the country.

Thirdly, CMIE doesn't collect data on the amount of money saved in different assets by households. It only captures whether households save in a particular asset. Hence, the amount that the households save in the form of physical assets such as gold and real estate might also be a part of the surplus that is left with the households after monthly consumption, making it higher than the actual savings rate of the country.

Further, we separate the overall surplus rate into urban surplus rate and rural surplus rate. On average, we find that both the urban surplus rate and rural surplus rate are increasing with a similar growth rate as that of the overall surplus rate. Moreover, the overall surplus rate of urban areas has remained higher than both the overall surplus rate of the country and the rural surplus rate. One possible explanation for this is that, on average, urban regions have higher monthly incomes than rural regions, and hence, the potential to save is higher for urban households.[17] Further, the opportunities to save formally are also higher in urban areas than in rural areas.[18]

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[12]38.2% is the simple average of surplus rates from January 2014 to December 2019.

[13]The linear trend fitted to the overall savings has a slope of 0.0296.

[14]Except for the sudden drop from 80% in April 2015 to 68% in November 2015. We haven't explored the reasons behind this drop in this analysis.

[15]Household savings is a component of gross savings of the country and is estimated by the Central Statistics Office (CSO) regularly: http://mospi.nic.in/sites/default/files/reports_and_publication/cso_national_accounts/chptwenty_nad003.pdf

[16]Formal sources of savings include both savings in physical assets such as real estate and gold, and financial assets.

[17]https://www.financialexpress.com/economy/indias-rural-urban-divide-village-worker-earns-less-than-half-of-city-peer/1792245/

[18]Both the payment access points such as bank branches, active business correspondent locations, and ATMs, and credit access points are higher for urban areas than rural areas: https://m.rbi.org.in/scripts/PublicationReportDetails.aspx?UrlPage=&ID=733

Figure 1: Graph showing overall surplus rate, urban surplus rate, rural surplus rate, and the percentage of households with a positive surplus from 2014 to 2019.
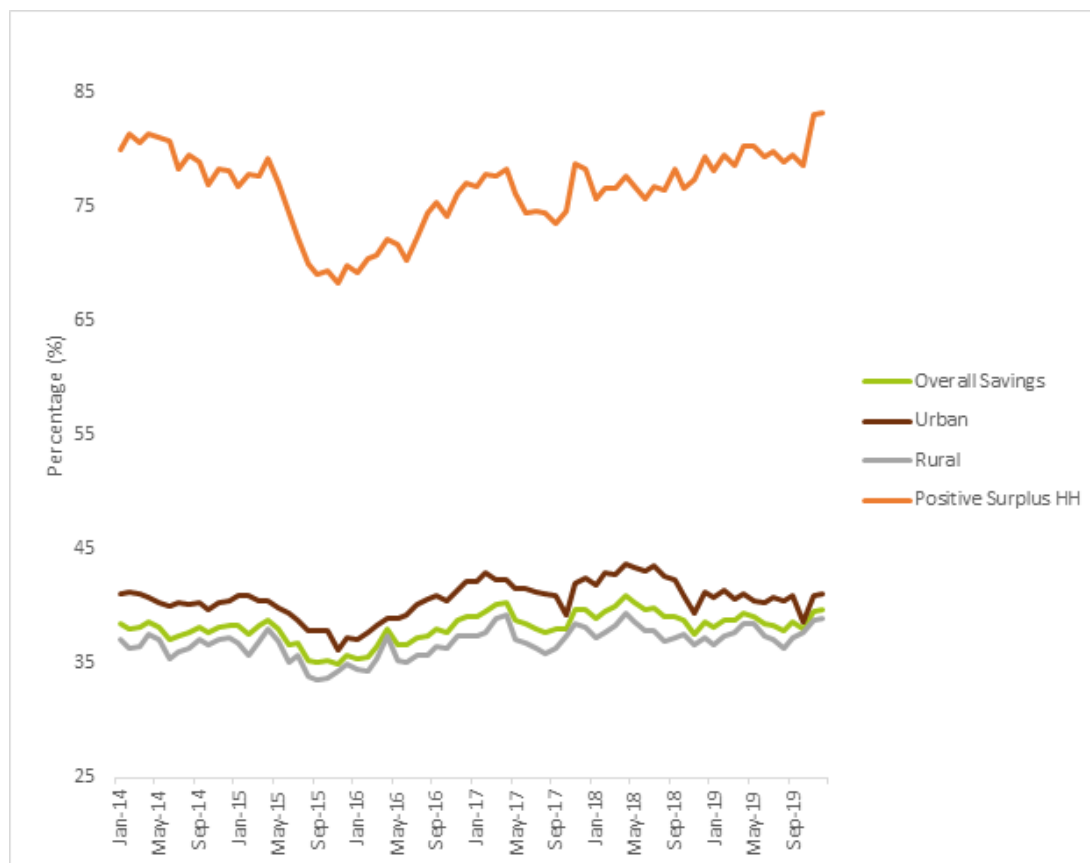
3. Savings Potential by Income Quintile

We further break down the surplus rate by income quintiles, to see how the surplus rate or the formal savings potential of households differ by income. To do this, we create monthly income quintiles[19] of households where the lowest income quintile household earns less than 6000 rupees on average, and the highest income quintile household earns more than 50,000 rupees on average. Then, we compute the average monthly surplus rate of households reporting a positive surplus for each income quintile.[20] We find that the surplus as a fraction of income is the lowest for the lowest income quintile households and the highest for the highest income quintile households. This is fairly intuitive as the lowest income quintile households barely make a subsistence living. However, an interesting point to note is that this surplus rate is not 0 for even the lowest income quintile. The lowest income quintile households exhibited an approximately 20% surplus rate on average, indicating that even they have the potential to save. Moreover, the growth of this surplus rate is the highest for the lowest income quintile over the years, as on average, it exhibited a growth rate of 5%.[21] How-

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[19]These income quintiles are generated by dividing the weighted number of households in five income groups such that approximately 20% of the households are in each income group. They are based on the total monthly income earned by the households.

[20]Average monthly savings in absolute terms for each income quintile based on 2019 (from January 2019 to December 2019) income and expenditure data are: Q1 = Rs. 1589.38, Q2 = Rs. 2731.04, Q3 = Rs. 4877.22, Q4 = Rs. 9321.29, Q5 = Rs. 33657.88.

[21]The linear trend fitted to the Q1 surplus rate has a slope of 0.05515, for Q2 is 0.029918, for Q3 is 0.031305, for Q4 is 0.020196, and for Q5 is 0.029078.

-ever, low-income households tend to use informal channels to save, such as cash-at-home, savings with family members, or with moneylenders, due to lack of access to formal saving channels. (Kumar and Sharma 2020) find that more than 20% of the households in India remain without at least one bank account, and less than 30% of the lowest income quintile households have an outstanding investment in at least one formal financial instrument as opposed to 80% for the highest income quintile households.

Increased savings in formal saving channels not only benefit low-income households by providing them with safer and better ways to save, but also contribute to a higher savings rate at the macro-level. One way to do this is through financial inclusion. Various studies show that financial inclusion positively impacts economic growth (Sethi and Sethy 2019) and aids in reducing income inequality and poverty (Omar and Inaba 2020). In fact, financial inclusion is one of the main drivers of economic growth (Sethi and Acharya 2018) and hence the universal policy push for inclusive finance.

Figure 2: Graph showing the surplus rate of households based on different income quintiles, where Q1 is the lowest income quintile, and Q5 is the highest income quintile.
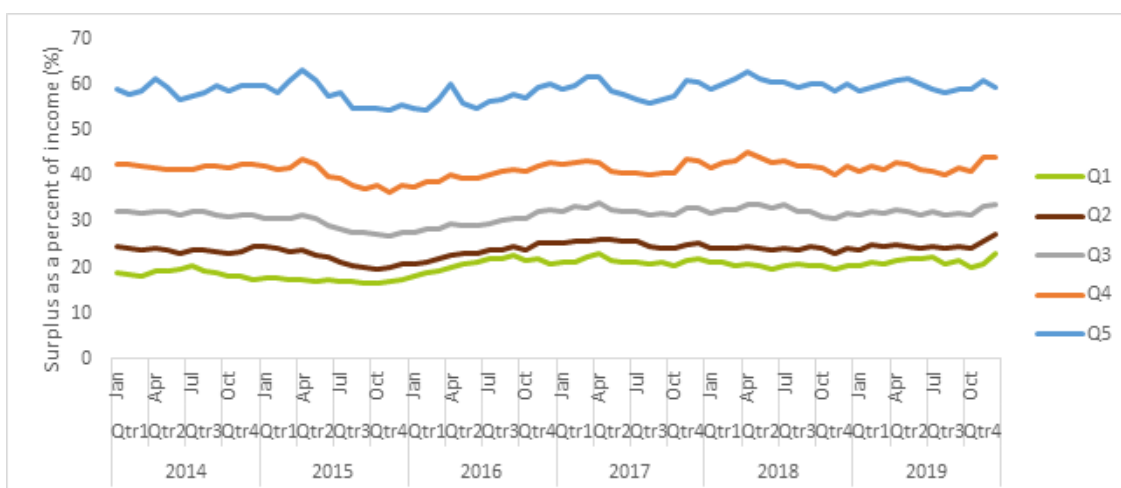
4. A state-level analysis of household savings

In this section, we look at trends in household surplus rates across states and union territories (UTs). To do this, we use weights in our state-level analysis and follow the same methodology as in the previous sections.

The metrics of importance for each state/UT level analysis are the percentage of households that report a positive surplus, the average surplus rate of households that manage a positive surplus and the average annual growth in surplus rate. We fit a simple linear trendline to the first two metrics to average out monthly variations and see the direction of movement of surplus rates in the last six years, and to approximate their growth rates.

We calculate the percentage of households maintaining a positive surplus by averaging the percentage of households maintaining a positive surplus over all the 72 months from January 2014 to December 2019. The formula is as follows:

[22]The CMIE dataset provides weights for each household to extrapolate from the sample to the state-level. Also, this analysis could be performed only in states and union territories where CMIE conducts its surveys. A few north-eastern states and union territories have been left out due to the unavailability of data.

$$\text{Percentage of positive surplus households} = \frac{\Sigma \text{ Percentage of positive surplus households for each month from Jan'14 to Dec'19}}{72}$$

We calculate the average surplus rate of households, maintaining a positive surplus by averaging the values of surplus rate among positive surplus households over all the 72 months from January 2014 to December 2019. The formula is as follows:

$$\text{Average surplus rate} = \frac{\Sigma \text{ Average surplus rate of positive surplus households for each month from Jan'14 to Dec'19}}{72}$$

We calculate the average annual growth in surplus rate by subtracting the difference between the estimated surplus rate of the ending month (December 2019) and the starting month (January 2014) first, then divide this by the estimated surplus rate of the starting month, and then divide it again by the number of years (six). The formula is as follows:

$$\text{Average annual growth in surplus rate} = \frac{\left(\frac{\text{Estimated surplus rate of Dec'19 - Estimated surplus rate of Jan'14}}{\text{Estimated surplus rate of Jan'14}}\right)}{6}$$

- **Share of positive surplus households:** We find more than 60% of the households in all states and UTs maintain a positive surplus on an average. Among the populous states/UTs, Delhi (91%), Tamil Nadu (83%), Karnataka (81%), and Rajasthan (81%) see the greatest share of households maintaining a positive surplus on an average each month, while Gujarat (61%), Assam (67%) and Madhya Pradesh (67%) see the lowest share. Turning to the non-populous states/UTs, Chandigarh (92%) and Sikkim (91%) have the greatest share of households that maintain a positive surplus, while Tripura (66%) and Jammu and Kashmir[23] (72%) have the lowest share. Table 2 shows the average (and standard deviation) share of households maintaining a positive surplus for all states/UTs from 2014 to 2019.

- **Surplus Rates:** Delhi (47%), Madhya Pradesh (45%), and Haryana (44%) top the populous states in average surplus rates, while Assam (31%), Bihar (31%), and West Bengal (32%) occupy the lowest spots. Tripura (24%) seems to have the lowest surplus rate among both non-populous states and overall, while Chandigarh (49%) and Sikkim (45%) show the highest surplus rates among non-populous states/UTs. Table 3 shows the average (and standard deviation) of the surplus rate maintained by households maintaining a positive surplus—over the time period of 2014-19—for all states/UTs.

- **Average annual growth in surplus rate:** We find that twenty states/UTs show positive growth in surplus rate over the last six years, while it has declined in eight states/UTs. Among the populous states,[24] Uttar Pradesh (6.5%), Haryana (6.1%), and Delhi (5.9%) have experienced the highest average annual growth in surplus rates, while Odisha (-4.8%), Bihar (-2.3%), and Jharkhand (-2.2%) have seen their surplus rates dip the most. Among the non-populous states, Meghalaya (16.9%) and Himachal Pradesh (12.3%) show the highest growth, while Uttarakhand (-4.5%) and Chandigarh (-2.1%) have seen their surplus rates sink over the period. Table 1 shows the average annual growth in surplus rate for all states/UTs from 2014 to 2019.

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[23]Jammu and Kashmir in our dataset refers to the erstwhile unified state of Jammu Kashmir, which has now been split into two union territories of Jammu and Kashmir, and Ladakh
[24]States and UTs that have a population of over 1.5 crores as per Census 2011 have been considered as populous states.

The state-level analysis shows that there's a sizable portion of households in each state that are left with a surplus after fulfilling their monthly expense obligations. However, contrasting it with findings from our earlier research brief on the participation across different financial assets (Agrawal 2020), we find that there are significant gaps between households' formal savings potential and their actual savings in formal financial instruments. While this analysis shows that households have the potential to save (which has been increasing for households in almost 20 states and UTs over time), the participation across formal financial assets remains low.

For example, in most states, except a few northern frontier states and Kerala, the participation in a simple formal savings instrument like Fixed Deposit is significantly lower than the percentage of households that maintain a positive surplus. The gap only widens in the case of other savings instruments such as Post-office Savings, National Savings Certificate, Provident Fund, and Health Insurance, suggesting the lack of customised savings instruments that suit the financial requirement, capacity, and circumstances of households.

Bridging the gap between the potential to save and actual savings in formal financial instruments could boost the overall financial savings of the country, which, in turn, is beneficial for economic growth. Moreover, we have not explored the reasons behind households with a negative surplus in this brief. But it is important to study these reasons, and coping mechanisms of such households as this percentage becomes even higher for states such as Gujarat (39%), Assam (33%), Madhya Pradesh (33%), Tripura (33%), and Punjab (30%). The appendix contains detailed time-series plots of how the share of households maintaining a positive surplus and the surplus rate itself has changed month on month in each State/UT from January 2014 to December 2019.

Table 1: Percentage of households maintaining positive surplus on an average over the period (2014-19)

Populous States			Non-populous States/UTs		
State	**Positive Surplus HH % : Average**	**Positive Surplus HH % : Standard Deviation**	**State**	**Positive Surplus HH % : Average**	**Positive Surplus HH % : Standard Deviation**
Delhi	91.27%	5.66%	Chandigarh	92.10%	3.61%
Tamil Nadu	83.35%	4.93%	Sikkim	90.78%	5.73%
Karnataka	80.96%	7.61%	Meghalaya	90.38%	7.94%
Rajasthan	80.95%	8.28%	Goa	80.12%	5.22%
Odisha	79.81%	5.52%	Puducherry	79.34%	11.06%
Haryana	78.50%	4.58%	Uttarakhand	78.85%	4.99%
Telangana	77.84%	6.49%	Himachal Pradesh	77.77%	10.01%
Kerala	76.44%	11.71%	Jammu & Kashmir	71.53%	10.33%
Maharashtra	75.34%	3.71%	Tripura	66.47%	12.83%
Bihar	74.77%	8.32%			
Andhra Pradesh	73.23%	8.30%			
West Bengal	72.62%	6.58%			
Jharkhand	72.53%	8.84%			
Uttar Pradesh	71.82%	7.74%			
Chhattisgarh	71.22%	6.29%			
Punjab	69.30%	7.80%			
Madhya Pradesh	66.77%	6.40%			
Assam	66.59%	16.77%			
Gujarat	61.20%	7.14%			

Table 2: Average surplus rate over the period for all states/UTs (2014-19)

Populous States			Non-populous States/UTs		
State	**Surplus Rate: Average**	**Surplus Rate: Standard Deviation**	**State**	**Surplus Rate: Average**	**Surplus Rate: Standard Deviation**
Delhi	46.91%	5.22%	Chandigarh	49.30%	3.41%
Madhya Pradesh	44.55%	3.50%	Sikkim	44.82%	3.07%
Haryana	43.78%	5.15%	Puducherry	44.80%	6.88%
Telangana	42.42%	4.63%	Uttarakhand	42.46%	5.73%
Karnataka	41.68%	2.46%	Jammu & Kashmir	42.46%	3.76%
Maharashtra	41.02%	2.04%	Himachal Pradesh	40.12%	9.23%
Tamil Nadu	40.98%	3.64%	Goa	40.09%	3.55%
Punjab	39.98%	5.48%	Meghalaya	38.08%	5.18%
Uttar Pradesh	39.81%	4.26%	Tripura	24.19%	4.30%
Andhra Pradesh	37.91%	3.47%			
Chhattisgarh	37.48%	3.40%			
Rajasthan	37.39%	3.34%			
Gujarat	35.88%	2.81%			
Odisha	34.18%	3.92%			
Kerala	33.18%	3.31%			
Jharkhand	31.85%	3.01%			
West Bengal	31.65%	1.48%			
Bihar	31.38%	1.89%			
Assam	30.88%	5.31%			

Table 3: Average annual growth in surplus rate for all states/ UTs (2014-19)

Populous States		Non-populous States/UTs	
State	**Average Annual Growth in Surplus Rate**	**State**	**Average Annual Growth in Surplus Rate**
Uttar Pradesh	6.5%	Meghalaya	16.9%
Haryana	6.1%	Himachal Pradesh	12.3%
Delhi	5.9%	Tripura	7.6%
Telangana	4.9%	Sikkim	7.2%
Kerala	4.4%	Goa	3.4%
Assam	3.9%	Jammu & Kashmir	2.8%
Chhattisgarh	2.9%	Puducherry	0.9%
Maharashtra	1.4%	Chandigarh	-2.1%
Madhya Pradesh	1.4%	Uttarakhand	-4.5%
Karnataka	1.3%		
Gujarat	0.5%		
Punjab	0.3%		
West Bengal	0.3%		
Tamil Nadu	-1.0%		
Rajasthan	-1.8%		
Andhra Pradesh	-2.1%		
Jharkhand	-2.2%		
Bihar	-2.3%		
Odisha	-4.8%		

5. Conclusion

In this analysis, we study the formal savings potential of the households over six years from 2014-19 using the CMIE-CPHS data on household income and expenditure. We find that though the household savings rate of the country has been declining over time, households' potential to save formally, or the household surplus rate has been increasing over time. We argue that the potential reasons for this could be three. One, we only capture the surplus rate of households that posit a positive surplus, which corresponds to 75-80% of the households from the data. Two, the household savings rate of the country, as reported annually by Central Statistics Office (CSO), is different from the surplus rate that we have calculated as the household savings rate measures the actual savings of the country in formal sources – both in physical and financial assets, whereas the surplus rate is the households' potential to save. This potential may be higher than their actual formal savings as the households might have informal ways to save, which are not captured in the overall household savings rate. Three, CMIE collects information only on whether the household has saved in a particular asset as opposed to the share of wealth in that asset. Therefore, the savings in physical assets such as gold and real estate by households could also be included in our surplus rate calculations, making it higher than the actual household savings rate.

To assess the second reason, we map the surplus rate of households by different income quintiles and find that even the lowest income quintile households exhibit a surplus rate of about 20%. But the lowest income quintile households have lower access to formal savings and often rely on informal modes of savings.

Further, we also look at how the surplus rate has changed over time for different states of the country. By comparing the percentage of households having a positive surplus in different states with the participation of households in different financial assets, using one of our earlier pieces of research on this topic, we see that there are significant gaps between households' potential to save and their actual participation in formal savings instruments.

Our analysis shows that a vast majority of households across all states maintain a positive surplus, corroborating previous literature (Banerjee and Duflo 2007). But many structural and behavioural constraints may have continued to prevent them from utilising different financial instruments to maximise their surplus for future plans and welfare (Karlan, Ratan and Zinman 2014). While we do not explore these constraints in this brief, we believe that these findings reinforce the case for financial service providers to innovate across products and processes, to enable household savings in formal instruments. This will not only increase household welfare but also increase the economic growth of the country by directly increasing the savings rate.

References

Agrawal, Niyati. 2020. https://www.dvara.com/research/household-finance/how-do-the-portfolios-of-indian-households-differ-across-states/. September. https://www.dvara.com/research/wp-content/uploads/2020/09/How-Do-the-Portfolios-of-Indian-Households-Differ-Across-States.pdf.

Athukorala, Prema-Chandra, and Kunal Sen. 2004. "The Determinants of Private Saving in India." World Development 491-503.

Banerjee, Abhijit, and Esther Duflo. 2007. "The Economic Lives of the Poor." Journal of Economic Perspectives 141-167.

Cole, Shawan, Thomas Sampson, and Bilal Zia. 2011. "Prices or Knowledge? What Drives Demand for Financial Services in Emerging Markets?" The Journal of Finance 1933-1967.

Collins, Daryl, Jonathan Morduch, Stuart Rutherford, and Orlanda Ruthven. 2009. Portfolios of the Poor: How the World's Poor Live on $2 a day. Princeton University Press.

Household Finance Committee. 2017. Indian Household Finance. Reserve Bank of India.

Karlan, Dean, Aishwarya Lakshmi Ratan, and Jonathan Zinman. 2014. "Savings by and for the Poor: A Research Review and Agenda." Review of Income and Wealth 36-78.

Kumar, Sanjaya Kumar, and Ruchi Sharma. 2017. "Does Financial Inclusion Spur Economic Growth in India?" The Journal of Developing Areas 215-228.

Kumar, Shailesh, and Misha Sharma. 2020. Picturising the Portfolios of Indian Households. July. https://www.dvara.com/research/wp-content/uploads/2020/07/Picturising-the-Portfolios-of-Indian-Households.pdf.

Patnaik, Ila, and Radhika Pandey. 2019. Savings and capital formation in India. June 10. https://macrofinance.nipfp.org.in/PDF/PatnaikPandey-savings_and_capital_formation_in_India.pdf.

Samantaraya, Amaresh, and Suresh Kumar Patra. 2014. "Determinants of Household Savings in India: An Empirical Analysis Using ARDL Approach." Economic Research International (Hindawi Publishing Corporation).

Sethi, Dinabandhu, and Debashis Acharya. 2018. "Financial Inclusion and Economic Growth linkage: Some Cross Country Evidence." Journal of Financial Economic Policy 369-385.

Appendix

State-level trends in household surplus: Andra Pradesh

State-level trends in household surplus: Assam

State-level trends in household surplus: Bihar

- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

State-level trends in household surplus: Chandigarh

- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

State-level trends in household surplus: Chhattisgarh

Data point labels: 71.35%, 76.82%, 82.99%, 73.88%, 69.55%, 73.12%, 66.34%, 37.60%, 37.38%, 46.10%, 41.22%, 40.95%, 45.28%, 36.99%

Legend:
- Positive Surplus HH % – Actual
- Mean Surplus Rate – Actual
- Positive Surplus HH % – Linear Trendline
- Mean Surplus Rate – Linear Trendline

State-level trends in household surplus: Delhi

Data point labels: 88.44%, 82.62%, 92.72%, 98.55%, 99.54%, 98.40%, 89.86%, 46.32%, 39.19%, 47.71%, 54.84%, 54.22%, 45.67%, 45.70%

Legend:
- Positive Surplus HH % – Actual
- Mean Surplus Rate – Actual
- Positive Surplus HH % – Linear Trendline
- Mean Surplus Rate – Linear Trendline

State-level trends in household surplus: Goa

- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

State-level trends in household surplus: Gujarat

- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

State-level trends in household surplus: Haryana

- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

State-level trends in household surplus: Himachal Pradesh

- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

State-level trends in household surplus: Jammu & Kashmir

- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

State-level trends in household surplus: Jharkhand

- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

State-level trends in household surplus: Karnataka

Legend:
- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

Data labels (Positive Surplus HH %): 79.08%, 82.61%, 68.82%, 82.87%, 78.31%, 92.53%, 92.07%

Data labels (Mean Surplus Rate): 41.95%, 42.02%, 39.03%, 44.58%, 45.07%, 40.64%, 43.95%

State-level trends in household surplus: Kerala

Legend:
- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

Data labels (Positive Surplus HH %): 57.32%, 80.37%, 55.41%, 81.75%, 79.11%, 87.64%, 88.89%

Data labels (Mean Surplus Rate): 27.71%, 34.87%, 27.45%, 36.27%, 34.61%, 33.85%, 35.90%

State-level trends in household surplus: Madhya Pradesh

Legend: Positive Surplus HH % - Actual | Mean Surplus Rate - Actual | Positive Surplus HH % - Linear Trendline | Mean Surplus Rate - Linear Trendline

State-level trends in household surplus: Maharashtra

Legend: Positive Surplus HH % - Actual | Mean Surplus Rate - Actual | Positive Surplus HH % - Linear Trendline | Mean Surplus Rate - Linear Trendline

State-level trends in household surplus: Meghalaya

- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

84.71% 83.74% 95.93% 98.25% 99.51% 88.87%
36.49% 33.35% 40.71% 41.63% 45.98% 35.74%

State-level trends in household surplus: Odisha

- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

85.95% 81.03% 72.74% 81.41% 80.13% 74.33% 76.24%
38.35% 36.68% 34.27% 35.13% 34.73% 29.86% 26.36%

State-level trends in household surplus: Puducherry

State-level trends in household surplus: Punjab

State-level trends in household surplus: Rajasthan

Legend:
- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

Data labels: 74.03%, 75.82%, 70.82%, 80.00%, 83.13%, 91.77%, 94.39%, 35.36%, 39.96%, 34.63%, 41.29%, 31.17%, 35.99%, 33.43%

State-level trends in household surplus: Sikkim

Legend:
- Positive Surplus HH % - Actual
- Mean Surplus Rate - Actual
- Positive Surplus HH % - Linear Trendline
- Mean Surplus Rate - Linear Trendline

Data labels: 83.62%, 93.30%, 87.63%, 99.13%, 85.35%, 40.75%, 46.73%, 45.22%, 48.88%, 38.54%

State-level trends in household surplus: Tamil Nadu

State-level trends in household surplus: Telangana

State-level trends in household surplus: Tripura

State-level trends in household surplus: Uttar Pradesh

State-level trends in household surplus: Uttarkhand

State-level trends in household surplus: West Bengal